



Exam : 070-552

Title : UPGRADE: MCAD Skills to MCPD Windows
Developer by Using the Microsoft .NET
Framework□□□□□□

Ver : 02-24-09

Topic 1, C#, Creating a UI for a Windows Forms Application by Using Standard Controls (14 Questions)

QUESTION 1

You are working as an application developer at Certkiller .com. The Certkiller .com network consists of a single Active Directory domain named Certkiller .com. Certkiller .com uses Visual Studio 2005 as an application platform. Certkiller .com consists of a Development department. You as the developer of Certkiller .com use a client computer named Certkiller -WS001 as developing collateral. You have received instructions to make sure that the PictureBox control's properties cannot be changed with a logo that you have added to the PictureBox in the designer of the form base. Before the time you have added a form to the Microsoft Windows Forms Control Library project and add a PictureBox control to the form. The form is presenting CertKiller.com's logo. What action should you take?

- A. You should set the Locked property to False.
- B. You should set the Locked property to True.
- C. You should set the Modifiers property to Private.
- D. You should set the Modifiers property to Protected.

Answer: C

Explanation: When you set the Modifiers property to Private, the value will show that only the base form can modify the control.

Incorrect Answers:

- A: You should not set it to False, because the control can be moved and resized.
- B: If you set the property to True the control cannot be removed or resized. .
- D: If you set the Modifiers property to Protected, the value will show that the base form and any of the form yet to come can modify the control.

QUESTION 2

You are working as an application developer at Certkiller .com. The Certkiller .com network consists of a single Active Directory domain named Certkiller .com. Certkiller .com uses Visual Studio 2005 as an application platform. Certkiller .com consists of a Development department. You as the developer of Certkiller .com use a client computer named Certkiller -WS005 as developing collateral. You have just included a DateTimePicker control to a form. You then set the format property to Time. During the course of the day, you check how the DateTimePicker control is working, and learnt that it does not allow the Certkiller .com users to change the selected time. What should you do to change the control so that it will allow the Certkiller .com users to change the selected time?

- A. You should set the ShowUpDown property to True.

- B. You should set the ShowSelectBox property to True.
- C. You should set the Visible property to False.
- D. You should set the Checked property to False.

Answer: A

Explanation: The ShowUpDown property is by default set on False. You should set it on True. On False it will show the DateTimePicker must simulate a drop-down control. This setting will allow the users to set the MonthCalendar. If it is set to True the users can select the time.

Incorrect Answers:

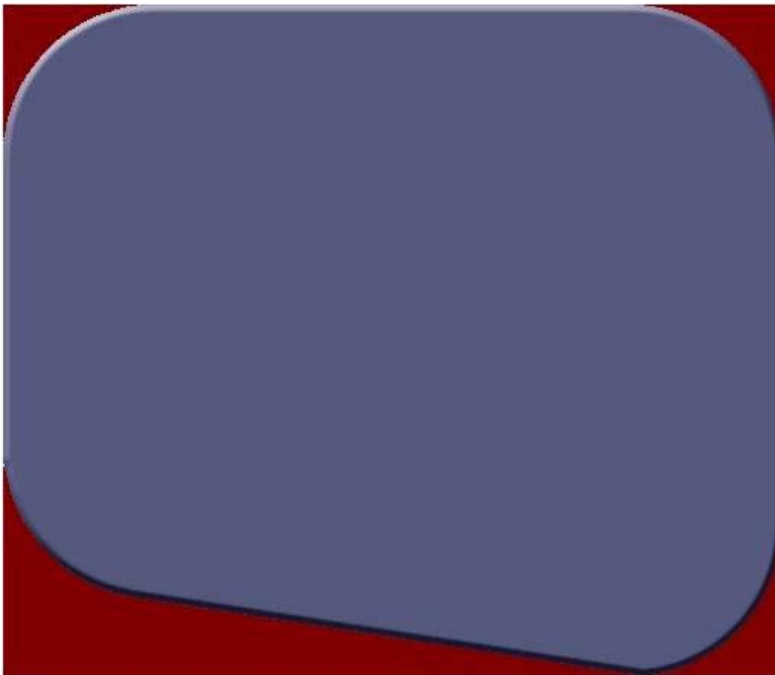
B: The ShowSelectBox will not resolve the problem. This will show if a CheckBox should be displayed on the DateTimePicker.

C: If you set the Visible property to False, it will hide the DateTimePicker. .

D: You should not set the Checked property to False. If this is set on True, a CheckBox control will be displayed on the DateTimePicker.

QUESTION 3

You are working as an application developer at Certkiller .com. The Certkiller .com network consists of a single Active Directory domain named Certkiller .com. Certkiller .com uses Visual Studio 2005 as an application platform. Certkiller .com consists of a Development department. You as the developer of Certkiller .com use a client computer named Certkiller -WS001 as developing collateral. The manager of Certkiller .com wants to have a borderless form with the background shown in the exhibit.



When the form is view, the manager named Rory Allen does not want the maroon area to be visible. He only wants the blue to be visible when the form is displayed. Which of the following code segments should be used?

- A. `this.TransparencyKey = Color.Maroon;`
- B. `this.BackColor = Color.Maroon;`
- C. `this.TransparencyKey = Color.CornflowerBlue`
- D. `this.BackColor = Color.Transparent;`

Answer: A

Explanation: The `TransparencyKey = Color.Maroon` specify the color that the transparent represents the area on the form. With this setting the blue will respond to the mouse.

Incorrect Answers:

- B: You should not use the `BackColor = Color.Maroon`. This will determine the background color of the form.
- C: You should not use this code segment. The manager does not want the blue area to be transparent.
- D: You should not use the `BackColor = Color.Transparent`. The manager does not want the background to be transparent.

QUESTION 4

You are working as an application developer at Certkiller .com. The Certkiller .com network consists of a single Active Directory domain named Certkiller .com. Certkiller .com uses Visual Studio 2005 as an application platform. Certkiller .com consists of a Development department. You as the developer of Certkiller .com use a client computer named Certkiller -WS020 as developing collateral. You have configured three columns to a form and add a `TableLayoutPanel` to the form. You want the two side columns to have a fix width of 200 pixels each and anchor the four edges of the form to the control. A Certkiller .com manager wants the center column to fill the remaining space, when ever the form is resized. You need to change the `ColumnStyle` instance that represents the center column? How should you set the `ColumnStyle` instance's `Size Type` property?

- A. Set it to `AutoSize` and the `Width` property to 100F.
- B. Set it to `Absolute` and the `Width` property to 100F.
- C. Set it to `Percent` and the `Width` property to 100F.
- D. Set it to `AutoSize` and the `Width` property to 0F.

Answer: C

Explanation: This setting will show that the column should fill the remaining space.

Incorrect Answers:

- A: This setting will allow the column to be sized enough so that not any of its child controls are clipped. In this setting the middle will not occupy the remaining free space.
- B: If you set it to `Absolute`, the value of the `Width` property will show the number of pixels for the column.

D: You need to set the ColumnStyle instance's Size Type property to AutoSize and the Width property to 100F.

QUESTION 5

You are working as an application developer at Certkiller .com. The Certkiller .com network consists of a single Active Directory domain named Certkiller .com. Certkiller .com uses Visual Studio 2005 as an application platform. Certkiller .com consists of a Development department. You as the developer of Certkiller .com use a client computer named Certkiller -WS020 as developing collateral. You have added a SplitContainer control named Certkiller SplitContainer to a form. You then left the control to the default properties. To the right-most container of the SplitContainer control, you need to add a PropertyGrid. Which of the following code segments should you use?

- A. `PropertyGrid propertyGrid = new PropertyGrid[];`
`Panel rightPanel = [Panel] Certkiller SplitContainer.GetContainerControl[];`
`rightPanel.ControlAdd[porpertyGrid];`
- B. `PropertyGrid propertyGrid = new PropertyGrid[];`
`Panel rightPanel = [Panel] Certkiller SplitContainer.GetNextControl[propertyGrid, true];`
`rightPanel.ControlAdd[porpertyGrid];`
- C. `PropertyGrid propertyGrid = new PropertyGrid[];`
`Certkiller SplitContainer.Container.Add[propertyGrid, "RightPanel"];`
- D. `PropertyGrid propertyGrid = new PropertyGrid[];`
`Certkiller SplitContainer.Panel2.Control.Add[propertyGrid];`

Answer: D

Explanation: An area can be divided into two containers, which is separated by a movable bar, if you use the SplitContainer control. When the two Panels are created, the left one is the Panel1 and the right is Panel2. You are adding a panel so it will be on the right. You then need to specify Panel2.

Incorrect Answers:

A, B, C: You should not use the Add method of the SplitContainer.Container to add the PropertyGrid. You also should not pass a PropertyGrid instance to the GetNextControl method to return a Panel instance. This will actually retrieve the next tab-ordered control given the current control. You also should not call the GetContainerControl method to return a Panel instance. This will return the logical container of the SplitContainer control.

QUESTION 6

You are working as an application developer at Certkiller .com. The Certkiller .com network consists of a single Active Directory domain named Certkiller .com. Certkiller .com uses Visual Studio 2005 as an application platform. Certkiller .com consists of a Development department. You as the developer of Certkiller .com use a client computer named Certkiller -WS020 as developing collateral. You are busy to develop a Microsoft Windows Forms exam delivery application. This is going to be

used to access the content of the exam via the Internet. A WebBrowser named testbrowser is added to the control to a form named Certkiller Form, which is define as follows:

```
[PermissionSet[SecurityAction.Demand, Name="FullTrust"]]  
[System.Runtime.InteropServices.ComVisible[true]]  
public Certkiller Form : Form  
{  
    public Certkiller Form()  
    {  
        InitializeComponent();  
    }  
    public void Expire()  
    {  
    }  
}
```

The JavaScript-based timer that is used by the Web site for the exam has a function to inform the exam delivery application when the time has expired for the exam, which is the following:

```
window.external.Expire();
```

What should you do to make sure that the Expire method of Certkiller Form is called when the JavaScript function is carry out?

- A. You should set the Document.DomDocument property of the browser instance to the current instance of the Certkiller Form class.
- B. You should set the ObjectForScripting property of the browser instance to the current instance of the Certkiller Form class.
- C. You should call the AttachEventHandler of the Document property of the browser instance.
- D. You should call the ExecCommand method of the Document property of the browser instance.

Answer: B

Explanation: You must set the ObjectForScripting for the browser instance to the current instance of the Certkiller Form class.

Incorrect Answers:

- A: The property of the Document.DomDocument represents the true DOM object of an HTML document.
- C: The AttachEventHandler allows you to attach a HTML Document Object Model event to an event handler.
- D: The ExecCommand method allows you to execute commands against DOM documents.

QUESTION 7

You are working as an application developer at Certkiller .com. The Certkiller .com network consists of a single Active Directory domain named Certkiller .com.

Certkiller .com uses Visual Studio 2005 as an application platform. Certkiller .com consists of a Development department. You as the developer of Certkiller .com use a client computer named Certkiller -WS003 as developing collateral. You have received instructions to make sure that the PictureBox will display dynamically loaded images.

Which property will display a static image if any dynamic image fails to load?

- A. BackgroundImage
- B. Image
- C. ErrorImage
- D. InitailImage

Answer: C

Explanation: The ErrorImage property specifies the image that should be displayed. This will happen only if the image that you are trying to load dynamically fails.

Incorrect Answers:

A: The BackgroundImage property specifies a background image which is used by the control.

B: TheImage property specifies the image you want the PictureBox control to display.

D: The InitailImage specifies the image you want the PictureBox control to display while the other one is loading.

QUESTION 8

You are working as an application developer at Certkiller .com. The Certkiller .com network consists of a single Active Directory domain named Certkiller .com. Certkiller .com uses Visual Studio 2005 as an application platform. Certkiller .com consists of a Development department. You as the developer of Certkiller .com use a client computer named Certkiller -WS020 as developing collateral. You are developing a Web service for new updates to query automatically, by use of a Microsoft Windows Forms application. You then add a NotifyIcon component named Certkiller notify to the application's main form. Whenever a new update is available you want the following balloon tip to display as seen in the exhibit for 5 seconds.



Which segment should you use to write a code to download the updates if the users click the balloon tip?

- A. `Certkiller notify.BallonTipClick +=delegate`
{
// Download the updates
}


```
Certkiller notify.ShowBallonTip[5000, "New Update Available"; "Click here to download"  
, ToolTipIcon.Info];  
B. Certkiller notify.ShowBallonTip[5];  
Certkiller notify.BalloonTipIcon = ToolTipIcon.Info;  
Certkiller .Balloon TipTitle = "New Update Available";  
Certkiller .BalloonTipText = "Click here to download";  
Certkiller .Click += delegate  
{  
// Download the updates  
}  
C. Certkiller notify.BalloonTipIcon = ToolTipIcon.Info;  
Certkiller .Balloon TipTitle = "New Update Available";  
Certkiller .BalloonTipText = "Click here to download";  
Certkiller .Click += delegate  
{  
// Download the updates  
}  
Certkiller notify.ShowBallonTip[5000];  
D. Certkiller notify.ShowBallonTip[5, New Update Available", "Click here to download",  
ToolTipIcon.Info];  
Certkiller .BalloonTipClick += delegate  
{  
// Download the updates  
}
```

Answer: A

Explanation: You should use an event handler, attach the BalloonTipClicked to the event and call the ShowBalloon Tip method of the NotifyIcon class. When a user clicks a balloon tip, a BalloonTipClicked event is raised.

Incorrect Answers:

B, C, D: You should not attach the BalloonTipClicked even to an event handler after you have called the ShowBalloonTip method. Also note that the event is raised when the icon is clicked and not the balloon tip.

QUESTION 9

You are working as an application developer at Certkiller .com. The Certkiller .com network consists of a single Active Directory domain named Certkiller .com. Certkiller .com uses Visual Studio 2005 as an application platform. Certkiller .com consists of a Development department. You as the developer of Certkiller .com use a client computer named Certkiller -WS020 as developing collateral. You are busy adding a MenuStrip control, which has an instance of a ToolStripMenu item named testjobItem, to a form in a Microsoft Windows Forms application. This item's display text is Job. You have received instructions to add two menu items to the Job menu item. The first item's display text should be Create New Job, and the second one is Run Job.

Which code segment should you use to programmatically add the two menu items?

A. ToolStripMenuItem createNewItem = new ToolStripMenuItem["Create New Job"];
ToolStripMenuItem runJobItem = new ToolStripMenuItem["Run Job"];
jobItem.Container.Add[createNewItem];
jobItem.Container.Add[runJobItem];
B. ToolStripMenuItem createNewItem = new ToolStripMenuItem["Create New Job"];
ToolStripMenuItem runJobItem = new ToolStripMenuItem["Run Job"];
jobItem.Owner.Items.Add[createNewItem];
jobItem.Owner.Items.Add[runJobItem];
C. ToolStripMenuItem createNewItem = new ToolStripMenuItem["Create New Job"];
ToolStripMenuItem runJobItem = new ToolStripMenuItem["Run Job"];
ToolStripMenuItem[] items = new ToolStripMenuItem[]{create NewJobItem, runJobItem}
jobItem.DropDownItems.AddRange[items];
D. ToolStripMenuItem createNewItem = new ToolStripMenuItem["Create New Job"];
ToolStripMenuItem runJobItem = new ToolStripMenuItem["Run Job"];
ToolStripMenuItem[] items = new ToolStripMenuItem[]{create NewJobItem, runJobItem}
jobItem.Owner.Items.AddRange[items];

Answer: C

Explanation: For the jobItem instance you should call the AddRange. The property of the DropDownItems represents a collection of child items of the jobItem instance, which allows you to add the two items to the job menu item.

Incorrect Answers:

A: This property returns an instance of IContainer, which represents a logical container for other components.

B: TheOwner property returns the Menu script instance that owns the ToolStripMenuItem instance.

D: This action will add the two new menu at the same level as the Job menu item.

QUESTION 10

You are working as an application developer at Certkiller .com. The Certkiller .com network consists of a single Active Directory domain named Certkiller .com. Certkiller .com uses Visual Studio 2005 as an application platform. Certkiller .com consists of a Development department. You as the developer of Certkiller .com use a client computer named Certkiller -WS050 as developing collateral. You were busy with a task to add a ContextMenuStrip control to a form.

What should you do to display a custom control as a menu item of the ContextMenuStrip control?

- A. Add a ToolStripContainer control to the form and add the custom control to the Controls collection residing on the toolStripContainer control. You should then add the ContextMenuStrip control to the controls of the ToolStripContainer control.
- B. Of ToolStripControlHost, create an instance and specify your custom control instance as a parameter to the constructor. You should then the ToolStripControlHost instance to the Items collection of the ContextMenuStrip control.
- C. Add a ToolStripContainer control to the form and add the custom control to the Controls collection residing on the toolStripContainer control. You should then add the ToolStripContainer control to the controls of the ContextMenuStrip controls.
- D. Of ToolStripControlHost, create an instance and specify your custom control instance as a parameter to the constructor. You should then the ContextMenuStrip controls to the collection of the ToolStripControlHost instance.

Answer: B

Explanation: The ToolStripControlHost class to host a custom control as a menu item in the ContextMenuStrip. You should also the custom control instance as the parameter to the constructor.

Incorrect Answers:

A, B, C: The ToolStripContainer should not be used to reach your goal. Furthermore, you cannot host a ToolStripContainer control as the menu item in a ContextMenuStrip controls.

QUESTION 11

You are working as an application developer at Certkiller .com. The Certkiller .com network consists of a single Active Directory domain named Certkiller .com. Certkiller .com uses Visual Studio 2005 as an application platform. Certkiller .com consists of a Development department. You as the developer of Certkiller .com use a client computer named Certkiller -WS007 as developing collateral. You are busy adding a WebBrowser control named, Certkiller browser to a form in a Microsoft Windows Form application. To control the navigation of the documents, you add Button controls and a TextBox control to the form, just incase a HTML document needs to e programmatically parse through the content.

Which code segment should be used to create an event handler?

- A.

```
browser.Navigated += delegate
{
    HtmlDocument document = browser.Document;
    //Parse the document
}
```
- B.

```
browser.FileDownload += delegate
{
    HtmlDocument document = browser.Document;
    //Parse the document
}
```

```
C. browser.DocumentCompleted += delegate
{
    HtmlDocument document = browser.Document;
    //Parse the document
}
D. browser.Navigating += delegate
{
    HtmlDocument document = browser.Document;
    //Parse the document
}
```

Answer: B

Explanation: For the DocumentComplete event, you should create an event handler. When a document is complete in the WebBrowser control, a DocumentComplete will be raised.

Incorrect Answers:

A: ANavigated for the event handler will raise after the WebBrowser control has begun with the downloading of the HTML document.

C: You should not create an event handler for the FileDownload event. This will raise when the WebBrowser downloads a file.

D: This will result in the event raise after the WebBrowser control navigates to an HTML document.

QUESTION 12

You are working as an application developer at Certkiller .com. The Certkiller .com network consists of a single Active Directory domain named Certkiller .com. Certkiller .com uses Visual Studio 2005 as an application platform. Certkiller .com consists of a Development department. You as the developer of Certkiller .com use a client computer named Certkiller -WS100 as developing collateral. A Certkiller .com manager named Andy Booth has asked you to develop a custom control that exposes a custom event. The custom event should be of such a caliber that the event handler for the event is automatically added to the code when you double-click the control in the designer.

How should you configure the control?

A. Apply the DefaultEvent attribute the class that presents the custom control and specify the name of the event as a parameter to the attribute.

B. Override the OnDoubleClick method on the Control class and call the AddEventHandler method of the EventDescriptor class.

C. Override the OnDoubleClick method on the Control class and call the AddEventHandler method of the EventInfo class.

D. Apply the DefaultEvent attribute the class that presents the custom control and specify the name of the event handler method as a parameter to the attribute.

Answer: A

Explanation: The DefaultEvent attribute specifies the name of the event for which an event handler should be created, when double-clicking the control in the designer.

Incorrect Answers:

B: You should not do this. This allows you to programmatically attach each event handler to an event, discovered via reflection.

C: Doing this, will allow you to programmatically attach each event handler to an event, discovered via reflection. You then cannot use this to generate a code for the event.

D: This specifies the name of the event as a parameter.

QUESTION 13

You are working as an application developer at Certkiller .com. The Certkiller .com network consists of a single Active Directory domain named Certkiller .com.

Certkiller .com uses Visual Studio 2005 as an application platform. Certkiller .com consists of a Development department. You as the developer of Certkiller .com use a client computer named Certkiller -WS133 as developing collateral. A Certkiller .com manager named Andy Booth has asked you to create a custom control. You want to custom control to take action when a user presses the Alt+D keys. It must be of such a nature that it allows you to prevent other control from receiving instructions that the Alt+D keys are pressed.

What should you do?

- A. Handle the KeyDown event.
- B. Override the OnKeyDown method.
- C. Override the OnKeyPress method.
- D. Handle the KeyPress event.

Answer: B

Explanation: The OnKeyDown method specifies a KeyEventArgs instance as a parameter. The KeyEventArgs class also contains a Modifier keys that were pressed.

Incorrect Answers:

A: This will stop other controls from getting instructions that the Alt+D keys were pressed.

C: The OnKeyPress is invoked when you press a key. Overriding the OnKeyPress will not allow you to find the combination of the modifier keys that was pressed.

D: The KeyPress event is raised when a key is pressed. This will not allow you to find the combination of the modifier keys that was pressed.

QUESTION 14

You are working as an application developer at Certkiller .com. The Certkiller .com network consists of a single Active Directory domain named Certkiller .com.

Certkiller .com uses Visual Studio 2005 as an application platform. Certkiller .com consists of a Development department. You as the developer of Certkiller .com use a

client computer named Certkiller -WS133 as developing collateral. You are busy developing a Microsoft Windows Forms application. The application will be shrink-wrapped and sold to end users. The application is specified so that if a user installs it, it will use the user's display preferences to create Help images for each form in the application.

Which of the following code segments should you use to allow the application to update the image if a user changes system colors? (Select two)

A. SystemColorsChanged += delegate

```
{  
//Update the Help images  
}
```

B. SystemEvents.UserPreferenceChanged += delegate[object sender, UserPreferenceChangedEventArgs e]

```
{  
if [e.Category == UserPreferenceCategory.Color]  
{  
SystemColorsChanged += delegate  
{  
//Update the Help images  
}  
}  
}
```

C. SystemEvents.UserPreferenceChanged += delegate[object sender, UserPreferenceChangedEventArgs e]

```
{  
if [e.Category == UserPreferenceCategory.Color]  
{  
//Update the Help images  
}  
}
```

D. SystemEvents.UserPreferenceChanged += delegate

```
{  
//Update the Help images  
}
```

Answer: A, C

Explanation: When a preference is changed, the common language runtime raises the UserPreferenceChanged event. And even the handler should be attached to the event and update the Help images if the Category property is set to color.

Incorrect Answers:

B, D: It is not necessary to update the Help images when the UserPreferenceChanged event is raised. When the UserPreferenceChanged event is raised, you should not handle the SystemColorsChange and update the Help images.

Topic 2, C#, Integrating Data in a Windows Forms Application (10 Questions)

QUESTION 15

You are working as an application developer at Certkiller .com. The Certkiller .com network consists of a single Active Directory domain named Certkiller .com. Certkiller .com uses Visual Studio 2005 as an application platform. Certkiller .com consists of a Development department. You as the developer of Certkiller .com use a client computer named Certkiller -WS001 as developing collateral. You are busy adding a TextBox control named Certkiller TextBox to a form. You are doing this by dragging a Contact field from the Data Sources window to the form. The data of the Text properties of the Certkiller TextBox is part of the Contact field. To navigate the records in a data source, you added two Button controls to the form. Which code segment should you use to programmatically move the next record and display the new value of the Certkiller TextBox's Contact field when the Certkiller .com users click one of the Button controls?

- A. `Binding binding = Certkiller TextBox.DataBindings["Text"];`
`binding.BindingManagerBase.Position += 1;`
- B. `Binding binding = Certkiller TextBox.DataBindings["Contact"];`
`binding.BindingManagerBase.Position += 1;`
- C. `Certkiller TextBox.BindingContext["Text"].Position += 1;`
- D. `Certkiller TextBox.BindingContext["Contact"].Position += 1;`

Answer: A

Explanation: The Windows Forms control has a DataBindings property that represents a collection of Binding instances. When data source members change, the Binding class allows a control's property to be updated automatically.

Incorrect Answers:

B, C, D: When you pass the value Contact as the parameter to the DataBindings property, you should not get a Binding instance ManagerBase instance. Furthermore you should not pass the name of the property as a parameter to the BindingContext property.

QUESTION 16

You are working as an application developer at Certkiller .com. The Certkiller .com network consists of a single Active Directory domain named Certkiller .com. Certkiller .com uses Visual Studio 2005 as an application platform. Certkiller .com consists of a Development department. You as the developer of Certkiller .com use a client computer named Certkiller -WS006 as developing collateral. You have called a stored procedure that returns a row set that has data about electrical chips. You then load the part data in a DataSet instance named testdataSet. The DataSet has a single Data Table instance. The DataTable instance's TableName property is set to Part.

Which code segment should you use to display the part data in a DataGridView control named testdataGridView?

A. testdataGridView.DataSource = testdataSet.Tables[0];
testdataGridView.DataMember = "Part";
B. testdataGridView.DataSource = testdataSet.Tables["Part"];
testdataGridView.DataMember = "DataTable";
C. testdataGridView.DataSource = testdataSet;
testdataGridView.DataMember = "Part";
D. testdataGridView.DataSource = testdataSet;
testdataGridView.DataMember = "TableName.Part";

Answer: C

Explanation: To obtain your objective you should set the DataGridView control DataSource property to the DataSet instance. You also should set the DataGridView control DataSource property to the DataMember property to part.

Incorrect Answers:

A, B, D: It is not good if you set the DataMember property if you set the DataSource property to the DataTable instance which signifies the Part data. Furthermore, you should not set the DataMember property to TableName.Part.

QUESTION 17

You are working as an application developer at Certkiller .com. The Certkiller .com network consists of a single Active Directory domain named Certkiller .com. Certkiller .com uses Visual Studio 2005 as an application platform. Certkiller .com consists of a Development department. You as the developer of Certkiller .com use a client computer named Certkiller -WS006 as developing collateral. You are busy adding a ComboBox control name testComboBox to a form. Which code segment should you use to populate the ComboBox with a list of valid Microsoft SQL Server instances which is registered on the system where the application is running?

A. DataTable dataTable = SqlDataSourceEnumerator.Instance.GetDataSource[];
testComboBox.DataSource = dataTable;
testComboBox.DisplayMember = @"{ServerName}\{InstanceName}";
testComboBox.ValueMember = "InstanceName";
testComboBox.FormatString = "{0}{1}";
B. DataTable dataTable = SqlDataSourceEnumerator.Instance.GetDataSource[];
Foreach [DataRow row in dataTable.Rows]
{
string dataSource = [string] row["InstanceName"];
if [row["InstanceName"] != DBNull.Value]
{
dataSource += string.Format@"\{0}",row["ServerName"]]
}
testComboBox.Items.Add(dataSource];
}
C. DataTable dataTable = SqlDataSourceEnumerator.Instance.GetDataSource[];


```
testComboBox.DataSource = dataTable;
testComboBox.DisplayMember = "ServerName";
testComboBox.ValueMember = "InstanceName";
D. DataTable dataTable = SqlDataSourceEnumerator.Instance.GetDataSource[];
Foreach [DataRow row in dataTable.Rows]
{
string dataSource = [string] row["ServerName"];
if [row["InstanceName"] != DBNull.Value]
{
dataSource += string.Format@"\{0}",row["InstanceName"]]'
}
testComboBox.Items.Add[dataSource];
}
```

Answer: A

Explanation: The SqlDataSourceEnumerator class permits you to enumerate registered SQL server instances. If you want to get hold of the instance, you should call the GetDataSource method. This will return an instance of four columns.

Incorrect Answers:

B, C, D: You do not need to set the DataSource property of testComboBox to the DataTable instance returned from GetDataSource. This will not display the values from the ServerName and InstanceName field as a single value.

QUESTION 18

You are working as an application developer at Certkiller .com. The Certkiller .com network consists of a single Active Directory domain named Certkiller .com. Certkiller .com uses Visual Studio 2005 as an application platform. Certkiller .com consists of a Development department. You as the developer of Certkiller .com use a client computer named Certkiller -WS002 as developing collateral. One of the assistant application developers named Rory Allen were asked to execute two SQL commands which can update the data in separate Microsoft SQL Server 2005 databases. When ever the second command fails, the first command should be rolled back.

What should Rory Allen do?

- A. Execute both the commands within a single TransactionScope block and call the Complete method of the TransactionScope instance if both commands execute successfully.
- B. Execute both the commands in separate TransactionScope block and call the Complete method of the second TransactionScope instance if both commands execute successfully.
- C. Execute both the commands within a single TransactionScope block and call the Complete method of the TransactionScope instance if each command executed successfully.
- D. Execute both the commands in separate TransactionScope block and call the Complete method of the TransactionScope instance if each command executed successfully.

Answer: A

Explanation: Both of the commands should be executed within a single TransactionScope block. This will allow both of the commands to execute within the same context of the same transaction.

Incorrect Answers:

B, D: You should not execute each command in a separate TransactionScope block. Both of the commands should be executed within a single TransactionScope block.

C: Before the second command succeeds, you should not call the Complete method.

QUESTION 19

You are working as an application developer at Certkiller .com. The Certkiller .com network consists of a single Active Directory domain named Certkiller .com. Certkiller .com uses Visual Studio 2005 as an application platform. Certkiller .com consists of a Development department. You as the developer of Certkiller .com use a client computer named Certkiller -WS002 as developing collateral. You have received instructions to call a stored procedure that return images from a Microsoft SQL Server 2005 database. You want to use the SqlDataReader class to read the returned images.

To ensure that each image is returned as a Stream instance that can be read on demand, what should you do?

- A. To the ExecuteReader method of a SqlCommand instance, specify CommandBehavior.SequentialAccess as a parameter.
- B. For the SqlConnection instance that represents the database connection, set the Packet Size connection string property to 0.
- C. For a SqlCommand instance, call the Prepare method followed by the ExecuteNonQuery method.
- D. Call the BeginTransaction method of a SqlConnection instance and specify IsolationLevel.Serializable as a parameter.

Answer: A

Explanation: You need to specify CommandBehavior.SequentialAccess as a parameter. The Microsoft .NET DataProvider for SQL Server will load the returned data as steam.

Incorrect Answers:

B: You should not set the size to 0. This will not instruct the Microsoft .NET DataProvider for SQL Server will load the returned data as steam.

C: The ExecuteNonQuery method executes SQL commands and does not return row sets.

D: TheIsolationLevel.Serializable enumeration member shows that a lock should be placed to prevent transactions from updating or inserting rows into the DataSet instance.

QUESTION 20

You are working as an application developer at Certkiller .com. The Certkiller .com

network consists of a single Active Directory domain named Certkiller .com. Certkiller .com uses Visual Studio 2005 as an application platform. Certkiller .com consists of a Development department. You as the developer of Certkiller .com use a client computer named Certkiller -WS002 as developing collateral. You have received instructions to import data from a flat file into a Microsoft SQL Server 2005 database table.

What should you do to use the SqlBulkCopy class to import the data?

- A. From the flat file, import data into a DataTable instance.
- B. Make sure that the column order in the database table matches the field order in the flat file.
- C. Create a stored procedure to copy the data to the database table.
- D. Put the Bcp.exe tool in the output directory of the assembly that has the code.

Answer: A

Explanation: You need to import data into a DataTable instance.

Incorrect Answers:

- B: You do not need to make sure that the column order in the database table matches the field order in the flat file.
- C: There is no need to create a stored procedure to copy the data to the database table.
- D: The Bcp.exe tool is a command line that is the equivalent of the managed SqlBulkCopy class. You do not need that.

QUESTION 21

You are working as an application developer at Certkiller .com. The Certkiller .com network consists of a single Active Directory domain named Certkiller .com. Certkiller .com uses Visual Studio 2005 as an application platform. Certkiller .com consists of a Development department. You as the developer of Certkiller .com use a client computer named Certkiller -WS002 as developing collateral. You have received instructions to create a DataSet diagram that models a one-to-many relationship between patients and treatments as seen in the exhibit:

Relation

Name: PatientTreatment

Specify the keys that relate tables in your dataset.

Parent Table: Patient Child Table: Treatment

Columns:

Key Columns	Foreign Key Columns
PatientID	PatientID

Choose what to create

☐ Both Relation and Foreign Key Constraint
☐ Foreign Key Constraint Only
☒ Relation Only

Update Rule: None

Delete Rule: None

Accept/Reject Rule: None

☐ Nested Relation

OK Cancel

When you serialize instance of the created DataSet component you, you received the following XML:

```
<Patient>
<PatientID> 100</PatientID>
<PatientName>Amy Good</PatientName>
</Patient>
<Treatment>
<TreatmentID> 1000</TreatmentID>
<PatientID> 100</PatientID>
<Code>DTP</Code>
</Treatment>
```

The XLM should be as follows

```
<Patient>
<PatientID> 100</PatientID>
<PatientName>Amy Good</PatientName>
<Treatment>
<TreatmentID> 1000</TreatmentID>
<Code>DTP</Code>
</Treatment>
</Patient>
```

What should you do to change the dialog box so that the XLM in generated correctly?

- A. You should select the Treatment from the Parent Table list and the Patient from the Child Table list.
- B. You should select the Both Relation and Foreign Key Constraint option.
- C. You should select the Foreign Key Constraint Only option.
- D. You should select the Nested Relation option.

Answer: D

Explanation: The Nested Relation option will indicate that elements that is the same as the child rows of the relation should be nested as child elements that corresponds to the parent row.

Incorrect Answers:

- A: You should not do this. A one-to-many relation exists between the patients and treatments.
- B: This will show that no relation exists between the two tables.
- C: This will create a foreign key constraint between the child table and the parent table.

QUESTION 22

You are working as an application developer at Certkiller .com. The Certkiller .com network consists of a single Active Directory domain named Certkiller .com. Certkiller .com uses Visual Studio 2005 as an application platform. Certkiller .com consists of a Development department. You as the developer of Certkiller .com use a client computer named Certkiller -WS006 as developing collateral. You are busy using the XmlDocument class to control an XML document. If the XML attribute is modified and inserted, you need to perform validation and return the XmlDocument instance to the original state if the validation fails. Which of the following events should you use to handle the events of the XmlDocument class?

- A. NodeChanged and NodeInserting
- B. NodeChanged and NodeInserted
- C. NodeChanging and NodeInserted
- D. NodeChanging and NodeInserting

Answer: D

Explanation: When the Xml node is about to change, an NodeChanging event is raised. So you need to handle the NodeChanging and NodeInserting events.

Incorrect Answers:

- A: When the node has changed and then the event is raised, it will be too late. You should not handle the NodeChanged event.
- B: When the node has changed and then the event is raised, it will be too late. You should not handle the NodeChanged event. The NodeInserted will also raise after the event has happened.

C: You should not handle the NodeChanged event. The NodeInserted will also raise after the event has happened.

QUESTION 23

You are working as an application developer at Certkiller .com. The Certkiller .com network consists of a single Active Directory domain named Certkiller .com. Certkiller .com uses Visual Studio 2005 as an application platform. Certkiller .com consists of a Development department. You as the developer of Certkiller .com use a client computer named Certkiller -WS006 as developing collateral. You have to read large amounts of XML data. The data resides on an external data source. You need to read the XML data and validate it as it is read. Which of the following classes should you use which will be most memory-efficient way?

- A. DataSet
- B. XmlReader
- C. XmlDataDocument
- D. XmlDocument

Answer: B

Explanation: If large amount of data is read, you should use the XMLReader class. It represents a forward-only and read-only. This is a very efficient way because the document does not need to be loaded into the memory.

Incorrect Answers:

- A: The DataSet represents disconnected relational data and the data need to be in the memory.
 - C: The XmlDataDocument implements the functionality of the XmlDocument class and the DataSet class.
 - D: The XmlDocument implements the XML Document Object Model.
-

QUESTION 24

You are working as an application developer at Certkiller .com. The Certkiller .com network consists of a single Active Directory domain named Certkiller .com. Certkiller .com uses Visual Studio 2005 as an application platform. Certkiller .com consists of a Development department. You as the developer of Certkiller .com use a client computer named Certkiller -WS006 as developing collateral. You are busy using the XmlWriter class to write large amount of XML data to a physical device via a buffer stream. Which method should you use to write all buffered data in the stream to the device without losing any buffered data?

- A. WriteFullEndElement
- B. Flush
- C. Close
- D. WriteEndDocument

Answer: B

Explanation: The flush method flushes the underlying stream by writing all buffered data to the underlying device and it does not loose any data.

Incorrect Answers:

- A: The WriteFullEndElement method closes the current document which is open.
- C: The Close method closes the underlying stream. This will cause you to loose data.
- D: The WriteEndDocument method closes all the open documents.

Topic 3, C#, Implementing Printing and Reporting Functionality in a Windows Forms Application (10 Questions)

QUESTION 25

You are working as an application developer at Certkiller .com. The Certkiller .com network consists of a single Active Directory domain named Certkiller .com. Certkiller .com uses Visual Studio 2005 as an application platform. Certkiller .com consists of a Development department. You as the developer of Certkiller .com use a client computer named Certkiller -WS006 as developing collateral. The manager has told you to develop a Microsoft Windows Forms application which has printing capabilities.

From which of the following base should you derive your class to create a class that will show you the required dialog box?

- A. PageSetupDialog
- B. PrintControllerWithStatusDialog
- C. PrintDialog
- D. PrintPreviewDialog

Answer: B

Explanation: You should get your class from the PrintControllerWithStatusDialog. This will allow you to extend the PrintController.

Incorrect Answers:

- A: The PageSetupDialog presents the standard Page Setup dialog box. The dialog box does not show the status of a print.
- C: The PrintDialog shows the Print dialog box.
- D: The PrintPreviewDialog shows the Print Preview dialog box. This will not display the status of the print job.

QUESTION 26

You are working as an application developer at Certkiller .com. The Certkiller .com network consists of a single Active Directory domain named Certkiller .com. Certkiller .com uses Visual Studio 2005 as an application platform. Certkiller .com consists of a Development department. You as the developer of Certkiller .com use a client computer named Certkiller -WS009 as developing collateral. You are busy

developing a Microsoft Windows Forms resume builder application.
Which code segment should you use to allow users to see a printed resume without printing the document? (Use a modal dialog box)

- A. `PrintPreviewDialog dialog = new PrintPreviewDialog[];`
`dialog.Document = document;`
`dialog.ShowDialog[];`
- B. `PrintPreviewDialog dialog = new PrintPreviewDialog[];`
`dialog.Document = document;`
`dialog.Show[];`
- C. `PrintDialog dialog = new PrintDialog[];`
`dialog.Document = document;`
`dialog.Show[];`
- D. `PrintDialog dialog = new PrintDialog[];`
`dialog.Document = document;`
`dialog.UseEXDialog = true`
`dialog.ShowDialog[];`

Answer: B

Explanation: The `PrintPreviewDialog` class represents the standard Print Preview dialog box. With this you can preview the document before you print it.

Incorrect Answers:

A, C, D: The `Show` method shows a modeless dialog box and not the modal dialog box. The `PrintDialog` class represents the standard Print dialog box. It does not allow you to preview the document.

QUESTION 27

You are working as an application developer at Certkiller .com. The Certkiller .com network consists of a single Active Directory domain named Certkiller .com. Certkiller .com uses Visual Studio 2005 as an application platform. Certkiller .com consists of a Development department. You as the developer of Certkiller .com use a client computer named Certkiller -WS009 as developing collateral. You are busy creating a `PrintDocument` instance that represents a report to print. Which of the following event will programmatically change the page settings of individual pages as they are printed?

- A. `QueryPageSettings`
- B. `BeginPrint`
- C. `PrintPage`
- D. `EndPage`

Answer: A

Explanation: The `QueryPageSettings` is raised before the printing starts. You can then modify the page.

Incorrect Answers:

B: The BeginPrint is raised before the first page is print. You need this for multiple page settings.

C: The PrintPage raise an event when a page is print, you cannot change settings at that stage.

D: The EndPage is shown when the print job is finished.

QUESTION 28

You are working as an application developer at Certkiller .com. The Certkiller .com network consists of a single Active Directory domain named Certkiller .com. Certkiller .com uses Visual Studio 2005 as an application platform. Certkiller .com consists of a Development department. You as the developer of Certkiller .com use a client computer named Certkiller -WS009 as developing collateral. You were given instructions to develop a print driver license. The component that you will use should grant permission to access all the printers that are connected to the client computers.

What should you do to step by step specify security to make sure that applications cannot use your component unless they are granted an unrestricted printing permission?

A. Call the Demand method on a PrintingPermission instance with the Level property set to PrintingPermissionLevel.AllPrinting.

B. Call the Demand method on a PrintingPermission instance with the Level property set to PrintingPermissionLevel.NoPrinting.

C. Call the Assert method on a PrintingPermission instance with the Level property set to PrintingPermissionLevel.AllPrinting.

D. Call the Assert method on a PrintingPermission instance with the Level property set to PrintingPermissionLevel.NoPrinting.

Answer: A

Explanation: When using the Demand method, it demand the callers in a higher stack a specific permission. The applications that are granted unrestricted printing permissions can use the print driver license.

Incorrect Answers:

B: The Demand method on a PrintingPermission is the same as permission to print.

C, D: The Assert method, you can make sure that the code is secure and prevent a full stack walk from whether all callers in the call stack are granted the permission.

QUESTION 29

You are working as an application developer at Certkiller .com. The Certkiller .com network consists of a single Active Directory domain named Certkiller .com. Certkiller .com uses Visual Studio 2005 as an application platform. Certkiller .com consists of a Development department. You as the developer of Certkiller .com use a client computer named Certkiller -WS009 as developing collateral. You are busy creating a Microsoft Windows Forms applications for the security agency. The

application is used to print security-related documents. They also want the document to be watermarked on each page.

From which base class would you obtain your class to create a class that meets the requirements?

- A. PrintDocument
- B. PrintPreviewControl
- C. PrintController
- D. PrintPreviewDialog

Answer: A

Explanation: The PrintDocument allows you to override the OnPrintPage method which will print a secure watermark on each page.

Incorrect Answers:

B: ThePrintPreviewControl represents a customized print preview control. You then can add this to the form but you cannot customize the printing process.

C: ThePrintController allow you to control the printing process but cannot force secure watermarks.

D: The PrintPreviewDialog shows the Print Preview dialog box. You cannot customize the printing process.

QUESTION 30

You are working as an application developer at Certkiller .com. The Certkiller .com network consists of a single Active Directory domain named Certkiller .com.

Certkiller .com uses Visual Studio 2005 as an application platform. Certkiller .com consists of a Development department and a Finance department. You as the developer of Certkiller .com use a client computer named Certkiller -WS009 as developing collateral. You are busy creating a component that allows the users in the Finance department to print daily reports. You want the component to grant permission to access all the printers on the client computers of the users.

What should you do to programmatically specify security to stop a full stack walk from being performed when the component prints the report?

- A. Call the Demand method on a fully-restricted PrintingPermission instance.
- B. Call the Demand method on an unrestricted PrintingPermission instance.
- C. Call the Assert method on a fully-restricted PrintingPermission instance.
- D. Call the Assert method on an unrestricted PrintingPermission instance.

Answer: D

Explanation: For you to create an unrestricted PrintingPermission, you should create an instance of the PrintingPermission class and pass the PrintingPermissionLevel.AllPrinting enumeration member or the PermissionState.Unrestricted enumeration member as a parameter.

Incorrect Answers:

A, B: The Demand method will demand that a stack walk be performed to find out if all callers higher in the stack have permission to print. This is then done for each document that needs to be printed.

C: The Assert method on a fully-restricted PrintingPermission instance is the same as not demanding permission to print.

QUESTION 31

You are working as an application developer at Certkiller .com. The Certkiller .com network consists of a single Active Directory domain named Certkiller .com. Certkiller .com uses Visual Studio 2005 as an application platform. Certkiller .com consists of a Development department and a Finance department. You as the developer of Certkiller .com use a client computer named Certkiller -WS017 as developing collateral. You are using the PrintPreviewDialog class to permit the users in the Finance department to have a preview of there documents. You need to stop a viewed page in the document from being automatically resized when the dialog box represented by the PrintPreviewDialog instance is resized. What should you do to configure the PrintPreviewControl instance of the PrintPreviewDialog instance?

- A. You should set the AutoZoom property to True.
- B. You should set the Zoom property to 100.
- C. You should set the Zoom property to 1.
- D. You should set the AutoZoom property to False.

Answer: D

Explanation: If it is set to False, it will show that the page should not automatically be resized when the dialog box is resized.

Incorrect Answers:

A: If the AutoZoom property is set to True, it will show that the page be resized when the dialog box is resized.

B, C: Setting the value to 100 percent which is the same as 1, will support a decimal value that shows the zoom level of the previewed page. This has not effect when the page is automatically resized.

QUESTION 32

You are working as an application developer at Certkiller .com. The Certkiller .com network consists of a single Active Directory domain named Certkiller .com. Certkiller .com uses Visual Studio 2005 as an application platform. Certkiller .com consists of a Development department and a Graphics department. You as the developer of Certkiller .com use a client computer named Certkiller -WS009 as developing collateral. You are busy creating an instance of the PrintPreviewControl class named graphicprintPreviewControl to allow the users in the Graphics department to preview their printed documents.

Which code segment is used to default the preview to a zoom level of 50 percent and avert text from appearing jagged?

A. `printPreviewControlZoom = 0.5;`
`printPreviewControl.UseAntiAlias = true;`
B. `printPreviewControlZoom = 0.5;`
`printPreviewControl.UseAntiAlias = false;`
C. `printPreviewControlZoom = 50;`
`printPreviewControl.UseAntiAlias = false;`
D. `printPreviewControlZoom = 0.05;`
`printPreviewControl.UseAntiAlias = true;`

Answer: A

Explanation: The 0.5 is the same as 50 percent. You must set the `UseAntiAlias` to `true`.

Incorrect Answers:

B, C: You must not set the `UseAntiAlias` to `false`. This will disable anti-aliasing.

D: This setting is wrong, 0.05 is not 50 percent.

QUESTION 33

You are working as an application developer at Certkiller .com. The Certkiller .com network consists of a single Active Directory domain named Certkiller .com. Certkiller .com uses Visual Studio 2005 as an application platform. Certkiller .com consists of a Development department. You as the developer of Certkiller .com use a client computer named Certkiller -WS009 as developing collateral. You are busy creating a Microsoft Windows Forms applications with printing support. You were asked to raise a custom event named `PageChanged`. From which base class would you obtain your class to create a class that meets the requirements with the minimal code changes?

- A. `PrintDocument`
- B. `PrintPreviewControl`
- C. `PrintController`
- D. `PrintPreviewDialog`

Answer: B

Explanation: The `PrintPreviewControl` represents a customized print preview control. You can also raise custom events.

Incorrect Answers:

A: The `PrintDocument` is a document that can be printed.

C: The `PrintController` allow you to control the printing process but not to preview the document.

D: The `PrintPreviewDialog` shows the Print Preview dialog box.

QUESTION 34

You are working as an application developer at Certkiller .com. The Certkiller .com

network consists of a single Active Directory domain named Certkiller .com. Certkiller .com uses Visual Studio 2005 as an application platform. Certkiller .com consists of a Development department. You as the developer of Certkiller .com use a client computer named Certkiller -WS009 as developing collateral. The following code was added to add a PrintPreviewControl instance to a Panel control named testpanel.

```
PrintPreviewControl printPreview = new PrintPreviewControl[];  
printPreview.Columns = 2;  
printPreview.Rows = 2;  
printPreview.Dock = DockStyle.Fill;  
testpanel.Controls.Add[printPreview];
```

When you run the application that has this code, you received the following message on the Panel control.

Document does not contain any pages.

What must you do to allow a page to be displayed, when running the application?

- A. You should set the StartPage property of printPreview to 1
- B. You should set the Visible property of printPreview to true
- C. You should call the Show method of printPreview
- D. You should set the Document property of printPreview to an instance of PrintDocument

Answer: D

Explanation: To display a preview of a document when the Document property is set, you should use the PrintPreviewControl.

Incorrect Answers:

A: The StartPage property has no effect if the Documentproperty is not set to a PrintDocument instance.

B: This shows that the controls should be visible.

C: The property has no effect if the Documentproperty is not set.

Topic 4, C#, Enhancing Usability (7 Questions)

QUESTION 35

You are working as an application developer at Certkiller .com. The Certkiller .com network consists of a single Active Directory domain named Certkiller .com. Certkiller .com uses Visual Studio 2005 as an application platform. Certkiller .com consists of a Development department. You as the developer of Certkiller .com use a client computer named Certkiller -WS009 as developing collateral. You are busy to develop a Microsoft Windows Forms application that allows the computer engineers to design circuit boards for different types of hardware. You then create a custom control that portrays the design surface.

Which of the following event should you handle so that you can highlight the available areas on the design surface where a component can be dropped?

- A. DragEnter
- B. QueryContinueDrag
- C. GiveFeedback
- D. DragOver

Answer: D

Explanation: The DragOver event will be raised if the mouse pointer will move over a control during a drag-and-drop action.

Incorrect Answers:

- A: The DragEnter event will raise only if the mouse pointer enters a control during a drag-and-drop action.
- B: The QueryContinueDrag event is raise when the mouse or keyboard button state changes.
- C: The GiveFeedback event is raised when a drag-and-drop action is started.

QUESTION 36

You are working as an application developer at Certkiller .com. The Certkiller .com network consists of a single Active Directory domain named Certkiller .com. Certkiller .com uses Visual Studio 2005 as an application platform. Certkiller .com consists of a Development department. You as the developer of Certkiller .com use a client computer named Certkiller -WS009 as developing collateral. You are busy to develop a Microsoft Windows Forms application that allows the computer engineers to design circuit boards for different types of hardware. The electronic parts exits as nodes, on the main form, which reside in a TreeView control named testtreeView. The TreeView's AllowDrop property is set to false and a Panel control provides the drawing surface. You want the Development users to drag the components to the drawing surface.

Which of the following code segments is used to write code to begin a drag-and-drop operation?

- A. `testtreeView.DragEnter += delegate[object sender, DragEventArgs e]`
{
DoDragDrop[e.Data, DragDropEffects.Copy];
}
- B. `testtreeView.DragLeave += delegate`
{
DoDragDrop[testtreeView.SelectedNode, DragDropEffects.Copy];
}
- C. `testtreeView.DragEnter += delegate[object sender, DragEventArgs e]`
{
DoDragDrop[e.Item, DragDropEffects.Copy];
}
- D. `testtreeView.DragEnter += delegate[object sender, DragEventArgs e]`
{
DoDragDrop[testtreeView.SelectedNode, DragDropEffects.Copy];

}

Answer: C

Explanation: If you handle the ItemDrag event of the TreeView control, an event will raise when the user begins to drag a node in the TreeView control.

Incorrect Answers:

A, D: The MouseEnter event of the TreeView control should not be used. It will raise an event every time the mouse pointer enters the area which is occupied by the TreeView control.

The DragEnter event of the TreeView control should not be used, because the AllowDrop is set to false.

B: The DragLeave of the TreeView control should not be used, because the AllowDrop is set to false.

QUESTION 37

You are working as an application developer at Certkiller .com. The Certkiller .com network consists of a single Active Directory domain named Certkiller .com. Certkiller .com uses Visual Studio 2005 as an application platform. Certkiller .com consists of a Development department. You as the developer of Certkiller .com use a client computer named Certkiller -WS019 as developing collateral. You are busy to develop a Microsoft Windows Forms application that has localized resources for the Arabic language.

Which code segment is used to display all currencies in the format used by Egypt?

- A. Thread.CurrentThread.CurrentUICulture = new CultureInfo["ar"];
- B. Thread.CurrentThread.CurrentCulture = new CultureInfo["ar"];
- C. Thread.CurrentThread.CurrentUICulture = new CultureInfo["ar-EG"];
- D. Thread.CurrentThread.CurrentCulture = new CultureInfo["ar-EG"];

Answer: D

Explanation: The CurrentCulture property specifies the culture to use for formatting numbers, currencies, dates, and time. The culture ar-EG is for the Arabic language in Egypt.

Incorrect Answers:

A, B, C: The CurrentUICulture identifies the culture to be used by a resource manager, which load localized resources. Furthermore, you should not specify the ar to the constructure of CultureInfo. The ar value represents a neutral for the Arabic language.

QUESTION 38

You are working as an application developer at Certkiller .com. The Certkiller .com network consists of a single Active Directory domain named Certkiller .com. Certkiller .com uses Visual Studio 2005 as an application platform. Certkiller .com consists of a Development department. You as the developer of Certkiller .com use a client computer named Certkiller -WS049 as developing collateral. You are busy to develop a Microsoft Windows Forms application that has localized resources for the

French language.

Which code segment is used to automatically load French resources but use the United States format for all currencies, numbers, dates and times?

- A. Thread.CurrentThread.CurrentCulture = new CultureInfo["en-US"];
Thread.CurrentThread.CurrentUICulture = new CultureInfo["fr"];
- B. Thread.CurrentThread.CurrentCulture = new CultureInfo["FR"];
Thread.CurrentThread.CurrentUICulture = new CultureInfo["US"];
- C. Thread.CurrentThread.CurrentCulture = new CultureInfo["US"];
Thread.CurrentThread.CurrentUICulture = new CultureInfo["FR"];
- D. Thread.CurrentThread.CurrentCulture = new CultureInfo["fr-FR"];
Thread.CurrentThread.CurrentUICulture = new CultureInfo["en-US"];

Answer: A

Explanation: The CurrentUICulture should be set to the CultureInfo instance that represents the fr neutral culture. The fr neutral culture represents the French language.

Incorrect Answers:

B, C, D: The CurrentCulture property must be avoided, that represents the fr-FR culture. This will give the format for all currencies, numbers, dates and times in French, you want to leave it o the United States format. The en-US will show that the English resources will be locked. Furthermore, you should not set the CurrentCulture property to US. It should be set to specify the culture.

QUESTION 39

You are working as an application developer at Certkiller .com. The Certkiller .com network consists of a single Active Directory domain named Certkiller .com. Certkiller .com uses Visual Studio 2005 as an application platform. Certkiller .com consists of a Development department. You as the developer of Certkiller .com use a client computer named Certkiller -WS023 as developing collateral. You are busy to develop a Microsoft Windows Forms application that has to support the neutral English and all Arabic cultures.

What should you do to make sure that the user interface supports the text flow for the Arabic language?

- A. You should set the Localizable property of each form to True.
- B. You should set the Language property of each form to Arabic.
- C. You should set the RightToLeftLayout property of each form to True.
- D. You should set the RightToLeft property of each form to True.

Answer: D

Explanation: The Arabic script is written from right to left. You have to support the language flow.

Incorrect Answers:

A: The Localizable shows whether the designer should create localize resources to save property value for different cultures. It should not be used.

B: The Language property specifies that culture for the resources to which a designer would save property values.

C: The True setting of RightToLeftLayout will change the control flow from right to left. You want to change the text flow.

QUESTION 40

You are working as an application developer at Certkiller .com. The Certkiller .com network consists of a single Active Directory domain named Certkiller .com. Certkiller .com uses Visual Studio 2005 as an application platform. Certkiller .com consists of a Development department. You as the developer of Certkiller .com use a client computer named Certkiller -WS034 as developing collateral. You are busy to create a MenuStrip control named testmenuStrip to a container form named testcontainerForm in a Microsoft Windows Forms application. The testcontainerForm contains tree child forms.

Which code segment should you sue to create a windows list menu so that each name of each child window is displayed on a ToolStripMenuItem control which was named testmenuItem?

- A. testmenuStrip.MdiWindowListItem = menuItem;
- B. testcontainerFrom.IsMdiContainer = true;
- C. foreach [Control childForm in testcontainerForm.Controls]
{
ToolStripMenuItem item = new ToolStripMenuItem[childForm.Text];
testmenuItem.DropDownItems.Add[item];
}
- D. foreach [Form childForm in Application.OpenForms]
{
ToolStripMenuItem item = new ToolStripMenuItem[childForm.Text];
testmenuItem.DropDownItems.Add[item];
}

Answer: A

Explanation:

You need to set the MdiWindowListItem property to the ToolStripMenuItem that has the window list items.

Incorrect Answers:

C, D: A ToolStripMenuItem should not be put in manually of each Form instance. This collection has all the open form, which has the container form. You also should not add the ToolStripMenuItem manually for each Control instance.

B: The IsMdiContainer should not be set to accomplish the goal.

QUESTION 41

You are working as an application developer at Certkiller .com. The Certkiller .com

network consists of a single Active Directory domain named Certkiller .com. Certkiller .com uses Visual Studio 2005 as an application platform. Certkiller .com consists of a Development department and a Marketing department. You as the developer of Certkiller .com use a client computer named Certkiller -WS034 as developing collateral. A Certkiller .com user named Mia Hamm is working for the Marketing department. You need to provide her assistance for an input control by automatically show tooltip when she uses the F1 key. You want the tooltip to show enough information. This is, so that Mia Hamm not causing errors by entering the wrong or invalid data.

What should you do to add a component to the form, without manual coding?

- A. You should add a ToolTip component to the form.
- B. You should add a HelpProvider component to the form.
- C. You should add a NotifyIcon component to the form.
- D. You should add an ErrorProvider component to the form.

Answer: B

Explanation: The HelpProvider component allows you to display a tooltip when ever a user presses the F1 key.

Incorrect Answers:

- A: This component will show a tooltip when the mouse pointer hover over a control.
- C: The NotifyIcon allows you to show icons in the taskbar.
- D: The ErrorProvider displays a blinking icon when you call its SetLastError method.

Topic 5, C#, Implementing Asynchronous Programming Techniques to Improve the User Experience (12 Questions)

QUESTION 42

You are working as an application developer at Certkiller .com. The Certkiller .com network consists of a single Active Directory domain named Certkiller .com. Certkiller .com uses Visual Studio 2005 as an application platform. Certkiller .com consists of a Development department. You as the developer of Certkiller .com use a client computer named Certkiller -WS034 as developing collateral. You are busy using a BackgroundWorker component, set to its default value, to execute an asynchronous operation.

What should you do to receive notification when the operation completes?

- A. You should handle the ProgressChanged event.
- B. You should handle the RunWorkerCompleted event.
- C. You should call the WaitAny method of the WaitHandle class.
- D. You should call the WaitAll method of the WaitHandle class.

Answer: B

Explanation: The BackgroundWorker class has a method called

RunWorkerCompleted, when called; it raises a DoWork event in a separate thread. When ever the background thread is complete, the component raises the RunWorkerCompleted event.

Incorrect Answers:

A: The ProgressChanged is raised when the background thread calls the ReportProgress method.

C: The WaitAny causes the current thread to block until at least one wait handle in the specified WaitHandle array is signaled as complete.

D: The WaitAll causes the current thread to block until one wait handle in the specified WaitHandle array is signaled as complete.

QUESTION 43

You are working as an application developer at Certkiller .com. The Certkiller .com network consists of a single Active Directory domain named Certkiller .com. Certkiller .com uses Visual Studio 2005 as an application platform. Certkiller .com consists of a Development department. You as the developer of Certkiller .com use a client computer named Certkiller -WS114 as developing collateral. You are busy using a BackgroundWorker component to call a method named DownloadJob in a background thread.

Which code segment is used to display a message box to alert the users when the background thread is complete?

A. if[backgroundWorker.Worker.WorkerReportsProgress ==false]

```
{  
    MessageBox.Show["The download is complete."];  
}
```

B. backgroundWorker.DoWork +=delegate

```
{  
    MessageBox.Show["The download is complete."];  
}
```

C. if [backgroundWorker.IsBusy==false]

```
{  
    MessageBox.Show["The download is complete."];  
}
```

D. backgroundWorker.RunWorkerCompleted += delegate

```
{  
    MessageBox.Show["The download is complete."];  
}
```

Answer: D

Explanation: The BackgroundWorker allow you to perform task in a background thread. The BackgroundWorker class has a method called RunWorkerAsync that raises a DoWork event.

Incorrect Answers:

A: The message only, should not be displayed. This shows whether the

BackgroundWorker should raise the ProgressChange event when the background thread calls the ReportProgress method.

B: The DoWork does not display the message. It raises the background thread to start.

C: The IsBusy shows whether the background threads are busy.

QUESTION 44

You are working as an application developer at Certkiller .com. The Certkiller .com network consists of a single Active Directory domain named Certkiller .com. Certkiller .com uses Visual Studio 2005 as an application platform. Certkiller .com consists of a Development department. You as the developer of Certkiller .com use a client computer named Certkiller -WS054 as developing collateral. You are busy using a BackgroundWorker component to execute an asynchronous operation. The job of the background thread is to call the ReportProgress method to update the foreground thread. You have handled the ProgressChanged event and set the Value property of a ProgressBar. The problem is that the ProgressBar display by no means gets updated. During the investigation you find out that the event handler that works with the ProgressChanged event never gets called. What should you do to make sure that the event handler gets called?

- A. You should call the ReportProgress method in the foreground thread.
- B. You should set the WorkerReportsProgress property to True.
- C. You should set the BackgroundWorker component to the value of the Site property returned from the ProgressBar control.
- D. You should set the BackgroundWorker component to the value of the Site property returned from Form control that host the component.

Answer: B

Explanation: The WorkerReportsProgress property shows whether the BackgroundWorker component should raise the ProgressChanged event when the background thread calls the ReportProgress method.

Incorrect Answers:

A: The BackgroundWorker should call the ReportProgress. You should not put it to the foreground.

C, D: The Site property should not be changed. It defined the binding between a control or component and its associate container.

QUESTION 45

You are working as an application developer at Certkiller .com. The Certkiller .com network consists of a single Active Directory domain named Certkiller .com. Certkiller .com uses Visual Studio 2005 as an application platform. Certkiller .com consists of a Development department. You as the developer of Certkiller .com use a client computer named Certkiller -WS013 as developing collateral. You are busy to develop a Microsoft Windows Forms application that performs long-running task that performs in the background thread. The application is of such a kind, that it does not interoperate with Component Object Model {COM}.

What should you do to configure the application so that the background thread can report the status of the task by calling the ReportProgress method of the BackgroundWorker class?

- A. You should add a ProgressBar control to the form that hosts the BackgroundWorker component.
- B. You should apply the MTAThread attribute to the Main method of the application.
- C. You should apply the STAThread attribute to the Main method of the application.
- D. You should set WorkerReportProgress property of the BackgroundWorker class to true.

Answer: D

Explanation: You need to set the WorkerReportProgress property of the BackgroundWorker class to true, which will raise the ProgressChange event whenever the ReportProgress method is called.

Incorrect Answers:

- A: The ProgressBar should not be added. This also will not report the status of the background task.
- B: The MTAThread should not be applied to the Main method. Furthermore, the application does not interoperate with COM.
- C: The STAThread should not be applied to the Main method. It is there by default.

QUESTION 46

You are working as an application developer at Certkiller .com. The Certkiller .com network consists of a single Active Directory domain named Certkiller .com. Certkiller .com uses Visual Studio 2005 as an application platform. Certkiller .com consists of a Development department. You as the developer of Certkiller .com use a client computer named Certkiller -WS065 as developing collateral. You were asked to use the BackgroundWorker component to do an asynchronous task. What should you do to define the signature of the method that will contain the code to perform the asynchronous task?

- A. You should create a method that matches the ThreadStart delegate's signature.
- B. You should create a method that matches the AsyncCallback delegate's signature.
- C. You should create a method that matches the ParameterizedThreadStart delegate's signature.
- D. You should create a method that matches the DoWorkEventHandler delegate's signature.

Answer: D

Explanation: You should create a method that matches the DoWorkEventHandler delegate's signature. The BackgroundWorker allows you to do jobs in a background thread quite then the interface thread.

Incorrect Answers:

A: The ThreadStart allows you to define a method for executing codes in separate threads. You must in this case avoid creating a method that matches the ThreadStart signature.

B: The AsyncCallback allows you to define a method that represents an asynchronous operation's callback. You must in this case avoid creating a method that matches the AsyncCallback signature.

C: The ParameterizedThreadStart allows you to define a method that represents an asynchronous operation's callback. You must in this case avoid creating a method that matches the AsyncCallback signature.

QUESTION 47

You are working as an application developer at Certkiller .com. The Certkiller .com network consists of a single Active Directory domain named Certkiller .com. Certkiller .com uses Visual Studio 2005 as an application platform. Certkiller .com consists of a Development department. You as the developer of Certkiller .com use a client computer named Certkiller -WS021 as developing collateral. You are using the Semaphore class to synchronize access to a resource pool. During an inspection you find out that an exception of type UnauthorizedAccessException is thrown when you call the OpenExisting method of the Semaphore class, which is only thrown for one user.

What should you do to stop the exception from being thrown?

- A. You should call the Demand method of an unrestricted SecurityPermission instance.
- B. You should grant the user permission to read the semaphore that protects the resource pool.
- C. You should grant the user permission to access the resource pool.
- D. You should call the Assert method of an unrestricted SecurityPermission instance.

Answer: B

Explanation: The user's permissions are granted to read the semaphore that protects the resource pool. An access control list is there to protect the Semaphores. The SetAccessControl method of the Semaphore class is there to grant the users permissions to read the semaphore.

Incorrect Answers:

- A: The Demand method is not used for an unrestricted SecurityPermission instance.
- C: The user permission is not used to access the resource to correct the problem.
- D: The SecurityPermission prevents a code from performing a stack walk past the present stack.

QUESTION 48

You are working as an application developer at Certkiller .com. The Certkiller .com network consists of a single Active Directory domain named Certkiller .com. Certkiller .com uses Visual Studio 2005 as an application platform. Certkiller .com consists of a Development department. You as the developer of Certkiller .com use a client computer named Certkiller -WS023 as developing collateral. You are busy

creating an instance of Semaphore by means of calling its constructor. While the Semaphore instance was created, you specify four resources from a resource pool and reserve the three resources. You want to call the Release method of the Semaphore instance to allocate four available resources from the resource pool. Which of the following numbers should you pass to the Release method?

- A. 3
- B. 4
- C. 1
- D. 0

Answer: A

Explanation: Every time you call the Release method, the semaphore will exit and makes a resource available. When a parameter has passed to the Release method, you indicate the number of times that the semaphore exits, which is three times.

Incorrect Answers:

B: The SemaphoreFullException can only free three resources in this case.

C: If it was one, then it would have only release one resource.

D: This number would cause an exception of type ArgumentOutOfRangeException to be thrown because the semaphore has to release one resource.

QUESTION 49

You are working as an application developer at Certkiller .com. The Certkiller .com network consists of a single Active Directory domain named Certkiller .com. Certkiller .com uses Visual Studio 2005 as an application platform. Certkiller .com consists of a Development department. You as the developer of Certkiller .com use a client computer named Certkiller -WS003 as developing collateral. You need to implement an asynchronous method to the Download method. You have the following class:

```
public class Job
{
    public void Download[]
    {
    }
}
```

Which of the following segments should you use? (Use the event-base asynchronous pattern)

- A.

```
public IAsyncResult InvokeDownload[]
{
    Return null;
}
```
- B.

```
public IAsyncResult DownloadAsync[]
{
    Return null;
```

```
}  
C. public IAsyncResult BeginDownload()  
{  
    Return null;  
}  
D. public void DownloadAsync()  
{  
    Return null;  
}
```

Answer: D

Explanation: If it is an event-based asynchronous pattern, a worker thread raises an event to signal completion of an asynchronous process. The event should have the same name of the synchronous method suffixed with "Completed".

Incorrect Answers:

A, B, C: To adhere to the pattern, you should name the method DownloadAsync. You also should not return a value from the method.

QUESTION 50

You are working as an application developer at Certkiller .com. The Certkiller .com network consists of a single Active Directory domain named Certkiller .com. Certkiller .com uses Visual Studio 2005 as an application platform. Certkiller .com consists of a Development department. You as the developer of Certkiller .com use a client computer named Certkiller -WS333 as developing collateral. You are using the following class to download jobs.

```
public class Job  
{  
    public void Download()  
    {  
    }  
}
```

You need to use the event-based asynchronous pattern to support asynchronous job downloads.

Which of the following code segments should you use to define a member of that class to signal asynchronous completion?

```
A. public bool DownloadCompleted;  
B. public void DownloadCompleted()  
{  
}  
C. public DownloadCompletedEventHandler DownloadCompleted()  
{  
    Return null;  
}  
D. public DownloadCompletedEventHandler DownloadCompleted;
```

Answer: D

Explanation: If you have the event-based asynchronous pattern, a worker thread raises an event to indicate completion of an asynchronous process. The event should have the same name of the synchronous method suffixed with "Completed".

Incorrect Answers:

A, B, C: You should not define a method or field named DownloadCompleted. An event must be defined to signal notification.

QUESTION 51

You are working as an application developer at Certkiller .com. The Certkiller .com network consists of a single Active Directory domain named Certkiller .com. Certkiller .com uses Visual Studio 2005 as an application platform. Certkiller .com consists of a Development department. You as the developer of Certkiller .com use a client computer named Certkiller -WS333 as developing guarantee. You are busy writing a code to perform an asynchronous operation. You must adjust the priority of the thread that executes the asynchronous operation. The operation is must be specified to use input data from the main thread.

What should you do to define the signature of the method that will contain the code to perform the asynchronous operation?

- A. You should create a method that matches the AsyncCallback delegate's signature.
- B. You should create a method that matches the ParameterizedThreadStart delegate's signature.
- C. You should create a method that matches the ThreadStart delegate's signature.
- D. You should create a method that matches the DoWorkEventHandler delegate's signature.

Answer: B

Explanation: You need to create a method that matches the ParameterizedThreadStart delegate's signature. This will then accept a single Object instance as a parameter.

Incorrect Answers:

A: The AsyncCallback allows you to define a method that represents an asynchronous operation's callback.

C: The parameters are not accepted by the ThreadStart. Because of this, you cannot use it to supply input data to the asynchronous operation.

D: The DoWorkEventHandler delegate's signature is supported by the BackgroundWorker. The BackgroundWorker does not adjust priority of the BackgroundWorker thread

QUESTION 52

ThreadStart threadStart = delegate

{ }

```
ParameterizedThreadStart parameterizedThreadStart = delegate[object  
args]  
{ }  
int threadPoolThreadCount = 0  
Thread thread1 = new Thread[threadStart];  
Thread thread2 = new Thread[parameterizedThreadStart];  
Thread thread3 = new Thread[threadStart];  
thread1.Start[];  
thread2.Start[null];  
thread3.Start[];  
if [thread1.IsThreadPoolThread]  
{  
threadPoolThreadCount++;  
}  
if [thread2.IsThreadPoolThread]  
{  
threadPoolThreadCount++;  
}  
if [thread3.IsThreadPoolThread]  
{  
threadPoolThreadCount++;  
}
```

What value of the threadPoolThreadCount should you identify after the code is executed?

- A. 0
- B. 2
- C. 3
- D. 1

Answer: A

Explanation: The value of the threadPoolThreadCount is set at 0. The threads that are manually made are not class as thread pool threads. The threads that are created by calling the QueueUserWorkItem method of the ThreadPool are class thread pool threads.

QUESTION 53

You are working as an application developer at Certkiller .com. The Certkiller .com network consists of a single Active Directory domain named Certkiller .com. Certkiller .com uses Visual Studio 2005 as an application platform. Certkiller .com consists of a Development department. You as the developer of Certkiller .com use a client computer named Certkiller -WS005 as developing collateral. You are busy developing a Microsoft Windows From application. This Windows Forms application will allow electrical engineers to visually design circuit boards. The users in the Development department connect to Certkiller -WS005 and download

their respective designed circuit board for the hardware they developed.

Which of the following code segments should you use to allow users to download all designed circuit boards in a background thread with Common Language Runtime to manage the thread?

A. `ParameterizedThreadStart threadStart = delegate`

```
{  
//Download the jobs  
}
```

`New Thread[threadStart].Start[null];`

B. `AsyncCallback callback = delegate`

```
{  
//Download the jobs  
}
```

`Application.OpenForms[0].BeginInvoke(callback);`

C. `ThreadStart threadStart = delegate`

```
{  
//Download the jobs  
}
```

`New Thread[threadStart].Start[];`

D. `ThreadPool.QueueUserWorkItem(delegate`

```
{  
//Download the jobs  
}
```

Answer: D

Explanation: The `QueueUserWorkItem` will allow you for execution in a thread pool.

Incorrect Answers:

A, C: The `Start` method of the thread class will create and execute a thread. The CLR does not manually create threads.

B: The parameters are not accepted by the `ThreadStart`. Because of this, you cannot use it to supply input data to the asynchronous operation.

Topic 6, C#, Developing Windows Forms Controls (7 Questions)

QUESTION 54

You are working as an application developer at Certkiller .com. The Certkiller .com network consists of a single Active Directory domain named Certkiller .com. Certkiller .com uses Visual Studio 2005 as an application platform. Certkiller .com consists of a Development department. You as the developer of Certkiller .com use a client computer named Certkiller -WS005 as developing collateral. You are busy developing a composite control. You do not want the controls to be displayed when certain conditions are met.

Which code segment should you use to write code to stop the control from being

displayed?

- A. `this.BackColor = Color, Transparent;`
- B. `this.Visible = false;`
- C. `this.SetStyle[ControlStyles.SupportTranparentBackColor, true];`
- D. `this.SetStyle[ControlStyles.Opaque, true];`

Answer: B

Explanation: The Visible control should be on false. This setting will not allow displaying.

Incorrect Answers:

- A: This will prevent the background from being displayed; however it cannot hide the entire control.
- C: This will prevent the background from being displayed; however it cannot hide the entire control.
- D: This will prevent the background from being displayed; however it cannot hide the entire control.

QUESTION 55

You are working as an application developer at Certkiller .com. The Certkiller .com network consists of a single Active Directory domain named Certkiller .com. Certkiller .com uses Visual Studio 2005 as an application platform. Certkiller .com consists of a Development department. You as the developer of Certkiller .com use a client computer named Certkiller -WS005 as developing collateral. You are busy developing a composite control, which has a read-only property named Count. Which code segment should you use to apply an attribute to the Count property to stop it from being displayed in the Visual Studio 2005 property browser?

- A. `<Category[NonBrowsable]>`
- B. `<Editor["Visible", "False"]>`
- C. `<Browsable[False]>`
- D. `[TypeConverter["Hidden"]>`

Answer: C

Explanation: This setting will indicate that the property should not be visible in the Visual Studio 2005 property browser.

Incorrect Answers:

- A: This has nothing to do with the visibility of the property.
- B: This defines an editor that is used to edit the values of the properties.
- D: This allows you to define the property.

QUESTION 56

You are working as an application developer at Certkiller .com. The Certkiller .com network consists of a single Active Directory domain named Certkiller .com.

Certkiller .com uses Visual Studio 2005 as an application platform. Certkiller .com consists of a Development department. You as the developer of Certkiller .com use a client computer named Certkiller -WS105 as developing collateral. You are busy developing a custom control, which displays the time in digital and analog formats. You need to apply the control in a class named Clock. The Clock control will be place on forms and configure the properties to show the time. Which code segment should you use to define the Clock class?

- A. public class Clock
{
}
- B. public class Clock : Component
{
}
- C. public class Clock : Control
{
}
- D. public class Clock : Timer
{
}

Answer: C

Explanation: The controls that are obtained from the Clock class are displayed on the form.

Incorrect Answers:

- A: You should not obtain it from the Clock. The controls that are obtained from the Clock class are displayed on the form.
- B: The controls that are obtained from the Clock class are displayed on the form.
- D: The controls that are obtained from the Clock class are displayed on the form.

QUESTION 57

You are working as an application developer at Certkiller .com. The Certkiller .com network consists of a single Active Directory domain named Certkiller .com. Certkiller .com uses Visual Studio 2005 as an application platform. Certkiller .com consists of a Development department. You as the developer of Certkiller .com use a client computer named Certkiller -WS205 as developing collateral. You are busy developing a custom control from a class from Control, which is not a composite control and performs all of its rendering by using GD+. What should you do to make sure that portions of the control are automatically repainted when a specific property changes?

- A. You should call the Onpaint method.
- B. You should call the Invalidate method.
- C. You should call the Update method.
- D. You should call the Refresh method.

Answer: B

Explanation: This method is overloaded to define the portions of a control that is about to be repainted.

Incorrect Answers:

A: The Invalidate method calls the Onpaint method.

C: The Update method does not allow you to specify the portions of the control that must be prepared.

D: The Refresh method does not allow you to specify the portions of the control that must be prepared.

QUESTION 58

You are working as an application developer at Certkiller .com. The Certkiller .com network consists of a single Active Directory domain named Certkiller .com. Certkiller .com uses Visual Studio 2005 as an application platform. Certkiller .com consists of a Development department. You as the developer of Certkiller .com use a client computer named Certkiller -WS105 as developing collateral. You are busy developing a custom control from a class from Control, which is not a composite control and performs all of its rendering by using GD+.

What should you do to write code to render the control, preventing other controls from modifying the rendering behavior of your control?

A. You should attach the Paint event to an event handler in the constructor and perform all rendering in the event handler.

B. You should create a Graphic instance in the contracture and perform all rendering via the Graphic instance.

C. You should override the Onpaint method and do all rendering in the overridden method.

D. You should override the InitLayout method, attach the Paint event to the event handler and do all rendering in the event handler.

Answer: C

Explanation: When you override the Onpaint method, you can render the control via the Supplied PaintEventArgs parameter.

Incorrect Answers:

A, D: The event handler is not needed. You cannot stop the other controls from attaching to the event handlers.

B: You should not create a graphic instance.

QUESTION 59

You are working as an application developer at Certkiller .com. The Certkiller .com network consists of a single Active Directory domain named Certkiller .com.

Certkiller .com uses Visual Studio 2005 as an application platform. Certkiller .com consists of a Development department. You as the developer of Certkiller .com use a

client computer named Certkiller -WS105 as developing collateral. You are busy creating an extended control deriving class from TextBox. You did override the OnPaint method of the TextBox, but it never is called.

What should you do to set or unset a flag in the ControlStyles enumeration to solve this problem?

- A. You should set the AllPaintInWmPaint flag.
- B. You should unset the UserPaint.
- C. You should unset the AllPaintInWmPaint flag.
- D. You should set the UserPaint.

Answer: D

Explanation: The UserPaint flag shows that the control paints itself then having the operating system performs the job. If the flag is not set, the OnPaint method is not called.

Incorrect Answers:

A, C: It does not matter if you set or unset the AllPaintInWmPaint flag. It shows that the control should reduce flickering the WM_ERASEBKGND window message.

B: The UserPaint flag should be set for the OnPaint method to be called.

QUESTION 60

You are working as an application developer at Certkiller .com. The Certkiller .com network consists of a single Active Directory domain named Certkiller .com. Certkiller .com uses Visual Studio 2005 as an application platform. Certkiller .com consists of a Development department. You as the developer of Certkiller .com use a client computer named Certkiller -WS105 as developing collateral. You are busy creating an extended control deriving class from Button.

What should you do to render your control with an oval shape which must prevent other control from modifying the rendering behavior of your control?

- A. You should override the OnPaint method and call the base implementation and render the control.
- B. You should override the OnPaintBackground method and render the control but not call the base implementation.
- C. You should override the OnPaint method and render the control but not call the base implementation.
- D. You should override the OnPaintBackground method and call the base implementation and render the control.

Answer: C

Explanation: The UserPaint method is used whenever regions of a control are invalidated. The base OnPaint method raise the Paint event.

Incorrect Answers:

A: You should not call the OnPaint method. This would raise the OnPaint method.
B, D: You should not override the OnPaintBackground method.

Topic 7, C#, Configuring and Deploying Applications (9 Questions)

QUESTION 61

You are working as an application developer at Certkiller .com. The Certkiller .com network consists of a single Active Directory domain named Certkiller .com. Certkiller .com uses Visual Studio 2005 as an application platform. Certkiller .com consists of a Development department. You as the developer of Certkiller .com use a client computer named Certkiller -WS222 as developing collateral. You are busy developing a Microsoft Windows Forms application that uses the ClickOnce technology. You did specify several assemblies. The assemblies are used by the application as optional so that they do not get deployed initially. The application is specified to loads these assemblies dynamically.

What should you do to modify the application so that the assemblies are automatically downloaded when the application requires them?

- A. You should handle the AssemblyResolve event of the AppDomain class and call the DownloadFileGroup method of the ApplicationDeployment class.
- B. You should handle the TypeResolve event of the AppDomain class and call the DownloadFileGroup method of the ApplicationDeployment class.
- C. You should handle the AssemblyLoad event of the AppDomain class and call the Update method of the ApplicationDeployment class.
- D. You should handle the ResourceResolve event of the AppDomain class and call the Update method of the ApplicationDeployment class.

Answer: A

Explanation: The AssemblyResolve event is raised when the current application domain fails to load an assembly requested by the application. You need to specify the name of the deployment group to which the assembly belongs.

Incorrect Answers:

- B: The TypeResolve is raised after an assembly is successfully loaded.
- C: The AssemblyLoad is raised after an assembly is loaded.
- D: The ResourceResolve event is raised when the current application domain fails to load a resource.

QUESTION 62

You are working as an application developer at Certkiller .com. The Certkiller .com network consists of a single Active Directory domain named Certkiller .com. Certkiller .com uses Visual Studio 2005 as an application platform. Certkiller .com consists of a Development department. You as the developer of Certkiller .com use a client computer named Certkiller -WS222 as developing collateral. You are busy developing a Microsoft Windows Forms application named TestGradeBook to deployment server.

What should you do to use a batch file to programmatically change the update requirement of the application?

- A. You should use the Manifest Generation and Editing Graphical Tool {MageUI.exe} to change the GradeBook.application settings.
- B. You should use the Manifest Generation and Editing Tool {Mage.exe} to change the GradeBook.exe.manifest settings.
- C. You should use the Manifest Generation and Editing Tool {Mage.exe} to change the GradeBook.application settings.
- D. You should use the Manifest Generation and Editing Graphical Tool {MageUI.exe} to change the GradeBook.exe.manifest settings.

Answer: C

Explanation: The Mage.exe is used to change the GradeBook.application settings. It also helps to manage a published application.

Incorrect Answers:

A: The MageUI.exe provides a graphical user interface for managing a published application.

B, D: The GradeBook.exe cannot change the update requirements. The GradeBook.exe.manifest allows you to specify an application's associated files.

QUESTION 63

You are working as an application developer at Certkiller .com. The Certkiller .com network consists of a single Active Directory domain named Certkiller .com. Certkiller .com uses Visual Studio 2005 as an application platform. Certkiller .com consists of a Development department. You as the developer of Certkiller .com use a client computer named Certkiller -WS132 as developing collateral. You are busy developing a Microsoft Windows Forms application named Certkiller GradeBook to deployment server. You first deployed the application so that it supports offline use. What should you do to change the application so that it is only available when the Certkiller .com user's computer is connected to the Internet?

- A. You should use the Manifest Generation and Editing Graphical Tool {MageUI.exe} to change the GradeBook.application settings.
- B. You should use the Manifest Generation and Editing Tool {Mage.exe} to change the GradeBook.exe.manifest settings.
- C. You should use the Manifest Generation and Editing Graphical Client Tool {MageUI.exe} to change the GradeBook.exe.manifest settings.
- D. You should use the Manifest Generation and Editing Tool {Mage.exe} to change the GradeBook.application settings.

Answer: A

Explanation: The Mage.exe is used to change the GradeBook.application settings. It also helps to manage a published application.

Incorrect Answers:

B: The MageUI.exe provides a graphical user interface for managing a published application.

C, D: The GradeBook.exe cannot change the update requirements. The GradeBook.exe.manifest allows you to specify an application's associated files. It also cannot change the launch requirements of the application with the GradeBook.exe.manifest file.

QUESTION 64

You are working as an application developer at Certkiller .com. The Certkiller .com network consists of a single Active Directory domain named Certkiller .com. Certkiller .com uses Visual Studio 2005 as an application platform. Certkiller .com consists of a Development department. You as the developer of Certkiller .com use a client computer named Certkiller -WS002 as developing collateral. You are busy developing a Setup project.

What should you do to configure the project so that the built package can be installed on 32-bit and 64-bit computers?

- A. You should set the TargetPlatform property to x64.
- B. You should set the TargetPlatform property to x86.
- C. You should set the Version property to 64.
- D. You should set the Version property to 32.

Answer: B

Explanation: The x86 setting allows a package to be installed on 32-bit and 64-bit computers.

Incorrect Answers:

A: The x86 setting will cause an error to be raised when the package is installed on a 32-bit system..

C, D: The Version property identifies the version of the installer package itself.

QUESTION 65

You are working as an application developer at Certkiller .com. The Certkiller .com network consists of a single Active Directory domain named Certkiller .com. Certkiller .com uses Visual Studio 2005 as an application platform. Certkiller .com consists of a Development department. You as the developer of Certkiller .com use a client computer named Certkiller -WS005 as developing collateral. You are busy developing a Microsoft Windows Forms application. You want the users to download or run a Microsoft Windows Installer package from Certkiller .com's Web site to install the application.

Which of the following deployment project should you create?

- A. Setup Project
- B. CAB Project
- C. Merge Module Project

D. Web Setup Project

Answer: A

Explanation: The Setup Project allows you to install Window-based applications.

Incorrect Answers:

B: The CAB Project is used to package components.

C: TheMerge Module Project allows you to install shared components.

D: The Web Setup Project allows you to install Web applications.

QUESTION 66

You are working as an application developer at Certkiller .com. The Certkiller .com network consists of a single Active Directory domain named Certkiller .com. Certkiller .com uses Visual Studio 2005 as an application platform. Certkiller .com consists of a Development department. You as the developer of Certkiller .com use a client computer named Certkiller -WS005 as developing collateral. You are busy developing a Microsoft Windows Forms application. The applications that you are developing are using shared assemblies that must be installed into the Global Assembly Cache (GAC).

What should you do to develop a deployment strategy?

A. You should create a CAB project that contains the application.

B. You should use the XCOPY to deploy the application.

C. You should use the ClickOnce to deploy the application.

D. You should create a Window Forms Setup application

Answer: D

Explanation: The Window Forms Setup application can accomplish this by creating and configuring a Setup project to deploy a Microsoft Windows Installer package.

Incorrect Answers:

A: The CAB Project is used to package components.

B: TheXCOPY cannot install assemblies into the GAC by using XCOPY.

C: The ClickOnce cannot be used to install shared assemblies into the GAC.

QUESTION 67

You are working as an application developer at Certkiller .com. The Certkiller .com network consists of a single Active Directory domain named Certkiller .com. Certkiller .com uses Visual Studio 2005 as an application platform. Certkiller .com consists of a Development department. You as the developer of Certkiller .com use a client computer named Certkiller -WS009 as developing collateral. You are busy developing a Microsoft Windows Forms application. You then change the default configuration to package files as loose uncompressed files. You also need to make sure that the .NET Framework 2.0 redistributable component exits after you build the Setup project.

Which of the following components should look for in the Setup project's output

directory?

- A. RegSvcs.exe
- B. Dotnetfx.exe
- C. InstallUtil.exe
- D. RegAsm.exe

Answer: B

Explanation: The Dotnetfx.exe needs to exist in the output directory, which uses the .NET Framework 2.0 redistributable package.

Incorrect Answers:

- A: The RegSvcs.exe is the .NET Services Installation tool. It allows you to register an assembly for use with COM+.
- C: The InstallUtil.exe allows you to execute custom installers that are associated with an assembly. .
- D: The RegAsm.exe allows you to register an assembly for use with COM+.

QUESTION 68

You are working as an application developer at Certkiller .com. The Certkiller .com network consists of a single Active Directory domain named Certkiller .com. Certkiller .com uses Visual Studio 2005 as an application platform. Certkiller .com consists of a Development department. You as the developer of Certkiller .com use a client computer named Certkiller -WS209 as developing collateral. You are busy creating a class that derives from Installer. The class that you created is used by Microsoft Windows Forms application to install a custom component which uses an existing Microsoft Access database.

Which exception type should you use if the database does not exist at installation time and you need to throw an exception and have the installation rolled back?

- A. You should install InstallException
- B. You should install ApplicationException
- C. You should install SqlException
- D. You should install FileNotFoundException

Answer: A

Explanation: The InstallException passes information to the Microsoft Windows Installer and causes the installation to be rolled back.

Incorrect Answers:

- B: The ApplicationException will not cause the installation to roll back.
- C: The SqlException will not cause the installation to roll back.
- D: The FileNotFoundException will not cause the installation to roll back.

QUESTION 69

You are working as an application developer at Certkiller .com. The Certkiller .com

network consists of a single Active Directory domain named Certkiller .com. Certkiller .com uses Visual Studio 2005 as an application platform. Certkiller .com consists of a Development department. You as the developer of Certkiller .com use a client computer named Certkiller -WS209 as developing collateral. You are busy creating a class that derives from Installer. The class that you created is used by Microsoft Windows Forms setup application to install a custom component which uses an existing Microsoft SQL Server 2005 database. The component throws a SQLException instance when it cannot connect to the database during installation. What should you do to automatically rollback the installation is the component throws a SQLException instance?

- A. You should catch the SQLException instance and create an instance of InstallException and pass the SQLException instance as the inner exception and then throw the InstallException instance.
- B. You should catch the SQLException instance and create an instance of ApplicationException and pass the SQLException instance as the inner exception and then throw the ApplicationException instance.
- C. You should catch the SQLException instance and re-throw it.
- D. You do not need to catch the SQLException instance as it will propagate up the call stack.

Answer: A

Explanation: This action will pass information to the Microsoft Windows Installer and causes the installation to be rolled back.

Incorrect Answers:

- B: The ApplicationException will not cause the installation to roll back.
- C: The SQLException will not cause the installation to roll back.
- D: The FileNotFoundException will not cause the installation to roll back.

Topic 8, VB, Creating a UI for a Windows Forms Application by Using Standard Controls (12 Questions)

QUESTION 70

You are working as an application developer at Certkiller .com. The Certkiller .com network consists of a single Active Directory domain named Certkiller .com. Certkiller .com uses Visual Studio 2005 as an application platform. Certkiller .com consists of a Development department. You as the developer of Certkiller .com use a client computer named Certkiller -WS001 as developing collateral. You have received instructions to make sure that the PictureBox control's properties cannot be changed with a logo that you have added to the PictureBox in the designer of the form base. Before the time you have added a form to the Microsoft Windows Forms Control Library project and add a PictureBox control to the form. The form is presenting CertKiller.com's logo. What action should you take?

- A. You should set the Locked property to False.
- B. You should set the Locked property to True.
- C. You should set the Modifiers property to Private.
- D. You should set the Modifiers property to Protected.

Answer: C

Explanation:

When you set the Modifiers property to Private, the value will show that only the base form can modify the control.

Incorrect Answers:

- A: You should not set it to False, because the control can be moved and resized.
- B: If you set the property to True the control cannot be removed or resized. .
- D: If you set the Modifiers property to Protected, the value will show that the base form and any of the form yet to come can modify the control.

QUESTION 71

You are working as an application developer at Certkiller .com. The Certkiller .com network consists of a single Active Directory domain named Certkiller .com. Certkiller .com uses Visual Studio 2005 as an application platform. Certkiller .com consists of a Development department. You as the developer of Certkiller .com use a client computer named Certkiller -WS001 as developing collateral. You have just included a DateTimePicker control to a form. You then set the format property to Time. During the course of the day, you check how the DateTimePicker control is working, and learnt that it does not allow the Certkiller .com users to change the selected time.

What should you do to change the control so that it will allow the Certkiller .com users to change the selected time?

- A. You should set the ShowUpDown property to True.
- B. You should set the ShowSelectBox property to True.
- C. You should set the Visible property to False.
- D. You should set the Checked property to False.

Answer: A

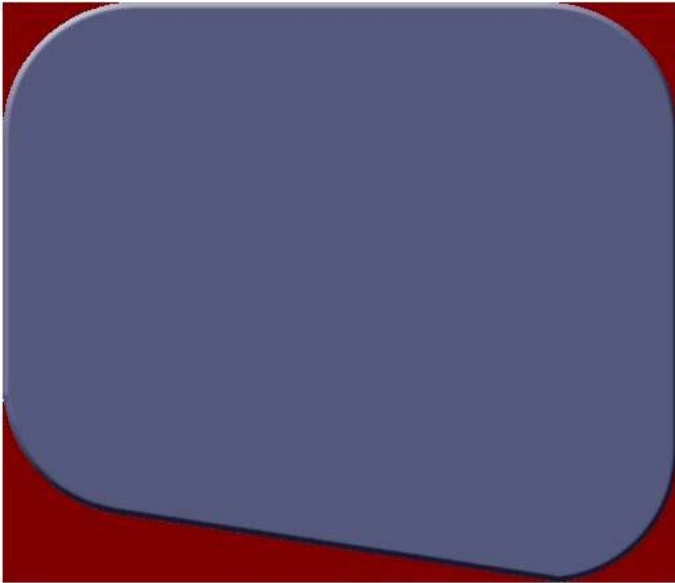
Explanation: The ShowUpDown property is by default set on False. You should set it on True. On False it will show the DateTimePicker must simulate a drop-down control. This setting will allow the users to set the MonthCalendar. If it is set to True the users can select the time.

Incorrect Answers:

- B: The ShowSelectBox will not resolve the problem. This will show if a CheckBox should be displayed on the DateTimePicker.
- C: If you set the Visible property to False, it will hide the DateTimePicker. .
- D: You should not set the Checked property to False. If this is set on True, a CheckBox control will be displayed on the DateTimePicker.

QUESTION 72

You are working as an application developer at Certkiller .com. The Certkiller .com network consists of a single Active Directory domain named Certkiller .com. Certkiller .com uses Visual Studio 2005 as an application platform. Certkiller .com consists of a Development department. You as the developer of Certkiller .com use a client computer named Certkiller -WS001 as developing collateral. The manager of Certkiller .com wants to have a borderless form with the background shown in the exhibit.



When the form is view, the manager named Rory Allen does not want the maroon area to be visible. He only wants the blue to be visible when the form is displayed. Which of the following code segments should be used?

- A. `Me.TransparencyKey = Color.Maroon;`
- B. `Me.BackColor = Color.Maroon;`
- C. `Me.TransparencyKey = Color.CornflowerBlue`
- D. `Me.BackColor = Color.Transparent;`

Answer: A

Explanation: The `TransparencyKey = Color.Maroon` specify the color that the transparent represents the area on the form. With this setting the blue will respond to the mouse.

Incorrect Answers:

- B: You should not use the `BackColor = Color.Maroon`. This will determine the background color of the form.
- C: You should not use this code segment. The manager does not want the blue area to be transparent.
- D: You should not use the `BackColor = Color.Transparent`. The manager does not want the background to be transparent.

QUESTION 73

You are working as an application developer at Certkiller .com. The Certkiller .com network consists of a single Active Directory domain named Certkiller .com. Certkiller .com uses Visual Studio 2005 as an application platform. Certkiller .com consists of a Development department. You as the developer of Certkiller .com use a client computer named Certkiller -WS020 as developing collateral.

You have configured three columns to a form and add a TableLayoutPanel to the form. You want the two side columns to have a fix width of 200 pixels each and anchor the four edges of the form to the control. A Certkiller .com manager wants the center column to fill the remaining space, when ever the form is resized. You need to change the ColumnStyle instance that represents the center column?

How should you set the ColumnStyle instance's Size Type property?

- A. Set it to AutoSize and the Width property to 100F.
- B. Set it to Absolute and the Width property to 100F.
- C. Set it to Percent and the Width property to 100F.
- D. Set it to AutoSize and the Width property to 0F.

Answer: C

Explanation: This setting will show that the column should fill the remaining space.

Incorrect Answers:

- A: This setting will allow the column to be sized enough so that not any of its child controls are clipped. In this setting the middle will not occupy the remaining free space.
- B: If you set it to Absolute, the value of the Width property will show the number of pixels for the column.
- D: You need to set the the ColumnStyle instance's Size Type property to AutoSize and the Width property to 100F.

QUESTION 74

You are working as an application developer at Certkiller .com. The Certkiller .com network consists of a single Active Directory domain named Certkiller .com. Certkiller .com uses Visual Studio 2005 as an application platform. Certkiller .com consists of a Development department. You as the developer of Certkiller .com use a client computer named Certkiller -WS020 as developing collateral. You have added a SplitContainer control named Certkiller SplitContainer to a form. You then left the control to the default properties. To the right-most container of the SplitContainer control, you need to add a PropertyGrid.

Which of the following code segments should you use?

- A. `Dim propertyGrid As PropertyGrid = New PropertyGrid`
`Dim rightPanel As Panel = _`
`CType[Certkiller SplitContainer.GetContainerControl, Panel]`
`rightPanel.Controls.Add[propertyGrid]`
- B. `Dim propertyGrid As PropertyGrid = New PropertyGrid`
`Certkiller SplitContainer.Container.Add[propertyGrid, "RightPanel"]`

C. Dim propertyGrid As PropertyGrid = New PropertyGrid
Dim rightPanel As Panel = _
CType[Certkiller SplitContainer.GetNextControl[propertyGrid, True], Panel]
rightPanel.Controls.Add[propertyGrid]
D. Dim propertyGrid As PropertyGrid = New PropertyGrid
Certkiller SplitContainer.Panel2.Controls.Add[propertyGrid]

Answer: D

Explanation: An area can be divided into two containers, which is separated by a movable bar, if you use the SplitContainer control. When the two Panels are created, the left one is the Panel1 and the right is Panel2. You are adding a panel so it will be on the right. You then need to specify Panel2.

Incorrect Answers:

A, B, C: You should not use the Add method of the SplitContainer.Container to add the PropertyGrid. You also should not pass a PropertyGrid instance to the GetNextControl method to return a Panel instance. This will actually retrieve the next tab-ordered control given the current control. You also should not call the GetContainerControl method to return a Panel instance. This will return the logical container of the SplitContainer control.

QUESTION 75

You are working as an application developer at Certkiller .com. The Certkiller .com network consists of a single Active Directory domain named Certkiller .com. Certkiller .com uses Visual Studio 2005 as an application platform. Certkiller .com consists of a Development department. You as the developer of Certkiller .com use a client computer named Certkiller -WS020 as developing collateral. You are busy to develop a Microsoft Windows Forms exam delivery application. This is going to be used to access the content of the exam via the Internet. A WebBrowser named testbrowser is added to the control to a form named Certkiller Form, which is define as follows:

```
<PermissionSet[SecurityAction.Demand, Name:="FullTrust"]> _
```

```
<System.Runtime.InteropServices.ComVisible[true]> _
```

```
Partial Public Class Certkiller Form
```

```
Inherits Form
```

```
Public Sub New[]
```

```
InitializeComponent[]
```

```
End Sub
```

```
Public Sub Expire[]
```

```
End Sub
```

```
End Class
```

The JavaScript-based timer that is used by the Web site for the exam has a function to inform the exam delivery application when the time has expired for the exam, which is the following:

```
window.external.Expire[];
```

What should you do to make sure that the Expire method of Certkiller Form is called

when the JavaScript function is carry out?

- A. You should set the Document.DomDocument property of the browser instance to the current instance of the Certkiller Form class.
- B. You should set the ObjectForScripting property of the browser instance to the current instance of the Certkiller Form class.
- C. You should call the AttachEventHandler of the Document property of the browser instance.
- D. You should call the ExecCommand method of the Document property of the browser instance.

Answer: B

Explanation: You must set the ObjectForScripting for the browser instance to the current instance of the Certkiller Form class.

Incorrect Answers:

- A: The property of the Document.DomDocument represents the true DOM object of an HTML document.
- C: TheAttachEventHandler allows you to attach a HTML Document Object Model event to an event handler.
- D: The ExecCommand method allows you to execute commands against DOM documents.

QUESTION 76

You are working as an application developer at Certkiller .com. The Certkiller .com network consists of a single Active Directory domain named Certkiller .com. Certkiller .com uses Visual Studio 2005 as an application platform. Certkiller .com consists of a Development department. You as the developer of Certkiller .com use a client computer named Certkiller -WS003 as developing collateral. You have received instructions to make sure that the PictureBox will display dynamically loaded images.

Which property will display a static image if any dynamic image fails to load?

- A. BackgroundImage
- B. Image
- C. ErrorImage
- D. InitailImage

Answer: C

Explanation: The ErrorImage property specifies the image that should be displayed. This will happened only if the image that you are trying to load dynamically fails.

Incorrect Answers:

- A: The BackgroundImage property specifies a background image which is used by the control.

B: TheImage property specifies the image you want the PictureBox control to display.
D: The InitailImage specifies the image you want the PictureBox control to display while the other one is loading.

QUESTION 77

You are working as an application developer at Certkiller .com. The Certkiller .com network consists of a single Active Directory domain named Certkiller .com. Certkiller .com uses Visual Studio 2005 as an application platform. Certkiller .com consists of a Development department. You as the developer of Certkiller .com use a client computer named Certkiller -WS020 as developing collateral. You are developing a Web service for new updates to query automatically, by use of a Microsoft Windows Forms application. You then add a NotifyIcon component named Certkiller notify to the application's main form. Whenever a new update is available you want the following balloon tip to display as seen in the exhibit for 5 seconds.



Which segment should you use to write a code to download the updates if the users click the balloon tip?

- A. Private Sub Show.BallonTip[]
Certkiller notify.ShowBallonTip[5000]
Certkiller notify.BalloonTipIcon = ToolTipIcon.Info
Certkiller .Balloon TipTitle = "New Update Available"
Certkiller .BalloonTipText = "Click here to download"
AddHandler Certkiller notify.Click,AddressOf Handler
End Sub
Public Sub Handler[ByVal sender As Object, ByVal e As EventArgs]
'Download the updates
End Sub
- B. Private Sub Show.BallonTip[]
Certkiller notify.BalloonTipIcon = ToolTipIcon.Info
Certkiller .Balloon TipTitle = "New Update Available"
Certkiller .BalloonTipText = "Click here to download"
AddHandler Certkiller notify.Click,AddressOf Handler
Certkiller notify.ShowBallonTip[5000]
End Sub
Public Sub Handler[ByVal sender As Object, ByVal e As EventArgs]
'Download the updates
End Sub
- C. Public Sub Handler[ByVal sender As Object, ByVal e As EventArgs]
'Download the updates
End Sub
Private Sub Show.BallonTip[]

```
AddHandler Certkiller notify.BalloonTipClicked,AddressOf Handler
Certkiller notify.ShowBallonTip[5000, "New Update Available", _
"Click here to download", ToolTipIcon.Info];
End Sub
D. Private Sub Show.BallonTip[]
Certkiller notify.ShowBallonTip[5, "New Update Available", _
"Click here to download", ToolTipIcon.Info]
AddHandler Certkiller notify.BalloonTipClicked,AddressOf Handler
End Sub
Public Sub Handler[ByVal sender As Object, ByVal e As EventArgs]
'Download the updates
End Sub
```

Answer: C

Explanation: You should use an event handler, attach the BalloonTipClicked to the event and call the ShowBalloon Tip method of the NotifyIcon class. When a user clicks a balloon tip, a BalloonTipClicked event is raised.

Incorrect Answers:

A, B, D: You should not attach the BalloonTipClicked even to an event handler after you have called the ShowBalloonTip method. Also note that the event is raised when the icon is clicked and not the balloon tip.

QUESTION 78

You are working as an application developer at Certkiller .com. The Certkiller .com network consists of a single Active Directory domain named Certkiller .com. Certkiller .com uses Visual Studio 2005 as an application platform. Certkiller .com consists of a Development department. You as the developer of Certkiller .com use a client computer named Certkiller -WS020 as developing collateral. You are busy adding a MenuStrip control, which has an instance of a ToolStripMenuItem item named testjobItem, to a form in a Microsoft Windows Forms application. This item's display text is Job. You have received instructions to add two menu items to the Job menu item. The first item's display text should be Create New Job, and the second one is Run Job.

Which code segment should you use to programmatically add the two menu items?

```
A. Dim createNewJobItem As ToolStripMenuItem = _
New ToolStripMenuItem["Create New Job"]
Dim runJobItem As ToolStripMenuItem = New ToolStripMenuItem ["Run Job"]
Dim item[] As ToolStripMenuItem = _
New ToolStripMenuItem[] {create NewJobItem, runJobItem}
jobItem.DropDownItem.AddRange[Items]
B. Dim createNewJobItem As ToolStripMenuItem = _
New ToolStripMenuItem["Create New Job"]
Dim runJobItem As ToolStripMenuItem = New ToolStripMenuItem ["Run Job"]
jobItem.Container.Add[createNewJobItem]
```



```
jobItem.Container.Add[runJobItem]
C. Dim createNewJobItem As ToolStripMenuItem = _
  New ToolStripMenuItem["Create New Job"]
  Dim runJobItem As ToolStripMenuItem = New ToolStripMenuItem ["Run Job"]
  Dim item[] As ToolStripMenuItem = _
    New ToolStripMenuItem[] {create NewJobItem, runJobItem}
  jobItem.Owner.Items.AddRange(items]
D. Dim createNewJobItem As ToolStripMenuItem = _
  New ToolStripMenuItem["Create New Job"]
  Dim runJobItem As ToolStripMenuItem = New ToolStripMenuItem ["Run Job"]
  jobItem.Owner.Items.Add[create NewJobItem]
  jobItem.Owner.Items.Add[runJobItem]
```

Answer: C

Explanation:

For the jobItem instance you should call the AddRange. The property of the DropDownItems represents a collection of child items of the jobItem instance, which allows you to add the two items to the job menu item.

Incorrect Answers:

A: This property returns an instance of IContainer, which represents a logical container for other components.

B: TheOwner property returns the Menu script instance that owns the ToolStripMenuItem instance.

D: This action will add the two new menu at the same level as the Job menu item.

QUESTION 79

You are working as an application developer at Certkiller .com. The Certkiller .com network consists of a single Active Directory domain named Certkiller .com. Certkiller .com uses Visual Studio 2005 as an application platform. Certkiller .com consists of a Development department. You as the developer of Certkiller .com use a client computer named Certkiller -WS020 as developing collateral. You were busy with a task to add a ContextMenuStrip control to a form.

What should you do to display a custom control as a menu item of the ContextMenuStrip control?

- A. Add a ToolStripContainer control to the form and add the custom control to the Controls collection residing on the toolStripContainer control. You should then add the ContextMenuStrip control to the controls of the ToolStripContainer control.
- B. Of ToolStripControlHost, create an instance and specify your custom control instance as a parameter to the constructor. You should then add the ToolStripControlHost instance to the Items collection of the ContextMenuStrip control.
- C. Add a ToolStripContainer control to the form and add the custom control to the Controls collection residing on the toolStripContainer control. You should then add the ToolStripContainer control to the controls of the ContextMenuStrip controls.
- D. Of ToolStripControlHost, create an instance and specify your custom control instance

as a parameter to the constructor. You should then add the ContextMenuStrip controls to the collection of the ToolStripControlHost instance.

Answer: B

Explanation:

The ToolStripControlHost class is used to host a custom control as a menu item in the ContextMenuStrip. You should also pass the custom control instance as the parameter to the constructor.

Incorrect Answers:

A, B, C: The ToolStripContainer should not be used to reach your goal. Furthermore, you cannot host a ToolStripContainer control as the menu item in a ContextMenuStrip controls.

QUESTION 80

You are working as an application developer at Certkiller .com. The Certkiller .com network consists of a single Active Directory domain named Certkiller .com. Certkiller .com uses Visual Studio 2005 as an application platform. Certkiller .com consists of a Development department. You as the developer of Certkiller .com use a client computer named Certkiller -WS103 as developing collateral. A Certkiller .com manager named Andy Booth has asked you to develop a custom control that exposes a custom event. The custom event should be of such a caliber that the event handler for the event is automatically added to the code when you double-click the control in the designer.

How should you configure the control?

- A. Apply the DefaultEvent attribute to the class that presents the custom control and specify the name of the event as a parameter to the attribute.
- B. Override the OnDoubleClick method on the Control class and call the AddEventHandler method of the EventDescriptor class.
- C. Override the OnDoubleClick method on the Control class and call the AddEventHandler method of the EventArgs class.
- D. Apply the DefaultEvent attribute to the class that presents the custom control and specify the name of the event handler method as a parameter to the attribute.

Answer: A

Explanation: The DefaultEvent attribute specifies the name of the event for which an event handler should be created, when double-clicking the control in the designer.

Incorrect Answers:

B: You should not do this. This allows you to programmatically attach each event handler to an event, discovered via reflection.

C: Doing this, will allow you to programmatically attach each event handler to an event, discovered via reflection. You then cannot use this to generate a code for the event.

QUESTION 81

You are working as an application developer at Certkiller .com. The Certkiller .com network consists of a single Active Directory domain named Certkiller .com. Certkiller .com uses Visual Studio 2005 as an application platform. Certkiller .com consists of a Development department. You as the developer of Certkiller .com use a client computer named Certkiller -WS133 as developing collateral. A Certkiller .com manager named Andy Booth has asked you to create a custom control. You want to custom control to take action when a user presses the Alt+D keys. It must be of such a nature that it allows you to prevent other control from receiving instructions that the Alt+D keys are pressed. What should you do?

- A. Handle the KeyDown event.
- B. Override the OnKeyDown method.
- C. Override the OnKeyPress method.
- D. Handle the KeyPress event.

Answer: B

Explanation: The OnKeyDown method specifies a KeyEventArgs instance as a parameter. The KeyEventArgs class also contains a Modifier keys that were pressed.

Incorrect Answers:

A: This will stop other controls from getting instructions that the Alt+D keys were pressed.

C: The OnKeyPress is invoked when you press a key. Overriding the OnKeyPress will not allow you to find the combination of the modifier keys that was pressed.

D: The KeyPress event is raised when a key is pressed. This will not allow you to find the combination of the modifier keys that was pressed.

Topic 9, VB, Integrating Data in a Windows Forms Application (10 Questions)

QUESTION 82

You are working as an application developer at Certkiller .com. The Certkiller .com network consists of a single Active Directory domain named Certkiller .com. Certkiller .com uses Visual Studio 2005 as an application platform. Certkiller .com consists of a Development department. You as the developer of Certkiller .com use a client computer named Certkiller -WS006 as developing collateral. You have called a stored procedure that returns a row set that has data about electrical chips. You then load the part data in a DataSet instance named testDataSet. The DataSet has a single DataTable instance. The DataTable instance's TableName property is set to Part.

Which code segment should you use to display the part data in a DataGridView control named testDataGridView?

- A. testDataGridView.DataSource = testDataSet.Tables[0]

testdataGridView.DataMember = "Part"
B. testdataGridView.DataSource = testdataSet. Tables ["Part"]
testdataGridView.DataMember = "DataTable"
C. testdataGridView.DataSource = testdataSet
testdataGridView.DataMember = "Part"
D. testdataGridView.DataSource = testdataSet
testdataGridView.DataMember = "TableName.Part"

Answer: C

Explanation: To obtain your objective you should set the DataGridView control DataSource property to the DataSet instance. You also should set the DataGridView control DataSource property to theDataMember property to part.

Incorrect Answers:

A, B, D: It is not good if you set the DataMember property if you set eh DataSource property to the DataTable instance which signifies the Part data. Furthermore, you should not set the DataMember property to TableName.Part.

QUESTION 83

You are working as an application developer at Certkiller .com. The Certkiller .com network consists of a single Active Directory domain named Certkiller .com. Certkiller .com uses Visual Studio 2005 as an application platform. Certkiller .com consists of a Development department. You as the developer of Certkiller .com use a client computer named Certkiller -WS003 as developing collateral. You are busy adding a TextBox control named Certkiller TextBox to a form. You are doing this by dragging a Contact field from the Data Sources window to the form. The data of the Text properties of the Certkiller TextBox is part of the Contact field. To navigate the records in a data source, you added two Button controls to the form. Which code segment should you use to programmatically move the next record and display the new value of the Certkiller TextBox's Contact field when the Certkiller .com users click one of the Button controls?

A. Dim binding As Binding = Certkiller TextBox.DataBindings["Text"]
binding.BindingManagerBase.Position += 1
B. Dim binding As Binding = Certkiller TextBox.DataBindings["Contact"]
binding.BindingManagerBase.Position += 1
C. Certkiller TextBox.BindingContext["Text"].Position += 1
D. Certkiller TextBox.BindingContext["Contact"].Position += 1

Answer: A

Explanation: The Windows Forms control has a DataBindings property that represents a collection of Binding instances. When data source members change, the Binding class allows a control's property to be updated automatically.

Incorrect Answers:

B, C, D: When you pass the value Contact as the parameter to the DataBindings

property, you should not get a Binding instance ManagerBase instance. Furthermore you should not pass the name of the property as a parameter to the BindingContext property.

QUESTION 84

You are working as an application developer at Certkiller .com. The Certkiller .com network consists of a single Active Directory domain named Certkiller .com. Certkiller .com uses Visual Studio 2005 as an application platform. Certkiller .com consists of a Development department. You as the developer of Certkiller .com use a client computer named Certkiller -WS006 as developing collateral. You are busy adding a ComboBox control name testComboBox to a form.

Which code segment should you use to populate the ComboBox with a list of valid Microsoft SQL Server instances which is registered on the system where the application is running?

```
A. Dim dataTable As DataTable = SqlDataSourceEnumerator.Instance.GetDataSource[]
testComboBox.DataSource = dataTable
testComboBox.DisplayMember = "{ServerName}\{InstanceName}"
testComboBox.ValueMember = "InstanceName"
testComboBox.FormatString = "{0}{1}"

B. Dim dataTable As DataTable = SqlDataSourceEnumerator.Instance.GetDataSource[]
Dim row As DataRow
For Each row In dataTable.Rows
Dim dataSource As String = CType[row["ServerName"], String]
If row["InstanceName"] IsNot DBNull.Value Then
dataSource += string.Format("{0}",row["ServerName"])
End If
testComboBox.Items.Add(dataSource)
Next

C. Dim dataTable As DataTable = SqlDataSourceEnumerator.Instance.GetDataSource[]
testComboBox.DataSource = dataTable
testComboBox.DisplayMember = "ServerName"
testComboBox.ValueMember = "InstanceName"

D. Dim dataTable As DataTable = SqlDataSourceEnumerator.Instance.GetDataSource[]
Dim row As DataRow
For Each row In dataTable.Rows
Dim dataSource As String = CType[row["InstanceName"], String]
If row["InstanceName"] IsNot DBNull.Value Then
dataSource += string.Format("{0}",row["ServerName"])
End If
testComboBox.Items.Add(dataSource)
Next
```

Answer: B

Explanation: The SqlDataSourceEnumerator class permits you to enumerate registered SQL server instances. If you want to get hold of the instance, you should

call the GetDataSource method. This will return an instance of four columns.

Incorrect Answers:

A, C, D: You do not need to set the DataSource property of testComboBox to the DataTable instance returned from GetDataSource. This will not display the values from the ServerName and InstanceName field as a single value.

QUESTION 85

You are working as an application developer at Certkiller .com. The Certkiller .com network consists of a single Active Directory domain named Certkiller .com. Certkiller .com uses Visual Studio 2005 as an application platform. Certkiller .com consists of a Development department. You as the developer of Certkiller .com use a client computer named Certkiller -WS005 as developing collateral. One of the assistant application developers named Rory Allen were asked to execute two SQL commands which can update the data in separate Microsoft SQL Server 2005 databases. When ever the second command fails, the first command should be rolled back.

What should Rory Allen do?

- A. Execute both the commands within a single TransactionScope block and call the Complete method of the TransactionScope instance if both commands execute successfully.
- B. Execute both the commands in separate TransactionScope block and call the Complete method of the second TransactionScope instance if both commands execute successfully.
- C. Execute both the commands within a single TransactionScope block and call the Complete method of the TransactionScope instance if each command executed successfully.
- D. Execute both the commands in separate TransactionScope block and call the Complete method of the TransactionScope instance if each command executed successfully.

Answer: A

Explanation: Both of the commands should be executed within a single TransactionScope block. This will allow both of the commands to execute within the same context of the same transaction.

Incorrect Answers:

- B, D: You should not execute each command in a separate TransactionScope block. Both of the commands should be executed within a single TransactionScope block.
- C: Before the second command succeeds, you should not call the Complete method.

QUESTION 86

You are working as an application developer at Certkiller .com. The Certkiller .com network consists of a single Active Directory domain named Certkiller .com. Certkiller .com uses Visual Studio 2005 as an application platform. Certkiller .com consists of a Development department. You as the developer of Certkiller .com use a client computer named Certkiller -WS002 as developing collateral. You have received instructions to call a stored procedure that return images from a Microsoft

SQL Server 2005 database. You want to use the SqlDataReader class to read the returned images.

To ensure that each image is returned as a Stream instance that can be read on demand, what should you do?

- A. To the ExecuteReader method of a SqlCommand instance, specify CommandBehavior.SequentialAccess as a parameter.
- B. For the SqlConnection instance that represents the database connection, set the Packet Size connection string property to 0.
- C. For a SqlCommand instance, call the Prepare method followed by the ExecuteNonQuery method.
- D. Call the BeginTransaction method of a SqlConnection instance and specify IsolationLevel.Serializable as a parameter.

Answer: A

Explanation: You need to specify CommandBehavior.SequentialAccess as a parameter. The Microsoft .NET DataProvider for SQL Server will load the returned data as steam.

Incorrect Answers:

- B: You should not set the size to 0. This will not instruct the Microsoft .NET DataProvider for SQL Server will load the returned data as steam.
- C: The ExecuteNonQuery method executes SQL commands and does not return row sets.
- D: TheIsolationLevel.Serializable enumeration member shows that a lock should be placed to prevent transactions from updating or inserting rows into the DataSet instance.

QUESTION 87

You are working as an application developer at Certkiller .com. The Certkiller .com network consists of a single Active Directory domain named Certkiller .com. Certkiller .com uses Visual Studio 2005 as an application platform. Certkiller .com consists of a Development department. You as the developer of Certkiller .com use a client computer named Certkiller -WS002 as developing collateral. You have received instructions to import data from a flat file into a into a Microsoft SQL Server 2005 database table.

What should you do to use the SqlBulkCopy class to import the data?

- A. From the flat file, import data into a DataTable instance.
- B. Make sure that the column order in the database table matches the field order in the flat file.
- C. Create a stored procedure to copy the data to the database table.
- D. Put the Bcp.exe tool in the output directory of the assembly that has the code.

Answer: A

Explanation: You need to import data into a DataTable instance.

Incorrect Answers:

B: You do not need to make sure that the column order in the database table matches the field order in the flat file.

C: There is no need to create a stored procedure to copy the data to the database table.

D: The Bcp.exe tool is a command line that is the equivalent of the managed SqlBulkCopy class. You do not need that.

QUESTION 88

You are working as an application developer at Certkiller .com. The Certkiller .com network consists of a single Active Directory domain named Certkiller .com. Certkiller .com uses Visual Studio 2005 as an application platform. Certkiller .com consists of a Development department. You as the developer of Certkiller .com use a client computer named Certkiller -WS002 as developing collateral. You have received instructions to create a DataSet diagram that models a one-to-many relationship between patients and treatments as seen in the exhibit:

Relation

Name: PatientTreatment

Specify the keys that relate tables in your dataset.

Parent Table: Patient Child Table: Treatment

Columns:

Key Columns	Foreign Key Columns
PatientID	PatientID

Choose what to create

☐ Both Relation and Foreign Key Constraint
☐ Foreign Key Constraint Only
☒ Relation Only

Update Rule: None

Delete Rule: None

Accept/Reject Rule: None

☐ Nested Relation

OK Cancel

When you serialize instance of the created DataSet component you, you received the following XML:

```
<Patient>
<PatientID>526</PatientID>
<PatientName>Amy Walsh</PatientName>
</Patient>
<Treatment>
<TreatmentID> 1000</TreatmentID>
```

<PatientID>526</PatientID>

<Code>DTP</Code>

</Treatment>

The XLM should be as follows

<Patient>

<PatientID>526</PatientID>

<PatientName>Amy Walsh</PatientName>

<Treatment>

<TreatmentID> 1000</PatientID>

<Code>DTP</Code>

</Treatment>

</Patient>

What should you do to change the dialog box so that the XLM is generated correctly?

- A. You should select the Treatment from the Parent Table list and the Patient from the Child Table list.
- B. You should select the Both Relation and Foreign Key Constraint option.
- C. You should select the Foreign Key Constraint Only option.
- D. You should select the Nested Relation option.

Answer: D

Explanation: The Nested Relation option will indicate that elements that is the same as the child rows of the relation should be nested as child elements that corresponds to the parent row.

Incorrect Answers:

- A: You should not do this. A one-to-many relation exists between the patients and treatments.
- B: This will show that no relation exists between the two tables.
- C: This will create a foreign key constraint between the child table and the parent table.

QUESTION 89

You are working as an application developer at Certkiller .com. The Certkiller .com network consists of a single Active Directory domain named Certkiller .com. Certkiller .com uses Visual Studio 2005 as an application platform. Certkiller .com consists of a Development department. You as the developer of Certkiller .com use a client computer named Certkiller -WS003 as developing collateral. You are busy using the XmlDocument class to control an XML document. If the XML attribute is modified and inserted, you need to perform validation and return the XmlDocument instance to the original state if the validation fails. Which of the following events should you use to handle the events of the XmlDocument class?

- A. NodeChanged and NodeInserting
- B. NodeChanged and NodeInserted

- C. NodeChanging and NodeInserted
- D. NodeChanging and NodeInserting

Answer: D

Explanation: When the Xml node is about to change, an NodeChanging event is raised. So you need to handle the NodeChanging and NodeInserting events.

Incorrect Answers:

- A: When the node has changed and then the event is raised, it will be too late. You should not handle the NodeChanged event.
- B: When the node has changed and then the event is raised, it will be too late. You should not handle the NodeChanged event. The NodeInserted will also raise after the event has happened.
- C: You should not handle the NodeChanged event. The NodeInserted will also raise after the event has happened.

QUESTION 90

You are working as an application developer at Certkiller .com. The Certkiller .com network consists of a single Active Directory domain named Certkiller .com. Certkiller .com uses Visual Studio 2005 as an application platform. Certkiller .com consists of a Development department. You as the developer of Certkiller .com use a client computer named Certkiller -WS006 as developing collateral. You have to read large amounts of XML data. The data resides on an external data source. You need to read the XML data and validate it as it is read. Which of the following classes should you use which will be most memory-efficient way?

- A. DataSet
- B. XmlReader
- C. XmlDataDocument
- D. XmlDocument

Answer: B

Explanation: If large amount of data is read, you should use the XMLReader class. It represents a forward-only and read-only. This is a very efficient way because the document does not need to be loaded into the memory.

Incorrect Answers:

- A: The DataSet represents disconnected relational data and the data need to be in the memory.
- C: The XmlDataDocument implements the functionality of the XmlDocument class and the DataSet class.
- D: The XmlDocument implements the XML Document Object Model.

QUESTION 91

You are working as an application developer at Certkiller .com. The Certkiller .com

network consists of a single Active Directory domain named Certkiller .com. Certkiller .com uses Visual Studio 2005 as an application platform. Certkiller .com consists of a Development department. You as the developer of Certkiller .com use a client computer named Certkiller -WS006 as developing collateral. You are busy using the XmlWriter class to write large amount of XML data to a physical device via a buffer stream.

Which method should you use to write all buffered data in the stream to the device without losing any buffered data?

- A. WriteFullEndElement
- B. Flush
- C. Close
- D. WriteEndDocument

Answer: B

Explanation: The flush method flushes the underlying stream by writing all buffered data to the underlying device and it does not loose any data.

Incorrect Answers:

- A: The WriteFullEndElement method closes the current document which is open.
- C: The Close method closes the underlying stream. This will cause you to loose data.
- D: The WriteEndDocument method closes all the open documents.

Topic 10, VB, Implementing Printing and Reporting Functionality in a Windows Forms Application (10 Questions)

QUESTION 92

You are working as an application developer at Certkiller .com. The Certkiller .com network consists of a single Active Directory domain named Certkiller .com. Certkiller .com uses Visual Studio 2005 as an application platform. Certkiller .com consists of a Development department. You as the developer of Certkiller .com use a client computer named Certkiller -WS066 as developing collateral. The manager has told you to develop a Microsoft Windows Forms application which has printing capabilities.

From which of the following base should you derive you class to create a class that will show you the required dialog box?

- A. PageSetupDialog
- B. PrintControllerWithStatusDialog
- C. PrintDialog
- D. PrintPreviewDialog

Answer: B

Explanation: You should get you class from the PrintControllerWithStatusDialog. This will allow you to extend the PrintController.

Incorrect Answers:

A: The PageSetupDialog present the standard Page Setup dialog box. The dialog box does not show the status of a print.

C: The PrintDialog shows the Print dialog box.

D: The PrintPreviewDialog shows the Print Preview dialog box. This will not display the status of the print job.

QUESTION 93

You are working as an application developer at Certkiller .com. The Certkiller .com network consists of a single Active Directory domain named Certkiller .com. Certkiller .com uses Visual Studio 2005 as an application platform. Certkiller .com consists of a Development department. Certkiller .com consists of a Development department. You as the developer of Certkiller .com use a client computer named Certkiller -WS009 as developing collateral. You are busy developing a Microsoft Windows Forms resume builder application.

Which code segment should you use to allow users to see a printed resume without printing the document? (Use a modal dialog box)

A. Dim dialog As PrintDialog = New PrintPreviewDialog
dialog.Document = document
dialog.Show[]

B. Dim dialog As PrintDialog = New PrintPreviewDialog
dialog.Document = document
dialog.ShowDialog[]

C. Dim dialog As PrintDialog = New PrintDialog
dialog.Document = document
dialog.ShowDialog[]

D. Dim dialog As PrintDialog = New PrintDialog
dialog.Document = document
dialog.UseEXDialog = true
dialog.ShowDialog[]

Answer: B

Explanation: The PrintPreviewDialog class represents the standard Print Preview dialog box. With this you can preview the document before you print it.

Incorrect Answers:

A, C, D: The Show method shows a modeless dialog box and not the modal dialog box. The PrintDialog class represents the standard Print dialog box. It does not allow you to preview the document.

QUESTION 94

You are working as an application developer at Certkiller .com. The Certkiller .com network consists of a single Active Directory domain named Certkiller .com. Certkiller .com uses Visual Studio 2005 as an application platform. Certkiller .com consists of a Development department. Certkiller .com consists of a Development

department. You as the developer of Certkiller .com use a client computer named Certkiller -WS009 as developing collateral. You are busy creating a PrintDocument instance that represents a report to print.

Which of the following event will programmatically change the page settings of individual pages as they are printed?

- A. QueryPageSettings
- B. BeginPrint
- C. PrintPage
- D. EndPage

Answer: A

Explanation: The QueryPageSettings is raised before the printing starts. You can then modify the page.

Incorrect Answers:

B: The BeginPrint is raised before the first page is print. You need this for multiple page settings.

C: The PrintPage raise an event when a page is print, you cannot change settings at that stage.

D: The EndPage is shown when the print job is finished.

QUESTION 95

You are working as an application developer at Certkiller .com. The Certkiller .com network consists of a single Active Directory domain named Certkiller .com.

Certkiller .com uses Visual Studio 2005 as an application platform. Certkiller .com consists of a Development department. Certkiller .com consists of a Development department and a Finance department. You as the developer of Certkiller .com use a client computer named Certkiller -WS003 as developing collateral. You are busy creating a component that allows the users in the

Finance department to print daily reports. You want the component to grant permission to access all the printers on the client computers of the users.

What should you do to programmatically specify security to stop a full stack walk from being performed when the component prints the report?

- A. Call the Demand method on a fully-restricted PrintingPermission instance.
- B. Call the Demand method on an unrestricted PrintingPermission instance.
- C. Call the Assert method on a fully-restricted PrintingPermission instance.
- D. Call the Assert method on an unrestricted PrintingPermission instance.

Answer: D

Explanation: For you to create an unrestricted PrintingPermission, you should create an instance of the PrintingPermission class and pass the PrintingPermissionLevel.AllPrinting enumeration member or the PermissionState.Unrestricted enumeration member as a parameter.

Incorrect Answers:

A, B: The

Demand method will demand that a stack walk be performed to find out if all callers higher in the stack have permission to print. This is then done for each document that needs to be printed.

C: The Assert method on a fully-restricted PrintingPermission instance is the same as not demanding permission to print.

QUESTION 96

You are working as an application developer at Certkiller .com. The Certkiller .com network consists of a single Active Directory domain named Certkiller .com.

Certkiller .com uses Visual Studio 2005 as an application platform. Certkiller .com consists of a Development department. Certkiller .com consists of a Development department. You as the developer of Certkiller .com use a client computer named Certkiller -WS009 as developing collateral. You are busy creating a Microsoft Windows Forms applications for the security agency. The application is used to print security-related documents. They also want the document to be watermarked on each page.

From which base class would you obtain your class to create a class that meets the requirements?

- A. PrintDocument
- B. PrintPreviewControl
- C. PrintController
- D. PrintPreviewDialog

Answer: A

Explanation: The PrintDocument allows you to override the OnPrintPage method which will print a secure watermark on each page.

Incorrect Answers:

B: ThePrintPreviewControl represents a customized print preview control. You then can add this to the form but you cannot customize the printing process.

C: ThePrintController allow you to control the printing process but cannot force secure watermarks.

D: The PrintPreviewDialog shows the Print Preview dialog box. You cannot customize the printing process.

QUESTION 97

You are working as an application developer at Certkiller .com. The Certkiller .com network consists of a single Active Directory domain named Certkiller .com.

Certkiller .com uses Visual Studio 2005 as an application platform. Certkiller .com consists of a Development department. Certkiller .com consists of a Development department. You as the developer of Certkiller .com use a client computer named Certkiller -WS009 as developing collateral. You were given instructions to develop a print driver license. The component that you will use should grant permission to

access all the printers that are connected to the client computers.

What should you do to step by step specify security to make sure that applications cannot use your component unless they are granted an unrestricted printing permission?

- A. Call the Demand method on a PrintingPermission instance with the Level property set to PrintingPermissionLevel.AllPrinting.
- B. Call the Demand method on a PrintingPermission instance with the Level property set to PrintingPermissionLevel.NoPrinting.
- C. Call the Assert method on a PrintingPermission instance with the Level property set to PrintingPermissionLevel.AllPrinting.
- D. Call the Assert method on a PrintingPermission instance with the Level property set to PrintingPermissionLevel.NoPrinting.

Answer: A

Explanation: When using the Demand method, it demands the callers in a higher stack a specific permission. The applications that are granted unrestricted printing permissions can use the print driver license.

Incorrect Answers:

B: The Demand method on a PrintingPermission is the same as permission to print.

C, D: The Assert method, you can make sure that the code is secure and prevent a full stack walk from whether all callers in the call stack are granted the permission.

QUESTION 98

You are working as an application developer at Certkiller .com. The Certkiller .com network consists of a single Active Directory domain named Certkiller .com.

Certkiller .com uses Visual Studio 2005 as an application platform. Certkiller .com consists of a Development department. Certkiller .com consists of a Development department. You as the developer of Certkiller .com use a client computer named Certkiller -WS006 as developing collateral. You are busy creating a Microsoft Windows Forms applications with printing support. You were asked to raise a custom event named PageChanged.

From which base class would you obtain your class to create a class that meets the requirements with the minimal code changes?

- A. PrintDocument
- B. PrintPreviewControl
- C. PrintController
- D. PrintPreviewDialog

Answer: B

Explanation: The PrintPreviewControl represents a customized print preview control. You can also raise custom events.

Incorrect Answers:

- A: The PrintDocument is a document that can be printed.
C: The PrintController allow you to control the printing process but not to preview the document.
D: The PrintPreviewDialog shows the Print Preview dialog box.
-

QUESTION 99

You are working as an application developer at Certkiller .com. The Certkiller .com network consists of a single Active Directory domain named Certkiller .com. Certkiller .com uses Visual Studio 2005 as an application platform. Certkiller .com consists of a Development department and a Finance department. You as the developer of Certkiller .com use a client computer named Certkiller -WS017 as developing collateral. You are using the PrintPreviewDialog class to permit the users in the Finance department to have a preview of there documents. You need to stop a viewed page in the document from being automatically resized when the dialog box represented by the PrintPreviewDialog instance is resized. What should you do to configure the PrintPreviewControl instance of the PrintPreviewDialog instance?

- A. You should set the AutoZoom property to True.
B. You should set the Zoom property to 100.
C. You should set the Zoom property to 1.
D. You should set the AutoZoom property to False.

Answer: D

Explanation: If it is set to False, it will show that the page should not automatically be resized when the dialog box is resized.

Incorrect Answers:

- A: If the AutoZoom property is set to True, it will show that the page be resized when the dialog box is resized.
B, C: Setting the value to 100 percent which is the same as 1, will support a decimal value that shows the zoom level of the previewed page. This has not effect when the page is automatically resized.
-

QUESTION 100

You are working as an application developer at Certkiller .com. The Certkiller .com network consists of a single Active Directory domain named Certkiller .com. Certkiller .com uses Visual Studio 2005 as an application platform. Certkiller .com consists of a Development department and a Graphics department. You as the developer of Certkiller .com use a client computer named Certkiller -WS009 as developing collateral. You are busy creating an instance of the PrintPreviewControl class named graphicprintPreviewControl to allow the users in the Graphics department to preview their printed documents. Which code segment is used to default the preview to a zoom level of 50 percent and avert text from appearing jagged?

- A. `printPreviewControlZoom = 0.5`
`printPreviewControl.UseAntiAlias = true`
- B. `printPreviewControlZoom = 0.5`
`printPreviewControl.UseAntiAlias = false`
- C. `printPreviewControlZoom = 50`
`printPreviewControl.UseAntiAlias = false`
- D. `printPreviewControlZoom = 0.05`
`printPreviewControl.UseAntiAlias = true`

Answer: A

Explanation: The 0.5 is the same as 50 percent. You must set the `UseAntiAlias` to true.

Incorrect Answers:

B, C: You must not set the `UseAntiAlias` to false. This will disable anti-aliasing.

D: This setting is wrong, 0.05 is not 50 percent.

QUESTION 101

You are working as an application developer at Certkiller .com. The Certkiller .com network consists of a single Active Directory domain named Certkiller .com. Certkiller .com uses Visual Studio 2005 as an application platform. Certkiller .com consists of a Development department. You as the developer of Certkiller .com use a client computer named Certkiller -WS123 as developing collateral. The following code was added to add a `PrintPreviewControl` instance to a `Panel` control named `testpanel`.

```
Dim printPreview As PrintPreviewControl = New PrintPreviewControl[]  
printPreview.Columns = 2  
printPreview.Rows = 2  
printPreview.Dock = DockStyle.Fill  
testpanel.Controls.Add[printPreview]
```

When you run the application that has this code, you received the following message on the `Panel` control.

Document does not contain any pages.

What must you do to allow a page to be displayed, when running the application?

- A. You should set the `StartPage` property of `printPreview` to 1
- B. You should set the `Visible` property of `printPreview` to true
- C. You should call the `Show` method of `printPreview`
- D. You should set the `Document` property of `printPreview` to an instance of `PrintDocument`

Answer: D

Explanation: To display a preview of a document when the `Document` property is set, you should use the `PrintPreviewControl`.

Incorrect Answers:

A: The StartPage property has no effect if the Documentproperty is not set to a PrintDocument instance.

B: This shows that the controls should be visible.

C: The property has no effect if the Documentproperty is not set.

Topic 11, VB, Enhancing Usability (7 Questions)

QUESTION 102

You are working as an application developer at Certkiller .com. The Certkiller .com network consists of a single Active Directory domain named Certkiller .com. Certkiller .com uses Visual Studio 2005 as an application platform. Certkiller .com consists of a Development department. You as the developer of Certkiller .com use a client computer named Certkiller -WS059 as developing collateral. You are busy to develop a Microsoft Windows Forms application that allows the computer engineers to design circuit boards for different types of hardware. You then create a custom control that portrays the design surface.

Which of the following event should you handle so that you can highlight the available areas on the design surface where a component can be dropped?

- A. DragEnter
- B. QueryContinueDrag
- C. GiveFeedback
- D. DragOver

Answer: D

Explanation: The DragOver event will be raised if the mouse pointer will move over a control during a drag-and-drop action.

Incorrect Answers:

A: The DragEnter event will raise only if the mouse pointer enters a control during a drag-and-drop action.

B: The QueryContinueDrag event is raise when the mouse or keyboard button state changes.

C: The GiveFeedback event is raised when a drag-and-drop action is started.

QUESTION 103

You are working as an application developer at Certkiller .com. The Certkiller .com network consists of a single Active Directory domain named Certkiller .com. Certkiller .com uses Visual Studio 2005 as an application platform. Certkiller .com consists of a Development department. You as the developer of Certkiller .com use a client computer named Certkiller -WS009 as developing collateral. You are busy to develop a Microsoft Windows Forms application that allows the computer engineers to design circuit boards for different types of hardware. The electronic parts exits as nodes, on the main form, which reside in a TreeView control named testtreeView. The TreeView's AllowDrop property is set to false and a Panel control provides the drawing surface. You want the Development users to drag the components to the

drawing surface.

Which of the following code segments is used to write code to begin a drag-and-drop operation?

- A. `Public Sub Handler[ByVal sender As Object, ByVal e As EventArgs] _
Handler testTreeView.DragLeave
DoDragDrop[testTreeView.SelectNode, DragDropEffects.Copy]
End Sub`
- B. `Public Sub Handler[ByVal sender As Object, ByVal e As EventArgs] _
Handler testTreeView.DragEnter
DoDragDrop[e.Data.DragDropEffects.Copy]
End Sub`
- C. `Public Sub Handler[ByVal sender As Object, ByVal e As ItemDragEventArgs] _
Handler testTreeView.ItemDrag
DoDragDrop[e.Item, DragDropEffects.Copy]
End Sub`
- D. `Public Sub Handler[ByVal sender As Object, ByVal e As EventArgs] _
Handler testTreeView.MouseEnter
DoDragDrop[testTreeView.SelectNode, DragDropEffects.Copy]
End Sub`

Answer: C

Explanation: If you handle the ItemDrag event of the TreeView control, an event will raise when the user begins to drag a node in the TreeView control.

Incorrect Answers:

A, D: The MouseEnter event of the TreeView control should not be used. It will raise an event every time the mouse pointer enters the area which is occupied by the TreeView control. The DragEnter event of the TreeView control should not be used, because the AllowDrop is set to false.

B: The DragLeave of the TreeView control should not be used, because the AllowDrop is set to false.

QUESTION 104

You are working as an application developer at Certkiller .com. The Certkiller .com network consists of a single Active Directory domain named Certkiller .com. Certkiller .com uses Visual Studio 2005 as an application platform. Certkiller .com consists of a Development department. You as the developer of Certkiller .com use a client computer named Certkiller -WS009 as developing collateral. You are busy to develop a Microsoft Windows Forms application that has to support the neutral English and all Arabic cultures.

What should you do to make sure that the user interface supports the text flow for the Arabic language?

- A. You should set the Localizable property of each form to True.
- B. You should set the Language property of each form to Arabic.

- C. You should set the RightToLeftLayout property of each form to True.
- D. You should set the RightToLeft property of each form to True.

Answer: D

Explanation: The Arabic script is written from right to left. You have to support the language flow.

Incorrect Answers:

A: The Localizable shows whether the designer should create localized resources to save property value for different cultures. It should not be used.

B: The Language property specifies that culture for the resources to which a designer would save property values.

C: The True setting of RightToLeftLayout will change the control flow from right to left. You want to change the text flow.

QUESTION 105

You are working as an application developer at Certkiller .com. The Certkiller .com network consists of a single Active Directory domain named Certkiller .com. Certkiller .com uses Visual Studio 2005 as an application platform. Certkiller .com consists of a Development department. You as the developer of Certkiller .com use a client computer named Certkiller -WS009 as developing collateral. You are busy to develop a Microsoft Windows Forms application that has localized resources for the Arabic language.

Which code segment is used to display all currencies in the format used by Egypt?

- A. Thread.CurrentThread.CurrentUICulture = new CultureInfo["ar"]
- B. Thread.CurrentThread.CurrentCulture = new CultureInfo["ar"]
- C. Thread.CurrentThread.CurrentUICulture = new CultureInfo["ar-EG"]
- D. Thread.CurrentThread.CurrentCulture = new CultureInfo["ar-EG"]

Answer: D

Explanation: The CurrentCulture property specifies the culture to use for formatting numbers, currencies, dates, and time. The culture ar-EG is for the Arabic language in Egypt.

Incorrect Answers:

A, B, C: The CurrentUICulture identifies the culture to be used by a resource manager, which load localized resources. Furthermore, you should not specify the ar to the constructure of CultureInfo. The as value represents a neutral for the Arabic language.

QUESTION 106

You are working as an application developer at Certkiller .com. The Certkiller .com network consists of a single Active Directory domain named Certkiller .com. Certkiller .com uses Visual Studio 2005 as an application platform. Certkiller .com consists of a Development department. You as the developer of Certkiller .com use a client computer named Certkiller -WS109 as developing collateral. You are busy to

develop a Microsoft Windows Forms application that has localized resources for the French language.

Which code segment is used to automatically load French resources but use the United States format for all currencies, numbers, dates and times?

- A. Thread.CurrentThread.CurrentCulture = new CultureInfo["en-US"]
Thread.CurrentThread.CurrentUICulture = new CultureInfo["fr"]
- B. Thread.CurrentThread.CurrentCulture = new CultureInfo["FR"]
Thread.CurrentThread.CurrentUICulture = new CultureInfo["US"]
- C. Thread.CurrentThread.CurrentCulture = new CultureInfo["US"]
Thread.CurrentThread.CurrentUICulture = new CultureInfo["FR"]
- D. Thread.CurrentThread.CurrentCulture = new CultureInfo["fr-FR"]
Thread.CurrentThread.CurrentUICulture = new CultureInfo["en-US"]

Answer: A

Explanation: The CurrentUICulture should be set to the CultureInfo instance that represents the fr neutral culture. The fr neutral culture represents the French language.

Incorrect Answers:

B, C, D: The CurrentCulture property must be avoided, that represents the fr-FR culture. This will give the format for all currencies, numbers, dates and times in French, you want to leave it o the United States format. The en-US will show that the English resources will be locked. Furthermore, you should not set the CurrentCulture property to US. It should be set to specify the culture.

QUESTION 107

You are working as an application developer at Certkiller .com. The Certkiller .com network consists of a single Active Directory domain named Certkiller .com. Certkiller .com uses Visual Studio 2005 as an application platform. Certkiller .com consists of a Development department. You as the developer of Certkiller .com use a client computer named Certkiller -WS034 as developing collateral. You are busy to create a MenuStrip control named testmenuStrip to a container form named testcontainerForm in a Microsoft Windows Forms application. The testcontainerForm contains tree child forms.

Which code segment should you sue to create a windows list menu so that each name of each child window is displayed on a ToolStripMenuItem control which was named testmenuItem?

- A. testmenuStrip.MdiWindowListItem = menuItem
- B. testcontainerFrom.IsMdiContainer = true
- C. Dim childForm As Control
For Each childForm In containerForm.Controls
Dim item As ToolStripMenuItem = New ToolStripMenuItem[childForm.Text]
testmenuItem.DropDownItems.Add[item]
Next

```
D. Dim childForm As Application.OpenForms
For Each childForm In Application.OpenForms
Dim item As ToolStripMenuItem = New ToolStripMenuItem[childForm.Text]
testmenuItem.DropDownItems.Add[item]
Next
```

Answer: A

Explanation: You need to set the MdiWindowListItem property to the ToolStripMenuItem that has the window list items.

Incorrect Answers:

C, D: A ToolStripMenuItem should not be put in manually of each Form instance. This collection has all the open form, which has the container form. You also should not add the ToolStripMenuItem manually for each Control instance.

B: The IsMdiContainer should not be set to accomplish the goal.

QUESTION 108

You are working as an application developer at Certkiller .com. The Certkiller .com network consists of a single Active Directory domain named Certkiller .com. Certkiller .com uses Visual Studio 2005 as an application platform. Certkiller .com consists of a Development department and a Marketing department. You as the developer of Certkiller .com use a client computer named Certkiller -WS034 as developing collateral. A Certkiller .com user named Mia Hamm is working for the Marketing department. You need to provide her assistance for an input control by automatically show tooltip when she uses the F1 key. You want the tooltip to show enough information. This is, so that Mia Hamm not causing errors by entering the wrong or invalid data.

What should you do to add a component to the form, without manual coding?

- A. You should add a ToolTip component to the form.
- B. You should add a HelpProvider component to the form.
- C. You should add a NotifyIcon component to the form.
- D. You should add an ErrorProvider component to the form.

Answer: B

Explanation: The HelpProvider component allows you to display a tooltip when ever a user presses the F1 key.

Incorrect Answers:

- A: This component will show a tooltip when the mouse pointer hover over a control.
- C: The NotifyIcon allows you to show icons in the taskbar.
- D: The ErrorProvider displays a blinking icon when you call its SetError method.

Topic 12, VB, Implementing Asynchronous Programming Techniques to Improve the User Experience (12 Questions)

QUESTION 109

You are working as an application developer at Certkiller .com. The Certkiller .com network consists of a single Active Directory domain named Certkiller .com. Certkiller .com uses Visual Studio 2005 as an application platform. Certkiller .com consists of a Development department. You as the developer of Certkiller .com use a client computer named Certkiller -WS014 as developing collateral. You are busy using a BackgroundWorker component, set to its default value, to execute an asynchronous operation.

What should you do to receive notification when the operation completes?

- A. You should handle the ProgressChanged event.
- B. You should handle the RunWorkerCompleted event.
- C. You should call the WaitAny method of the WaitHandle class.
- D. You should call the WaitAll method of the WaitHandle class.

Answer: B

Explanation: The BackgroundWorker class has a method called RunWorkerCompleted, when called; it raises a DoWork event in a separate thread. When ever the background thread is complete, the component raises the RunWorkerCompleted event.

Incorrect Answers:

A: The ProgressChanged is raised when the background thread calls the ReportProgress method.

C: The WaitAny causes the current thread to block until at least one wait handle in the specified WaitHandle array is signaled as complete.

D: The WaitAll causes the current thread to block until one wait handle in the specified WaitHandle array is signaled as complete.

QUESTION 110

You are working as an application developer at Certkiller .com. The Certkiller .com network consists of a single Active Directory domain named Certkiller .com. Certkiller .com uses Visual Studio 2005 as an application platform. Certkiller .com consists of a Development department. You as the developer of Certkiller .com use a client computer named Certkiller -WS113 as developing collateral. You are busy using a BackgroundWorker component to execute an asynchronous operation. The job of the background thread is to call the ReportProgress method to update the foreground thread. You have handled the ProgressChanged event and set the Value property of a ProgressBar. The problem is that the ProgressBar display by no means gets updated. During the investigation you find out that the event handler that works with the ProgressChanged event never gets called.

What should you do to make sure that the event handler gets called?

- A. You should call the ReportProgress method in the foreground thread.
- B. You should set the WorkerReportsProgress property to True.
- C. You should set the BackgroundWorker component to the value of the Site property

returned from the ProgressBar control.

D. You should set the BackgroundWorker component to the value of the Site property returned from Form control that host the component.

Answer: B

Explanation: The WorkerReportsProgress property shows whether the BackgroundWorker component should raise the ProgressChanged event when the background thread calls the ReportProgress method.

Incorrect Answers:

A: The BackgroundWorker should call the ReportProgress. You should not put it to the foreground.

C, D: The Site property should not be changed. It defined the binding between a control or component and its associate container.

QUESTION 111

You are working as an application developer at Certkiller .com. The Certkiller .com network consists of a single Active Directory domain named Certkiller .com. Certkiller .com uses Visual Studio 2005 as an application platform. Certkiller .com consists of a Development department. You as the developer of Certkiller .com use a client computer named Certkiller -WS144 as developing collateral. You are busy using a BackgroundWorker component to call a method named DownloadJob in a background thread.

Which code segment is used to display a message box to alert the users when the background thread is complete?

A. `if[backgroundWorker.WorkerReportsProgress =false] Then
MessageBox.Show["The download is complete."]
End If`

B. `Public Sub Handler[ByVal As Object, ByVal e As DoWorkEventArgs]
Handles backgroundWorker.RunWorkerCompleted
End Sub`

C. `if [backgroundWorker.IsBusy=false] Then
MessageBox.Show["The download is complete."]
End If`

D. `Public Sub Handler[ByVal sender As Object,
ByVal e As RunWorkerCompletedEventArgs]
Handles backgroundWorker.RunWorkerCompleted
MessageBox.Show["The download is complete."]
End Sub`

Answer: D

Explanation: The BackgroundWorker allow you to perform task in a background thread. The BackgroundWorker class has a method called RunWorkerAsync that raises a DoWork event.

Incorrect Answers:

A: The message only, should not be displayed. This shows whether the BackgroundWorker should raise the ProgressChange event when the background thread calls the ReportProgress method.

B: The DoWork does not display the message. It raises the background thread to start.

C: The IfBusy shows whether the background threads is busy.

QUESTION 112

You are working as an application developer at Certkiller .com. The Certkiller .com network consists of a single Active Directory domain named Certkiller .com. Certkiller .com uses Visual Studio 2005 as an application platform. Certkiller .com consists of a Development department. You as the developer of Certkiller .com use a client computer named Certkiller -WS023 as developing collateral. You are busy to develop a Microsoft Windows Forms application that performs long-running task that performs in the background thread. The application is of such a kind, that it does not interoperate with Component Object Model {COM}.

What should you do to configure the application so that the background thread can report the status of the task by calling the ReportProgress method of the BackgroundWorker class?

A. You should add a ProgressBar control to the form that hosts the BackgroundWorker component.

B. You should apply the MTAThread attribute to the Main method of the application.

C. You should apply the STAThread attribute to the Main method of the application.

D. You should set WorkerReportProgress property of the BackgroundWorker class to true.

Answer: D

Explanation: You need to set the WorkerReportProgress property of the BackgroundWorker class to true, which will raise the ProgressChange event whenever the ReportProgress method is called.

Incorrect Answers:

A: The ProgressBar should not be added. This also will not report the status of the background task.

B: The MTAThread should not be applied to the Main method. Furthermore, the application does not interoperate with COM.

C: The STAThread should not be applied to the Main method. It is there by default.

QUESTION 113

You are working as an application developer at Certkiller .com. The Certkiller .com network consists of a single Active Directory domain named Certkiller .com. Certkiller .com uses Visual Studio 2005 as an application platform. Certkiller .com consists of a Development department. You as the developer of Certkiller .com use a client computer named Certkiller -WS015 as developing collateral. You were asked to use the BackgroundWorker component to do an asynchronous task.

What should you do to define the signature of the method that will contain the code to perform the asynchronous task?

- A. You should create a method that matches the ThreadStart delegate's signature.
- B. You should create a method that matches the AsyncCallback delegate's signature.
- C. You should create a method that matches the ParameterizedThreadStart delegate's signature.
- D. You should create a method that matches the DoWorkEventHandler delegate's signature.

Answer: D

Explanation: You should create a method that matches the DoWorkEventHandler delegate's signature. The BackgroundWorker allows you to do jobs in a background thread quite then the interface thread.

Incorrect Answers:

- A: The ThreadStart allows you to define a method for executing codes in separate threads. You must in this case avoid creating a method that matches the ThreadStart signature.
- B: The AsyncCallback allows you to define a method that represents an asynchronous operation's callback. You must in this case avoid creating a method that matches the AsyncCallback signature.
- C: The ParameterizedThreadStart allows you to define a method that represents an asynchronous operation's callback. You must in this case avoid creating a method that matches the AsyncCallback signature.

QUESTION 114

You are working as an application developer at Certkiller .com. The Certkiller .com network consists of a single Active Directory domain named Certkiller .com. Certkiller .com uses Visual Studio 2005 as an application platform. Certkiller .com consists of a Development department. You as the developer of Certkiller .com use a client computer named Certkiller -WS023 as developing collateral. You are using the Semaphore class to synchronize access to a resource pool. During an inspection you find out that an exception of type UnauthorizedAccessException is thrown when you call the OpenExisting method of the Semaphore class, which is only thrown for one user.

What should you do to stop the exception from being thrown?

- A. You should call the Demand method of an unrestricted SecurityPermission instance.
- B. You should grant the user permission to read the semaphore that protects the resource pool.
- C. You should grant the user permission to access the resource pool.
- D. You should call the Assert method of an unrestricted SecurityPermission instance.

Answer: B

Explanation: The user's permissions are granted to read the semaphore that protects the resource pool. An access control list is there to protect the Semaphores. The SetAccessControl method of the Semaphore class is there to grant the users permissions to read the semaphore.

Incorrect Answers:

A: The Demand method is not used for an unrestricted SecurityPermission instance.

C: The user permission is not use to access the resource to correct the problem.

D: The SecurityPermission prevents a code from performing a stack walk past the present stack.

QUESTION 115

You are working as an application developer at Certkiller .com. The Certkiller .com network consists of a single Active Directory domain named Certkiller .com. Certkiller .com uses Visual Studio 2005 as an application platform. Certkiller .com consists of a Development department. You as the developer of Certkiller .com use a client computer named Certkiller -WS001 as developing collateral. You are busy creating an instance of Semaphore by means of calling its constructor. While the Semaphore instance was created, you specify four resources from a resource pool and reserve the three resources. You want to call the Release method of the Semaphore instance to allocate four available resources from the resource pool. Which of the following numbers should you pass to the Release method?

- A. 3
- B. 4
- C. 1
- D. 0

Answer: A

Explanation: Every time you call the Release method, the semaphore will exit and makes a resource available. When a parameter has passed to the Release method, you indicate the number of times that the semaphore exits, which is three times.

Incorrect Answers:

B: The SemaphoreFullException can only free three resources in this case.

C: If it was one, then it would have only release one resource.

D: This number would cause an exception of type ArgumentOutOfRangeException to be thrown because the semaphore has to release one resource.

QUESTION 116

You are working as an application developer at Certkiller .com. The Certkiller .com network consists of a single Active Directory domain named Certkiller .com. Certkiller .com uses Visual Studio 2005 as an application platform. Certkiller .com consists of a Development department. You as the developer of Certkiller .com use a client computer named Certkiller -WS003 as developing collateral. You need to implement an asynchronous method to the Download method. You have the following class:

```
Public Plass Job
Public Sub Download[]
End Sub
End Class
```

Which of the following segments should you use? (Use the event-base asynchronous pattern)

- A. Public Function InvokeDownload[] As |AsyncResult
Return Nothing
End Function
- B. Public Function Download[] As |AsyncResult
Return Nothing
End Function
- C. Public Function BeginDownload[] As |AsyncResult
Return Nothing
End Function
- D. public Sub DownloadAsync[]
Return Nothing
End Sub

Answer: D

Explanation: If it is an event-base asynchronous pattern, a worker thread raises an event to signal completion of an asynchronous process. The event should have the same name of the synchronous method suffixed with "Completed".

Incorrect Answers:

A, B, C: To adhere to the pattern, you should name the method DownloadAsync. You also should not return a value from the method.

QUESTION 117

You are working as an application developer at Certkiller .com. The Certkiller .com network consists of a single Active Directory domain named Certkiller .com. Certkiller .com uses Visual Studio 2005 as an application platform. Certkiller .com consists of a Development department. You as the developer of Certkiller .com use a client computer named Certkiller -WS333 as developing collateral. You are using the following class to download jobs.

```
Public Plass Job
Public Sub Download[]
End Sub
End Class
```

You need to use the event-based asynchronous pattern to support asynchronous job downloads.

Which of the following code segments should you use to define a member of that class to signal asynchronous completion?

- A. PublicDownloadCompleted As Boolean

B. PublicDownloadCompleted[]
End Sub
C. Public Event DownloadCompleted[] As DownloadCompletedEventHandler
Return Nothing
End Function
D. Public Event DownloadCompleted As DownloadCompletedEventHandler

Answer: D

Explanation:

If you have the event-based asynchronous pattern, a worker thread raises an event to indicate completion of an asynchronous process. The event should have the same name of the synchronous method suffixed with "Completed".

Incorrect Answers:

A, B, C: You should not define a method or field named DownloadCompleted. An event must be defined to signal notification.

QUESTION 118

You are working as an application developer at Certkiller .com. The Certkiller .com network consists of a single Active Directory domain named Certkiller .com. Certkiller .com uses Visual Studio 2005 as an application platform. Certkiller .com consists of a Development department. You as the developer of Certkiller .com use a client computer named Certkiller -WS303 as developing guarantee. You are busy writing a code to perform an asynchronous operation. You must adjust the priority of the thread that executes the asynchronous operation. The operation is must be specified to use input data from the main thread.

What should you do to define the signature of the method that will contain the code to perform the asynchronous operation?

- A. You should create a method that matches the AsyncCallback delegate's signature.
- B. You should create a method that matches the ParameterizedThreadStart delegate's signature.
- C. You should create a method that matches the ThreadStart delegate's signature.
- D. You should create a method that matches the DoWorkEventHandler delegate's signature.

Answer: B

Explanation: You need to create a method that matches the ParameterizedThreadStart delegate's signature. This will then accept a single Object instance as a parameter.

Incorrect Answers:

A: The AsyncCallback allows you to define a method that represents an asynchronous operation's callback.

C: The parameters are not accepted by the ThreadStart. Because of this, you cannot use it to supply input data to the asynchronous operation.

D: The DoWorkEventHandler delegate's signature is supported by the BackgroundWorker. The BackgroundWorker do not adjust priority of the BackgroundWorker thread

QUESTION 119

```
Public Sub Handler1[]
End Sub
Public Sub Handler2(ByVal args As Object)
End Sub
Public Sub Start[]
Dim threadStart As ThreadStart = New ThreadStart(AddressOf Handler1)
Dim parameterizedThreadStart As ParameterizedThreadStart = _
New ParameterizedThreadStart(AddressOf Handler2)
Dim threadPoolThreadCount As Integer = 0
Dim thread1 As Thread = New Thread(ThreadStart)
Dim thread2 As Thread = New Thread(ParameterizedThreadStart)
Dim thread3 As Thread = New Thread(threadStart)
thread1.Start()
thread2.Start(nothing)
thread3.Start()
if thread1.IsThreadPoolThread Then
threadPoolThreadCount = [threadPoolThreadCount + 1]
End If
if thread2.IsThreadPoolThread Then
threadPoolThreadCount = [threadPoolThreadCount + 1]
End If
if thread3.IsThreadPoolThread Then
threadPoolThreadCount = [threadPoolThreadCount + 1]
End If
End Sub
```

What value of the threadPoolThreadCount should you identify after the code is executed?

- A. 0
- B. 2
- C. 3
- D. 1

Answer: A

Explanation: The value of the threadPoolThreadCount is set at 0. The threads that are manually made are not class as thread pool threads. The threads that are created by calling the QueueUserWorkItem method of the ThreadPool are class thread pool threads.

QUESTION 120

You are working as an application developer at Certkiller .com. The Certkiller .com network consists of a single Active Directory domain named Certkiller .com. Certkiller .com uses Visual Studio 2005 as an application platform. Certkiller .com consists of a Development department. You as the developer of Certkiller .com use a client computer named Certkiller -WS065 as developing collateral. You are busy developing a Microsoft Windows Forms application. This Windows Forms application will allow electrical engineers to visually design circuit boards. The users in the Development department connect to Certkiller -WS005 and download their respective designed circuit board for the hardware they developed. Which of the following code segments should you use to allow users to download all designed circuit boards in a background thread with Common Language Runtime to manage the thread?

A. `ParameterizedThreadStart threadStart = delegate`

```
{  
//Download the jobs  
}
```

`New Thread[threadStart].Start[null];`

B. `AsyncCallback callback = delegate`

```
{  
//Download the jobs  
}
```

`Application.OpenForms[0].BeginInvoke(callback);`

C. `ThreadStart threadStart = delegate`

```
{  
//Download the jobs  
}
```

`New Thread[threadStart].Start[];`

D. `ThreadPool.QueueUserWorkItem(delegate`

```
{  
//Download the jobs  
});
```

Answer: D

Explanation: The `QueueUserWorkItem` will allow you for execution in a thread pool.

Incorrect Answers:

A, C: The `Start` method of the thread class will create and execute a thread. The CLR does not manually create threads.

B: The parameters are not accepted by the `ThreadStart`. Because of this, you cannot use it to supply input data to the asynchronous operation.

Topic 13, VB, Developing Windows Forms Controls (6 Questions)

QUESTION 121

You are working as an application developer at Certkiller .com. The Certkiller .com network consists of a single Active Directory domain named Certkiller .com. Certkiller .com uses Visual Studio 2005 as an application platform. Certkiller .com consists of a Development department. You as the developer of Certkiller .com use a client computer named Certkiller -WS005 as developing collateral. You are busy developing a composite control. You do not want the controls to be displayed when certain conditions are met.

Which code segment should you use to write code to stop the control from being displayed?

- A. `Me.SetStyle[ControlStyles.Opaque, True]`
- B. `Me.Visible = False`
- C. `Me.SetStyle[ControlStyles.SupportTransparentBackColor, True]`
- D. `Me.BackColor = Color. Transparent`

Answer: B

Explanation: The Visible control should be on false. This setting will not allow displaying.

Incorrect Answers:

- A: This will prevent the background from being displayed; however it cannot hide the entire control.
- C: This will prevent the background from being displayed; however it cannot hide the entire control.
- D: This will prevent the background from being displayed; however it cannot hide the entire control.

QUESTION 122

You are working as an application developer at Certkiller .com. The Certkiller .com network consists of a single Active Directory domain named Certkiller .com. Certkiller .com uses Visual Studio 2005 as an application platform. Certkiller .com consists of a Development department. You as the developer of Certkiller .com use a client computer named Certkiller -WS105 as developing collateral. You are busy developing a custom control, which displays the time in digital and analog formats. You need to apply the control in a class named Clock. The Clock control will be placed on forms and configure the properties to show the time. Which code segment should you use to define the Clock class?

- A. `public class Clock`
`{`
`}`
- B. `public class Clock : Component`
`{`
`}`
- C. `public class Clock : Control`

```
{  
}  
D. public class Clock : Timer  
{  
}
```

Answer: C

Explanation: The controls that are obtained from the Clock class are displayed on the form.

Incorrect Answers:

A: You should not obtain it from the Clock. The controls that are obtained from the Clock class are displayed on the form.

B: The controls that are obtained from the Clock class are displayed on the form.

D: The controls that are obtained from the Clock class are displayed on the form.

QUESTION 123

You are working as an application developer at Certkiller .com. The Certkiller .com network consists of a single Active Directory domain named Certkiller .com. Certkiller .com uses Visual Studio 2005 as an application platform. Certkiller .com consists of a Development department. You as the developer of Certkiller .com use a client computer named Certkiller -WS005 as developing collateral. You are busy developing a custom control from a class from Control, which is not a composite control and performs all of its rendering by using GD+.

What should you do to make sure that portions of the control are automatically repainted when a specific property changes?

- A. You should call the Onpaint method.
- B. You should call the Invalidate method.
- C. You should call the Update method.
- D. You should call the Refresh method.

Answer: B

Explanation: This method is overloaded to define the portions of a control that is about to be repainted.

Incorrect Answers:

A: The Invalidate method calls the Onpaint method.

C: The Update method does not allow you to specify the portions of the control that must be prepared.

D: The Refresh method does not allow you to specify the portions of the control that must be prepared.

QUESTION 124

You are working as an application developer at Certkiller .com. The Certkiller .com network consists of a single Active Directory domain named Certkiller .com.

Certkiller .com uses Visual Studio 2005 as an application platform. Certkiller .com consists of a Development department. You as the developer of Certkiller .com use a client computer named Certkiller -WS025 as developing collateral. You are busy developing a custom control from a class from Control, which is not a composite control and performs all of its rendering by using GD+.

What should you do to write code to render the control, preventing other controls from modifying the rendering behavior of your control?

- A. You should attach the Paint event to an event handler in the constructor and perform all rendering in the event handler.
- B. You should create a Graphic instance in the contracture and perform all rendering via the Graphic instance.
- C. You should override the Onpaint method and do all rendering in the overridden method.
- D. You should override the InitLayout method, attach the Paint event to the event handler and do all rendering in the event handler.

Answer: C

Explanation: When you override the Onpaint method, you can render the control via the Supplied PaintEventArgs parameter.

Incorrect Answers:

A, D: The event handler in not needed. You cannot stop the other controls from attaching to the event handlers.

B: You should not create a graphic instance.

QUESTION 125

You are working as an application developer at Certkiller .com. The Certkiller .com network consists of a single Active Directory domain named Certkiller .com. Certkiller .com uses Visual Studio 2005 as an application platform. Certkiller .com consists of a Development department. You as the developer of Certkiller .com use a client computer named Certkiller -WS115 as developing collateral. You are busy creating an extended control deriving class from TextBox. You did override the OnPaint method of the TextBox, but it never is called.

What should you do to set or unset a flag in the ControlStyles enumeration to solve this problem?

- A. You should set the AllPaintInWmPaint flag.
- B. You should unset the UserPaint.
- C. You should unset the AllPaintInWmPaint flag.
- D. You should set the UserPaint.

Answer: D

Explanation: The UserPaint flag shows that the control paints itself then having the operating system performs the job. If the flag is not set, the OnPaint method is not

called.

Incorrect Answers:

A, C: It does not matter if you set or unset the AllPaintInWmPaint flag. It shows that the control should reduce flickering the WM_ERASEBKGD window message.

B: The UserPaint flag should be set for the OnPaint method to be called.

QUESTION 126

You are working as an application developer at Certkiller .com. The Certkiller .com network consists of a single Active Directory domain named Certkiller .com. Certkiller .com uses Visual Studio 2005 as an application platform. Certkiller .com consists of a Development department. You as the developer of Certkiller .com use a client computer named Certkiller -WS005 as developing collateral. You are busy creating an extended control deriving class from Button.

What should you do to render your control with an oval shape which must prevent other control from modifying the rendering behavior of your control?

A. You should override the OnPaint method and call the base implementation and render the control.

B. You should override the OnPaintBackground method and render the control but not call the base implementation.

C. You should override the OnPaint method and render the control but not call the base implementation.

D. You should override the OnPaintBackground method and call the base implementation and render the control.

Answer: C

Explanation: The UserPaint method is used whenever regions of a control are invalidated. The base OnPaint method raise the Paint event.

Incorrect Answers:

A: You should not call the OnPaint method. This would raise the OnPaint method.

B, D: You should not override the OnPaintBackground method.

Topic 14, VB, Configuring and Deploying Applications (9 Questions)

QUESTION 127

You are working as an application developer at Certkiller .com. The Certkiller .com network consists of a single Active Directory domain named Certkiller .com. Certkiller .com uses Visual Studio 2005 as an application platform. Certkiller .com consists of a Development department. You as the developer of Certkiller .com use a client computer named Certkiller -WS222 as developing collateral. You are busy developing a Microsoft Windows Forms application that uses the ClickOnce technology. You did specify several assemblies. The assemblies are used by the application as optional so that they do not get deployed initially. The application is specified to loads these assemblies dynamically.

What should you do to modify the application so that the assemblies are

automatically downloaded when the application requires them?

- A. You should handle the AssemblyResolve event of the AppDomain class and call the DownloadFileGroup method of the ApplicationDeployment class.
- B. You should handle the TypeResolve event of the AppDomain class and call the DownloadFileGroup method of the ApplicationDeployment class.
- C. You should handle the AssemblyLoad event of the AppDomain class and call the Update method of the ApplicationDeployment class.
- D. You should handle the ResourceResolve event of the AppDomain class and call the Update method of the ApplicationDeployment class.

Answer: A

Explanation: The AssemblyResolve event is raised when the current application domain fails to load an assembly requested by the application. You need to specify the name of the deployment group to which the assembly belongs.

Incorrect Answers:

- B: The TypeResolve is raised after an assembly is successfully loaded.
- C: The AssemblyLoad is raised after an assembly is loaded.
- D: The ResourceResolve event is raised when the current application domain fails to load a resource.

QUESTION 128

You are working as an application developer at Certkiller .com. The Certkiller .com network consists of a single Active Directory domain named Certkiller .com. Certkiller .com uses Visual Studio 2005 as an application platform. Certkiller .com consists of a Development department. You as the developer of Certkiller .com use a client computer named Certkiller -WS222 as developing collateral. You are busy developing a Microsoft Windows Forms application named TestGradeBook to deployment server.

What should you do to use a batch file to programmatically change the update requirement of the application?

- A. You should use the Manifest Generation and Editing Graphical Tool {MageUI.exe} to change the GradeBook.application settings.
- B. You should use the Manifest Generation and Editing Tool {Mage.exe} to change the GradeBook.exe.manifest settings.
- C. You should use the Manifest Generation and Editing Tool {Mage.exe} to change the GradeBook.application settings.
- D. You should use the Manifest Generation and Editing Graphical Tool {MageUI.exe} to change the GradeBook.exe.manifest settings.

Answer: C

Explanation: The Mage.exe is used to change the GradeBook.application settings. It also helps to manage a published application.

Incorrect Answers:

A: The MageUI.exe provides a graphical user interface for managing a published application.

B, D: The GradeBook.exe cannot change the update requirements. The GradeBook.exe.manifest allows you to specify an application's associated files.

QUESTION 129

You are working as an application developer at Certkiller .com. The Certkiller .com network consists of a single Active Directory domain named Certkiller .com. Certkiller .com uses Visual Studio 2005 as an application platform. Certkiller .com consists of a Development department. You as the developer of Certkiller .com use a client computer named Certkiller -WS102 as developing collateral. You are busy developing a Microsoft Windows Forms application named Certkiller GradeBook to deployment server. You first deployed the application so that it supports offline use. What should you do to change the application so that it is only available when the Certkiller .com user's computer is connected to the Internet?

A. You should use the Manifest Generation and Editing Graphical Tool {MageUI.exe} to change the GradeBook.application settings.

B. You should use the Manifest Generation and Editing Tool {Mage.exe} to change the GradeBook..exe.manifest settings.

C. You should use the Manifest Generation and Editing Graphical Client Tool {MageUI.exe} to change the GradeBook.exe.manifest settings.

D. You should use the Manifest Generation and Editing Tool {Mage.exe} to change the GradeBook.application settings.

Answer: A

Explanation: The Mage.exe is used to change the GradeBook.application settings. It also helps to manage a published application.

Incorrect Answers:

B: The MageUI.exe provides a graphical user interface for managing a published application.

C, D: The GradeBook.exe cannot change the update requirements. The GradeBook.exe.manifest allows you to specify an application's associated files. It also cannot change the launch requirements of the application with the GradeBook.exe.manifest file.

QUESTION 130

You are working as an application developer at Certkiller .com. The Certkiller .com network consists of a single Active Directory domain named Certkiller .com. Certkiller .com uses Visual Studio 2005 as an application platform. Certkiller .com consists of a Development department. You as the developer of Certkiller .com use a client computer named Certkiller -WS202 as developing collateral. You are busy developing a Setup project.

What should you do to configure the project so that the built package can be

installed on 32-bit and 64-bit computers?

- A. You should set the TargetPlatform property to x64.
- B. You should set the TargetPlatform property to x86.
- C. You should set the Version property to 64.
- D. You should set the Version property to 32.

Answer: B

Explanation: The x86 setting allows a package to be installed on 32-bit and 64-bit computers.

Incorrect Answers:

- A: The x86 setting will cause an error to be raised when the package is installed on a 32-bit system..
- C, D: The Version property identifies the version of the installer package itself.

QUESTION 131

You are working as an application developer at Certkiller .com. The Certkiller .com network consists of a single Active Directory domain named Certkiller .com. Certkiller .com uses Visual Studio 2005 as an application platform. Certkiller .com consists of a Development department. You as the developer of Certkiller .com use a client computer named Certkiller -WS035 as developing collateral. You are busy developing a Microsoft Windows Forms application. The applications that you are developing are using shared assemblies that must be installed into the Global Assembly Cache (GAC).

What should you do to develop a deployment strategy?

- A. You should create a CAB project that contains the application.
- B. You should use the XCOPY to deploy the application.
- C. You should use the ClickOnce to deploy the application.
- D. You should create a Window Forms Setup application

Answer: D

Explanation: The Window Forms Setup application can accomplish this by creating and configuring a Setup project to deploy a Microsoft Windows Installer package.

Incorrect Answers:

- A: The CAB Project is used to package components.
- B: TheXCOPY cannot install assemblies into the GAC by using XCOPY.
- C: The ClickOnce cannot be used to install shared assemblies into the GAC.

QUESTION 132

You are working as an application developer at Certkiller .com. The Certkiller .com network consists of a single Active Directory domain named Certkiller .com. Certkiller .com uses Visual Studio 2005 as an application platform. Certkiller .com consists of a Development department. You as the developer of Certkiller .com use a

client computer named Certkiller -WS205 as developing collateral. You are busy developing a Microsoft Windows Forms application. You want the users to download or run a Microsoft Windows Installer package from Certkiller .com's Web site to install the application.

Which of the following deployment project should you create?

- A. Setup Project
- B. CAB Project
- C. Merge Module Project
- D. Web Setup Project

Answer: A

Explanation: The Setup Project allows you to install Window-based applications.

Incorrect Answers:

B: The CAB Project is used to package components.

C: The Merge Module Project allows you to install shared components.

D: The Web Setup Project allows you to install Web applications.

QUESTION 133

You are working as an application developer at Certkiller .com. The Certkiller .com network consists of a single Active Directory domain named Certkiller .com. Certkiller .com uses Visual Studio 2005 as an application platform. Certkiller .com consists of a Development department. You as the developer of Certkiller .com use a client computer named Certkiller -WS009 as developing collateral. You are busy developing a Microsoft Windows Forms application. You then change the default configuration to package files as loose uncompressed files. You also need to make sure that the .NET Framework 2.0 redistributable component exits after you build the Setup project.

Which of the following components should look for in the Setup project's output directory?

- A. RegSvcs.exe
- B. Dotnetfx.exe
- C. InstallUtil.exe
- D. RegAsm.exe

Answer: B

Explanation:

The Dotnetfx.exe needs to exits in the output directory, which uses the .NET Framework 2.0 redistributable package.

Incorrect Answers:

A: The RegSvcs.exe is the .NET Services Installation tool. It allows you to register an assembly for use with COM+.

C: The InstallUtil.exe allows you to execute custom installers that are associated with an

assembly. .

D: The RegAsm.exe allows you to register an assembly for use with COM+.

QUESTION 134

You are working as an application developer at Certkiller .com. The Certkiller .com network consists of a single Active Directory domain named Certkiller .com. Certkiller .com uses Visual Studio 2005 as an application platform. Certkiller .com consists of a Development department. You as the developer of Certkiller .com use a client computer named Certkiller -WS209 as developing collateral. You are busy creating a class that derives from Installer. The class that you created is used by Microsoft Windows Forms application to install a custom component which uses an existing Microsoft Access database.

Which exception type should you use if the database does not exist at installation time and you need to throw an exception and have the installation rolled back?

- A. You should install InstallException
- B. You should install ApplicationException
- C. You should install SqlException
- D. You should install FileNotFoundException

Answer: A

Explanation: The InstallException passes information to the Microsoft Windows Installer and causes the installation to be rolled back.

Incorrect Answers:

- B: The ApplicationException will not cause the installation to roll back.
 - C: The SqlException will not cause the installation to roll back.
 - D: The FileNotFoundException will not cause the installation to roll back.
-

QUESTION 135

You are working as an application developer at Certkiller .com. The Certkiller .com network consists of a single Active Directory domain named Certkiller .com. Certkiller .com uses Visual Studio 2005 as an application platform. You as the developer of Certkiller .com use a client computer named Certkiller -WS209 as developing collateral.

You are busy creating a class that derives from Installer. The class that you created is used by Microsoft Windows Forms setup application to install a custom component which uses an existing Microsoft SQL Server 2005 database. The component throws a SqlException instance when it cannot connect to the database during installation.

What should you do to automatically rollback the installation is the component throws a SqlException instance?

- A. You should catch the SqlException instance and create an instance of InstallException and pass the SqlException instance as the inner exception and then throw the InstallException instance.

- B. You should catch the `SqlException` instance and create an instance of `ApplicationException` and pass the `SqlException` instance as the inner exception and then throw the `ApplicationException` instance.
- C. You should catch the `SqlException` instance and re-throw it.
- D. You do not need to catch the `SqlException` instance as it will propagate up the call stack.

Answer: A

Explanation: This action will pass information to the Microsoft Windows Installer and causes the installation to be rolled back.

Incorrect Answers:

- B: The `ApplicationException` will not cause the installation to roll back.
- C: The `SqlException` will not cause the installation to roll back.
- D: The `FileNotFoundException` will not cause the installation to roll back.

Topic 15, C#, Developing applications that use system types and collections(21 Questions)

QUESTION 136

You work as the application developer at Certkiller .com. The Certkiller .com network consists of a single Active Directory domain named Certkiller .com. All servers on the Certkiller .com network run Windows Server 2003 and all client computers run Windows XP Professional.

You are in the process of storing numerical values up to 2,100,000,000 into a variable and may require storing negative values using a .NET Framework 2.0 application. You are required to optimize memory usage. What should you do?

- A. `Int32`
- B. `UInt16`
- C. `UInt32`
- D. `Int16`

Answer: A

Explanation: The `Int32` type should be used in the scenario as it can be used to store positive and negative numerical values from -2,147,483,648 to +2,147,483,647.

Incorrect Answers:

- B, C: The `UINT32` and `UInt16` type should not be used in the scenario because they are used to store only unsigned positive numbers.
- D: The `Int16` type should not be used as you will only be allowed to store values from -32768 to +32768.

QUESTION 137

You work as an application developer at Certkiller .com. you are currently in the

process of creating a class that stores data about Certkiller .com's customers. Certkiller .com customers are assigned unique identifiers and various characteristics that may include aliases, shipping instructions, and sales comments. These characteristics can change in both size and data type.

You start by defining the Customer class as shown below:

```
public class Customer
{
    private int custID;
    private ArrayList attributes;
    public int CustomerID
    {
        get {return custID;}
    }
    public Customer (int CustomerID)
    {
        this.custID = CustomerID;
        this.attributes = new ArrayList ();
    }
    public void AddAttribute (object att)
    {
        attributes.Add (att);
    }
}
```

You have to create the FindAttribute method for locating attributes in Customer objects no matter what the data type is.

You need to ensure that the FindAttribute method returns the attribute if found, and you also need to ensure type-safety when returning the attribute.

What should you do?

A. Use the following code to declare the FindAttribute method:

```
public T FindAttribute (T att)
{
    //Find attribute and return the value
}
```

B. Use the following code to declare the FindAttribute method:

```
public object FindAttribute (object att)
{
    //Find attribute and return the value
}
```

C. Use the following code to declare the FindAttribute method:

```
public T FindAttribute <T> (T att)
{
    //Find attribute and return the value
}
```

D. Use the following code to declare the FindAttribute method:

```
public string FindAttribute (string att)
```

```
{  
//Find attribute and return the value  
}
```

Answer: C

Explanation: This code declares the method `FindAttribute` and specifies an argument named `att` using the `T` placeholder as the argument and return data type. To ensure the `FindAttribute` method accepts arguments of different types, you should specify an argument using a generic placeholder. The argument `att` in this generic method will accept any valid data type and ensures type-safety by returning that same data type.

Incorrect Answers:

A: You should not use this code because it does not declare the placeholder `T`. when declaring a generic method, you have to use the `<>` brackets to declare the placeholder before using it.

B: You should not use this code because it does not guarantee type-safety.

D: You should not use this code because it will only accept a string argument and return a string argument.

QUESTION 138

You work as an application developer at Certkiller .com. You are creating a custom exception class named `ProductDoesNotExistException` so that custom exception messages are displayed in a new application when the product specified by users is unavailable.

This custom exception class will take the `ProductID` as an argument to its constructor and expose this value through the `ProductID`. You are now in the process of creating a method named `UpdateProduct`. This method will be used to generate and manage the `ProductDoesNotExistException` exception if the `ProductID` variable contains the value 0.

You need to ensure that use the appropriate code for the `UpdateProduct` method. What should you do?

A. Make use of the following code:

```
public void UpdateProduct ()  
{  
    try  
    {  
        if (ProductID == 0)  
            throw new ProductDoesNotExistException (ProductID);  
    }  
    catch (ProductDoesNotExistException ex)  
    {  
        MessageBox.Show ("There is no Product" + ex. ProductID);  
    }  
}
```

B. Make use of the following code:

```
public void UpdateProduct ()
{
    try
    {
        if (ProductID == 0)
            throw new Exception ("Invalid ProductID");
    }
    catch (ProductDoesNotExistException ex)
    {
        MessageBox.Show (ex.Message);
    }
}
```

C. Make use of the following code:

```
public void UpdateProduct ()
{
    if (ProductID == 0)
        throw new ProductDoesNotExistException (ProductID);
}
```

D. Make use of the following code:

```
public void UpdateProduct ()
{
    if (ProductID == 0)
        throw new Exception ("Invalid ProductID");
}
```

Answer: A

Explanation: This code verifies the value of the ProductID variable by using the if statement. If the ProductID variable contains a value of 0, this code generates an exception of type ProductDoesNotExistException. To explicitly generate an exception, you are required to use the throw statement. The exception generated by using the throw statement can be handled by the try...catch block. This code generates the custom exception by calling the constructor of the custom exception class named ProductDoesNotExistException. The constructor argument is the ProductID attached to the ProductDoesNotExistException object. This code then handles the custom exception named ProductDoesNotExistException by using a catch block, which handles exceptions by using a variable named ex of the type ProductDoesNotExistException. This code displays the "There is no Product" error message by using the MessageBox.Show method and concatenating the ex.ProductID to it.

Incorrect Answers:

B: You should not use the code that generates an exception of the type Exception and handles the exception of the type ProductDoesNotExistException in the catch block. This code is incorrect because you are required to generate a custom exception named ProductDoesNotExistException.

C, D: You should not use the codes that do not use a try...catch block because the application an unhandled exception.

QUESTION 139

You work as the application developer at Certkiller .com. The Certkiller .com network consists of a single Active Directory domain named Certkiller .com. All servers on the Certkiller .com network run Windows Server 2003 and all client computers run Windows XP Professional.

You have recently finished development of a class named TestReward and package the class in a .NET 2.0 assembly named TestObj.dll. After you ship the assembly and it is used by client applications, you decide to move the TestReward class from TestObj.dll assembly to the TestRewardObj.dll Assembly. You are to ensure when you ship the updated TestObj.dll and TestRewardObj.dll assemblies that the client applications continue to work and do not require recompiling.

What should you do?

- A. The TypeForwardedTo attribute should be used
- B. The TypeConvertor.ConvertTo method should be used
- C. The InternalsVisibleTo attribute should be used
- D. The Type Converter.ConvertFrom method should be used

Answer: A

Explanation:

The statement used for you to add a type from one assembly into another assembly is the TypeForwardTo attribute which enables you not to have the application recompiled.

Incorrect Answers:

B, D: The TypeConverter class provides a unified way of converting different types of values to other types and can not be used to move a type.

C: The method in question here specifies all nonpublic types in an assembly are visible to other assemblies but can not be used to move types.

QUESTION 140

You work as an application developer at Certkiller .com. You have recently created a custom collection class named ShoppingList for a local supermarket. This custom class will include ShoppinItem objects that have the public properties listed below.

- * Name
- * AisleNumber
- * OnDiscount

You are required to enable users of your class to iterate through the ShoppingList collection, and to list each product name and aisle number using the foreach statement.

You need to achieve this by declaring the appropriate code.

What code should you use?

```
A. public class ShoppingList : ICollection
{
// Class implementation
}
B. public class ShoppingList : IEnumerator, IEnumerable
{
// Class implementation
}
C. public class ShoppingList : IList
{
// Class implementation
}
D. public class ShoppingList : Enum
{
// Class implementation
}
```

Answer: B

Explanation: You should implement the IEnumerable and IEnumerator interfaces of the System.Collections namespace to ensure that your collection class supports foreach iteration. The IEnumerable interface defines only one method named GetEnumerator that returns an object of type IEnumerator of the System.Collections namespace and is used to support iteration over a collection. The IEnumerator interface supports methods, such as Current, MoveNext, and Reset to iterate through a collection. The Current method returns the current element of the collection. The Move method positions the enumerator to the next available element of the collection. The Reset method positions the enumerator before the first element of the collection.

Incorrect Answers:

A: You should not use the code that implements the ICollection interface because this interface is used to define properties in a collection. Implementing this interface will not ensure that your collection class supports foreach iteration because it does not inherit the IEnumerator interface.

C: You should not use the code that implements the IList interface because this interface is used to define properties of a non-generic list of items accessed by index. Implementing this interface will not ensure that your collection class supports foreach iteration because it does not inherit the IEnumerator interface.

D: You should not use the code that inherits the Enum because this structure is used as a base class for those classes that provide enumeration values. Inheriting the Enum structure will not ensure that your collection class supports foreach iteration.

QUESTION 141

You work as the application developer at Certkiller .com. The Certkiller .com network consists of a single Active Directory domain named Certkiller .com. All servers on the Certkiller .com network run Windows Server 2003 and all client computers run

Windows XP Professional.

You are in the process of developing a .NET Framework 2.0 application used to store a type-safe list of names and e-mail addresses. The list will be populated all at once from the sorted data which means you will not always need to perform insertion or deletion operations on the data. You are required to choose a data structure that optimizes memory use and has good performance.

What should you do?

- A. The System.Collections.Generic.SortedList class should be used
- B. The System.Collections.HashTable class should be used
- C. The System.Collections.Generic.SortedDictionary class should be used
- D. The System.Collections.SortedList class should be used

Answer: A

Explanation: The SortedList generic class should be used in the scenario class as it provides type safety compared against the System.Collections.SortedList class.

Incorrect Answers:

B: The System.Collections.HashTable class should not be used as this class provides no type safety.

C, D: Although this is very similar to the SortedList class the SortedList class should be used instead in the scenario.

QUESTION 142

You work as an application developer at Certkiller .com. You are currently in the process of reviewing an application that was created by a fellow developer.

The application that you are reviewing includes a declaration for a collection named EmployeeList, which stores Employee objects. The declaration is shown below:

```
public class EmployeeList : Enumerator, IEnumerable
{
// Class implementation
}
```

You require the ability to iterate through the EmployeeList with minimum development effort.

What should you do?

- A. Utilize the switch statement
- B. Utilize the dowhile statement
- C. Utilize the foreach statement
- D. Utilize the if statement

Answer: C

Explanation: the IEnumerable and IEnumerator interfaces of the System.Collections namespace are used to ensure that your collection class supports foreach iteration. The IEnumerable interface defines only one method named

GetEnumerator that returns an object of type IEnumerator of the System.Collections namespace and is used to support iteration over a collection. The IEnumerator interface supports methods, such as Current, MoveNext, and Reset to iterate through a collection. The Current method returns the current element of the collection. The Move method positions the enumerator to the next available element of the collection. The Reset method positions the enumerator before the first element of the collection.

Incorrect Answers:

A D: These statements will not allow you to iterate through the EmployeeList collection.

B: You should not use this statement because it will require manually calling the MoveNext and Current methods. The scenario states that you need to "...iterate through the EmployeeList with minimum development effort."

QUESTION 143

You work as an application developer at Certkiller .com. Certkiller .com has been contracted to develop an application for the local bank.

You have been given the responsibility of creating this application and need to store each transaction record, which is identified using a complex transaction identifier, in memory. The bank informs you that the total amount of transaction records could reach 200 per day.

To achieve this, you decide to utilize one of the existing collection classes in the .NET 2.0 class library.

You need to ensure that you the collection class you select is the most efficient one for storing transaction records.

What should you do?

- A. Select the ListDictionary collection class.
- B. Select the HashTable collection class.
- C. Select the Queue collection class.
- D. Select the StringCollection collection class.

Answer: B

Explanation: You should select the HashTable class to store transaction records because each element is identified using a unique identifier and the size of the collection is large. Elements in the HashTable collection are stored with a key/value pair where each key is created using a hash code. The default capacity of a HashTable class is zero, and you can use the Add method to add a new element to the collection. The Count property provides the total number of elements in the HashTable collection. An element of the HashTable class can be accessed using the DictionaryEntry class. You can use the Key and Value properties of the DictionaryEntry class to access the key associated with the element and the value of the element, respectively.

Incorrect Answers:

A: You should not select this collection class because this class is used if the total number of elements to be stored in a collection is less than 10 elements in length.

C: You should not select this collection class because you need to access transaction records using a transaction identifier, not in sequential order.

D: You should not select this collection class because this class is used to manage a collection of string values.

QUESTION 144

You work as an application developer at Certkiller .com. Certkiller .com has been hired by a small local private school to develop a class library that will be used in an application named ManageAttendance for the purpose of managing student records.

You are responsible for developing this class library. Certkiller .com has instructed you to create a collection in the application to store learners' results.

The school has informed you that they currently only have seven learners, but that this value will triple in the following year. Due to the limited resources, you need to ensure that the collection you create consumes a minimum amount of resources.

What should you use to create the collection?

A. The HybridDictionary collection class.

B. The HashTable collection class.

C. The ListDictionary collection class.

D. The StringCollection collection class.

Answer: A

Explanation: You should use the HybridDictionary class to create the collection because this class is useful in scenarios where the number of elements is unknown or could grow in size. A collection of the HybridDictionary type manages the collection depending on the number of elements. The

HybridDictionary type collection uses the ListDictionary class to manage the collection when there are only a few elements. When the number of elements exceeds ten, the HybridDictionary type collection automatically converts the elements into HashTable management.

Incorrect Answers:

B: You should not use this collection class because this class is used if the total number of elements to be stored in a collection is known and is greater than ten elements in length.

C: You should not use this collection class because this class is used if the total number of elements to be stored in a collection is known and is less than ten elements in length.

D: You should not use this collection class because this class is used to manage a collection of string values.

QUESTION 145

You work as an application developer at Certkiller .com. Certkiller .com wants you to develop an application that stores and retrieves client information by means of a unique account number.

You create a custom collection class, which implements the IDictionary interface,

named ClientDictionary. The following code have been included into the new application.

```
//Create Client objects
Client c1 = new Client ("AReid", "Andy Reid", Status.Current);
Client c2 = new Client ("DAustin", "Dean Austin", Status.New);
//Create ClientDictionary object
IDictionary cData = new ClientDictionary ();
cData.Add ("10001", c1);
cData.Add ("10002", c2);
```

You use the same method to add other Client objects to the collection. You need to ensure that you are able to retrieve client information associated with the account number 10111.

What should you do?

A. Use the following code:

```
Client foundClient;
foundClient = (Client) cData.Find ("10111");
```

B. Use the following code:

```
Client foundClient;
if (cData.Contains ("10111"))
foundClient = cData ["10111"];
```

C. Use the following code:

```
Client foundClient;
if (cData.Contains ("10111"))
foundClient = (Client) cData ["10111"];
```

D. Use the following code:

```
Client foundClient;
foreach (string key in cData.Keys
{
if (key == "10111")
foundClient = (Client) cData.Values ["10111"];
}
```

Answer: C

Explanation: This code invokes the Contains method of the IDictionary interface to determine whether a value is associated with the key 10111. If a value exists for that key, then the clientData ["10111"] statement retrieves the client data as a generic object. The code casts the generic object into a Client object, and it is stored in the foundClient variable

Incorrect Answers:

A: You should not use the code that uses the Find method because no such method exists in the IDictionary interface.

B: You should not use the code that assigns the foundClient variable to a generic object because the foundClient variable is declared as a Client type.

D: You should not use the code that iterates through the Keys collection because it is unnecessary and process-intensive.

QUESTION 146

You work as an application developer at Certkiller .com. Certkiller .com has instructed you to create a class named MetricFormula. This class will be used to compare MetricUnit and EnglishUnit objects.

The MetricFormula is currently defined as follows (Line numbers are used for reference purposes only):

```
1. public class MetricFormula
2. {
3.
4. }
```

You need to ensure that the MetricFormula class can be used to compare the required objects.

What should you do? (Choose two)

A. Add the following code on line 1:

```
: IComparable
{
```

B. Add the following code on line 1:

```
: IComparer
{
```

C. Add the following code on line 3:

```
public int Compare (object x, object y)
{
// implementation code
}
```

D. Add the following code on line 3:

```
public int CompareTo (object obj)
{
// implementation code
}
```

Answer: B, C

Explanation: You should add the code so that it reads as follows:

```
1. public class MetricFormula : IComparer
2. {
3. public int Compare (object x, object y)
4. {
5. // implementation code
5. }
6. }
```

You have to implement the IComparer interface to create a comparer class for MetricUnit and EnglishUnit objects. The IComparer interface provides only one method

named Compare. The Compare method takes two objects and returns an integer value representing whether those objects are equal, greater than, or less than the other. If the return value is negative, then the first object is less than the second. The objects are equal if the return value is zero. The first object is greater than the first if the return value is positive. The IComparer interface is typically used if you want to implement comparison across objects of different classes without having to provide implementation in each comparable class.

Incorrect Answers:

A, D: You should use these two options because this should be implemented by the MetricUnit and EnglishUnit classes.

QUESTION 147

You work as an application developer at Certkiller .com. You are in the process of developing an application that makes use of a Queue class object named MyQueue. This Queue class object will be used to store messages sent by the user during application run time. The application that you are developing provides an interface for administrators and an interface for users to create message reports.

You want to ensure that all user messages stored in the MyQueue object are removed when an administrator selects the reset option.

What should you do?

- A. Use the Enqueue method of the MyQueue object.
- B. Use the Clear method of the MyQueue object.
- C. Use the Dequeue method of the MyQueue object.
- D. Use the TrimToSize method of the MyQueue object.

Answer: B

Explanation: The clear method sets the Count property of the Queue class object to 0 after removing all the elements from the queue. When you call the Clear method for a Queue object, the capacity of the Queue object is not changed.

Incorrect Answers:

A: You should not use this method because it is used to add a new element at the beginning of a Queue object.

C: You should not use this method because it is used to remove an element at the beginning of a Queue object.

D: You should not use this method because it is used to resize a Queue object.

QUESTION 148

You work as an application developer at Certkiller .com. You are in the process of developing an application that will store user messages collectively and the process the messages in sequence. The order in which the messages are processed will depend on the order in which it is received.

To add messages to the collection, users will specify the message that should be stored in a TextBox control named txtMsg and then click a Button control named btnAdd.

You need to ensure that the appropriate code is used to create the collection.
What should you use? (Choose two)

- A. Queue msgCollection = new Queue ();
- B. Stack msgCollection = new Stack ();
- C. msgCollection.Enqueue (txtMSG.Text);
- D. msgCollection.Push (txtMSG.Text);

Answer: A, C

Explanation: In this scenario, you should use the Queue class to create the collection because you are required to process user messages in sequence. The Dim statement creates an object named msgCollection of the Queue class. The second line of code then calls the Enqueue method of the msgCollection object to add the Text property value of the txtMSG control as an element in the collection. To manage elements in the queue, the Queue class provides methods, such as Dequeue and Clear. The Dequeue method is used to remove elements that are at the beginning of the Queue object. The Clear method is used to remove all elements from a Queue object. The Queue class is a data structure for handling elements based on the First In First Out (FIFO) concept.

Incorrect Answers:

B, D: Using these lines of code is incorrect because they use the Stack class to create a collection. Stack objects are used to store elements on the Last In First Out (LIFO) concept.

QUESTION 149

You work as an application developer at Certkiller .com. You are in the process of developing an application that makes use of a Queue class object named MyQueue. This Queue class object will be used to store messages sent by the user during application run time.

You would like to access the message at the beginning of the queue, prior to processing the user messages, without removing it.

What should you do?

- A. Use the Enqueue method of the MyQueue object.
- B. Use the Contains method of the MyQueue object.
- C. Use the Dequeue method of the MyQueue object.
- D. Use the Peek method of the MyQueue object.

Answer: D

Explanation: The Peek method accesses the element at the beginning of the object of the Queue class without removing it from the queue. The Queue class is a data structure for handling elements based on the First In First Out (FIFO) concept.

According to this concept, elements that are stored first are processed first.

Incorrect Answers:

A: You should not use this method of the Queue class because it is used to add a new element at the end of a Queue object.

B: You should not use this method of the Queue class because it is used to verify whether the specified element exists for the Queue object instance or not.

C: You should not use this method of the Queue class because it is used to remove the next element at the beginning of a Queue object.

QUESTION 150

You work as an application developer at Certkiller .com. Certkiller .com wants you to develop an application that stores and retrieves employee information by means of a unique staff number.

You create a custom collection class, which implements the type-safe IDictionary interface. This collection class is named EmployeeCollection, and is defined using the following code.

```
public class EmployeeCollection : IDictionary <int, Employee>
{
    // Implementation code
}
```

You need to ensure that an EmployeeCollection object is instantiated and that Employee objects are added to it.

What should you do?

A. Use the following code:

```
Employee e1, e2;
e1 = new Employee (1001, "Andy Reid", "Manager");
e2 = new Employee (1002, "Kara Lang", "Sales Engineer");
EmployeeCollection eData = new EmployeeCollection();
eData.Add (new KeyValuePair <string, Employee> (e1.ID, e1));
eData.Add (new KeyValuePair <string, Employee> (e2.ID, e2));
```

B. Use the following code:

```
Employee e1, e2;
e1 = new Employee (1001, "Andy Reid", "Manager");
e2 = new Employee (1002, "Kara Lang", "Sales Engineer");
EmployeeCollection eData = new EmployeeCollection();
eData.Add ((string) e1.ID, e1);
eData.Add ((string) e2.ID, e2);
```

C. Use the following code:

```
Employee e1, e2;
e1 = new Employee (1001, "Andy Reid", "Manager");
e2 = new Employee (1002, "Kara Lang", "Sales Engineer");
EmployeeCollection eData = new EmployeeCollection();
eData.Add (e1.ID, e1);
eData.Add (e2.ID, e2);
```

D. Use the following code:

```
Employee e1, e2;
e1 = new Employee (1001, "Andy Reid", "Manager");
```

```
e2 = new Employee (1002, "Kara Lang", "Sales Engineer");  
EmployeeCollection eData = new EmployeeCollection();  
eData.Add (new KeyValuePair (e1.ID, e1));  
eData.Add (new KeyValuePair (e2.ID, e2));
```

Answer: C

Explanation: This code instantiates two Employee objects and an EmployeeCollection object, and it adds those two Employee objects to the EmployeeCollection object. The EmployeeCollection class implements the generic IDictionary interface specifying the CKey and TValue placeholders as Integer and Employee data types, respectively. Like the non-generic IDictionary interface, the key is used to retrieve the value. Unlike the non-generic IDictionary interface, the key does not have to be a string and the value does not have to be a generic object. Unlike the non-generic IDictionary interface, the Add method of the generic IDictionary interface can accept either a KeyValuePair structure with the appropriate data types specified or in this case two arguments, an integer and Employee object.

Incorrect Answers:

A: If you use this code fragment, the EmployeeCollection class accepts an integer for the CKey placeholder and an Employee object for the TValue placeholder.

B: You should not use the code that casts the ID property from an integer into a string, because the key value should match the integer data type defined by CKey placeholder of the generic IDictionary interface.

D: You should not use the code that does not specify the CKey and TValue placeholders when using the KeyValuePair structure because the data types must be declared explicitly.

QUESTION 151

You work as an application developer at Certkiller .com. Certkiller .com wants you to develop an application that stores and retrieves staff information by means of a unique staff number.

You have already written the following code for the purpose of storing Employee objects.

```
Employee e1 = new Employee (1001, "Andy Reid", "Manager");  
Employee e2 = new Employee (1002, "Kara Lang", "Sales Engineer");  
Dictionary <int, Employee> eData = new Dictionary <int, Employee> ();  
eData.Add (e1.ID, e1);  
eData.Add (e2.ID, e2);
```

All other Employee objects have been added in the same way. You are required to display all key/value pairs within the Dictionary collection.

What should you do?

A. Use the following code:

```
foreach (KeyValuePair<int, Employee> keyPair in eData)  
Console.WriteLine (" {0} key : {1} value", keyPair.Key, keyPair.Value);
```


B. Use the following code:

```
foreach (string key in eData.Keys)
Console.WriteLine ("{0} key : {1} value", Key, (Employee) eData [key]);
```

C. Use the following code:

```
foreach (KeyValuePair keyPair in eData)
Console.WriteLine ("{0} key : {1} value", keyPair.Key, keyPair.Value);
```

D. Use the following code:

```
foreach (object value in eData.Values)
Console.WriteLine ("{0} key : {1} value", eData [value], value);
```

Answer: A

Explanation: This code iterates through each KeyValuePair structure in the generic DictionaryData, and it displays the Key and Value properties. Like the non-generic IDictionary interface, the key is used to retrieve the value. Unlike the non-generic IDictionary interface, the key does not have to be a string and the value does not have to be a generic object. You must specify the CKey and TValue placeholders when specifying a KeyValuePair structure. Because the eDataDictionary collection is instantiated with the integer and Employee data types for the CKey and TValue placeholders, respectively, the KeyValuePair structure should also use these data types. During each iteration, the KeyValuePair object is assigned to the keyPair variable, and the Console.WriteLine method is used to display the Key and Value properties to the console.

Incorrect Answers:

B: Like the non-generic IDictionary interface, the key is used to retrieve the value. Unlike the non-generic IDictionary interface, the key does not have to be a string and the value does not have to be a generic object. You must specify the CKey and TValue placeholders when specifying a KeyValuePair structure.

C: You should not use the code that does not specify the CKey and TValue placeholders when using the KeyValuePair structure because the data types must be declared explicitly.

D: You should not use the code that specifies a value when accessing items in the Dictionary collection because you should use a key to access a value and you cannot guarantee that only one key exists for a value, as there might be duplicate values in a Dictionary collection

QUESTION 152

You work as an application developer at Certkiller .com. Certkiller .com wants you to develop an application that handles passes for Certkiller .com's parking lot. The application has to store and retrieve vehicle information using a vehicle identification number (VIN).

You need to use the correct code to ensure type-safety.

What should you do?

A. Use the following code:

```
Vehicle v1, v2;
```

```
v1 = new Vehicle ("1M2567871Y91234574", "Nissan Silvia", 1996);  
v2 = new Vehicle ("1F2569122491234574", "Mitsubishi Lancer", 2005);  
ArrayList vList = new ArrayList ();  
vList.Add (v1);  
vList.Add (v2);
```

B. Use the following code:

```
Vehicle v1, v2;  
v1 = new Vehicle ("1M2567871Y91234574", "Nissan Silvia", 1996);  
v2 = new Vehicle ("1F2569122491234574", "Mitsubishi Lancer", 2005);  
SortedList <string, Vehicle> vList = new SortedList <string, Vehicle> ();  
vList.Add (v1.VIN, v1);  
vList.Add (v2.VIN, v2);
```

C. Use the following code:

```
Vehicle v1, v2;  
v1 = new Vehicle ("1M2567871Y91234574", "Nissan Silvia", 1996);  
v2 = new Vehicle ("1F2569122491234574", "Mitsubishi Lancer", 2005);  
List vList = new List ();  
vList.Add (v1);  
vList.Add (v2);
```

D. Use the following code:

```
Vehicle v1, v2;  
v1 = new Vehicle ("1M2567871Y91234574", "Nissan Silvia", 1996);  
v2 = new Vehicle ("1F2569122491234574", "Mitsubishi Lancer", 2005);  
SortedList vList = new SortedList ();  
vList.Add (v1.VIN, v1);  
vList.Add (v2.VIN, v2);
```

Answer: B

Explanation: This code instantiates two Vehicle objects and a SortedList collection, and it adds those two Vehicle objects to the SortedList collection. The SortedList collection class implements the generic IDictionary interface specifying the CKey and TValue placeholders. Like the non-generic IDictionary interface, the key is used to retrieve the value. Unlike the non-generic IDictionary interface, the key does not have to be a string and the value does not have to be a generic object. This allows flexibility and type-safety.

Incorrect Answers:

A: You should not use the code fragments that specify the ArrayList or generic List collections because these collection classes do not implement the IDictionary interface and only allow element access by index, not by key.

C, D: You should not use the code fragments that specify the List or non-generic SortedList collections because you must use generic collection classes to guarantee type-safety.

QUESTION 153

You work as an application developer at Certkiller .com. Certkiller .com wants you to

develop an application that handles passes for Certkiller .com's parking lot. The application has to store and retrieve vehicle information in a contiguous list that allows for advanced navigation techniques.

You have already written and executed the following code:

```
Vehicle v1, v2, v3, v4, v5;
v1 = new Vehicle ("1M2567871Y91234574", "Nissan Silvia", 1996);
v2 = new Vehicle ("1H2569122493456960", "Honda Civic", 1999);
v3 = new Vehicle ("1F2569106891234589", "Mitsubishi Lancer", 2001);
v4 = new Vehicle ("1F7969122491234589", "Mazda MX7", 1998);
v5 = new Vehicle ("1T2569122493456123", "Toyota Supra", 2000);
LinkedList <Vehicle> vList = new LinkedList < Vehicle > ();
LinkedListNode < Vehicle > vNode;
vNode = vList.AddFirst (v1);
vNode = vList.AddLast (v2);
vNode = vList.AddAfter (vNode, v3);
vNode = vList.AddAfter (vNode, v4);
vList.AddLast (v5);
foreach (Vehicle v in vList)
{
Console.WriteLine (" {0} {1} ({2})", v.MakeModel, v.Year, v.Vin);
}
```

What output will be produced in the console?

- A. Nissan Silvia 1996 (1M2567871Y91234574)
Honda Civic 1999 (1H2569122493456960)
Mitsubishi Lancer 2001 (1F2569106891234589)
Mazda MX7 1998 (1F7969122491234589)
Toyota Supra 2000 (1T2569122493456123)
- B. Nissan Silvia 1996 (1M2567871Y91234574)
Mazda MX7 1998 (1F7969122491234589)
Mitsubishi Lancer 2001 (1F2569106891234589)
Honda Civic 1999 (1H2569122493456960)
Toyota Supra 2000 (1T2569122493456123)
- C. Nissan Silvia 1996 (1M2567871Y91234574)
Mazda MX7 1998 (1F7969122491234589)
Mitsubishi Lancer 2001 (1F2569106891234589)
Toyota Corolla 2002 (1T2569122493456123)
Honda Civic 1999 (1H2569122493456960)
- D. Nissan Silvia 1996 (1M2567871Y91234574)
Mitsubishi Lancer 2001 (1F2569106891234589)
Mazda MX7 1998 (1F7969122491234589)
Honda Civic 1999 (1H2569122493456960)
Toyota Supra 2000 (1T2569122493456123)

Answer: B

Explanation: The LinkedList collection class is a doubly-linked list that allows advanced navigation techniques when accessing its elements. An element pointer is provided by the LinkedListNode class with the Previous and Next properties. The LinkedList collection class has a few methods of insertion, including AddFirst, AddLast, AddBefore, and AddAfter methods. The AddFirst and AddLast methods accept an element argument and return a LinkedListNode object as a pointer reference. The AddBefore and AddAfter methods also return a LinkedListNode object, but they accept another LinkedListNode indicating which node before or after to insert the element.

In this scenario, there are five Vehicle objects added to the LinkedList collection named vList. The v1 object is added to the beginning of vList collection by invoking the AddFirst method. The v2 object is added to the end of the vList collection by invoking the AddLast method. The v3 object is added by invoking the AddAfter method. The v4 object is added before the v3 object by invoking the AddBefore method. Finally, the v5 object is added at the end of the vList collection by invoking the AddLast method.

Incorrect Answers:

A, C, D: These options do not represent the output that will be produced by the code you wrote.

QUESTION 154

You work as an application developer at Certkiller .com. You are in the process of developing a collection class named ClientCollection, which is to be used for storing the names of Certkiller .com's clients that are situated in various geographical areas. These client names are represented by the Client class. You are planning to create a method named SortClients in the ClientCollection class to arrange Client objects in ascending order.

You need to ensure that the appropriate interface is implemented by the Client class to allow sorting.

What interface should be used?

- A. IDictionary
- B. IComparable
- C. IComparer
- D. IEqualityComparer

Answer: B

Explanation: The IComparable interface provides only one method named CompareTo, which takes on generic object, compares it to the current instance, and returns an Integer value representing whether the current instance is equal to, greater than, or less than the object. The

IComparable interface is typically used when you want to create a class whose objects can be sorted in either a list or collection.

Incorrect Answers:

A: This interface should not be implemented because it is used to create a collection that is managed by key/value pairs.

C: This interface should not be implemented because it should be implemented by collection or comparer classes, not comparable classes.

D: This interface should not be implemented because it provides methods to compare two objects for equality only.

QUESTION 155

You work as an application developer at Certkiller .com. You have been given the responsibility of creating a class named CalcSalary that will determine the salaries of Certkiller .com's staff.

The CalcSalary class includes methods to increment and decrement staff salaries. You would like to invoke the IncrementSalary and DecrementSalary methods dynamically at runtime from the sales manager application when needed. After viewing the information displayed in the exhibit, you decide to use the Salary delegate to invoke these methods.

using System;

public delegate bool Salary (Employee Emp, double Amount);

public class CalcSalary

{

// for promotions

public static bool IncrementSalary (Employee Emp, double Amount)

{

// implementation details

}

// for demotions

public static bool DecrementSalary (Employee Emp, double Amount)

{

// implementation details

}

What code should you use?

A. public void Review (Employee emp, double amount)

{

Salary salaryDel;

if (emp.Status == QuarterlyReview.OnTarget || emp.Status == QuarterlyReview.AboveGoals)

salaryDel.Invoke (CalcSalary.IncrementSalary (emp, amount));

else

salaryDel.Invoke (CalcSalary.DecrementSalary (emp, amount));

}

B. public void Review (Employee emp, double amount)

{

Salary salaryDel;

if (emp.Status == QuarterlyReview.OnTarget || emp.Status == QuarterlyReview.AboveGoals)

salaryDel.Method = CalcSalary.IncrementSalary;

else

```
salaryDel.Method = CalcSalary.DecrementSalary;
salaryDel.Invoke (emp, amount);
}
C. public void Review (Employee emp, double amount)
{
    Salary salaryDel;
    if (emp.Status == QuarterlyReview.OnTarget || emp.Status ==
        QuarterlyReview.AboveGoals)
        salaryDel.IncrementSalary (emp, amount);
    else
        salaryDel.DecrementSalary (emp, amount);
}
D. public void Review (Employee emp, double amount)
{
    Salary salaryDel;
    if (emp.Status == QuarterlyReview.OnTarget || emp.Status ==
        QuarterlyReview.AboveGoals)
        salaryDel = CalcSalary.IncrementSalary;
    else
        salaryDel = CalcSalary.DecrementSalary;
    salaryDel.Invoke (emp, amount);
}
```

Answer: D

Explanation: This code declares a delegate variable and, based upon the value of the Status property, assigns the delegate variable to the correct method. If the Status property is QuarterlyReview.OnTarget or QuarterlyReview.AboveGoals, then the Salary delegate variable is assigned to the IncrementSalary method of the CalcSalary class. If not, then the Salary delegate variable is assigned to the DecrementSalary method of the CalcSalary class. Delegates are method pointers and must be assigned to a method so that a delegate variable can invoke it. The Invoke method takes those arguments specified by the delegate declaration.

Incorrect Answers:

A, B, C: You should not use these code fragments because they are syntactically incorrect and will result in a compilation error if used.

QUESTION 156

You work as an application developer at Certkiller .com. You have been given the responsibility of creating a class named CalcSalary that will determine the salaries of Certkiller .com's staff.

The CalcSalary class includes methods to increment and decrement staff salaries.

The following code is included in the CalcSalary class:

```
public class CalcSalary
{
    // for promotions
```

```
public static bool IncrementSalary (Employee Emp, double Amount)
{
    if (Emp.Status == QuarterlyReview.AboveGoals)
        Emp.Salary += Amount;
    return true;
}
else
    return false;
}
//for demotions
public static bool DecrementSalary (Employee Emp, double Amount)
{
    if (Emp.Status == QuarterlyReview.AboveGoals)
        Emp.Salary -= Amount;
    return true;
}
else
    return false;
}
}
```

You would like to invoke the IncrementSalary and DecrementSalary methods dynamically at runtime from the sales manager application, and decide to create a delegate named SalaryDelegate to invoke them.

You need to ensure that you use the appropriate code to declare the SalaryDelegate delegate.

What is the correct line of code?

- A. public delegate bool Salary (Employee Emp, double Amount);
- B. public bool Salary (Employee Emp, double Amount);
- C. public event bool Salary (Employee Emp, double Amount);
- D. public delegate void Salary (Employee Emp, double Amount);

Answer: A

Explanation: The signatures of the delegate and the attached method(s) should be identical. When you declare a delegate, you use the delegate keyword followed by the return type. If you bind the delegate to a method with a return type, you should specify that. If you bind the delegate to a method that does not return a data type, you should use the void keyword. After that, you should specify the name of the delegate and declare the arguments expected. In this scenario, the IncrementSalary and DecrementSalary methods accept an Employee object and a double value, and return a Boolean value. You should, therefore, accept an Employee object and a double value, and return a Boolean value when you declare the SalaryDelegate delegate.

Incorrect Answers:

B: You should not use the code that does not use the delegate keyword.

C: You should not use the code that declares an event named SalaryDelegate.
D: You should not use the code that uses the void keyword because both the IncrementSalary and DecrementSalary methods return a Boolean value.

Topic 16, C#, Implementing service processes, threading, and application domains in a .NET Framework application (15 Questions)

QUESTION 157

You work as an application developer at Certkiller .com. You have recently created a Windows service application and need to define a Windows service class. What should you do?

A. Use the following code:

```
public class TestService : System.ServiceProcess.WindowsService
{
//Implementation details
}
```

B. Use the following code:

```
public class TestService : System.ServiceProcess.IWindowsService
{
//Implementation details
}
```

C. Use the following code:

```
public class TestService : System.ServiceProcess.ServiceBase
{
//Implementation details
}
```

D. Use the following code:

```
public class TestService : System.ServiceProcess.IService
{
//Implementation details
}
```

Answer: C

Explanation: The ServiceBase class contains event methods, such as OnStart, OnStop, and Run, for controlling Windows service classes.

The OnStart method code is executed when a Windows service is either manually started or when the system is booted if the Startup type is set to Automatic. The OnStop method code is executed when a Windows service is either manually stopped or when the system is shut down. The Main method is the first point of execution when running any windows application (.exe). For a Windows service to run in an application process, you must invoke the Run method on the ServiceBase class. The Run method is overloaded to accept either a single ServiceBase object or an array of ServiceBase objects.

Incorrect Answers:

A, B, D: You should not use either of the code fragments from the WindowsService class or implement the IService and IWindowsService interfaces because no such class or interfaces exist in the System.ServiceProcess namespace.

QUESTION 158

You work as an application developer at Certkiller .com. You have been given the task of developing a Windows service application that regularly monitors other Windows services on the same computer.

This Windows service application must also log any abnormal file system activity.

You have added the following class to the Windows service application:

```
public class EnumerateService : ServiceBase
{
    public static EnumerateService ()
    {
        this.ServiceName = "Enumerate Service";
        this.CanStop = true;
    }
    protected override void OnStart (string[] args)
    {
        // Enumerate all services and initialize the FileSystemWatcher
    }
    protected override void OnStop ()
    {
        // Stop the FileSystemWatcher and perform cleanup
    }
    public static void Main ()
    {
        EnumerateService service = new EnumerateService();
    }
}
```

You then create the installer for the Windows service application, and install the Windows service application. You have configured the Windows service Startup type to Automatic, and rebooted the system. You then test the new Windows service application, and find that it is not working.

You need to ensure that the service is working properly.

What should you do?

A. Override the OnBoot method instead of the OnStart method.

B. Replace the Main method code with the following code:

```
EnumerateService service = new EnumerateService ();
Service.Run ();
```

C. Override the OnLoad method instead of the OnStart method.

D. Replace the Main method code with the following code:

```
EnumerateService service = new EnumerateService ();
Run (service);
```

Answer: D

Explanation: For a Windows service to run in an application process, you have to invoke the Run method on the ServiceBase class. The Run method is overloaded to accept either a single ServiceBase object or an array of ServiceBase objects. The OnStart method code is executed when a Windows service is either manually started or when the system is booted if the Startup type is set to Automatic. The OnStop method code is executed when a Windows service is either manually stopped or when the system is shut down. The Main method is the first point of execution when running any windows application (.exe).

Incorrect Answers:

A C: You should not override the OnBoot or OnLoad method because there are no such methods in the ServiceBase class.

B: For a Windows service to run in an application process, you have to invoke the Run method on the ServiceBase class. The Run method is overloaded to accept either a single ServiceBase object or an array of ServiceBase objects. This code will not compile because the Run method is a class member and does not take zero arguments.

QUESTION 159

You work as an application developer at Certkiller .com. Certkiller .com has asked you to develop an application allows administrators to control Windows services dynamically without using the Services MMC.

You start by creating a class named LocalServiceController. You need to add the correct code to the LocalServiceController class to ensure that administrators are able to start local Windows services.

What code should you use?

A. `public static bool StartService (string serviceName)`

```
{  
    try {  
        ServiceBase.Run (serviceName);  
        return true;  
    }  
    catch  
    {  
        return false;  
    }  
}
```

B. `public static bool StartService (string serviceName)`

```
{  
    ServiceController controller = new ServiceController (serviceName);  
    if (controller.Status != ServiceControllerStatus.Running)  
    {  
        controller.Start ();  
        return true;  
    }  
}
```

```
else
return false;
}
C. public static bool StartService (string serviceName)
{
ServiceManager manager = new ServiceManager (serviceName);
if (manager.Status != ServiceManagerStatus.Running)
{
manager.Start ();
return true;
}
else
return false;
}
D. public static bool StartService (string serviceName)
{
ServiceBase service = new ServiceBase ();
service.ServiceName = serviceName;
if (service.CanStart)
{
ServiceBase.Run (service);
return true;
}
else
return false;
}
```

Answer: B

Explanation: This code first instantiates a ServiceController object using the ServiceName variable. Then, the Status property is compared to the enumeration value ServiceControllerStatus.Running. If the Windows service is not currently running, then the Start method is invoked on the ServiceController object, and the method returns true. If the Windows service is running, the method returns false.

Incorrect Answers:

A, D: You should not add the code that uses the ServiceManager class because there is no such class in the ServiceControllerStatus.Running namespace.

C: You should not add either of the code fragments that use the ServiceBase class because this is the base class for Windows service classes.

QUESTION 160

You work as an application developer at Certkiller .com. Certkiller .com has asked you to develop an application that monitors and controls the activities of a Windows service.

You need to use the appropriate class to meet Certkiller .com's requirements.

What should you do?

- A. Use the ServiceBase class.
- B. Use the ServiceInstaller class.
- C. Use the ServiceManager class.
- D. Use the ServiceController class.

Answer: D

Explanation: To monitor and control the behavior of a Windows service, you should use the ServiceController class.

Incorrect Answers:

- A: The ServiceBase class is the base class for Windows service classes.
- B: The ServiceInstaller class is used to install a Web service application.
- C: There is no such class in the ServiceControllerStatus.Running namespace.

QUESTION 161

You work as an application developer at Certkiller .com. Certkiller .com has asked you to create a multi-threaded application, which executes a critical database backup operation on an hourly basis. You define this operation with the following code:

```
public void BackupDB ()  
{  
    //Implementation code  
}
```

You then create a Thread object for the purpose of invoking this method. You need to ensure that the thread is scheduled for execution before any other thread at runtime. What should you do?

- A. Use the following code:
Thread th = new Thread (BackupDB);
th.Scheduled = ThreadScheduled.Before;
th.Start ();
- B. Use the following code:
Thread th = new Thread (BackupDB);
th.Priority = ThreadPriority.AboveNormal;
th.Start ();
- C. Use the following code:
Thread th = new Thread (BackupDB);
th.Priority = ThreadPriority.Highest;
th.Start ();
- D. Use the following code:
Thread th = new Thread (BackupDB);
th.Scheduled = ThreadScheduled.First;
th.Start ();

Answer: C

Explanation: This code instantiates a Thread object that will execute the BackupDB method, specifies the highest priority level for scheduling threads for execution, and starts the thread running. When instantiating a Thread object, you must specify the name of the method it will invoke. The Priority property indicates the relative position of a thread in the wait queue when being scheduled for execution. If two threads arrive in the wait queue at relatively the same time, the higher priority thread will receive the time slice before the other. The Priority property is a ThreadPriority enumeration value, which can be Lowest, BelowNormal, Normal, AboveNormal, and Highest. By default, the Priority property is set to ThreadPriority.Normal.

Incorrect Answers:

A D: You should not use the code fragments that set the Scheduled property with the ThreadSchedule enumeration because no such property or enumeration exists in the System.Threading namespace.

B: You should not use the code that specifies the value ThreadPriority.AboveNormal for the Priority property because this will not schedule the thread for execution before any other thread.

QUESTION 162

You work as an application developer at Certkiller .com. You have recently created a multithreaded application to manage Certkiller .com's inventory system. The fulfillment task has to be executed on a regular basis, while other tasks are performed in the application. The task does not need any input to start. You are required to create and start the fulfillment thread using the appropriate code.

What code should you use?

- A. ThreadStart work = new
ThreadStart (Fulfill);
Thread thFulfill = new Thread (work);
- B. ParameterizedThreadStart work = new
ParameterizedThreadStart (Fulfill);
Thread thFulfill = new Thread (work);
- C. ThreadStart work = new
ThreadStart (Fulfill);
Thread thFulfill = new Thread (work);
thFulfill.Start ();
- D. ParameterizedThreadStart work = new
ParameterizedThreadStart (Fulfill);
Thread thFulfill = new Thread (work);
thFulfill.Start ();

Answer: C

Explanation: This code creates a ThreadStart delegate that references the Fulfill method, creates a Thread object named thFulfill, and invokes the Start method to begin the thread execution.

Incorrect Answers:

A: You should not use the code that uses the ThreadStart delegate but does not call the Start method because you are required to create and start the fulfillment thread.

B: You should not use the code that uses the ParameterizedThreadStart delegate and does not call the Start method. You have to invoke the Start method to begin thread execution.

D: You should not use the code that uses the ParameterizedThreadStart delegate and calls the Start method. The ParameterizedThreadStart delegate is used to reference a method that takes a generic object as an argument and, in this scenario, the fulfill method takes no arguments

QUESTION 163

You work as an application developer at Certkiller .com. You are currently in the process of developing a business logic component that requires long calculations. You have identified numerous tasks within this application that can be done asynchronously. You notice that these tasks are mutually dependent and require complex synchronization techniques so that it can manage efficiently. You decide to use Microsoft .NET 2.0 to take advantage of its new thread management features. You need to create and start the application threads. What should you do?

A. Use the following code:

```
ThreadPool thPool = new ThreadPool ("Current Application");  
Thread th1 = new Thread (Task1);  
Thread th1 = new Thread (Task2);  
Thread th1 = new Thread (Task3);  
th1.StartInPool (thPool);  
th2.StartInPool (thPool);  
th3.StartInPool (thPool);
```

B. Use the following code:

```
ThreadPool thPool = new ThreadPool ("Current Application");  
thPool.QueueUserWorkItem (Task1);  
thPool.QueueUserWorkItem (Task2);  
thPool.QueueUserWorkItem (Task3);
```

C. Use the following code:

```
ThreadPool.QueueUserWorkItem (Task1);  
ThreadPool.QueueUserWorkItem (Task2);  
ThreadPool.QueueUserWorkItem (Task3);
```

D. Use the following code:

```
Thread th1 = new Thread (Task1);  
Thread th1 = new Thread (Task2);  
Thread th1 = new Thread (Task3);  
th1.Start ();  
th2.Start ();
```

th3.Start ();

Answer: C

Explanation: This code uses the QueueUserWorkItem method of the ThreadPool class to add tasks to the current application domain's thread pool. The QueueUserWorkItem method takes a WaitCallback delegate as an argument and manages the tasks using background threads. This allows the developer to concentrate on business logic and requires minimal synchronization code.

Incorrect Answers:

A D: You should not use either of the code fragments that instantiate the Thread objects explicitly because it will require excessive synchronization code to manage effectively.

B: You should not use the code that instantiates a ThreadPool object because the ThreadPool class is a static class and cannot be instantiated.

QUESTION 164

You work as an application developer at Certkiller .com. You have created a Windows service application for the purpose of monitoring the number of active service requests running on Certkiller .com's server.

You want to configure this Windows service application to produce a report every ten minutes. You start by placing the reporting logic in the GenerateReport method of this Windows service.

You want to create a Timer object that invokes this method every ten minutes. What should you do?

A. Use the following code:

```
Timer tmrReport = new Timer  
(new TimerCallback (GenerateReport), null, 600000, 0);
```

B. Use the following code:

```
Timer tmrReport = new Timer  
(new TimerCallback (GenerateReport), null, 10, 0);
```

C. Use the following code:

```
Timer tmrReport = new Timer  
(new TimerCallback (GenerateReport), null, 0, 600000);
```

D. Use the following code:

```
Timer tmrReport = new Timer  
(new TimerCallback (GenerateReport), null, 0, 10);
```

Answer: C

Explanation: This code creates a Timer object named tmrReport that will invoke the GnerateReport every ten minutes. The first argument of the Timer constructor is a TimerCallback delegate that points to the method to be invoked. The second argument is the object that will be sent to the callback method. The third and fourth arguments are integers that specify delay and interval in milliseconds, respectively. Because the interval is in milliseconds, the following conversion must be made:

10 minutes = 10 * 60 seconds = 600 * 1000 milliseconds = 600,000 milliseconds

Therefore, the delay is set to 0, and the interval is set to 600,000 milliseconds.

Incorrect Answers:

A: This option is incorrect because the delay and the interval arguments are reversed. If you use this option, then the tmrReport will invoke the GnerateReport method only once in ten minutes.

B: This option is incorrect because the delay and the interval arguments are reversed. Also, the interval argument is incorrectly specified. It should be specified in milliseconds.

D: The interval argument is incorrectly specified. It should be specified in milliseconds, not minutes. This code would set the interval to ten milliseconds instead of ten minutes.

QUESTION 165

You work as an application developer at Certkiller .com. You have recently created an application that includes the code shown below.

```
public delegate stringGetFileContentsDel ();
public stringGetFileContents ()
{
//Process file and return results
}
```

You now need to invoke the GetFileContents method asynchronously.

You have to ensure that the code you use to invoke the GetFileContents method will continue to process other user instructions, and displays the results as soon as the GetFileContents method finishes processing.

What should you do?

A. Use the following code:

```
GetFileContentsDel delAsync = new
GetFileContentsDel (GetFileContents);
IAsyncResult result = delAsync.BeginInvoke (null, null);
while (!result.IsCompleted)
{
//Process other user instructions
}
string strFile = delAsync.EndInvoke (result);
```

B. Use the following code:

```
GetFileContentsDel delAsync = new
GetFileContentsDel (GetFileContents);
string strFile = delAsync.Invoke ();
```

C. Use the following code:

```
string strFile = GetFileContents.Invoke ();
```

D. Use the following code:

```
GetFileContentsDel delAsync = new
GetFileContentsDel (GetFileContents);
IAsyncResult result = delAsync.BeginInvoke (null, null);
//Process other user instructions
```



```
string strFile = delAsync.EndInvoke (result);
```

Answer: A

Explanation: This code instantiates a GetFileContentsDel delegate that references the GetFileContents method. Then, the BeginInvoke method is invoked to implicitly create and start the worker thread. The BeginInvoke method takes the same arguments as the method it references but also includes an AsyncCallack delegate and a generic object. The AsyncCallack delegate references the method that the worker thread will invoke when its processing is complete. In this scenario, there is no AsyncCallack delegate specified. Then, the code polls the IAsyncResult object to determine if its processing is complete using the IsCompleted property. Once the processing is complete, the loop is exited and the EndInvoke method returns the result from the GetFileContents method.

Incorrect Answers:

B, C: You should not use either of the code fragments that use the Invoke method because this is not a technique in asynchronous processing.

D: you should not use the code that does not poll the IAsyncResult object by retrieving the IsCompleted property.

QUESTION 166

You work as an application developer at Certkiller .com. You have been asked by your superiors at Certkiller .com to create a child application domain. The new child application domain has to specify a different assembly path than that of the parent application domain. You need to ensure that your solution meets Certkiller .com's requirements. What should you do?

A. Use the following code:

```
AppDomainSetup domainSetup = new AppDomainSetup ();  
domainSetup.ApplicationName = @"C:\Program Files\ChildApp";  
AppDomain.CreateDomain ("ChildDomain", AppDomain.CurrentDomain.Evidence,  
domainSetup);
```

B. Use the following code:

```
AppDomainSetup domainSetup = new AppDomainSetup ();  
domainSetup.ApplicationBase = @"C:\Program Files\ChildApp";  
AppDomain.CreateDomain ("ChildDomain", AppDomain.CurrentDomain.Evidence,  
domainSetup);
```

C. Use the following code:

```
AppDomainSetup domainSetup = new AppDomainSetup ();  
domainSetup.ConfigurationFile = @"C:\Program Files\ChildApp";  
AppDomain.CreateDomain ("ChildDomain", AppDomain.CurrentDomain.Evidence,  
domainSetup);
```

D. Use the following code:

```
AppDomainSetup domainSetup = new AppDomainSetup ();  
domainSetup.CachePath = @"C:\Program Files\ChildApp";
```

`AppDomain.CreateDomain ("ChildDomain", AppDomain.CurrentDomain.Evidence, domainSetup);`

Answer: B

Explanation: The `CreateDomain` method of the `AppDomain` class is an overloaded method that you can use to create an application domain. This code creates a child application domain named `ChildDomain`, which uses the same evidence as its parent domain and specifies an `AppDomainSetup` object. In this version of `CreateDomain`, the first argument passed to the `CreateDomain` method is a `String` that represents the name of the application domain to be created. The second argument of the `CreateDomain` method specifies an `Evidence` object. The `Evidence` object represents the identity information used for Code Access Security (CAS) in the Microsoft .NET Framework to determine the permissions granted to an assembly. The third argument of the `CreateDomain` method specifies an `AppDomainSetup` object. The `AppDomainSetup` object represents application domain settings such as the application name, base directory, and configuration file path. You have to specify a different assembly path than that of the parent application domain, so the `ApplicationBase` property of the `AppDomain` object has to be set. The `ApplicationBase` property defines the base directory of an application. Any runtime references will be resolved using this directory for assembly probing.

Incorrect Answers:

A: You should not use the code that sets the `ApplicationName` property of the `AppDomainSetup` object because this should be the friendly name of the application domain.

C: You should not use the code that sets the `ConfigurationFile` property of the `AppDomainSetup` object because this should be the directory where the configuration file is located.

D: You should not use the code that sets the `CachePath` property of the `AppDomainSetup` object because this should be the location where shadow copies of assemblies and other resources are stored.

QUESTION 167

You work as an application developer at Certkiller .com. You have recently created an application domain for Certkiller .com.

A few weeks later you are asked to retrieve information from this application domain, which is the current application domain.

What can you do to achieve this objective? (Choose two)

A. Use the following code:

```
AppDomain appInfo = ApplicationDomain.Current;
```

B. Use the following code:

```
AppDomain appInfo = AppDomain.CurrentDomain ();
```

C. Use the following code:

```
AppDomain appInfo = Thread.GetDomain ();
```

D. Use the following code:

```
AppDomain appInfo = MainThread.GetDomain ();
```

Answer: B, C

Explanation: The CurrentDomain property of the AppDomain class is a read-only property that contains the application domain for the current thread. You can also use the GetDomain method of the Thread class to return the application domain for the thread that is currently running. Using either of these lines of code will return an

AppDomain object for the currently running application from which you can retrieve information.

Incorrect Answers:

A, D: If you use any of these codes it will result in a syntax error because the .NET class libraries do not provide an ApplicationDomain or MainThread class.

QUESTION 168

You work as an application developer at Certkiller .com. You have recently created an application domain for Certkiller .com.

A few weeks later, you are required to determine if assembly references in this application domain, which is the current application domain, are being cached. What property should you use to achieve this objective?

- A. AppDomain.CurrentDomain.ShadowCopyFiles
- B. AppDomain.CurrentDomain.CachePath
- C. AppDomain.CurrentDomain.ConfigurationFile
- D. AppDomain.CurrentDomain.Evidence

Answer: A

Explanation: The ShadowCopyFiles property of the AppDomain class contains a Boolean value that indicates whether assembly references are being cached or not.

Incorrect Answers:

B, C: These options are properties of the AppDomainSetup class.

D: This property is not used in caching.

QUESTION 169

You work as an application developer at Certkiller .com. You are required to dynamically load assemblies into a custom child application domain.

You need to ensure that the assemblies loaded into the child application domain have the same permissions as the applications that are accessed across the local intranet.

What should you do?

A. Use the following code to create the child application domain:

```
Evidence childEvidence = new Evidence (new object [ ] { SecurityZone.Intranet }, null);  
AppDomain.CreateDomain ("ChildDomain", childEvidence);
```

B. Use the following code to create the child application domain:

```
AppDomain.CreateDomain ("ChildDomain", SecurityZone.Intranet);
```

C. Use the following code to create the child application domain:

```
AppDomain domain = new AppDomain ("ChildDomain", SecurityZone.Intranet);
```

D. Use the following code to create the child application domain:

```
Evidence childEvidence = new Evidence (new object [ ] { SecurityZone.Intranet }, null);
```

```
AppDomain domain = new AppDomain ("ChildDomain", childEvidence);
```

Answer: A

Explanation: The CreateDomain method of the AppDomain class is an overload method that can be used to create an application domain. This code creates a child application domain named ChildDomain with the default permissions of applications that are accessed across the local intranet.

Incorrect Answers:

B: You should not use the code that specifies SecurityZone.Intranet as an argument to the CreateDomain method because no such method signature exists.

C, D: You should not use the code fragments that instantiate an AppDomain object because the AppDomain class does not have any constructors.

QUESTION 170

You work as an application developer at Certkiller .com. You are required to dynamically load assemblies into an application domain.

You are using the Load method of the AppDomain class.

What types of files can you this use method for?

A. Library application files (.dll).

B. All assembly files, no matter what there file extensions are.

C. Application configuration files (.config).

D. Standalone application files (.exe).

Answer: B

Explanation: An assembly specified in the Load method can use a valid extension, an invalid extension, or no extension at all. As long as the Microsoft Intermediate Language (MSIL) code is valid, the extension is immaterial.

Incorrect Answers:

A, D: Although .dll and .exe are common extensions for .NET assemblies, they are not required when you use the Load method of the AppDomain class.

C: You cannot use the Load method to load application configuration files (.config) because these have no MSIL code to execute and cannot be loaded into an application domain.

QUESTION 171

You work as an application developer at Certkiller .com. Certkiller .com has given you the task of creating medical billing application that will deal with various insurance

vendors.

The appropriate assemblies have to be loaded and unloaded dynamically based on the patient's insurance provider. All of these insurance assemblies are located in C:\Insurance Assemblies.

You have to ensure that when the new application first loads, it has to load all assemblies into a separate application domain. You need to create the child application domain and load all assemblies it using the correct code.

What should you do?

A. Use the following code:

```
AppDomain domain = AppDomain.CreateDomain ("InsuranceDomain");  
foreach (string assembly in Directory.GetFiles (@ "C:\Insurance Assemblies", "*.dll"))  
domain.LoadAssembly (assembly);
```

B. Use the following code:

```
AppDomain domain = AppDomain.CreateDomain ("InsuranceDomain");  
foreach (string assembly in Directory.GetFiles (@ "C:\Insurance Assemblies", "*.dll"))  
domain.Load (assembly);
```

C. Use the following code:

```
AppDomain domain = AppDomain.CreateDomain ("InsuranceDomain");  
foreach (string assembly in Directory.GetFiles (@ "C:\Insurance Assemblies", "*.dll"))  
domain.LoadFrom (assembly);
```

D. Use the following code:

```
AppDomain.CreateDomain ("InsuranceDomain",  
Directory.GetFiles (@ "C:\Insurance Assemblies", "*.dll"))
```

Answer: B

Explanation: First, the CreateDomain method of the AppDomain class is used to create an application named InsuranceDomain. Then, the foreach construct is used to iterate through the C:\Insurance Assemblies directory to retrieve the insurance assemblies in that location. The GetFiles method takes two String arguments, a directory path and a search string. In this code, the GetFiles method will retrieve the names of all files in C:\Insurance Assemblies that end in .dll. the Load method of the AppDomain class is used to load each assembly into the current application domain.

Incorrect Answers:

A, C: The LoadAssembly and LoadFrom methods do not exist in the AppDomain class.

D: The CreateDomain method does not allow the loading of assemblies into the new domain.

Topic 17, C#, Embedding configuration, diagnostic, management, and installation features into a .NET Framework application(18 Questions)

QUESTION 172

You work as an application developer at Certkiller .com. You have recently

completed creating an application that uses an application configuration file. This configuration file contains a section named EmployeeSection, which contains Employee elements.

You are required to view the contents of the EmployeeSection element.

You need to ensure that the EmployeeSection element outputs its contents to the console.

What should you do?

A. Use the following code:

```
Configuration config = ConfigurationManager.OpenExeConfiguration  
(ConfigurationUserLevel.None);  
ConfigurationSection section = Config.GetSection ("EmployeeSection");  
Console.WriteLine (section.Contents);
```

B. Use the following code:

```
ConfigurationSection section = Config.GetSection ("EmployeeSection");  
Console.WriteLine (section.SectionInformation.GetRawXml ());
```

C. Use the following code:

```
string section = ConfigurationSettings.AppSettings ["EmployeeSection"];  
Console.WriteLine (section);
```

D. Use the following code:

```
Configuration config = ConfigurationManager.OpenExeConfiguration  
(ConfigurationUserLevel.None);  
ConfigurationSection section = Config.GetSection ("EmployeeSection");  
Console.WriteLine (section.SectionInformation.GetRawXml ());
```

Answer: D

Explanation: This code opens the application configuration file, retrieves the EmployeeSection element and outputs the contents as raw XML. The OpenExeConfiguration method takes a ConfigurationUserLevel enumeration value to indicate the visibility of the configuration settings. The value None means that the settings apply to all users. The OpenExeConfiguration method returns a Configuration object representing the current configuration settings. The GetSection method of the Configuration object can then be used to retrieve a specified section of the configuration file. The GetSection method accepts a section name and returns a ConfigurationSection object representing the specified section, if it is found. In this scenario, you pass the GetSection method the name of the EmployeeSection, and it returns a ConfigurationSection representing the EmployeeSection. You can then use this ConfigurationSection object to access information about the section of the configuration file. The SectionInformation property of the ConfigurationSection object retrieves section-specific settings, including contents. The GetRawWml method returns the XML content of the EmployeeSection. The WriteLine method then outputs the contents of the console.

Incorrect Answers:

A: You should not use the code that accesses the Contents property of the

ConfigurationSection class because the ConfigurationSection class contains no such property.

B: You should not use the code that does not specify the ConfigurationManager because the GetSection method is an instance member.

C: You should not use the code that specifies the ConfigurationSettings class because this class is provide only for backwards compatibility.

QUESTION 173

You work as an application developer at Certkiller .com. You are in the process of creating an application for Certkiller .com's Human Resources department that tracks employee benefits.

You have to store current employee data without recompiling the application. You elect to store this employee data as a custom section in the application configuration file. The relevant portion of the application configuration file is shown in the following exhibit:

```
<?xml version="1.0" encoding="utf-8" ?>
<configuration>
  <configSections>
  </configSections>
  <!-- Begin Custom Section -->
  <EmployeeSection type="fulltime">
    <Employee name="Rory Allen" />
  </EmployeeSection>
  <!-- End Custom Section -->
</configuration>
```

You want to use the .NET 2.0 Configuration API to access the custom section.

You need to ensure that programmatic access of the EmployeeSection element is enabled.

What should you do? (Choose two)

A. Create a custom section handler class that inherits the ConfigurationSection interface.

B. Add a section element to the EmployeeSection element of the application configuration file.

C. Create a custom section handler class that implements the IConfigurationSectionHandler interface.

D. Add an EmployeeSection element to the configSections element of the application configuration file.

E. Create a custom section handler class that implements the IApplicatioSettingsProvider interface.

F. Add a section element to the configSections element of the application configuration file.

Answer: A, F

Explanation: To enable programmatic access of the EmployeeSection element, you should create a custom section handler class that inherits the ConfigurationSection

class and add a section element to the configSections element of the application configuration file.

Incorrect Answers:

B, D: These options violate the application configuration schema and will cause a run-time error when attempted.

C: This interface is deprecated in .NET 2.0 and requires more development effort.

E: This interface should be implemented if a custom storage solution other than application configuration files is required.

QUESTION 174

You work as an application developer at Certkiller .com. You have recently created a business application, which requires complex installation logic.

You add the following code to your project after electing to create a custom installer for the business application.

```
public class ApplicationInstaller : Installer
{
    public override void Install (IDictionary stateSaver)
    {
        //Install the application
        Base.Install (stateSaver);
    }
    public override void Commit (IDictionary savedState)
    {
        //Commit the application
        Base.Commit (savedState);
    }
    public override void Rollback (IDictionary savedState)
    {
        //Rollback the application
        Base.Rollback (savedState);
    }
    public override void Uninstall (IDictionary savedState)
    {
        //UnInstall the application
        Base.Uninstall (savedState);
    }
}
```

What should be done NEXT?

A. The assembly should be compiled and the Install.exe tool should be run.

B. The RunInstaller attribute should be added to the business application assembly and it should be set to true.

C. The assembly should be compiled and should be run as normal.

D. The RunInstaller attribute should be added to the ApplicationInstaller class and it should be set to true.

Answer: D

Explanation:

Incorrect Answers:

A: This option should be executed after applying the RunInstaller attribute and setting it to true.

B: You should not add the RunInstaller attribute to the assembly because the RunInstaller attribute is applied to a class, not the entire assembly.

C: You should not use this option because the installer class will be invoked without applying the RunInstaller attribute with a value of true.

QUESTION 175

You work as an application developer at Certkiller .com. You have recently created and deployed an application using the .NET 1.1 CLR to all Certkiller .com users. After a Certkiller .com administrator updates all user computers with the .NET 2.0 CLR, you run preliminary tests and find that the application you created using the .NET 1.1 CLR is not compatible with the .NET 2.0 CLR.

You need to ensure that the application can be run with the .NET 1.1 CLR.

What should you do?

A. Use the following element in the application configuration file:

```
<configuration>
<startup>
<bindingRedirect oldVersion="1.0.0.0" newVersion="1.1.0.0" />
</startup>
</configuration>
```

B. Use the following element in the application configuration file:

```
<configuration>
<startup>
<requiredRuntime version="v1.1.4322" safemode="true" />
</startup>
</configuration>
```

C. Use the following element in the application configuration file:

```
<configuration>
<startup>
<supportedRuntime version="v1.1.4322" />
<supportedRuntime version="v1.0.3705" />
</startup>
</configuration>
```

D. Use the following element in the application configuration file:

```
<configuration>
<startup>
<unsupportedRuntime version="v2.0.50727" />
</startup>
</configuration>
```

Answer: C

Explanation: This configuration element instructs the host system to launch the application using either .NET 1.1 CLR or .NET 1.0 CLR rather than defaulting to the .NET 2.0 CLR. The supportedRuntime element identifies the versions of the CLR with which the application can be run. The supportedRuntime element is only supported in assemblies built using .NET 1.1 or later.

Incorrect Answers:

A: There is no such subelement as bindingRedirect that exists for the startup element.

B: The requiredRuntime element should only be used by assemblies built by using the .NET 1.0 Framework.

D: There is no such element as the unsupportedRuntime element that exists in the application configuration schema.

QUESTION 176

You work as an application developer at Certkiller .com. You have recently created a business application that references another strong-named assembly named library.dll, and deployed it to all Certkiller .com users.

Subsequent to testing the application's performance, you elect to upgrade the assembly's version to 1.1.0.0.

You need to ensure that the new version of will not affect any of Certkiller .com's current users by adding the appropriate element to the assemblyBinding element in the application configuration file.

What element should you add?

A. <dependentAssembly>

```
<assemblyIdentity name="Library" publicKeyToken="32ab4bc45e90a1"
culture="neutral" />
```

```
<redirect oldVersion="1.0.0.0" newVersion="1.1.0.0" />
```

```
</dependentAssembly>
```

B. <dependentAssembly>

```
<assemblyIdentity name="Library" publicKeyToken="32ab4bc45e90a1"
culture="neutral" />
```

```
<bindingRedirect oldVersion="1.0.0.0" newVersion="1.1.0.0" />
```

```
</dependentAssembly>
```

C. <dependentAssembly>

```
<assemblyIdentity name="Library" publicKeyToken="32ab4bc45e90a1"
culture="neutral"
```

```
oldVersion="1.0.0.0" newVersion="1.1.0.0" />
```

```
</dependentAssembly>
```

D. <dependentAssembly>

```
<bindingRedirect oldVersion="1.0.0.0" newVersion="1.1.0.0" />
```

```
</dependentAssembly>
```

Answer: B

Explanation: This dependentAssembly element specifies the assembly identity information using the assemblyIdentity element. The name attribute of the assemblyIdentity element indicates the common name of the assembly. The publicKeyToken attribute specifies the strong-named key, and the culture attribute indicates the localization type. The bindingRedirect element is a subelement of the dependentAssembly element that specifies the oldVersion and newVersion attributes. Setting the oldVersion attribute to 1.0.0.0 and the newVersion attribute to 1.1.0.0 means that any users referencing the 1.0.0.0 version of the Library will now be referencing the 1.1.0.0 version.

Incorrect Answers:

A: You should not use the element that specifies the redirect element because there is no such subelement of the assemblyBinding element.

C: You should not use the element that specifies the assemblyIdentity element because this is required information when adding dependentAssembly elements.

D: You should not use the element that specifies the bindingRedirect element because there are no such attributes as oldVersion and newVersion attributes for the assemblyIdentity element.

QUESTION 177

You work as an application developer at Certkiller .com. You are currently in the process of creating a shared assembly.

You are required to perform many integration tests to make sure the assembly works properly with multiple applications. You want to avoid constantly updating each application's reference when the assembly is updated.

You have set the DEVPATH environmental variable to the default build location for the shared assembly.

You need to ensure that the Common Language Runtime (CLR) uses DEVPATH to locate the shared assembly.

What should you do?

A. Add the following element to each application's application configuration file:

```
<dependentAssembly>
<assemblyIdentity name="SharedAssembly" />
<codeBase version="1.0.0.0" DEVPATH ="true" />
</ dependentAssembly >
```

B. Add the following element to the machine.config file in the development computer:

```
<dependentAssembly>
<assemblyIdentity name="SharedAssembly" />
<codeBase version="1.0.0.0" DEVPATH ="true" />
</ dependentAssembly >
```

C. Add the following element to each application's application configuration file:

```
<configuration>
<runtime>
<developmentMode developerInstallation="true" />
</runtime>
</configuration>
```

D. Add the following element to the machine.config file in the development computer:

```
<configuration>
<runtime>
<developmentMode developerInstallation="true" />
</runtime>
</configuration>
```

Answer: D

Explanation: The developmentMode element instructs the CLR to use the DEVPATH environmental variable to locate assemblies. If you do not add this element to the machine.config file, the DEVPATH environmental variable will be ignored.

Incorrect Answers:

A, C: Application configuration files are used for application-specific settings only

B: The codeBase element does not have a DEVPATH attribute.

QUESTION 178

You work as an application developer at Certkiller .com. You have been asked to profile a business application that can be accessible using the Event Log API.

You have started by adding the following code to create a custom event log:

```
if (EventLog.SourceExists ("Application1"))
EventLog.DeleteEventSource ("Application1");
//Create new event log
EventLog.CreateEventSource ("Application1", "Profile");
You need to write an event to the Application1 event log.
What code must you use?
```

- A. EventLog log = new EventLog ();
log.Source = "Application1";
log.Log = "Profile";
log.WriteEvent ("Writing to event log.");
- B. EventLog log = new EventLog ();
log.Source = "Profile";
log.Log = "Application1";
log.WriteEvent ("Writing to event log.");
- C. EventLog log = new EventLog ();
log.Source = "Application1";
log.Log = "Profile";
log.WriteEntry ("Writing to event log.");
- D. EventLog log = new EventLog ();
log.Source = "Profile";
log.Log = "Application1";
log.WriteEntry ("Writing to event log.");

Answer: C

Explanation: This code instantiates an `EventLog` object, sets the `Source` and `Log` properties, and invokes the `WriteEntry` method to output the message to the event log. The `EventLog` object allows you to create, delete, read from, or write to Windows event logs. In this scenario, you use the `CreateEventSource` method to create a custom event log. When calling the `CreateEventSource` method, you pass the method two arguments. The first argument represents the source name for the event log, and the second represents the name of the event log. Next, you want to write an entry to the `Application1` event log. To write to an event log, you must first identify the event source and the name of the event log to which you want to write. The `Source` property specifies the event source, and the `Log` property specifies the name of the event log. There are two methods to write to the `EventLog` object: `WriteEntry` and `WriteEvent`. The `WriteEntry` method is an overloaded method used to write a text message to an event log. The `WriteEvent` method is used to write localized resources and event instances to an event log.

Incorrect Answers:

A, B: The `WriteEvent` method is used to write localized resources and event instances to an event log.

D: You should not use the code fragments that specify a value of "Profile" for the `Source` property and a value "Application1" for the `Log` property because they would attempt to write the entry to an event log named `Application1`.

QUESTION 179

You work as an application developer at Certkiller .com. The Certkiller .com network contains an application server named Certkiller -SR07.

You have been asked to profile a business application that can be accessible using the Event Log API. You want to achieve this by creating a custom event log on Certkiller -SR07.

What should you do?

A. Use the following code:

```
EventLog.CreateEventSource ("Application1", "Profile", " Certkiller -SR07");
```

B. Use the following code:

```
EventLog.CreateEventSource ("Application1", "Profile");
```

C. Use the following code:

```
EventSourceCreationData sourceData = new EventSourceCreationData ("Application1",  
"Profile");
```

```
sourceData.MachineName = " Certkiller -SR07";
```

```
EventLog.CreateEventSource (sourceData);
```

D. Use the following code:

```
EventSourceCreationData sourceData = new EventSourceCreationData ("Application1",  
"Profile");
```

```
EventLog.CreateEventSource (sourceData);
```

Answer: C

Explanation: This code instantiates an EventSourceCreationData object, sets the MachineName property of the EventSourceCreationData object, and invokes the CreateEventSource method, passing the EventSourceCreationData object as an argument, to create the custom event log.

The EventSourceCreationData object is used to configure a new event log source. You can then pass the EventSourceCreationData object to the CreateEventSource method of an EventLog to register the event log source and corresponding event log so that you can write entries to it. The EventSourceCreationData object's constructor accepts two String arguments: Source and Log. The Source argument specifies the event source, and the Log argument specifies the name of the event log. After creating an instance of EventSourceCreationData, you can set the EventSourceCreationData object's properties to further configure the event source. The MachineName property represents the computer on which you want to create the event source. In this scenario, you create a new EventSourceCreationData object named sourceData and then set its MachineName property to Certkiller -SR07. Then, you call the CreateEventSource method, passing the method sourceData. This creates an event log source on the computer named Certkiller -SR07.

Incorrect Answers:

A: The CreateEventSource method that takes three String arguments is obsolete in the .NET 2.0 Framework.

B, D: Both of these code fragments would create an event log on the local computer by default, but the scenario states that you should explicitly specify the machine name because the computer on which the code is running is unknown.

QUESTION 180

You work as an application developer at Certkiller .com. You are required to retrieve and display the names of all processes that are currently running in memory.

What should you do?

A. Use the following code:

```
foreach (Process curProcess in Process.GetSystemProcesses ())  
Console.WriteLine (curProcess.ProcessName);
```

B. Use the following code:

```
foreach (Process curProcess in Process.GetAllProcesses ())  
Console.WriteLine (curProcess.ProcessName);
```

C. Use the following code:

```
foreach (Process curProcess in Process.GetProcesses ())  
Console.WriteLine (curProcess.ProcessName);
```

D. Use the following code:

```
foreach (Process curProcess in Thread.GetProcesses ())  
Console.WriteLine (curProcess.ProcessName);
```

Answer: C

Explanation: The GetProcesses method creates and returns an array of Process

objects representing all currently running processes in memory. Because this method invocation does not contain a computer name, the local machine is assumed. The `curProcess` variable is reassigned to a `Process` object with each iteration. The `ProcessName` property of the `Process` object retrieves the system name of the process. The `WriteLine` method of the `Console` class outputs the process name to the console. Because the `WriteLine` method outputs a line return, each process name will be on a separate line in the `Console` window.

Incorrect Answers:

A, B: The `GetProcesses` and `GetAllProcesses` methods do not exist in the `Process` class.

D: There is no such method as the `GetProcesses` method in the `Thread` class.

QUESTION 181

You work as an application developer at `Certkiller .com`. `Certkiller .com` is currently using a performance counter named `HitCounter`.

You are required to increment each time a user accesses the UI classes within the application. To do this, you start by creating performance counters using the following code:

```
CounterCreationDataCollection colCounters =
    new CounterCreationDataCollection();
CounterCreationData counterHit =
    new CounterCreationData("HitCounter", "Number of hits",
        PerformanceCounterType.NumberOfItems32);
CounterCreationData counterFile = new CounterCreationData
    ("FileCounter", "Number of files access attempts",
        PerformanceCounterType.NumberOfItems32);

colCounters.Add(counterHit);
colCounters.Add(counterFile);

PerformanceCounterCategory.Create( "ApplicationPerformance",
    "ApplicationPerformanceHelp",
    PerformanceCounterCategoryType.SingleInstance,
    colCounters );
```

You have to adjust the `HitCounter` performance counter when a hit occurs.

What should you do?

A. Use the following code:

```
PerformanceCounter hitCounter = new PerformanceCounter ("ApplicationPerformance',
    "HitCounter");
```

```
hitCounter.ReadOnly = false;
```

```
hitCounter.Increment ();
```

B. Use the following code:

```
PerformanceCounter hitCounter = new PerformanceCounter ("ApplicationPerformance',
    "HitCounter");
```

```
hitCounter.Increment ();
```

C. Use the following code:

```
PerformanceCounter hitCounter = new PerformanceCounter ("ApplicationPerformance',
    "HitCounter");
```



```
hitCounter ++;
```

D. Use the following code:

```
PerformanceCounter hitCounter = new PerformanceCounter ("ApplicationPerformance',  
"HitCounter");  
hitCounter.ReadOnly = false;  
hitCounter ++;
```

Answer: A

Explanation: This code creates a new PerformanceCounter object that references the ApplicationPerformance category and the HitCounterperformance counter. By default, a performance counter is read-only, so this code sets the ReadOnly property to False. Then, the Increment method is called to increase the counter by one. The PerformanceCounter class also provides an IncrementBy method, which increments the performance counter by the value specified in a provided argument.

Incorrect Answers:

B: You should not use the code fragments that fail to set the ReadOnly property to False because by default, all performance counter objects are read-only.

C, D: You should not use the code fragments that use the ++ operator to increment the PerformanceCounter object because this will cause a compile-time error.

QUESTION 182

You work as an application developer at Certkiller .com. You would like to create a custom performance counter for an application that you created recently.

To do this, you decide to create a custom category named ApplicationPerformance and a performance counter named HitNumber.

You need to ensure that this counter is shared across numerous applications.

What should you do?

A. Use the following code:

```
PerformanceCounterCategory.Create ("ApplicationPerformance",  
"ApplicationPerformanceHelp",  
PerformanceCounterCategoryType.MultiInstance, "HitNumber", "HitNumberHelp");
```

B. Use the following code:

```
PerformanceCounterCategory.Create ("HitNumber", "HitNumberHelp",  
PerformanceCounterCategoryType.SingleInstance,  
"ApplicationPerformance" "ApplicationPerformanceHelp");
```

C. Use the following code:

```
PerformanceCounterCategory.Create ("HitNumber", "HitNumberHelp",  
PerformanceCounterCategoryType.MultiInstance,  
"ApplicationPerformance" "ApplicationPerformanceHelp");
```

D. Use the following code:

```
PerformanceCounterCategory.Create ("ApplicationPerformance",  
"ApplicationPerformanceHelp",  
PerformanceCounterCategoryType.SingleInstance,  
"HitNumber", "HitNumberHelp");
```


Answer: D

Explanation: This code invokes the Create method of the PerformanceCounterCategory class. This method registers a custom category on the local computer. The first two arguments specify the name of the category and category help string, respectively. The third argument specifies a PerformanceCounterCategoryType enumeration value indicating how many counters can be in use within the specified category. The value PerformanceCounterCategoryType.SingleInstance indicates that only a single instance can exist for the entire category. The last two arguments specify the name of the performance counter and the counter's help string, respectively.

Incorrect Answers:

A, C: The code fragments that specify the MultiInstance value should not be used because the scenario requires you to share the same counter across multiple applications.
B: This code fragment incorrectly assigns the value HitNumber to the category name and ApplicationPerformance to the counter name.

QUESTION 183

You work as an application developer at Certkiller .com.

You are required to launch the App.exe process, and specify sample.txt as the input file. App.exe will then use the contents of sample.txt to establish the environment's current settings.

You need to ensure that the code you use meets these requirements.

What should you do?

A. Use the following code:

```
Process myProcess = new Process ();  
myProcess.StartInfo = new ProcessStartInfo ("App.exe sample.txt");  
myProcess.Start ();
```

B. Use the following code:

```
Process myProcess = new Process ();  
myProcess.StartInfo = new ProcessStartInfo ("App.exe");  
myProcess.ProcessStartArgs ("sample.txt");  
myProcess.Start ();
```

C. Use the following code:

```
Process myProcess = new Process ();  
myProcess.StartInfo = new ProcessStartInfo ("App.exe");  
myProcess.Start ("sample.txt");
```

D. Use the following code:

```
Process myProcess = new Process ();  
myProcess.StartInfo = new ProcessStartInfo ("App.exe");  
myProcess.StartInfo.FileName = "sample.txt"  
myProcess.Start ();
```

Answer: D

Explanation: This code creates a new Process object, sets the application to run using the StartInfo property, and uses the FileName property to specify the file to use as input. The StartInfo property of a Process object stores startup information for the process. This includes the application to run and any command-line arguments to be used by the application. The FileName property must be set, and can be set by either explicitly setting the FileName property or by passing the name of the file to the ProcessStartInfo constructor. The Start method launches the application process with the values specified in the StartInfo property.

In this scenario, the code declares a new Process object named myProcess and then sets the StartInfo property of this process. The code passes the constructor of the ProcessStartInfo a single argument representing the name of the application, App.exe. Next, the FileName property is explicitly set with an assignment statement to the value of "sample.txt". Then, the code call the Start method to launch the application using the values specified in the customized startup settings.

Incorrect Answers:

A: You should not use the code that passes a single string containing the application and input file to the ProcessStartInfo constructor.

B: You should not use the code that invokes the ProcessStartArgs method because no such method exists in the Process class.

C: You should not use the code that invokes the Start method of the Process object specifying the input file because no such method signature exists.

QUESTION 184

You work as an application developer at Certkiller .com. Certkiller .com uses an application that calculates monthly payments based upon client input. You are currently debugging this application using the Microsoft Visual Studio 2005 IDE. The application contains the following code:

```
public double CalculateMonthlyPayment (Single rate, double principal)
{
//Implementation code
}
```

You have discovered that unexpected results are being returned by the application. You would like to pause execution and display a message box containing an error message in the event of a negative or zero rate value is Passed to the CalculateMonthlyPayment method.

You need to ensure that this only occurs during debugging mode.

What should you do?

A. Add the following code to the beginning of the CalculateMonthlyPayment method:

Debug.Assert (rate > 0, "Rate Error", "Rate must be > zero");

B. Add the following code to the beginning of the CalculateMonthlyPayment method:

if (rate <= 0)

MessageBox.Show ("Rate is" + rate, Error);

C. Add the following code to the beginning of the CalculateMonthlyPayment method:

if (rate <= 0)

```
Debug.WriteLine ("Error Rate is" + rate);
```

D. Add the following code to the beginning of the CalculateMonthlyPayment method:

```
Debug.WriteLineIf (rate <= 0, "Error Rate is" & rate);
```

Answer: A

Explanation: This code makes the debugging assertion that the rate argument is greater than zero. If it is not, then a message box will be display with the message Rate Error along with the detailed description "Rate must be > zero". The Assert method of the debug class is an overloaded method that provides you the ability to test assumptions made in your programming logic. The Assert method accepts three arguments, the first of which is required. This first argument represents a condition that is assumed to be true for your programming logic and will evaluate to a Boolean value. The other two arguments represent optional string messages. When the Assert method is invoked with three arguments, the condition is evaluated. If the condition evaluates to true, then the program continues to execute. If the condition evaluates to false, the program execution is halted, and by default a modal dialog box is displayed. This dialog box displays the first string on a single line, the second string on the second line, and then the location at which the assertion failed. From this dialog box, you can invoke the debugger, continue execution, or exit the application. Output generated using the Debug class is stripped out when creating a release version build of an application.

Incorrect Answers:

B: In this scenario, you want the dialog box to display only for debug builds of the application. Using this code, the message box would display in a release build of the application.

C, D: The output of these options will not display in a message box.

QUESTION 185

You work as an application developer at Certkiller .com. You are preparing to run diagnostics on an application by using TraceSwitch objects.

You start by adding the following elements to the application configuration file:

```
<system.diagnostics>
  <switches>
    <add name="DataTraceSwitch" value="1" />
    <add name="MessageTraceSwitch" value="3" />
  </switches>
</system.diagnostics>
```

You then test the TraceSwitch settings by using the code displayed in the exhibit below:

```

1 using System;
2 using System.Diagnostics;
3
4 public class MainApp {
5
6     private static TraceSwitch dataSwitch;
7     private static TraceSwitch messageSwitch;
8
9     public static void Main ( string[] args ) {
10         dataSwitch = new TraceSwitch( "DataTraceSwitch",
11             "Displays argument information." );
12         messageSwitch = new TraceSwitch( "MessageTraceSwitch",
13             "Displays method calling information." );
14         TestTraceSwitches( 0 );
15     }
16
17     private static void TestTraceSwitches ( int Input ) {
18         Trace.WriteLineIf( messageSwitch.Level == TraceLevel.Info,
19             "Entering TestTraceSwitches method." );
20         Trace.WriteLineIf( dataSwitch.Level == TraceLevel.Info,
21             "Input: " + Input );
22         if ( Input <= 0 ) {
23             Trace.WriteLine( dataSwitch.Level == TraceLevel.Error,
24                 "Input cannot be less than or equal to 0." );
25             Trace.WriteLine( messageSwitch.Level == TraceLevel.Error,
26                 "Exception thrown in TestTraceSwitches method." );
27             throw new ArgumentException( "Invalid value.", "Input" );
28         }
29         Trace.WriteLineIf( messageSwitch.Level == TraceLevel.Info,
30             "Exiting TestTraceSwitches method." );
31     }
32 }

```

What represents the output that will be displayed by this test?

- A. Entering TestTraceSwitsches method.
Input: 0
Input cannot be less than or equal to 0.
Exception thrown in TestTraceSwitsches method.
Exiting TestTraceSwitsches method.
- B. Entering TestTraceSwitsches method.
Input cannot be less than or equal to 0.
Exception thrown in TestTraceSwitsches method.
- C. Entering TestTraceSwitsches method.
Input cannot be less than or equal to 0.
Exception thrown in TestTraceSwitsches method.
Exiting TestTraceSwitsches method.
- D. Input cannot be less than or equal to 0.
Exception thrown in TestTraceSwitsches method.

Answer: B

Explanation: In this scenario, the DataTraceSwitch is set to 1, or TraceLevel.Error, and the MessageTraceSwitch is set to 3, or TraceLevel.Info. The Trace.WriteLineIf method invocations check the TraceLevel of each switch. In this way, only error messages will be in the output if the DataTraceSwitch.TraceLevel property is

evaluated. All messages except verbose will be in the output if the `MessageTraceSwitchTraceLevel` property is evaluated. The reason that the last trace message is not in the output is because an exception is thrown before that statement can be executed.

Incorrect Answers:

A, C, D: These options are all incorrect because they do not indicate the correct output based on the `TraceLevel` settings of the `TraceSwitch` object.

QUESTION 186

You work as an application developer at Certkiller .com. You have recently created an application, and want to capture all debugging text messages generated by it. You would like these debugging messages to display on the command line. The application that you created contains the following code:

```
Debug.WriteLine ("Start the processing");  
Console.WriteLine ("Generated by Console.WriteLine");  
Debug.WriteLine ("End the processing");
```

You need to ensure that you are able to capture all debugging messages to the command line.

What should you do?

A. Use the following code:

```
Debug.Listeners.Add (new TextWriterTraceListener (Console.Out));  
Debug.AutoFlush = true;
```

B. Use the following code:

```
Debug.Listeners.Add (new StreamWriter (Console.Out));  
Debug.AutoFlush = true;
```

C. Use the following code:

```
Debug.Listeners.Add (new ConsoleTraceListener ());  
Debug.AutoFlush = true;
```

D. Use the following code:

```
Debug.Listeners.Add (new DefaultTraceListener ());  
Debug.AutoFlush = true;
```

Answer: C

Explanation: Listeners are used to capture trace and debug messages. Both the `Trace` and `Debug` objects share the same `Listeners` collection, which includes a `DefaultTraceListener` that will capture trace and debug messages in the Output window. You are able to override this behavior by using the `Add` method to add another listener to the `Listeners` collection. The `ConsoleTraceListener` is used to route trace and debug messages to the console. The `AutoFlush` property should be set to `true` for immediate capture. This specifies that after each message is written, the buffer is flushed and the output is written to the listener.

Incorrect Answers:

A: You should use the code that instantiates a `TextWriterTraceListener` object that specifies the Console's output stream because this is less efficient than specifying a

ConsoleTraceListener object.

B: You should use the code that instantiates a StreamWriter object that specifies the Console's output stream because the Listeners collection allows only Listener object streams.

D: You should use the code that instantiates a DefaultTraceListener object because this will capture the debugging messages to the Output window in the Visual Studio .NET 2005 IDE. Also, each Listeners collection will contain a DefaultTraceListener by default.

QUESTION 187

You work as an application developer at Certkiller .com. You have created an application to interface with an inventory storage system, and want to enable tracing in the application to track stock shortages and surpluses.

The application should not, however, trace inventory levels if no shortages or surpluses exist. In addition, you do not want recompile every time to switch tracing capabilities on or off.

What should you do?

- A. Specify a command-line argument named InventoryTrace, and configure the application to read the argument.
- B. Specify a system-wide environmental variable named InventoryTrace, and configure the application to read the environmental variable.
- C. Specify a registry key named InventoryTrace, and configure the application to read the registry key setting.
- D. Specify a BooleanSwitch named InventoryTrace, and configure it in the application configuration file.

Answer: D

Explanation: The BooleanSwitch class is used to toggle trace messages on and off. The application configuration is intended to manage any application-specific settings, including tracing. The value of the Enabled property determines whether the BooleanSwitch is turned on or off. This value is set in the application configuration file. If the value is 0, then the BooleanSwitch object is turned off and the Enabled property returns false. If the value is any other value, the BooleanSwitch object is turned on and the Enabled property returns true.

Incorrect Answers:

- A: This option requires the application to run from the command-line.
- B: This option requires EnvironmentPermission and is intended for more complex application settings.
- C: This option requires RegistryPermission and is intended for system-wide settings, not for application-specific settings.

QUESTION 188

You work as an application developer at Certkiller .com. Certkiller .com has a server named Certkiller -SR05 that has numerous processors installed.

You have been given the task of developing an application that displays certain clock speed statistics on all processors installed on Certkiller -SR05.

You need to ensure that this requirement is fully satisfied.

What should you do?

A. Use the following code:

```
ManagementObjectSearcher processorSearcher = new ManagementObjectSearcher ();
foreach (ManagementObject obj in processorSearcher.Get ("SELECT * FROM
Win32_Processor"))
{
    Console.WriteLine (" {0}", obj ["Name"]);
    Console.WriteLine (" {0} / {1}", obj ["CurrentClockSpeed"], Obj ["MaxClockSpeed"]);
}
```

B. Use the following code:

```
ManagementObjectSearcher processorSearcher = new ManagementObjectSearcher (
"SELECT * FROM Win32_Processor");
foreach (ManagementObject obj in processorSearcher.Get ())
{
    Console.WriteLine (" {0}", obj ["Name"]);
    Console.WriteLine (" {0} / {1}", obj ["CurrentClockSpeed"], Obj ["MaxClockSpeed"]);
}
```

C. Use the following code:

```
ManagementObjectQuery processorQuery = new ManagementObjectQuery ();
foreach (ManagementObject obj in processorQuery.Get ("SELECT * FROM
Win32_Processor"))
{
    Console.WriteLine (" {0}", obj ["Name"]);
    Console.WriteLine (" {0} / {1}", obj ["CurrentClockSpeed"], Obj ["MaxClockSpeed"]);
}
```

D. Use the following code:

```
ManagementObjectQuery processorQuery = new ManagementObjectQuery (
"SELECT * FROM Win32_Processor");
foreach (ManagementObject obj in processorQuery.Get ())
{
    Console.WriteLine (" {0}", obj ["Name"]);
    Console.WriteLine (" {0} / {1}", obj ["CurrentClockSpeed"], Obj ["MaxClockSpeed"]);
}
```

Answer: B

Explanation: This code retrieve all Win32_Processor objects on the local machine, iterates through each Win32_Processor object, and displays the Name, CurrentClockSpeed, and MaxClockSpeed properties for each Win32_Processor object. First, the ManagementObjectSearcher object is instantiated with the WQL query string on which to search. WQL is a subset of SQL, and it is specifically designed for WMI. The WQL string specified in this code returns any 32-bit

processors available on the local machine. The Get method returns a ManagementObjectCollection object. On each iteration, a ManagementObject object is assigned to the variable obj. the Console.WriteLine method display the Name, ClockSpeed, and MaxClockSpeed properties on the command-line using a string indexer.

Incorrect Answers:

A: You should not use the code that specifies the WQL query string as an argument of the Get method of the ManagementObjectSearcher object because the Get method does not accept a string data type.

C D: You should not use the code that specifies the ManagementObjectQuery class because there is no such class in the .NET 2.0 class library.

QUESTION 189

You work as an application developer at Certkiller .com. You have developed an application that simplifies hard drive management for Certkiller .com's administrators.

The application that you created logs all modifications made to physical hard drives on an hourly basis. You now need to create an EventQuery object for this application.

What should you do?

A. Use the following code:

```
EventQuery query = new EventQuery ();
query.QueryString = "SELECT InstanceModificationEvent FROM 'Win32_DiskDrive'"
+
"WITHIN 3600";
```

B. Use the following code:

```
EventQuery query = new EventQuery ();
query.QueryString = "SELECT * FROM InstanceModificationEvent WITHIN 3600" +
"WHERE TargetInstance ISA 'Win32_DiskDrive'";
```

C. Use the following code:

```
EventQuery query = new EventQuery ();
query.QueryString = "SELECT * FROM 'Win32_DiskDrive' WITHIN 3600" +
"WHERE TargetInstance ISA InstanceModificationEvent";
```

D. Use the following code:

```
EventQuery query = new EventQuery ();
query.QueryString = "SELECT * FROM InstanceModificationEvent WITHIN 3600" +
"WHERE Instance = 'Win32_DiskDrive'";
```

Answer: B

Explanation: This code creates a new EventQuery object that queries all disk drive events every hour. The QueryString property contains a string that follows the syntax of WQL. WQL is a subset of SQL, and it is specifically designed for WMI. The SELECT clause indicates retrieval, where the asterisk (*) represents all properties associated with the event. The FROM clause indicates the event, which in

this case is `_InstanceModificationEvent`. The `WITHIN` clause specifies the polling interval in seconds. The `WHERE` clause specifies the condition that must be met. In this scenario, the `TargetInstance` field is compared to the value `Win32_DiskDrive`. This limits the `_InstanceModificationEvent` events to only those that modify hard drives.

Incorrect Answers:

A: `InstanceModificationEvent` is not a valid event property and `Win32_DiskDrive` is not a valid event.

C: The `FROM` clause should specify the event `InstanceModificationEvent` and the `ISA` operator should use the `Win32_DiskDrive` class.

D: `Instance` is not a valid field name and the equal sign (`=`) is not valid for class comparisons.

Topic 18, C#, Implementing serialization and input/output functionality in a .NET Framework application(18 Questions)

QUESTION 190

You work as an application developer at Certkiller .com.

Certkiller .com has given you the task of serializing an object and writing it to a data file using binary serialization.

You need to ensure that you meet these requirements.

What should you do?

A. Use the following code:

```
object obj = new object ();  
Stream objStream = File.Open ("DataFile.dat", FileMode.Create);  
BinaryFormatter objFormatter = new BinaryFormatter ();  
objFormatter.Serialize (objStream, obj);
```

B. Use the following code:

```
object obj = new object ();  
BinaryFormatter objFormatter = new BinaryFormatter ();  
objFormatter.Serialize (obj);
```

C. Use the following code:

```
Stream objStream = File.Open ("DataFile.dat", FileMode.Create);  
BinaryFormatter objFormatter = new BinaryFormatter ();  
objFormatter.Serialize (objStream);
```

D. Use the following code:

```
object obj = new object ();  
Stream objStream = File.Open ("DataFile.dat", FileMode.Create);  
BinaryFormatter objFormatter = new BinaryFormatter ();  
objFormatter.Serialize (obj, objStream);
```

Answer: A

Explanation: This code instantiates an object named `obj`, opens a file stream,

instantiates a BinaryFormatter object, and serializes the obj object to the DataFile.dat file. The File.Open method takes a file path string and FileMode enumeration value as arguments and returns a FileStream object. The Serialize method of the BinaryFormatter class takes two arguments: a stream and the object to be serialized. The Serialize method uses the stream to write the object to the destination.

Incorrect Answers:

B, C, D: If you use these options it will cause a compile-time error.

QUESTION 191

You work as an application developer at Certkiller .com. You have recently created a serializable class named Vehicle.

The class is shown below:

[Serializable]

```
public class Vehicle
{
    public string VIN;
    public string Make;
    public string Model;
    public string Year;
}
```

You are planning to create a custom formatter class to control the formatting of Vehicle objects when they are serialized. You need to ensure that is achieved with as little development effort as possible.

What should you do?

A. Use the following code:

```
public class VehicleFormatter : Formatter
{
    //Implementation omitted
}
```

B. Use the following code:

```
public class VehicleFormatter : IGenericFormatter
{
    //Implementation omitted
}
```

C. Use the following code:

```
public class VehicleFormatter : IFormatConverter
{
    //Implementation omitted
}
```

D. Use the following code

```
public class VehicleFormatter : IFormatter
{
    //Implementation omitted
}
```

Answer: D

Explanation: When implementing the IFormatter interface, you must provide implementation for two methods and three properties. The two methods, Serialize and Deserialize control how objects will be stored from memory and loaded into memory, respectively. Both methods accept a Stream object as an argument. The Serialize method also takes a generic object as its second argument and uses the Stream argument to write the object. The Deserialize method returns the object using the Stream argument. The Binder, Context, and Surrogate Selector properties must also be implemented.

Incorrect Answers:

A: The Formatter class requires more development effort than necessary.

B: The IGenericFormatter interface does not exist.

C: The IFormatConverter interface does not control formatting during serialization.

QUESTION 192

You work as an application developer at Certkiller .com. You develop a serializable class for persisting objects as files.

Every time an object is serialized, you have to update the database with the name of the object and location of that file. You elect to employ the OnSerialized attribute to achieve this objective.

You now need to apply the OnSerialized attribute to a certain method.

What should you do?

A. Apply the OnSerialized attribute to the following method:

```
public void AfterSerialization (object sender, SerializationEventArgs e)
{
//Update database
}
```

B. Apply the OnSerialized attribute to the following method:

```
public void AfterSerialization (object sender
{
//Update database
}
```

C. Apply the OnSerialized attribute to the following method:

```
public void AfterSerialization (StreamingContext context)
{
//Update database
}
```

D. Apply the OnSerialized attribute to the following method:

```
public StreamingContext AfterSerialization ()
{
//Update database
}
```

Answer: C

Explanation: This method contains the correct method signature to have the OnSerialized attribute applied. The method must accept a StreamingContext as an argument for accessing the read/write stream during serialization/deserialization.

Incorrect Answers:

A, B, D: You should not apply the OnSerialized attribute to these methods because they do not accept a StreamingContext as an argument.

QUESTION 193

You work as an application developer at Certkiller .com. You have recently created a point of sale application that serializes sales products into XML, which will then be consumed by Certkiller .com's partner company.

The following exhibit shows the appropriate serializable classes that you have created.

```

1 using System;
2 using System.IO;
3 using System.Xml.Serialization;
4 using System.Runtime.Serialization;
5
6 public class Product {
7     private int ID;
8     public string Name;
9 }
10
11 public class SalesProduct : Product {
12     [XmlAttribute( "Taxable" )]
13     public bool IsTaxable;
14 }
15
16 public class Region {
17     [XmlAttribute( "Area" )]
18     public string Name;
19     [XmlArrayItem( typeof( Product ),
20         ElementName = "Product" )]
21     [XmlArrayItem( typeof( SalesProduct ),
22         ElementName = "SalesProduct" )]
23     public Product[] Products;
24 }

```

You then test the serialization process by creating code in the exhibit below:

```

public void Serialize ( string filename ) {
    XmlSerializer serializer = new XmlSerializer( typeof( Region ) );
    StreamWriter writer = new StreamWriter( filename );
    SalesProduct product1 = new SalesProduct();
    product1.Name = "Sofa";
    product1.IsTaxable = true;
    Product productDisplay = new Product();
    productDisplay.Name = "Television";
    Region region = new Region();
    region.Name = "East";
    region.Products = new Product[] { product1, productDisplay };
    serializer.Serialize( writer, region );
    writer.Close();
}

```

What will be in the file if you invoke the Serialize method?

- A. <?xml version="1.0" encoding="utf-8"?>
 <Region xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance"
 xmlns:xsd= "http://www.w3.org/2001/XMLSchema">
 <Products>
 <Product> IsTaxable="true">Sofa</Product>
 <Product> Television</Product>
 </Products>
 </Region>
- B. <?xml version="1.0" encoding="utf-8"?>
 <Region xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance"
 xmlns:xsd= "http://www.w3.org/2001/XMLSchema">
 <Products>
 <SalesProduct Taxable="true">
 <Name>Sofa</Name>
 </SalesProduct>
 <Product>
 <Name>Television</Name>
 </Product>
 </Products>
 </Region>
- C. <?xml version="1.0" encoding="utf-8"?>
 <Region xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance"
 xmlns:xsd= "http://www.w3.org/2001/XMLSchema">
 <Products>
 <SalesProduct>
 <IsTaxable>true</IsTaxable >
 <Name>Sofa</Name>
 </SalesProduct>
 <Product>
 <Name>Television</Name>
 </Product>

```

</Products>
</Region>
D. <?xml version="1.0" encoding="utf-8"?>
<Region xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance"
xmlns:xsd="http://www.w3.org/2001/XMLSchema" Area="East">
<Products>
<SalesProduct Taxable="true">
<Name>Sofa</Name>
</SalesProduct>
<Product>
<Name>Television</Name>
</Product>
</Products>
</Region>

```

Answer: B

Explanation: This code is generated because of the inclusion and exclusion of XML serialization attributes. The Product class contains no XML-specific attributes, so the Name field will translate into the Name element. The ID field will not serialize because it is a private member. The XmlElement attribute can specify the element name if it is different from the field name. The SalesProduct class inherits the Product class and adds the IsTaxable field. The XmlAttribute attribute specifies the Taxable element to store the IsTaxable field value. The Region class contains the Name field, which has the XmlAttribute applied as well. The XmlAttribute attribute indicates the serialization schema to use for the Products array. Because both generic Product objects and SalesProduct objects can be stored in the array, you must specify the XmlArrayItem for each serializable type. If you do not, the serialization process will throw an InvalidOperationException runtime error.

Incorrect Answers:

A, C, D: The serialize method would not generate the output of the other options because they do not reflect the XML serialization attributes specified in the Product, SalesProduct, and Region classes.

QUESTION 194

You work as an application developer at Certkiller .com. You have recently created a serializable class named Vehicle.

The class is shown below:

```

[Serializable]
public class Vehicle
{
    public string VIN;
    public string Make;
    private string Model;
    private int Year;
}

```

```
private string Owner;  
}
```

Certkiller .com does not want the Owner field to be persisted when a Vehicle object is serialized, for security reasons.

You need to ensure that this objective is fulfilled.

What should you do?

- A. Apply the OptionalField attribute to the Owner field.
- B. Apply the NonSerialized attribute to the Owner field.
- C. Have the Vehicle class implement the IFormatter interface for custom serialization.
- D. Do nothing because, when using binary serialization, Private fields are never persisted.

Answer: B

Explanation: This will ensure that the Owner field will not be serialized, but it will allow all other fields to be serialized normally.

Incorrect Answers:

A: This option would be used for deserialization.

C: This option would require excessive developer effort.

D: This is incorrect because all fields marked private or otherwise are persisted when using binary serialization.

QUESTION 195

You work as an application developer at Certkiller .com. You have just completed the creation of an application that receives order data from Certkiller .com's partner company in XML format.

The XML has to be utilized to create an Order object that is consumed by the new application.

The following exhibit displays an example of Certkiller .com's partner company's XML data:


```

<?xml version="1.0" encoding="utf-8"?>
<Order id="101">
  <Shipping>
    <Instructions>
      Come to front door and ring door bell.
      No other options.
    </Instructions>
    <Address>
      <Street>345 Microsoft Way</Street>
      <City>Atlanta</City>
      <State>GA</State>
      <Zip>30350</Zip>
    </Address>
  </Shipping>
  <Date>2006-05-12T00:00:00-04:00</Date>
  <Details>
    <SalesProduct InStock="true" Taxable="true">
      <Name>Sofa</Name>
      <Quantity>1</Quantity>
      <Price>349.99</Price>
    </SalesProduct>
    <Product InStock="false">
      <Name>Television</Name>
      <Quantity>2</Quantity>
      <Price>230.89</Price>
    </Product>
  </Details>
</Order>

```

You plan to use the XmlSerializer class to deserialize the XML data into an Order object. When you learn that Certkiller .com's partner company's XML also contains Shipping object data, you decide to deserialize the shipping object after the Shipping element is detected during deserialization.

To achieve this, you need to use a certain event of the XmlSerializer class. What event should you use?

- A. UnknownElement
- B. UnknownNode
- C. UnreferencedObject
- D. UnknownAttribute

Answer: B

Explanation: The UnknownNode event is fired when an unexpected element or node is detected that does not map to the XmlSerializer object's expected type. The UnknownNode event included the XmlNodeEventArgs, which allows access to the entire node of the XML data. This would allow easy deserialization for the Shipping object.

Incorrect Answers:

A, C, D: These options would not allow easy deserialization for the Shipping object.

QUESTION 196

You work as an application developer at Certkiller .com. You have recently written the code shown below:

```
Hashtable emailAddresses = new Hashtable ();
emailAddresses.Add ("Mia", "mia@ Certkiller .com");
emailAddresses.Add ("Andy", "andy@ Certkiller .com");
emailAddresses.Add ("Kara", "kara@ Certkiller .com");
FileStream stream = new FileStream ("Email.dat", FileMode.Create);
BinaryFormatter formatter = new BinaryFormatter ();
formatter.Serialize (stream, emailAddresses);
```

You need to ensure that you are able to load the emailAddresses object from the Email.dat file into your application.

What should you do?

A. Use the following code:

```
FileStream readStream = new FileStream ("Email.dat", FileMode.Open);
HashTable loadEmails = readStream.Deserialize ();
```

B. Use the following code:

```
FileStream readStream = new FileStream ("Email.dat", FileMode.Open);
BinaryFormatter readFormatter = new BinaryFormatter ();
HashTable loadEmails = readFormatter.Deserialize (readStream);
```

C. Use the following code:

```
FileStream readStream = new FileStream ("Email.dat", FileMode.Open);
BinaryFormatter readFormatter = new BinaryFormatter ();
HashTable loadEmails = (HashTable) readFormatter.Deserialize (readStream);
```

D. Use the following code:

```
FileStream readStream = new FileStream ("Email.dat", FileMode.Open);
HashTable loadEmails = (HashTable) readFormatter.ReadObject ();
```

Answer: C

Explanation: This instantiates a BinaryFormatter object, and deserializes the emailAddresses object from the Email.dat file. the FileStream constructor takes a file path string and FileMode enumeration value as arguments. The Deserialize method of the BinaryFormatter class takes the stream of the object to be deserialized and returns a generic object. This generic object must be cast or converted to the Hashtable data type.

Incorrect Answers:

A, D: You should not use the code fragments that do not instantiate the BinaryFormatter object because the ReadObject and Deserialize methods do not exist in the FileStream class.

B: You should not use the code that does not cast or convert the return value of the Deserialize method because the Deserialize method returns a generic object.

QUESTION 197**DRAG DROP**

You work as an application developer at Certkiller .com. You define a serializable class named Employee, which is shown in the exhibit below.

```

1 using System;
2 using System.IO;
3 using System.Runtime.Serialization;
4
5 [Serializable()]
6 public class Employee {
7     public string Name;
8
9     public Employee() {
10         New();
11     }
12
13     public void New() {
14         //Implementation code
15     }
16
17     [OnDeserializing()]
18     public void OnDeserializingMethod( StreamingContext context ) {
19         //Implementation code
20     }
21
22     [OnDeserialized()]
23     public void OnDeserializedMethod( StreamingContext context ) {
24         //Implementation code
25     }
26
27     [OnSerializing()]
28     public void OnSerializingMethod( StreamingContext context ) {
29         //Implementation code
30     }
31
32     [OnSerialized()]
33     public void OnSerializedMethod(StreamingContext context) {
34         //Implementation code
35     }
36 }

```

To execute serialization on an Employee object, you write the code shown in the exhibit (line numbers are used for reference only).

```

01 public class Serialization {
02 public static void Main() {
03 Employee empObj = new Employee();
04 empObj.Name = "Derrin Mickels";
05 //Create formatter
06 BinaryFormatter formatter = new BinaryFormatter();
07 //Create stream
08 FileStream stream = new FileStream("empObj.emp", FileMode.Create);
09 formatter.Serialize(stream, empObj);
10 stream.Close();
11 Employee empObjCopy;
12 stream = new FileStream("empObj.emp", FileMode.Open);
13 empObjCopy = (Employee) formatter.Deserialize(stream);
14 stream.Close();
15 stream = null;
16 formatter = null;
17 }
18 }

```

A trainee developer named Amy Wilson asks you which Employee class methods will be called and in what order they will be invoked.

What should you tell Amy Wilson?

To answer, select the methods to be used and arrange them in the correct order on invocation.

Methods, Select from these

OnDeserializingMethod

OnDeserializedMethod

OnSerializingMethod

OnSerializedMethod

New

Methods, place here

Place first step here

Place second step here

Place third step here

Place fourth step here

Place fifth step here

Answer:

Methods, Select from these**Methods, place here**

New
OnSerializingMethod
OnSerializedMethod
OnDeserializingMethod
OnDeserializedMethod

Explanation:

Line 03 shows that the Employee object is instantiated, invoking the constructor. The constructor, in turn, invokes the New method.

Line 09 shows that the Employee object is serialized using a FileStream object. Because the OnSerializingMethod and OnSerializedMethod methods have the OnSerializing and OnSerialized attributes applied to them, respectively, the OnSerializingMethod will be invoked while serializing the Employee object, and the OnSerializedMethod will be invoked after the object is completely serialized.

Line 11 shows that a variable of type Employee is declared and the next line instantiates the FileStream object for reading the serialized data in the empObj.emp file. Because the new keyword is not used, neither the constructor nor the New method is invoked.

Because the OnDeserializingMethod and OnDeserializedMethod methods have the OnDeserializing and OnDeserialized attributes applied to them, respectively, the code on line 13 will invoke the OnDeserializing and OnDeserialized methods next. The OnDeserializing method will be invoked while deserializing the Employee object from a file. The OnDeserialized method will be invoked after the object is completely deserialized into memory.

QUESTION 198

You work as an application developer at Certkiller .com. you have recently written the code shown below:

```
Hashtable emailAddresses = new Hashtable ();
emailAddresses.Add ("Mia", "mia@ Certkiller .com")
emailAddresses.Add ("Andy", "andy@ Certkiller .com")
emailAddresses.Add ("Kara", "kara@ Certkiller .com")
```

You need to ensure that these e-mail addresses are stored in the Email.dat file so that you can load them again when the user restarts the application.

What should you do?

A. Add the following code:

```
FileStream stream = new FileStream ("Email.dat", FileMode.Create);  
BinaryFormatter formatter = new BinaryFormatter ();  
formatter.Deserialize (stream, emailAddresses);
```

B. Add the following code:

```
FileStream stream = new FileStream ("Email.dat", FileMode.Create);  
BinaryFormatter formatter = new BinaryFormatter ();  
formatter.Serialize (stream, emailAddresses);
```

C. Add the following code:

```
FileStream stream = new FileStream ("Email.dat", FileMode.Create);  
stream.Serialize (emailAddresses);
```

D. Add the following code:

```
FileStream stream = new FileStream ("Email.dat", FileMode.Create);  
stream.WriteObject (emailAddresses);
```

Answer: B

Explanation: This code instantiates a file stream, instantiates a BinaryFormatter object, and serializes the emailAddresses object to the Email.dat file. The FileStream constructor takes a file path string and FileMode enumeration as arguments. The Serialize method of the BinaryFormatter class takes two arguments, a stream and the object to be serialized. The Serialize method uses the stream to write the object to the destination.

Incorrect Answers:

A: You should not add the code that invokes the Deserialize method of the BinaryFormatter class because you must serialize the object first.

C D: You should not add the code fragments that do not instantiate the BinaryFormatter object because the WriteObject and Serialize methods do not exist in the FileStream class.

QUESTION 199

You work as an application developer at Certkiller .com. You have recently completely creating a new application for Certkiller .com.

This new application has to load an instance of the Inventory class from a large file named Inventory.dat. You need to ensure that the application executes the loading process in as little time as possible.

What should you do?

A. Use the following code:

```
FileStream readStream = new FileStream ("Inventory.dat", FileMode.Open);  
BinaryFormatter readFormatter = new BinaryFormatter ();  
Inventory currentInventory = (Inventory)  
readFormatter.FastDeserialize (readStream);
```

B. Use the following code:

```
FileStream readStream = new FileStream ("Inventory.dat", FileMode.Open);  
BinaryFormatter readFormatter = new BinaryFormatter ();  
Inventory currentInventory = (Inventory)
```

```
readFormatter.Deserialize (readStream);
```

C. Use the following code:

```
FileStream readStream = new FileStream ("Inventory.dat", FileMode.Open);
```

```
BinaryFormatter readFormatter = new BinaryFormatter ();
```

```
Inventory currentInventory = (Inventory)
```

```
readFormatter.UnsafeDeserialize (readStream);
```

D. Use the following code:

```
FileStream readStream = new FileStream ("Inventory.dat", FileMode.Open);
```

```
BinaryFormatter readFormatter = new BinaryFormatter ();
```

```
Inventory currentInventory = (Inventory)
```

```
readFormatter.SafeDeserialize (readStream);
```

Answer: C

Explanation: This code instantiates a file stream, instantiates a BinaryFormatter object, and deserializes an Inventory object to the Inventory.dat file. The UnsafeDeserialize and Deserialize methods perform the same operation, but the UnsafeDeserialize method uses unmanaged code and requires more permission. Because the UnsafeDeserialize method uses unmanaged code, your code should be granted full trust to execute properly. The UnsafeDeserialize method of the BinaryFormatter class takes two arguments, the stream of the object to be deserialized and the HeaderHandler object to deal with any binary headers. The UnsafeDeserialize method returns a generic object that must be cast or converted to the Inventory data type.

Incorrect Answers:

A, D: You should not use the code that invokes the FastDeserialize and SafeDeserialize methods because no such methods exist for the BinaryFormatter class.

B: You should not use the code that invokes the Deserialize method because the UnsafeDeserialize method yields better performance.

QUESTION 200

You work as an application developer at Certkiller .com. Certkiller .com has asked you to develop an application that displays the properties for all Certkiller .com's network drives.

The information generated by this application will be utilized by Certkiller .com's network administrators to verify client setups.

You need to ensure that these requirements are fully satisfied.

What should you do?

A. Use the following code:

```
public void EnumerateNetworkDrives ()
```

```
{
```

```
foreach (Drive netDrive in Drive.GetDrives ())
```

```
{
```

```
if (netDrive.DriveType == DriveType.Network)
```

```
Console.WriteLine ("{0} ({1}) : {2} bytes", netDrive.Name, netDrive.VolumeLabel,
```

```
netDrive.TotalSize);  
}  
}
```

B. Use the following code:

```
public void EnumerateNetworkDrives ()  
{  
    foreach (DriveInfo netDrive in DriveInfo.GetDrives ())  
    {  
        Console.WriteLine ("{0} ({1}) : {2} bytes", netDrive.Name, netDrive.VolumeLabel,  
            netDrive.TotalSize);  
    }  
}
```

C. Use the following code:

```
public void EnumerateNetworkDrives ()  
{  
    foreach (DriveInfo netDrive in DriveInfo.GetDrives ())  
    {  
        if (netDrive.DriveType == DriveType.Network)  
            Console.WriteLine ("{0} ({1}) : {2} bytes", netDrive.Name, netDrive.VolumeLabel,  
                netDrive.TotalSize);  
    }  
}
```

D. Use the following code:

```
public void EnumerateNetworkDrives ()  
{  
    foreach (DriveInfo netDrive in DriveInfo.GetDrives (DriveType.Network))  
    {  
        Console.WriteLine ("{0} ({1}) : {2} bytes", netDrive.Name,  
            netDrive.VolumeLabel, netDrive.TotalSize);  
    }  
}
```

Answer: C

Explanation: The GetDrives method is invoked and returns an array of DriveInfo objects representing the available drives. The DriveType property is used to verify that the netDrive variable is a network drive. The DriveType property returns a DriveType enumeration value that can be Network, Fixed, CDROM, or Removable. If the DriveType property is DriveType.Network, then the Console.WriteLine method displays the Name, VolumeLabel, and TotalSize properties of the DriveInfo object to the console.

Incorrect Answers:

A: You should not use the code that uses the Disk class because there is no such class in the System.IO namespace.

B D: You should not use the code fragments that do not retrieve the DriveType property

of the DriveInfo object because there is no such signature for the GetDrives method and no such method as GetNetworkDrives.

QUESTION 201

You work as an application developer at Certkiller .com.

Certkiller .com has asked you to create an application to display all of the top directories based on the drive path. You need to ensure that the application displays the number of files within top-level directories.

What should you do?

A. Use the following code:

```
public void DisplayDriveDirectories (string drivePath)
{
    if (Directory.Exists (drivePath))
    {
        foreach (String dirPath in Directory.GetDirectories (drivePath))
        {
            DirectoryInfo dir = new DirectoryInfo (drivePath);
            int numFiles = dir.TotalFiles;
            Console.WriteLine( "{0} : {1} files.", dir.Name, numFiles);
        }
    }
}
```

B. Use the following code:

```
public void DisplayDriveDirectories (string drivePath)
{
    if (Directory.Exists (drivePath))
    {
        foreach (String dirPath in Directory.GetDirectories (drivePath))
        {
            DirectoryInfo dir = new DirectoryInfo (drivePath);
            int numFiles = dir.Length;
            Console.WriteLine( "{0} : {1} files.", dir.Name, numFiles);
        }
    }
}
```

C. Use the following code:

```
public void DisplayDriveDirectories (string drivePath)
{
    if (Directory.Exists (drivePath))
    {
        foreach (String dirPath in Directory.GetDirectories (drivePath))
        {
            DirectoryInfo dir = new DirectoryInfo (drivePath);
            int numFiles = dir.GetFiles().Length;
            Console.WriteLine( "{0} : {1} files.", dir.Name, numFiles);
        }
    }
}
```



```
}  
}  
}
```

D. Use the following code:

```
public void DisplayDriveDirectories (string drivePath)  
{  
    if (Directory.Exists (drivePath))  
    {  
        foreach (String dirPath in Directory.GetDirectories (drivePath))  
        {  
            DirectoryInfo dir = new DirectoryInfo (drivePath);  
            int numFiles = dir.Size;  
            Console.WriteLine( "{0} : {1} files.", dir.Name, numFiles);  
        }  
    }  
}
```

Answer: C

Explanation: This code iterates through each top level of a given drive path and displays the Name property and number of files. First, the Exists method verifies that the drive path exists. Then, the GetDirectories method is invoked and returns a string array of directory paths. GetDirectories takes a directory path as an argument. Then a DirectoryInfo object is instantiated using the dirPath variable as it is updated with each iteration. The number of files in the directory is evaluated by using the GetFiles method, which returns an array of FileInfo objects and retrieves the Length Property of the array. The value is assigned to the numFiles variable. The DirectoryInfo object represents metadata about a directory instance. The Console.WriteLine method displays the Name property of the DirectoryInfo object and the numFiles variable.

Incorrect Answers:

A, B, D: The TotalFiles, Length, and Size properties do not exist in the DirectoryInfo class.

QUESTION 202

You work as an application developer at Certkiller .com. Certkiller .com has asked you to create a file management application to monitor the hosts file. Certkiller .com has instructed you to change the hosts file if it has been changed. You, therefore, need to display the size and whether the hosts file is set to read-only. What should you do?

A. Use the following code:

```
FileInfo hosts = new FileInfo (@ "C:\Windows\system32\drivers\etc\hosts");  
Console.WriteLine ("ReadOnly?" + hosts.IsReadOnly);  
Console.WriteLine ("Size?" + hosts.Length);
```

B. Use the following code:

```
File hosts = new File (@"C:\Windows\system32\drivers\etc\hosts");  
Console.WriteLine ("ReadOnly?" + hosts.IsReadOnly);  
Console.WriteLine ("Size?" + hosts.Length);
```

C. Use the following code:

```
File hosts = new File (@"C:\Windows\system32\drivers\etc\hosts");  
Console.WriteLine ("ReadOnly?" + hosts.GetReadOnly);  
Console.WriteLine ("Size?" + hosts.GetLength);
```

D. Use the following code:

```
FileInfo hosts = new FileInfo (@"C:\Windows\system32\drivers\etc\hosts");  
Console.WriteLine ("ReadOnly?" + hosts.IsReadOnly);  
Console.WriteLine ("Size?" + hosts.Size);
```

Answer: A

Explanation: This code instantiates a FileInfo object using a file path string and outputs the IsReadOnly and Length properties to the command line. The FileInfo object represents the information about a system file. The FileInfo class contains common properties and methods for reading and setting file metadata and contents. The IsReadOnly property returns a Boolean value indicating whether the file is set to read-only. The Length property returns the size of the file in bytes.

Incorrect Answers:

B C: You should not use the code that instantiate a File object because the File class does not contain an IsReadOnly or Length property and is a static class. Also, you should not use the code fragments that specify the Size property because no such property exists.

D: You should not use the code fragments that specify the GetReadOnly and GetLength methods because no such methods exist.

QUESTION 203

You work as an application developer at Certkiller .com. You have recently completed the creation of a new application.

Certkiller .com requires you to ensure that this new application creates a file that contains an array of bytes.

What should you do?

A. Use the following code:

```
public void WriteBytes (byte [] bytes)  
{  
    FileStream fs = new FileStream ("C:\\file.txt", FileMode.Create);  
    for (int i = 0; i < bytes.Length - 1; i++)  
        fs.Write (bytes [i]);  
    fs.Close ();  
}
```

B. Use the following code:

```
public void WriteBytes (byte [] bytes)  
{
```

```
FileStream fs = new FileStream ("C:\\file.txt", FileMode.Create);
for (int i = 0; i < bytes.Length - 1; i++)
fs.WriteByte (bytes [i]);
fs.Close ();
}
```

C. Use the following code:

```
public void WriteBytes (byte [] bytes)
{
FileStream fs = new FileStream ("C:\\file.txt", FileMode.Create);
fs.WriteBytes (bytes, 0, bytes.Length);
fs.Close ();
}
```

D. Use the following code:

```
public void WriteBytes (byte [] bytes)
{
FileStream fs = new FileStream ("C:\\file.txt", FileMode.Create);
fs.Write (bytes, 0, bytes.Length);
fs.Close ();
}
```

Answer: D

Explanation: The FileStream constructor accepts a string argument as the file path and a FileMode enumeration value. The FileMode enumeration value indicates the file stream will be used, and includes the values Append, Create, CreateNew, Open, and Truncate. The FileMode.Create value indicates a new file will be created or, if one already exists, that it will be overwritten. The FileStream class includes a Write method for writing an array of bytes. The Write method takes a byte array, offset value, and total number of bytes as arguments. The other method, WriteByte, takes a single argument of the type of byte, and it requires manual iteration to write an array. Like all streams, the FileStream object has a Close method, which should be called after work is done with the stream.

Incorrect Answers:

A, C: You should not use the code fragments that invokes the Write method or the WriteBytes method with only one argument because no such signatures exists in the FileStream class.

B: This code is unnecessary because the FileStream class also contains a Write method that takes a byte array as an argument.

QUESTION 204

You work as an application developer at Certkiller .com. You are currently in the process of creating an application that reads binary information from a file. You need to ensure that the only the first kilobyte of data is retrieved. What should you do?

A. Use the following code:

```
FileStream fs = new FileStream("C:\\file.txt", FileMode.Open);
BufferedStream bs = new BufferedStream (fs);
byte [ ] bytes = new byte [1023];
bs.Read (bytes, 0, bytes.Length);
bs.Close ();
```

```
for (int i = 0; i < bytes.Length-1; i++)
Console.WriteLine (" {0} : {1}", I, bytes [i]);
```

B. Use the following code:

```
FileStream fs = new FileStream("C:\\file.txt", FileMode.Open);
byte [ ] bytes = new byte [1023];
fs.Read (bytes, 0, bytes.Length);
fs.Close ();
for (int i = 0; i < bytes.Length-1; i++)
Console.WriteLine (" {0} : {1}", I, bytes [i]);
```

C. Use the following code:

```
FileStream fs = new FileStream("C:\\file.txt", FileMode.Open);
BufferedStream bs = new BufferedStream (fs);
byte [ ] bytes = new byte [1023];
bytes = bs.ReadAllBytes (0, 1023);
bs.Close ();
for (int i = 0; i < bytes.Length-1; i++)
Console.WriteLine (" {0} : {1}", I, bytes [i]);
```

D. Use the following code:

```
FileStream fs = new FileStream("C:\\file.txt", FileMode.Open);
BufferedStream bs = new BufferedStream (fs);
byte [ ] bytes = new byte [1023];
bs.Read (bytes);
bs.Close ();
for (int i = 0; i < bytes.Length-1; i++)
Console.WriteLine (" {0} : {1}", I, bytes [i]);
```

Answer: B

Explanation: The FileStream constructor accepts a string argument as the file path and a FileMode enumeration value. The FileMode enumeration value indicates the file stream will be used, and includes the values Append, Create, CreateNew, Open, and Truncate. The FileMode.Open value indicates a file will be opened if existing, or else a FileNotFoundException object will be thrown. An array of 1024 bytes is instantiated. The Read method takes the byte array, offset value, and total number of bytes as arguments. The other method ReadByte returns a single byte at a time, but it requires manual iteration to write an array. Like all streams, the FileStream object has a Close method, which should be called after work is done with the stream. The Console.WriteLine method is invoked to display the byte index and byte value.

Incorrect Answers:

A, C, D: You should not use the code that specifies a buffered stream because the

FileStream class is already a buffered stream. Also, you should not use the code fragments that invoke the ReadAllBytes method and the Read method with the incorrect arguments because no such method signatures exist.

QUESTION 205

You work as an application developer at Certkiller .com. You are in the process of creating a new application.

This new application has to be able to read all data from a text file.

What should you do?

A. Use the following code:

```
FileStream fs = new FileStream("C:\\file.txt", FileMode.Open);
StreamReader sr = new StreamReader (fs);
string data = new sr,ReadToEnd ();
sr.Close ();
Console.WriteLine (data);
```

B. Use the following code:

```
FileStream fs = new FileStream("C:\\file.txt", FileMode.Open);
string data = new sr,ReadToEnd ();
fs.Close ();
Console.WriteLine (data);
```

C. Use the following code:

```
FileStream fs = new FileStream("C:\\file.txt", FileMode.Open);
StringBuilder data = new StringBuilder ();
string data;
while (sr.Peek () > -1)
data += sr.ReadLine ();
sr.Close ();
Console.WriteLine (data);
```

D. Use the following code:

```
FileStream fs = new FileStream("C:\\file.txt", FileMode.Open);
StreamReader sr = new StreamReader (fs);
StringBuilder data = new StringBuilder ();
while (sr.Peek () > -1)
data.Append (sr.ReadLine ());
sr.Close ();
Console.WriteLine (data.ToString ());
```

Answer: A

Explanation: The FileStream constructor accepts a string argument as the file path and a FileMode enumeration value. The FileMode enumeration value indicates the file stream will be used, and includes the values Append, Create, CreateNew, Open, and Truncate. The FileMode.Open value indicates a file will be opened if existing, or else a FileNotFoundException object will be thrown. A StreamReader object is instantiated using the FileStream object as input. The ReadToEnd method returns a

string representing all data from that position to the end of the file. There are two other read methods, ReadLine and ReadBlock. The ReadLine method returns a string representing all data from that position to the end of a line return. The ReadBlock method takes a character array, offset value and total number of characters as arguments. Like all streams, the StreamReader object has a Close method, which should be called after work is done with the stream. The Console.WriteLine method is invoked to display the data to the console.

Incorrect Answers:

B: You should not use the code that does not specify the StreamReader class because the FileStream class does not contain a ReadToEnd method.

C: You should not use the code that specifies a string object when invoking the ReadLine method rather than a StringBuilder object. The string object is less efficient than StringBuilder objects when performing concatenation operations.

D: This code should not be used because it manually iterates through the file using the ReadLine method, whereas the ReadToEnd method is more efficient.

QUESTION 206

You work as an application developer at Certkiller .com. You are currently in the process of creating a new application for Certkiller .com.

You are required to read compressed data files that has been sent by Certkiller .com's sales offices. These data files are less than 4 GB in size, but was compressed without cyclic redundancy.

You want to write a method that receives the compressed files and return the uncompressed data as a byte array.

What should you do?

A. Use the following code:

```
public byte [] DecompressFile (string file)
{
    FileStream fs = new FileStream (file, FileMode.Open);
    DeflateStream cs = new DeflateStream (fs, CompressionMode.Decompress, true);
    byte [ ] data = new byte [fs.Length - 1];
    cs.Read (data, 0, data.Length);
    cs.Close ();
    return data;
}
```

B. Use the following code:

```
public byte [] DecompressFile (string file)
{
    FileStream fs = new FileStream (file, FileMode.Open);
    GZipStream cs = new GZipStream (fs, CompressionMode.Decompress)
    byte [ ] data = new byte [fs.Length - 1];
    cs.Read (data, 0, data.Length);
    return data;
}
```

C. Use the following code:

```
public byte [] DecompressFile (string file)
{
    FileStream fs = new FileStream (file, FileMode.Open);
    DeflateStream cs = new DeflateStream (fs, CompressionMode.Decompress)
    byte [ ] data = new byte [fs.Length - 1];
    cs.Read (data, 0, data.Length);
    return data;
}
```

D. Use the following code:

```
public byte [] DecompressFile (string file)
{
    FileStream fs = new FileStream (file, FileMode.Open);
    GZipStream cs = new GZipStream (fs, CompressionMode.Decompress, true);
    byte [ ] data = new byte [fs.Length - 1];
    cs.Read (data, 0, data.Length);
    cs.Close ();
    return data;
}
```

Answer: A

Explanation: The DeflateStream uses the LZ77 and Huffman coding algorithms for lossless compression and decompression without cyclic redundancy. The DeflateStream constructor takes a stream (in this case an input stream), a CompressionMode enumeration value, and a Boolean value indicating whether to keep the stream open. The CompressionMode enumeration value indicates whether to compress or decompress the specified stream using the values Compress and Decompress, respectively. The Read method takes the byte array, offset value, and total number of bytes as arguments. In this code, the compressed data is read from the FileStream object associated with the DeflateStream object, and it is stored in the byte array. Like all streams, the DeflateStream object has a Close method, which should be called after work is done with the stream. Finally, the resulting byte array is returned.

Incorrect Answers:

B, D: You should not use the code fragments that specify the GZipStream class because this data format includes a data corruption check during decompression.

C: You should not use the code fragments that instantiates the Stream objects and invoke the Read method with the wrong arguments.

QUESTION 207

You work as an application developer at Certkiller .com. Certkiller .com has a file server named Certkiller -SR07 that stores old inventory files.

Certkiller .com has given you the task of creating an application to archive these old inventory files. The inventory files have to be compressed prior to being uploaded to Certkiller .com's Web server.

You are currently writing a method that will receive a byte array and compress it

into a new file. You need to ensure that a data corruption check takes place during the decompression process.

What should you do?

A. Use the following code:

```
public void CompressFileWrite (string file, byte[] data)
{
    FileStream fs = new FileStream (file, FileMode.Create);
    DeflateStream cs = new DeflateStream( fs, Compressionmode.Compress, true);
    cs.Write (data, 0, data.Length);
    cs.Close ();
}
```

B. Use the following code:

```
public void CompressFileWrite (string file, byte[] data)
{
    FileStream fs = new FileStream (file, FileMode.Create);
    GZipStream cs = new GZipStream( fs, Compressionmode.Compress, true);
    cs.Compress (data, 0, data.Length);
    cs.Close ();
}
```

C. Use the following code:

```
public void CompressFileWrite (string file, byte[] data)
{
    FileStream fs = new FileStream (file, FileMode.Create);
    DeflateStream cs = new DeflateStream( fs, Compressionmode.Compress, true);
    cs.Compress (data, 0, data.Length);
    cs.Close ();
}
```

D. Use the following code:

```
public void CompressFileWrite (string file, byte[] data)
{
    FileStream fs = new FileStream (file, FileMode.Create);
    GZipStream cs = new GZipStream( fs, Compressionmode.Compress, true);
    cs.Write (data, 0, data.Length);
    cs.Close ();
}
```

Answer: D

Explanation:

Incorrect Answers:

A, B, C: You should not use the code fragments that specify the DeflateStream class because this data format does not ensure that a data corruption check occurs during decompression. You should also not use the code that invokes the Compress method because no such method exists in the GZipStream or the DeflateStream classes.

Topic 19, C#, Improving the security of the .NET Framework applications by using the .NET Framework 2.0 security features(17 Questions)

QUESTION 208

You work as an application developer at Certkiller .com. You are in the process of creating an assembly that will be used to manage file content on Certkiller .com's user computers.

Certkiller .com wants you to ensure that the users who use the assembly you are creating should not be able to access classes in your assembly if they do not have access to the local file system.

To do this, you need to add certain code fragments to your classes.

What should you use? (Choose two)

- A. [FileIOPermission (SecurityAction.RequestMinimum)]
- B. FileIOPermission perm = New FileIOPermission (PermissionState.Unrestricted);
Perm.Assert
- C. [FileIOPermission (SecurityAction.RequestOptional)]
- D. FileIOPermission perm = New FileIOPermission (PermissionState.Unrestricted);
Perm.Request
- E. [FileIOPermission (SecurityAction.Demand)]
- F. FileIOPermission perm = New FileIOPermission (PermissionState.Unrestricted);
Perm.Demand

Answer: E, F

Explanation: The .NET Framework security system allows permission requests, overrides, and demands using declarative security and imperative security. Declarative security makes use of attributes to place security data into the metadata of the assembly. The permission attributes take a SecurityAction enumeration and other optional arguments. The SecurityAction enumeration includes the values Assert, Demand, Deny, RequestMinimum, RequestOptional, and RequestRefuse. The SecurityAction.Demand value indicates that all callers must have the permission to access the resource.

Incorrect Answers:

A, C: You should not use the code fragments that specify the SecurityAction.RequestMinimum and SecurityAction.RequestOptional values because attributes with these values can only be applied to the entire assembly.

B: You should not use the code fragment that invokes the Assert method because all users must have permission to access the file system.

D: You should not use the code fragment that invokes the Request method because no such method exists in the CodeAccessPermission or FileIOPermission class.

QUESTION 209

You work as an application developer at Certkiller .com. A fellow developer named Amy Walsh recently created an assembly that implements a custom permission set.

Certkiller .com has asked you to test this assembly. You start by copying the assembly to a test server named Certkiller -SR15 that has the Microsoft .NET 2.0 Framework installed. You then log on to the Certkiller -SR15 as a member of the local Administrators Windows group.

You run the assembly, and receive a security exception. You perform a brief analysis of the security issues involved, and find that the assembly has not been assigned the appropriate permissions to run.

You need to ensure that this assembly runs.

What should you do?

- A. Use the permview.exe tool to modify the assembly's granted permissions.
- B. Use the sn.exe tool to modify the assembly's granted permissions.
- C. Use the caspol.exe tool to modify the assembly's granted permissions.
- D. Use the gacutil.exe tool to modify the assembly's granted permissions.

Answer: C

Explanation: The caspol.exe command-line tool allows users to modify security permissions, permission sets, and code groups for an assembly at the machine, user, and enterprise policy levels.

Incorrect Answers:

A: The permview.exe tool only allows users to view declarative security of an assembly.

B: The sn.exe tool allows developers to create a strong-named asymmetric key pair for strong-named assemblies.

D: The gacutil.exe tool allows users to manage the contents of the global assembly and download cache.

QUESTION 210

You work as an application developer at Certkiller .com. Certkiller .com has a test server named Certkiller -SR09 that is frequently used by other Certkiller .com developers to test assemblies and applied security policies.

You have just completed creating an assembly and want to test it on Certkiller -SR09. you need to ensure that all security policies on Certkiller -SR09 are reset to their default settings.

What should you do?

- A. Execute the caspol all -rollback command.
- B. Execute the caspol all -reset command.
- C. Execute the machine all -rollback command.
- D. Execute the machine all -reset command.

Answer: B

Explanation: The caspol.exe command-line tool allows users to modify security permissions, permission sets, and code groups for an assembly at the machine, user, and enterprise policy levels. The reset switch will set the specified security policy or

policies back to their default state. The all switch refers to machine, user, and enterprise policy levels.

Incorrect Answers:

A, C: The rollback switch does not exist for the caspol.exe tool.

D: This option will not set all security policies back to their default state.

QUESTION 211

You work as an application developer at Certkiller .com. Certkiller .com has asked you to create an application that copies file content from one file on a client computer named Certkiller -WS007 to a new file on a server named Certkiller -SR15.

The method displayed in the following exhibit is included in the new application:

```
public void Copy(string oFile , string dFile) {  
    FileInfo file1 = new FileInfo(oFile);  
    FileInfo file2 = new FileInfo(dFile);  
    StreamReader fs1 = new StreamReader(  
        file1.Open(FileMode.Open));  
    StreamWriter fs2 = new StreamWriter(  
        file2.Open(FileMode.Create));  
    fs2.Write(fs1.ReadToEnd());  
    fs1.Close();  
    fs2.Close();  
    //Add code here  
}
```

You have to ensure that the application copies all permissions on the original file to the new file. You should also make sure that the new file does not inherit its permissions from the destination directory on Certkiller -SR15. What should you do?

A. Add the following code to the Copy method:

file2.SetAccessControl (file1.GetAccessControl ());

B. Add the following code to the Copy method:

FileSecurity acl = file1.GetAccessControl ();

acl. SetAccessRuleProtection (true, true);

file2.SetAccessControl (acl);

C. Add the following code to the Copy method:

file2.SetAccessControl (file1.GetAccessControl (), false);

D. Add the following code to the Copy method:

FileSecurity acl = file1.GetAccessControl ();

acl. SetAccessRuleProtection (true, false);

file2.SetAccessControl (acl);

Answer: B

Explanation: This code retrieves the FileSecurity object from the original file, copies and protects the ACL settings from directory inheritance, and copies the ACL settings to the destination file. The GetAccessControl method returns a FileSecurity object representing the ACL of the original file. The SetAccessRuleProtection

method sets or removes ACL protection from the parent objects through inheritance. The SetAccessRuleProtection method accepts two Boolean arguments, the first of which indicates whether settings are protected from inheritance, and the second of which indicates whether to preserve the existing inherited access rule. In this scenario, the value true for both arguments indicates that the ACL is protected from inheritance, but the current ACL settings are copied. The SetAccessControl method takes a FileSecurity object and applies the ACL to the destination folder.

Incorrect Answers:

A, C: You should not use the code fragments that do not invoke the SetAccessRuleProtection method because this will not protect the destination file's ACL settings from inheritance.

D: This code will protect the ACL from inheritance, but it does not copy the existing inherited ACL settings.

QUESTION 212

You work as an application developer at Certkiller .com. Certkiller .com has been contracted by a local doctor's clinic to develop a client application using Microsoft .NET 2.0 that sends patient visit information to a remote server at the clinic's main office.

This data must be transmitted via a secure network stream because it contains patient protected health information (PHI). The data will be sent from a windows application client on the doctor's notebook computer to a windows service hosted on a remote server. Both of these applications employ a certificate store for network identification.

You need to create a secure data stream by adding certain classes to the client application.

What classes should you add? (Choose three)

- A. The MD5CryptoServiceProvider class.
- B. The X509Certificate class.
- C. The NetworkStream class.
- D. The SslStream class.
- E. The TcpListener class.
- F. The TcpClient class.

Answer: B, D, F

Explanation: You should use the X509Certificate class to store the server certificate and encrypt data, the SslStream class to create a secure channel, and the TcpClient class to establish the connection with the server application.

Incorrect Answers:

- A: Using this option would only hash the data using the MD5 algorithm.
- C: Using this option would not necessarily create a secure channel.
- E: This class is used by the server application.

QUESTION 213

You work as an application developer at Certkiller .com. Certkiller .com has been contracted by the local hospital to create an application that forwards private patient information to various insurance providers.

The hospital informs you that the amount and frequency of the patient data is high. You need to ensure that data confidentiality is guaranteed, with as little overhead as possible.

You now need to encrypt the patient information.

What should you do?

A. Use the following code:

```
public byte [] EncryptData (byte [] PatientInfo, RSACryptoServiceProvider SecretKey)
{
    CryptoStream cs = new CryptoStream (SecretKey);
    cs.Encrypt (PatientInfo, 0, PatientInfo.Length);
    byte [] data = cs.ToArray ();
    cs.Close ();
    return data;
}
```

B. Use the following code:

```
public byte [] EncryptData (byte [] PatientInfo, RSACryptoServiceProvider SecretKey)
{
    MemoryStream ms = new MemoryStream ();
    CryptoStream cs = new CryptoStream (ms, SecretKey.CreateEncryptor (),
    CryptoStreamMode.Write);
    cs.Write (PatientInfo, 0, PatientInfo.Length);
    cs.Close ();
    byte [] data = ms.ToArray ();
    ms.Close ();
    return data;
}
```

C. Use the following code:

```
public byte [] EncryptData (byte [] PatientInfo, DESCryptoServiceProvider SecretKey)
{
    CryptoStream cs = new CryptoStream (SecretKey);
    cs.Encrypt (PatientInfo, 0, PatientInfo.Length);
    byte [] data = cs.ToArray ();
    cs.Close ();
    return data;
}
```

D. Use the following code:

```
public byte [] EncryptData (byte [] PatientInfo, DESCryptoServiceProvider SecretKey)
{
    MemoryStream ms = new MemoryStream ();
    CryptoStream cs = new CryptoStream (ms, SecretKey.CreateEncryptor (),
    CryptoStreamMode.Write);
```

```
cs.Write (PatientInfo, 0, PatientInfo.Length);  
cs.Close ();  
byte [] data = ms.ToArray ();  
ms.Close ();  
return data;  
}
```

Answer: D

Explanation: This code instantiates a CryptoStream object, specifies the ICryptoTransform object to encrypt data, encrypts the PatientInfo byte array, and returns the encrypted byte array. The DESCryptoServiceProvider class represents a managed cryptographic provider of the DataEncryption Standard (DES) symmetric algorithm. The DES symmetric algorithm is commonly used for data confidentiality, and it supports 64-bit keys. When you instantiate a DESCryptoServiceProvider object, a secret key for encryption and an initialization vector (IV) are created. Because the same key and IV are needed for encryption and decryption, the CreateEncryptor and CreateDecryptor methods generate the appropriate ICryptoTransform object to alter the data.

Incorrect Answers:

A, B: You should not use the code fragments that specify the RSACryptoServiceProvider because this implements an asymmetric algorithm.

C: You should not use the code fragments that invoke the Encrypt method because no such method exists in the CryptoStream class.

QUESTION 214

You work as an application developer at Certkiller .com. Certkiller .com stores data in a byte array named dataArray.

You have been given the task of ensuring that this data is protected against corruption and tampering. You are planning to employ a HashAlgorithm object to achieve this objective.

What should you do?

A. Use the following code to generate a hash value for the dataArray object:

hash.GenerateHash (dataArray);

B. Use the following code to generate a hash value for the dataArray object:

hash.ComputeHash (dataArray);

C. Use the following code to generate a hash value for the dataArray object:

hash. Hash (dataArray);

D. Use the following code to generate a hash value for the dataArray object:

hash.Compute (dataArray);

Answer: B

Explanation: This option will return a byte array representing the hash value. The HashAlgorithm abstract class is the base class for all hash algorithm provider

classes, including the MD5CryptoServiceProvider and SHA1CryptoServiceProvider classes. They all inherit the ComputeHash method from the HashAlgorithm class.

Incorrect Answers:

A, C, D: These options are incorrect because these methods do not exist in the HashAlgorithm class.

QUESTION 215

You work as an application developer at Certkiller .com. Certkiller .com has been contracted by the local hospital to create an application that forwards private patient information to various insurance providers.

The patient information is sent via a secured VPN to ensure confidentiality. You also need to guarantee data integrity, and verify that the patient data originated from the local hospital. To achieve this objective, you elect to utilize asymmetric encryption and a digital signature technology.

What code would you use to complete your task?

- A. `public byte [] SignAndHash (byte [] PatientInfo, RSAParameters RSAInfo)`
{
 RSACryptoServiceProvider RSAProvider = new RSACryptoServiceProvider ();
 RSAProvider.ImportParameters (RSAInfo);
 Return RSAProvider.Encrypt (PatientInfo, true);
}
- B. `public byte [] SignAndHash (byte [] PatientInfo, DSAParameters DSAInfo)`
{
 DSACryptoServiceProvider DSAProvider = new DSACryptoServiceProvider ();
 DSAProvider.ImportParameters (DSAInfo);
 Return DSAProvider.SignHash (PatientInfo);
}
- C. `public byte [] SignAndHash (byte [] PatientInfo, RSAParameters RSAInfo)`
{
 RSACryptoServiceProvider RSAProvider = new RSACryptoServiceProvider ();
 RSAProvider.ImportParameters (RSAInfo);
 Return RSAProvider.SignEncrypt (PatientInfo, true);
}
- D. `public byte [] SignAndHash (byte [] PatientInfo, DSAParameters DSAInfo)`
{
 DSACryptoServiceProvider DSAProvider = new DSACryptoServiceProvider ();
 DSAProvider.ImportParameters (DSAInfo);
 Return DSAProvider.SignData (PatientInfo);
}

Answer: D

Explanation: The DSACryptoServiceProvider class represents a managed cryptographic provider of the Digital Signature Algorithm (DSA) asymmetric algorithm. The DSA asymmetric algorithm is commonly used for digital signatures

and data integrity, supporting 1024 bit keys. When instantiating a DSACryptoServiceProvider object, a public/private key pair is generated and a default hash is assigned. Thus, to use a particular private key to sign data, a public key to verify data, or a particular hash, you must invoke the ImportParameters method for the current DSACryptoServiceProvider to load custom settings. The SignData method takes a byte array representing the original data and returns the hashed and then signed byte array.

Incorrect Answers:

A, C: You should not use the code fragments that specify the RSACryptoServiceProvider object because the method invocations are incorrect.

B: The SignHash method is used to sign a message digest, not the original data.

QUESTION 216

You work as an application developer at Certkiller .com. A fellow developer named Andy Booth has recently created an application.

The application receives confidential transaction data from Certkiller .com's clients, which it secures using the TripleDESCryptoServiceProvider class. You are currently reviewing this application, and need to decrypt a byte array of cipher text. What code should you use to achieve this objective?

A. public byte [] DecryptData (byte [] cipherText, TripleDESCryptoServiceProvider secretKey)

```
{
    MemoryStream ms = new MemoryStream (cipherText);
    CryptoStream cs = new CryptoStream (ms, SecretKey, CryptoStreamMode.Read);
    byte [] data = new byte [ms.Length - 1];
    cs.Read (data, 0, data.Length);
    cs.Close ();
    ms.Close ();
    return data;
}
```

B. public byte [] DecryptData (byte [] cipherText, TripleDESCryptoServiceProvider secretKey)

```
{
    MemoryStream ms = new MemoryStream (cipherText);
    CryptoStream cs = new CryptoStream (ms, secretKey.CreateDecryptor (),
    CryptoStreamMode.Read);
    byte [] data = new byte [ms.Length - 1];
    cs.Read (data, 0, data.Length);
    cs.Close ();
    ms.Close ();
    return data;
}
```

C. public byte [] DecryptData (byte [] cipherText, TripleDESCryptoServiceProvider secretKey)

```
{
```



```
MemoryStream ms = new MemoryStream (secret.Key);
CryptoStreamMode.Read);
byte [] data = ms.Decrypt (cipherText);
cs.Read (data, 0, data.Length);
ms.Close ();
return data;
}
D. public byte [] DecryptData (byte [] cipherText, TripleDESCryptoServiceProvider
secretKey)
{
CryptoStream cs = new CryptoStream (secretKey);
byte [] data = ms.Decrypt (cipherText);
cs.Read (data, 0, data.Length);
ms.Close ();
return data;
}
```

Answer: B

Explanation: This code instantiates a CryptoStream object, specifies the ICryptoTransform object to encrypt data, decrypts the CipherText byte array, and returns the encrypted byte array. The TripleDESCryptoServiceProvider class represents a managed cryptographic provider of the Data Encryption Standard (DES) symmetric algorithm. The DES symmetric algorithm is commonly used for data confidentiality, and it supports 64-bit keys. When you instantiate a TripleDESCryptoServiceProvider object, a secret key for encryption and an initialization vector (IV) are created. Because the same key and IV are needed for encryption and decryption, the CreateEncryptor and CreateDecryptor methods generate the appropriate ICryptoTransform object to alter the data.

Incorrect Answers:

A: You should not use the code that does not invoke the CreateDecryptor method because this is required when instantiating a CryptoStream object.

C, D: You should not use the code fragments that invoke the Decrypt method because no such method exists in the CryptoStream class.

QUESTION 217

You work as an application developer at Certkiller .com. Certkiller .com has given you the task of creating an application that will allow Certkiller .com's customers to order products online.

To guarantee the availability funds, the application will forward billing information to a third-party payment verification system to guarantee the availability funds.

You need to ensure that the data has not been tampered with between the application and the third-party payment verification system. To do this, you have to hash the billing information.

What code should you use to achieve this?

A. Use the following code:

```
public byte [] Hash (byte [] BillingData)
{
    DESCryptoServiceProvider hashProvider = new DESCryptoServiceProvider ();
    return hashProvider.Hash (BillingData);
}
```

B. Use the following code:

```
public byte [] Hash (byte [] BillingData)
{
    MD5CryptoServiceProvider hashProvider = new MD5CryptoServiceProvider ();
    return hashProvider.Hash (BillingData);
}
```

C. Use the following code:

```
public byte [] Hash (byte [] BillingData)
{
    MD5CryptoServiceProvider hashProvider = new MD5CryptoServiceProvider ();
    return hashProvider.ComputeHash (BillingData);
}
```

D. Use the following code:

```
public byte [] Hash (byte [] BillingData)
{
    DESCryptoServiceProvider hashProvider = new DESCryptoServiceProvider ();
    return hashProvider.ComputeHash (BillingData);
}
```

Answer: C

Explanation:

This code instantiates an MD5CryptoServiceProvider object, invokes the ComputeHash method, and returns the hashed byte array. The MD5CryptoServiceProvider class represents a managed cryptographic provider of the MD5 hash algorithm. The MD5 hash algorithm is commonly used for data integrity, and it supports a 128-bit hash size. The MD5 hash algorithm is known as a message detection code (MDC) hash function. The ComputeHash method accepts a byte array and returns a hashed byte array for data integrity.

Incorrect Answers:

A, D: The DESCryptoServiceProvider class is used for data confidentiality, not integrity.

B: The Hash method does not exist in the MD5CryptoServiceProvider class.

QUESTION 218

You work as an application developer at Certkiller .com. Certkiller .com has a file server named Certkiller -SR07 that hosts company data.

You are currently in the process of creating an application that will be used by Certkiller .com users to manage the data on Certkiller -SR07. to ensure that Certkiller .com users have the appropriate file permissions on the working directory, you define the DemanDirectorySecurity method as shown below.

```
public void DemanDirectorySecurity (string path)
{
FileIOPermission filePerm = new FileIOPermission (PermissionState.None);
filePerm.AddPathList (FileIOPermissionAccess.AllAccess, path);
filePerm.Assert ();
}
```

Subsequent to installing the new application, you find that some users do not have full access to their working directories. You are informed that these Certkiller .com users only require read only access.

You are required to override the permission assertion in the DemanDirectorySecurity method for these users only.

What should you do?

A. Use the following code:

```
FileIOPermission.Revert ();
FileIOPermission fileOVPerm = new FileIOPermission (PermissionState.None);
fileOVPerm.AddPathList (FileIOPermissionAccess.Read, path);
fileOVPerm.Assert ();
```

B. Use the following code:

```
FileIOPermission fileOVPerm = new FileIOPermission (PermissionState.None);
fileOVPerm.AddPathList (FileIOPermissionAccess.Read, path);
fileOVPerm.Permit ();
```

C. Use the following code:

```
FileIOPermission.Revoke ();
FileIOPermission fileOVPerm = new FileIOPermission (PermissionState.None);
fileOVPerm.AddPathList (FileIOPermissionAccess.Read, path);
fileOVPerm.Assert ();
```

D. Use the following code:

```
FileIOPermission fileOVPerm = new FileIOPermission (PermissionState.None);
fileOVPerm.AddPathList (FileIOPermissionAccess.Read, path);
fileOVPerm.OverrideAll ();
```

Answer: A

Explanation: This code invokes the RevertAssert method on the FileIOPermission class, instantiates a FileIOPermission object representing read-only access to the working directory, and invokes the assert method on the FileIOPermission object.

Incorrect Answers:

B, C, D: The Permit, OverrideAll, and Revoke methods do not exist in the FileIOPermission class.

QUESTION 219

You work as an application developer at Certkiller .com. You are currently creating a manifest-activated application on the Certkiller .com's intranet using ClickOnce deployment.

The network administrator informs you that each application has to identify its

name, version, culture, and requested permissions. You need to ensure that the application you are creating uses the command line to display the required information.

What should you do?

A. Use the following code:

```
ApplicationSecurityInfo appInfo = new ApplicationSecurityInfo  
(appDomain.CurrentDomain);
```

```
Console.WriteLine (appInfo.ApplicationID.Name);
```

```
Console.WriteLine (appInfo.ApplicationID.Version);
```

```
Console.WriteLine (appInfo.ApplicationID.Culture);
```

```
Console.WriteLine (appInfo.DefaultRequestSet.ToXml ());
```

B. Use the following code:

```
ApplicationSecurityInfo appInfo = ActivationContext .GetCurrentContext ();
```

```
Console.WriteLine (appInfo.ApplicationID.Name);
```

```
Console.WriteLine (appInfo.ApplicationID.Version);
```

```
Console.WriteLine (appInfo.ApplicationID.Culture);
```

```
Console.WriteLine (appInfo.DefaultRequestSet.ToXml ());
```

C. Use the following code:

```
ApplicationSecurityInfo appInfo = new ApplicationSecurityInfo (  
appDomain.CurrentDomain.ActivationContext);
```

```
Console.WriteLine (appInfo.ApplicationID.Name);
```

```
Console.WriteLine (appInfo.ApplicationID.Version);
```

```
Console.WriteLine (appInfo.ApplicationID.Culture);
```

```
Console.WriteLine (appInfo.DefaultRequestSet.ToXml ());
```

D. Use the following code:

```
ApplicationSecurityInfo appInfo = ActivationID .GetCurrentApplication ();
```

```
Console.WriteLine (appInfo.ApplicationID.Name);
```

```
Console.WriteLine (appInfo.ApplicationID.Version);
```

```
Console.WriteLine (appInfo.ApplicationID.Culture);
```

```
Console.WriteLine (appInfo.DefaultRequestSet.ToXml ());
```

Answer: C

Explanation: The ApplicationSecurityInfo class represents the security evidence for a manifest-activated application. The constructor requires an ActivationContext object that represents the manifest activation context of the application. The AppDomain.CurrentDomain.ActivationContext property retrieves the activation context of the current manifest-activated application. The DefaultRequestSet property represents the permission set the application is requesting of the local system.

Incorrect Answers:

A, B, D: You should not use the code fragments because they attempt to retrieve the ApplicationSecurityInfo object through non-existent methods.

QUESTION 220

You work as an application developer at Certkiller .com. You are in the process of creating an application that will be used to forward confidential information to Certkiller .com's business partners.

In a bid to improve the security of your production environment, you install digital certificates for publishing all assemblies in the application.

You need to confirm that every assembly belongs to the same publisher, based on that publisher's digital certificate.

You are asked to confirm that the current assembly belongs to a certain publisher. What should you do?

A. Use the following code:

```
public bool CheckPolicy (X509Certificate cert)
{
    PublisherMembershipCondition policy = new PublisherMembershipCondition (cert);
    return policy.Check (Assembly.GetCallAssembly ().Evidence);
}
```

B. Use the following code:

```
public bool CheckPolicy (X509Certificate cert)
{
    Publisher pub = new Publisher (cert);
    return pub.Verify (AppDomain.CurrentDomain.Evidence);
}
```

C. Use the following code:

```
public bool CheckPolicy (X509Certificate cert)
{
    Publisher pub = new Publisher (cert);
    return pub.Check (AppDomain.CurrentDomain.Evidence);
}
```

D. Use the following code:

```
public bool CheckPolicy (X509Certificate cert)
{
    PublisherMembershipCondition policy = new PublisherMembershipCondition (cert);
    return policy.Verify (Assembly.GetCallAssembly ().Evidence);
}
```

Answer: A

Explanation:

Incorrect Answers:

B, C: You should not use the code fragments that specify the AppDomain.CurrentDomain.Evidence property as an argument because this property retrieves only the evidence available to the current application domain.

D: You should not use this code fragment that specifies the Verify method because this method does not exist in the PublisherMembershipCondition class

QUESTION 221

You work as an application developer at Certkiller .com. You are in the process of creating an application on Certkiller .com's Web sever named Certkiller -SR11. This application will be used to manage confidential data from Certkiller .com's business partners. The application relies on several assemblies located in Certkiller .com's intranet to fulfill its duties. As a result, you have to verify that every assembly originates from the same intranet Web site. How would you accomplish this?

A. Use the following code:

```
public bool CheckSite ()
{
    SiteMembershipCondition site = new SiteMembershipCondition
(http//intranet. Certkiller .com);
    return site.Check (AppDomain.CurrentDomain.Evidence);
}
```

B. Use the following code:

```
public bool CheckSite ()
{
    Site site = new Site (http//intranet. Certkiller .com);
    return site.Check (Assembly.GetCallingAssembly ().Evidence);
}
```

C. Use the following code:

```
public bool CheckSite ()
{
    Site site = new Site (http//intranet. Certkiller .com);
    return site.Check (AppDomain.CurrentDomain.Evidence);
}
```

D. Use the following code:

```
public bool CheckSite ()
{
    SiteMembershipCondition site = new SiteMembershipCondition
(http//intranet. Certkiller .com);
    return site.Check (Assembly.GetCallingAssembly ().Evidence);
}
```

Answer: D

Explanation: This code instantiates a SiteMembershipCondition object using the site's URL as a string, retrieves the evidence information from the current assembly, and verifies the evidence indicating the assembly originates from the company intranet. The SiteMembershipCondition class' sole purpose is to verify whether an assembly belongs to a site's code group based upon the originating Web site of the application or assembly. The SiteMembershipCondition class has a constructor that takes a URL as a string argument. The Check method determines

whether an assembly belongs to the site's code group based upon the evidence provided as an argument. The `GetExecutingAssembly` method of the `Assembly` class returns an

`Assembly` object representing the assembly that invoked the `CheckPolicy` method. The `Evidence` property of the `Assembly` class returns the identity information used by the .NET Framework code access security mechanism to determine code group membership.

Incorrect Answers:

A, C: You should not use the code fragments that specify the `AppDomain.CurrentDomain.Evidence` property because this retrieves the evidence available to the current application domain only.

B: You should not use the code fragments that specify the `Site` class because this class does not provide a method to verify the originating Web site of an assembly or application.

QUESTION 222

You work as an application developer at Certkiller .com. You are currently creating an application that requires role-based security. You are planning to utilize a database to store the user accounts and group membership data.

You need to ensure that users are able to log on and off. You also need to ensure that the application you have created tracks the user accounts of these users, and restrict or allow access to code based on their group membership. You need to achieve this objective with as little developer effort as possible.

What should you do to implement role-based security?

- A. Inherit from the `GenericIdentity` and `GenericPrincipal` classes.
- B. Make use of `GenericIdentity` and `GenericPrincipal` objects.
- C. Implement the `IIdentity` and `IPrincipal` interfaces.
- D. Make use of `WindowsIdentity` and `WindowsPrincipal` objects.

Answer: B

Explanation: in this scenario, the `GenericIdentity` and `GenericPrincipal` objects could be implemented as follows:

```
GenericIdentity curIdentity = new GenericIdentity ("CurrentUser");  
string [] roles = { "Users", "Administrators" };  
thread.CurrentPrincipal = GenericPrincipal (curIdentity, roles);
```

This code instantiates a `GenericIdentity` object based upon a user name as a string object, instantiates a string array representing the roles to which that user belongs, instantiates a `GenericPrincipal` object specifying the `GenericIdentity` object and string array of roles as arguments, and assigns the new `GenericPrincipal` object to the `CurrentPrincipal` property of the current thread. By assigning the new principal to the `CurrentPrincipal` property of the current thread, role membership checks can be performed using the `IsInRole` method

Incorrect Answers:

A, C: These options require more developer effort than necessary.

D: The WindowsIdentity and WindowsPrincipal classes are intended for use with windows domain stored accounts and groups only.

QUESTION 223

You work as an application developer at Certkiller .com. You are in the process of creating an application that will display confidential employee information.

When your manager informs you that only managers and administrators should be able to view the information, you utilize windows authentication and .NET role-based security to guarantee this.

The network administrator in your department informs you that he has noticed that there are certain users that are not managers or administrators are able to view the employee information. You immediately analyze your code, and discover an issue with domain group memberships.

The network administrator asks you to trace the user account and security identifier (SID) of each user in the application so that he can use this information to detect users across the enterprise and verify that their group memberships are correct.

How would you do this?

A. Use the following code:

```
WindowsIdentity curID = WindowsIdentity.GetCurrent ();  
NTAccount account = new NTAccount (curID.Name);  
SecurityIdentifier sid = (SecurityIdentifier);  
account.Translate (typeof (SecurityIdentifier));  
Trace.Write ("User's SID is" + sid.Value, "User" + account.Value);
```

B. Use the following code:

```
WindowsIdentity curID = WindowsIdentity.GetCurrent ();  
NTAccount account = new NTAccount (curID.Name);  
Trace.Write ("User's SID is" + sid.Value, "User" + account.Value);
```

C. Use the following code:

```
WindowsIdentity curID = WindowsIdentity.GetCurrent ();  
Trace.Write ("User's SID is" + curID.Value, "User" + sid.Name);
```

D. Use the following code:

```
WindowsIdentity curID = WindowsIdentity.GetCurrent ();  
SecurityIdentifier sid = new SecurityIdentifier (curID.Name);  
Trace.Write ("User's SID is" + curID.Value, "User" + sid.Name);
```

Answer: A

Explanation: This code retrieves the current WindowsIdentity object associated with the user, instantiates an NTAccount object using the Name property, invokes the Translate method to retrieve the current SecurityIdentifier object, and invokes the Write method on the Trace class to record the Value property of both the SecurityIdentifier and NTAccount objects. The GetCurrent method of the WindowsIdentity object represents the identity of the application user. The NTAccount class represents a Windows user group account in the local Security

Accounts Manager (SAM) or in the Active Directory domain. The constructor of the NTAccount class accepts either a single string representing the account name or two strings, one representing the domain name and the other representing the account on that domain. To facilitate SID lookups, the Translate method takes a Type argument and returns an IdentityReference object. You must convert or cast the IdentityReference object to a SecurityIdentifier object to retrieve the Sid for the specified account. The Value property of the SecurityIdentifier and NTAccount class returns a SID and fully-qualified user name string, respectively. The Write method of the Trace class outputs the specified message into the specified category.

Incorrect Answers:

B: You should not use the code that does not specify the SecurityIdentifier class because the NTAccount class does not have a SID property.

C: You should not use the code that does not specify the NTAccount and SecurityIdentifier classes because there is no SID property in the WindowsIdentity class.

D: You should not use the code that does not specify the NTAccount class because a SecurityIdentifier object cannot be instantiated using an account name as an argument, and it does not contain a Name property.

QUESTION 224

You work as an application developer at Certkiller .com. You are currently creating a sales report application that requires Windows authentication on Certkiller .com's domain.

To achieve this, you are required to implement role-based security within the sales report application.

You establish that the method shown below should only be invoked by members of the Managers group:

```
public void UpdateEmpSalesBonus (int empID, double amount)
{
//Update employee's salary
}
```

You need to ensure that invocation of the UpdateEmpSalesBonus method is restricted to only managers.

What should you do? (Choose two)

A. Apply the following attribute to the UpdateEmpSalesBonus method:

[WindowsPrincipalPermission (SecurityAction.Demand, Role = "Managers")]

B. Apply the following code to the UpdateEmpSalesBonus method:

WindowsIdentity user = WindowsIdentity.GetCurrent ();

if (user.IsInRole ("Managers"))

```
{
//Update employee's salary
}
```

C. Apply the following attribute to the UpdateEmpSalesBonus method:

[PrincipalPermission (SecurityAction.Demand, Role = "Managers")]

D. Apply the following code to the UpdateEmpSalesBonus method:

if (Thread.CurrentPrincipal.IsInRole ("Managers"))

```
{  
//Update employee's salary  
}
```

Answer: C, D

Explanation: Imperative role-based security can use the `PrincipalPermission` class or the `IPrincipal` object directly. The `PrincipalPermission` class takes a user name and role as string arguments representing the required membership. The `Demand` method indicates that all callers must belong to the user or group membership specified in the constructor to access the resource. The `IPrincipal` object can be retrieved using the `Thread.CurrentPrincipal` property. The `IsInRole` method takes a role argument as a string and returns a Boolean value indicating whether the current caller belongs to that group or not.

Incorrect Answers:

A: You should not use the attribute that applies the `WindowsPrincipalPermission` attribute because no such attribute exists in the .NET Framework 2.0 class library.

B: You should not use the code that invokes the `IsInRole` method on the `WindowsIdentity` class because no such method exists.

Topic 20, C#, Implementing interoperability, reflection, and mailing functionality in a .NET Framework application (5 Questions)

QUESTION 225

You work as the application developer at Certkiller .com. The Certkiller .com network consists of a single Active Directory domain named Certkiller .com. All servers on the Certkiller .com network run Windows Server 2003 and all client computers run Windows XP Professional. You make use of Visual Studio 2005 for creating the applications.

You are in the process of developing a .NET Framework 2.0 application on a workstation used as collateral and you are trying to port an old Certkiller .com management application that was written in unmanaged Windows code with no COM interfaces. The application you are developing makes calls to the old Certkiller .com management unmanaged library named `BillPerformance.dll`.

You are required to make a call to the `GetPerformanceScore` method of the unmanaged `Performance.dll` library.

What should you do?

- A. The Type Library Exporter tool (`tlbexp.exe`) should be used
- B. The Type Library Importer tool (`tlbimp.exe`) should be used
- C. The Assembly Registration tool (`regasm.exe`) should be used
- D. The Platform Invoke (`DllImportAttribute`) should be used

Answer: D

Explanation: The feature Platform Invoke is used to allow you to call methods that are in unmanaged libraries but you need to declare the unmanaged method in the managed code using the extern and static keywords with the DllImport attribute which is used to specify the unmanaged library.

Incorrect Answers:

A, B, C: The tool should not be considered for usage in the scenario because the unmanaged dll file is not in COM and it only processes COM type libraries.

QUESTION 226

You work as the application developer at Certkiller .com. The Certkiller .com network consists of a single Active Directory domain named Certkiller .com. All servers on the Certkiller .com network run Windows Server 2003 and all client computers run Windows XP Professional. You make use of Visual Studio 2005 for creating the applications.

You are in the process of developing a .NET Framework 2.0 application on a workstation named Certkiller -WS01 used as collateral. The application will be used to list the available public types and methods in the Certkiller .com assembly.

You named the assembly strongly and it is installed in the global assembly cache (GAL) and an assembly with the same identity is stored at c:\ Certkiller \assemb\ Certkiller .com.dll.

You are required to dynamically load the Certkiller .com assembly into your application whilst you ensure that the assembly is loaded from

c:\ Certkiller \assemb\ Certkiller .com.dll rather than the global assembly cache (GAL). What should you do?

- A. Assembly assemb = Assembly.LoadFrom("c:\ Certkiller \assemb\ Certkiller .com.dll");
- B. Assembly assemb = Assembly.LoadFile("c:\ Certkiller \assemb\ Certkiller .com.dll");
- C. Assembly assemb = Assembly.ReflectionOnlyLoad(" Certkiller .com");
- D. Assembly assemb = Assembly.Load(" Certkiller .com");
- E. Assembly assemb = Assembly.ReflectionOnlyLoadFrom("c:\ Certkiller \assemb\ Certkiller .com.dll");

Answer: E

Explanation: To correctly load the Assembly class from the location c:\ Certkiller \assemb\ Certkiller .com.dll you should make use of the method used in the option of the scenario.

Incorrect Answers:

A, B, C, D: The other methods of the assembly class will request the common language runtime (CLR) to resolve the location of the assembly based on its identity therefore these options should not be used in the scenario even though you provide the full absolute path as a parameter.

QUESTION 227

You work as the application developer at Certkiller .com. The Certkiller .com network consists of a single Active Directory domain named Certkiller .com. All servers on the

Certkiller .com network run Windows Server 2003 and all client computers run Windows XP Professional. You make use of Visual Studio 2005 for creating the applications.

You are in the process of developing a .NET Framework 2.0 application on a workstation named Certkiller -WS11 used as collateral. The application's assembly is named Certkiller App and is stored in Certkiller App.exe. You are busy using .NET Framework's Strong Name tool to generate a pair for Certkiller App.exe shown below:

```
Sn.exe -k Certkiller AppKey
```

You are required to use the key pair to build the Certkiller App.exe as a strong named assembly.

What should you do?

- A. The AssemblyKeyFileAttribute class should be used
- B. The AssemblyDelaySignAttribute class should be used
- C. The AssemblyConfigurationAttribute class should be used
- D. The AssemblyKeyNameAttribute should be used

Answer: A:

Explanation: The Strong name tool is used to allow you to generate and manage keys for the strong name signing and by using the -k switch the tool generates a new key pair and stores it in the specified file. So using the AssemblyKeyFileAttribute is the correct way to go in the scenario.

Incorrect Answers:

B: This class should not be considered for use as it is designed to specify whether or not delayed signing should be used.

C: The class should not be used in the scenario because the class is used to specify a build configuration for an assembly.

D: This class should not be used in the scenario because it is used to specify the name of a key container that should be used.

QUESTION 228

You work as the application developer at Certkiller .com. The Certkiller .com network consists of a single Active Directory domain named Certkiller .com. All servers on the Certkiller .com network run Windows Server 2003 and all client computers run Windows XP Professional. You make use of Visual Studio 2005 for creating the applications.

You are in the process of developing a .NET Framework 2.0 application on a workstation used as collateral, the application will allow users to send e-mails. The users are required to be able to send e-mail containing information like budget documents and images. You decide to use the .NET Framework 2.0 Attachment class to create the e-mail attachments within your application.

You are required to specify the content in an attachment by using the attachment class constructors.

What should you do? (Choose two)

- A. The Stream object attachment class should be used in the scenario
- B. The String object attachment class should be used in the scenario
- C. The Image object attachment class should be used in the scenario
- D. The XmlDocument object attachment class should be used in the scenario
- E. The SqlDataReader object attachment class should be used in the scenario

Answer: A, B

Explanation: In the scenario the Attachment constructors allow you to create attachments from a filename, a String object, or a Stream object.

Incorrect Answers:

- C: This method is incorrect and should not be used in the scenario because the Image object Attachment class cannot directly use an Image object.
- D: This method is incorrect and should not be used in the scenario because the XmlDocument Attachment class cannot directly use an XmlDocument object.
- E: This method is incorrect and should not be used in the scenario because the SqlDataReader Attachment class cannot directly make use of a SqlDataReader object.

QUESTION 229

You work as the application developer at Certkiller .com. The Certkiller .com network consists of a single Active Directory domain named Certkiller .com. All servers on the Certkiller .com network run Windows Server 2003 and all client computers run Windows XP Professional. You make use of Visual Studio 2005 for creating the applications.

You are in the process of developing a .NET Framework 2.0 enterprise application on a workstation used as collateral. The application will be used to allow the users to send e-mail messages and should allow users to send HTML-based e-mails, but the users should not be able to use the HTML tag to embed images in the HTML document

The images are not externally hosted so instead the images must be sent as part of the e-mail message. You are required to select which class to use.

What should you do?

- A. The AlternateView class should be used in the scenario
- B. The Attachment class should be used in the scenario
- C. The MailAddress class should be used in the scenario
- D. The LinkedResource class should be used in the scenario

Answer: D

Explanation: In the scenario you should make use of the LinkedResource class as it is used to embed external resources in an e-mail attachment such as images in an HTML attachment.

Incorrect Answers:

- A: The class in question could be used in the scenario but the AlternateView class itself

cannot be used to embed images in the HTML document.

B: The Attachment class should not be used in the scenario as the class only allows you to send images as an attachment.

C: The usage of this class is incorrect as it is used to store the address information for e-mail messages in the scenario.

Topic 21, C#, Implementing globalization, drawing, and text manipulation functionality in a .NET Framework application (10 Questions)

QUESTION 230

You work as the application developer at Certkiller .com. The Certkiller .com network consists of a single Active Directory domain named Certkiller .com. All servers on the Certkiller .com network run Windows Server 2003 and all client computers run Windows XP Professional. You make use of Visual Studio 2005 for creating the applications.

You are in the process of developing a .NET Framework 2.0 Windows Forms application using a workstation used as collateral. The Windows Forms application will be used by regional offices of Certkiller .com in various countries.

You are required to customize the application so that the language, calendar and cultural conventions are changed based on the user's operating system settings. You additionally are required to identify the .Net Framework class that should be used for this requirement.

What should you do?

- A. The CultureInfo class should be used
- B. The TextInfo class should be used
- C. The DateTimeFormatInfo should be used
- D. The CharUnicodeInfo should be used
- E. The RegionInfo should be used

Answer: A

Explanation: The CultureInfo class should be used in the scenario because it contains culture-specific information and provides the information required for performing culture-specific operations like changing casing, formatting dates and numbers and comparing strings.

Incorrect Answers:

B: This class should not be used in the scenario because this class only affects the behavior such as text casing.

C: This class should not be used in the scenario because this class only defines how the Date and Time values are formatted.

D: This class should not be used in the scenario because this class is used to only retrieve information about a Unicode character.

E: This class should not be used in the scenario because this class does not represent any preferences of the user and does not depend upon the culture.

QUESTION 231

You work as the application developer at Certkiller .com. The Certkiller .com network consists of a single Active Directory domain named Certkiller .com. All servers on the Certkiller .com network run Windows Server 2003 and all client computers run Windows XP Professional. You make use of Visual Studio 2005 for creating the applications.

You are in the process of developing a .NET Framework 2.0 Windows Forms application that must provide support for multiple languages and regional differences on a workstation that is used as collateral. You are required to define a custom culture based on an existing culture and region. An administrative user will install the custom culture on the end user's computer prior to the applications deployment and you are required to select which class to use. What should you do?

- A. The CultureAndRegionInfoBuilder class should be used
- B. The CustomAttributeBuilder class should be used
- C. The RegioInfo class should be used
- D. The CultureInfo class should be used

Answer: A

Explanation: The correct option in the scenario would be to make use of the CultureAndRegionInfoBuilder class as this class is used to define a custom culture that is new or based upon an existing region and culture.

Incorrect Answers:

B: This class should not be used in the scenario because this class is used to define custom attributes which are used to associate declarative information.

C: This class should not be used in the scenario because this class is used to access the region data for an already installed culture.

D: This class should not be used in the scenario because this class can only be used to make use of cultures that have already been installed.

QUESTION 232

You work as the application developer at Certkiller .com. The Certkiller .com network consists of a single Active Directory domain named Certkiller .com. All servers on the Certkiller .com network run Windows Server 2003 and all client computers run Windows XP Professional. You make use of Visual Studio 2005 for creating the applications.

You are in the process of developing a .NET Framework 2.0 application on a workstation used as collateral and you require to provide locale-specific services to employees with the application. You must additionally ensure that you use a unique country identifier that can be used as a key to access a database record that contains specific information about a country whilst you use the minimum storage for storing the key.

What should you do?

- A. `CultureInfo.Name` should be used as an identifier for a country
- B. `CultureInfo.GetHashCode` should be used as an identifier for a country
- C. `RegionInfo.GetHashCode` should be used as an identifier for a country
- D. `RegionInfo.Name` should be used as an identifier for a country

Answer: D

Explanation: In the scenario you should make use of the `RegionInfo.Name` property as this property gets the name or ISO 3166 two-letter country/region code for the current `RegionInfo` object.

Incorrect Answers:

A: This method should not be used in the scenario as you will only receive the culture name instead of the country name and does not meet the objective.

B, C: The usage of the `GetHashCode` property in the scenario is incorrect as the hash value generated can be used to tell whether the `RegionInfo` or `CultureInfo` objects are the same or not.

QUESTION 233

You work as the application developer at Certkiller .com. The Certkiller .com network consists of a single Active Directory domain named Certkiller .com. All servers on the Certkiller .com network run Windows Server 2003 and all client computers run Windows XP Professional. You make use of Visual Studio 2005 for creating the applications.

You are in the process of developing a .NET Framework 2.0 enterprise application on a workstation used as collateral and you create the following variable in your code:

`DateTime dateValue;`

You additionally write code to store time in the local time to the `dateValue` variable.

You are required to serialize the value of the `dateValue` variable, if you serialize the `DateTime` object in one time zone and deserialized in a different time zone, the local time represented as a result should be automatically adjusted to the second time zone. You are to decide which expression to use.

What should you do?

- A. `dateValue.ToString("yyyy-MM-ddTHH:mm:ss.ffffff", CultureInfo.InvariantCulture)`
- B. `dateValue.ToBinary()` expression should be used
- C. `dateValue.Kind` expression should be used
- D. `dateValue.Ticks` expression should be used

Answer: B

Explanation: To preserve the information that you are required to preserve in the scenario you should make use of the `newToBinary` and `FromBinary` method as these methods can be used to automatically adjust the local times.

Incorrect Answers:

A: The expression in question should not be used in the scenario because the expression will not preserve any of the required reserved information.

C: This expression will be used to check whether the value indicates whether time is represented by the instance is based on local time.

D: This expression is used to super fast serialize the required information but should not be considered when working with the local time.

QUESTION 234

You work as the application developer at Certkiller .com. The Certkiller .com network consists of a single Active Directory domain named Certkiller .com. All servers on the Certkiller .com network run Windows Server 2003 and all client computers run Windows XP Professional. You make use of Visual Studio 2005 for creating the applications.

You are in the process of developing a .NET Framework 2.0 enterprise application on a workstation named CertK INMG-WS02 used as collateral and you write the code below in your application, line numbers are reference:

01: String num;

02: Integer val;

03: num = " (37)";

04:

You are required to write additional code at line 04 that will be used to correctly parse the string value and assigns the result to the Integer variable named val.

When you execute the code the variable is required to hold a value of -37 and you must decide which code to use.

What should you do?

A. val=Int32.Parse(num, NumberStyles.AllowLeadingSign And NumberStyles.AllowLeadingWhite)

B. val=Int32.Parse(num, NumberStyles.AllowParentheses And NumberStyles.AllowLeadingWhite)

C. val=Int32.Parse(num, NumberStyles.AllowLeadingSign Or NumberStyles.AllowLeadingWhite)

D. val=Int32.Parse(num, NumberStyles.AllowParentheses Or NumberStyles.AllowLeadingWhite)

Answer: D

Explanation: The NumberStyles.AllowParentheses value is used to indicate that the numeric string can have one pair of parentheses enclosing the number and the NumberStyles.AllowLeadingWhite value is used to indicate that a leading white-space character must be ignored during the parse.

Incorrect Answers:

A, B: This code should not be used in the scenario because the code is used to indicate that the numeric string can have a leading sign.

C: The code in question should not be used in the scenario because the attributes of NumberStyles are set by using the bitwise inclusive Or on the field flags.

QUESTION 235

You work as the application developer at Certkiller .com. The Certkiller .com network consists of a single Active Directory domain named Certkiller .com. All servers on the Certkiller .com network run Windows Server 2003 and all client computers run Windows XP Professional. You make use of Visual Studio 2005 for creating the applications.

You are in the process of developing a .NET Framework 2.0 Windows Forms application that will be used by several Certkiller .com employees in several countries on a workstation used as collateral. The application is required to fully support customization of the user interface based on the user's preferences like the language currency and date and time formats.

You are required to write code that will compare the name of two employees which are stored in variables named employee1 and employee2. You are required to ensure correct comparisons whilst taking care of the regional settings selected. What should you do?

- A. The String.Compare(Fileemployee1, Fileemployee2, true, CultureInfo.CurrentCulture) segment should be used
- B. The String.Compare(Fileemployee1, Fileemployee2, true, CultureInfo.InvariantCulture) segment should be used
- C. The String.Compare(Fileemployee1, Fileemployee2, true, CultureInfo.InstalledUICulture) segment should be used
- D. The String.Compare(Fileemployee1, Fileemployee2, true, CultureInfo.CurrentUICulture) segment should be used

Answer: A

Explanation: The default behavior of the segment in question is to perform culture-sensitive comparisons and should definitely be considered for use in the scenario.

Incorrect Answers:

B: This code segment is incorrect and should not be used in the scenario because it will lead to culture-insensitive operations.

C: This code segment is incorrect and should not be used in the scenario because this will used the culture that is installed with the operating system.

D: This code segment is incorrect and should not be used in the scenario because this settings only used for changing the user's interface culture used by a thread.

QUESTION 236

You work as the application developer at Certkiller .com. The Certkiller .com network consists of a single Active Directory domain named Certkiller .com. All servers on the Certkiller .com network run Windows Server 2003 and all client computers run Windows XP Professional. You make use of Visual Studio 2005 for creating the

applications.

You are in the process of developing a large .NET Framework 2.0 application that is required to provide support for culture-specific information using a workstation used as collateral. You are required to parse a date and time string generated for a custom culture and to help the success of the parse operation you designate parse patterns that are likely to succeed. You must additionally prevent the operation from failing whilst you select the method to use for parsing the string.

What should you do?

- A. The ParseExact method should be used
- B. The Parse method should be used
- C. The TryParseExact method should be used
- D. The TryParse method should be used

Answer: C

Explanation: The TryParseExact method should be used if you require parsing a date and time string generated from a custom culture.

Incorrect Answers:

A, B: The usage of these methods in the scenario would be incorrect because the methods do not provide error handling and the custom culture can be complicated and difficult to parse.

D: If you decide to use the TryParse method which attempt to parse a string using several implicit parse patterns that may all fail you will not achieve the scenario objective.

QUESTION 237

You work as the application developer at Certkiller .com. The Certkiller .com network consists of a single Active Directory domain named Certkiller .com. All servers on the Certkiller .com network run Windows Server 2003 and all client computers run Windows XP Professional. You make use of Visual Studio 2005 for creating the applications.

You are in the process of developing a .NET Framework 2.0 application that will be used to manipulate graphics files in GIF, JPG and PNG formats using a workstation named Certkiller -WS32 which is used as collateral. You are required to choose an appropriate data type to store graphic files whilst your solution must use the least amount of code.

What should you do?

- A. The Icon class should be used
- B. The Metafile class should be used
- C. The Image class should be used
- D. The Bitmap class should be used

Answer: D

Explanation: Because the Bitmap class is an implementation of the Image abstract

class that is capable of working with several types of image formats this class should be considered for usage in the scenario.

Incorrect Answers:

A: This class should not be used in the scenario because the Icon class only allows you to work with small bitmap images.

B: This class should not be used in the scenario because this class can not be used to manipulate images in different formats.

C: This class should not be used in the scenario because this class is an abstract class which requires functionality to be implemented which requires programming effort.

QUESTION 238

You work as the application developer at Certkiller .com. The Certkiller .com network consists of a single Active Directory domain named Certkiller .com. All servers on the Certkiller .com network run Windows Server 2003 and all client computers run Windows XP Professional. You make use of Visual Studio 2005 for creating the applications.

You are in the process of developing a .NET Framework 2.0 text-processing application on a workstation used as collateral and are busy defining the regular expression of currency values:

Regex tx = Test Regex("^-?\d+(\.\d{2})?\$")

You are required to write code that will be used to find whether a string in the variable named Bill matches the regular expression or not and you are also required to use this code as the expression in a conditional statement and need to know which code segment to use.

What should you do?

- A. The tx.Matches(Bill)
- B. The tx.Equals(Bill)
- C. The tx.Match(Bill)
- D. The tx.IsMatch(Bill)

Answer: D

Explanation: In order for you to successfully indicate whether the regular expression finds a match in the input string you should make use of the IsMatch(Bill) segment in the scenario.

Incorrect Answers:

A: This segment should not be used in the scenario because the Matches method is used to search an input string for all occurrences of a regular expression and returns all the successful matches.

B: This segment should not be used in the scenario because this method is used to determine whether any two Object instances are equal.

C: This segment should not be used in the scenario because the Matches method is used to search an input string for an occurrence of a regular expression and returns the precise results as a single successful match.

QUESTION 239

You work as the application developer at Certkiller .com. The Certkiller .com network consists of a single Active Directory domain named Certkiller .com. All servers on the Certkiller .com network run Windows Server 2003 and all client computers run Windows XP Professional. You make use of Visual Studio 2005 for creating the applications.

You are in the process of developing a .NET Framework 2.0 application on a workstation used as collateral. The application will be used globally and must be able to represent characters in the following languages: English, Chinese Traditional, Hebrew and Tamil. Your application is required to provide error detection for invalid sequences of characters whilst your application must also optimize storage.

What should you do?

- A. Encode the characters in your application using the UTF8Encoding class
- B. Encode the characters in your application using the UTF7Encoding class
- C. Encode the characters in your application using the UTF32Encoding class
- D. Encode the characters in your application using the UTF16Encoding class

Answer: A

Explanation: To successfully enable error detection and make the class instance more secure you should make use of the UTF8Encoding class in the scenario.

Incorrect Answers:

B: The Encoding class used in this option UTF7Encoding does not provide any error detection and should not be used in the scenario.

C, D: The Encoding classes in these options should not be used in the scenario because the UTF16Encoding class represents each character as a sequence of one to two 16-bit integers and the UTF32Encoding represents each code point as a 32-bit integer.

Topic 22, VB, Developing applications that use system types and collections(18 Questions)

QUESTION 240

You work as the application developer at Certkiller .com. The Certkiller .com network consists of a single Active Directory domain named Certkiller .com. All servers on the Certkiller .com network run Windows Server 2003 and all client computers run Windows XP Professional.

You are in the process of developing a .NET Framework 2.0 application that uses the following code (line numbers are for reference only)

```
1: Dim testCount As Nullable(Of Integer) = -1  
2: testCount = Nothing
```

You are required to insert a statement after line 2 to print the value of the variable testCount but if the value of the testCount is a null reference(nothing) the program should print -1.

What should you do?

A. If (testCount.HasValue) Then
Console.WriteLine("testCount = {0}", testCount.Value)
Else
Console.WriteLine("testcount = {0}", testCount.GetValueOrDefault())
End If
B. Console.WriteLine("testCount = {0}", testCount.Value)
C. Console.WriteLine("testcount = {0}", testCount.GetValueOrDefault())
D. If (testCount.HasValue) Then
Console.WriteLine("testCount = {0}", testCount.Value)
Else
Console.WriteLine("testCount = {0}", -1)
End If

Answer: D

Explanation: The Has.Value method should be used to determine if a nullable type contains a defined value and should be used in the scenario.

Incorrect Answers:

A, B, C: The other statements are incorrect as it will only run fine when a value is not set to Nothing in the scenario. The GetValueOrDefault method retrieves the value of the current nullable object if it is not Nothing.

QUESTION 241

You work as the application developer at Certkiller .com. The Certkiller .com network consists of a single Active Directory domain named Certkiller .com. All servers on the Certkiller .com network run Windows Server 2003 and all client computers run Windows XP Professional.

You are in the process of storing numerical values up to 2,100,000,000 into a variable and may require storing negative values using a .NET Framework 2.0 application. You are required to optimize memory usage
What should you do?

- A. Int32
- B. UInt16
- C. UInt32
- D. Int16

Answer: A

Explanation: The Int32 type should be used in the scenario as it can be used to store positive and negative numerical values from -2,147,483,648 to +2,147,483,647.

Incorrect Answers:

B, C: The UInt32 and UInt16 type should not be used in the scenario because they are used to store only unsigned positive numbers.

D: The Int16 type should not be used as you will only be allowed to store values from -32768 to +32768.

QUESTION 242

You work as the application developer at Certkiller .com. The Certkiller .com network consists of a single Active Directory domain named Certkiller .com. All servers on the Certkiller .com network run Windows Server 2003 and all client computers run Windows XP Professional.

You have recently finished development of a class named TestReward and package the class in a .NET 2.0 assembly named TestObj.dll. After you ship the assembly and it is used by client applications, you decide to move the TestReward class from TestObj.dll assembly to the TestRewardObj.dll Assembly. You are to ensure when you ship the updated TestObj.dll and TestRewardObj.dll assemblies that the client applications continue to work and do not require recompiling.

What should you do?

- A. The TypeForwardedTo attribute should be used
- B. The TypeConverter.ConvertTo method should be used
- C. The InternalsVisibleTo attribute should be used
- D. The Type Converter.ConvertFrom method should be used

Answer: A

Explanation: The statement used for you to add a type from one assembly into another assembly is the TypeForwardTo attribute which enables you not to have the application recompiled.

Incorrect Answers:

B, D: The TypeConverter class provides a unified way of converting different types of values to other types and can not be used to move a type.

C: The method in question here specifies all nonpublic types in an assembly are visible to other assemblies but can not be used to move types.

QUESTION 243

You work as the application developer at Certkiller .com. The Certkiller .com network consists of a single Active Directory domain named Certkiller .com. All servers on the Certkiller .com network run Windows Server 2003 and all client computers run Windows XP Professional.

You are in the process of developing a .NET Framework 2.0 application used to store a type-safe list of names and e-mail addresses. The list will be populated all at ones from the sorted data which means you well not always need to perform insertion or deletion operations on the data. You are required to choose a data structure that optimizes memory use and has good performance.

What should you do?

- A. The System.Collections.Generic.SortedList class should be used
- B. The System.Collections.HashTable class should be used

- C. The System.Collections.Generic.SortedDictionary class should be used
- D. The System.Collections.SortedList class should be used

Answer: A

Explanation: The SortedList generic class should be used in the scenario class as it provides type safety compared against the System.Collections.SortedList class.

Incorrect Answers:

B: The System.Collections.Hashtable class should not be used as this class provides no type safety.

C, D: Although this is very similar to the SortedList class the SortedList class should be used instead in the scenario.

QUESTION 244

You work as the application developer at Certkiller .com. The Certkiller .com network consists of a single Active Directory domain named Certkiller .com. All servers on the Certkiller .com network run Windows Server 2003 and all client computers run Windows XP Professional.

You are in the process of developing a .NET Framework 2.0 application that uses the Stack class. You need to write the code which will enumerate through the stack which may contain objects of the Stack class or objects of a class derived from the Stack class. The code you write must guarantee thread safety during the enumeration

What should you do?

- A. Dim TeStack As Stack = Test Stack()
syncLock (TeStack.SyncRoot)
For Each item As Object In TeStack
'additional code for processing.
Next
End SyncLock
- B. Dim TeStack As Stack = Test Stack()
Dim syncStack As Stack = Stack.Synchronized(Test Stack)
For Each item As Object In syncStack
'additional code for processing.
Next
- C. Dim TeStack As Stack = Test Stack()
Dim syncStack As Stack = TeStack.SyncRoot
For Each item As Object In syncStack
'additional code for processing.
Next
- D. Dim TeStack As Stack = Test Stack()
SyncLock (Stack.Synchronized(Test Stack))
For Each item As Object In TeStack
'additional code for processing.
Next

End SyncLock

Answer: A

Explanation: It is important to remember that when enumerating through a collection that a thread procedure is not safe as another thread can modify the collection, to ensure the safety the collection should be locked during enumeration.

Incorrect Answers:

B C: Any Stack classes derived from the Stack class may make use of the SyncRoot property to implement their own synchronized version of the Stack class.

D: The technique used here can also be used to maintain proper synchronization with other threads that might be modifying the Stack object simultaneously.

QUESTION 245

You work as an application developer at Certkiller .com. Certkiller .com has been contracted to develop an application for the local bank.

You have been given the responsibility of creating this application and need to store each transaction record, which is identified using a complex transaction identifier, in memory. The bank informs you that the total amount of transaction records could reach 200 per day.

To achieve this, you decide to utilize one of the existing collection classes in the .NET 2.0 class library.

You need to ensure that you the collection class you select is the most efficient one for storing transaction records.

What should you do?

- A. Select the ListDictionary collection class.
- B. Select the HashTable collection class.
- C. Select the Queue collection class.
- D. Select the StringCollection collection class.

Answer: B

Explanation: You should select the HashTable class to store transaction records because each element is identified using a unique identifier and the size of the collection is large. Elements in the HashTable collection are stored with a key/value pair where each key is created using a hash code. The default capacity of a HashTable class is zero, and you can use the

Add method to add a new element to the collection. The Count property provides the total number of elements in the HashTable collection. An element of the HashTable class can be accessed using the DictionaryEntry class. You can use the Key and Value properties of the DictionaryEntry class to access the key associated with the element and the value of the element, respectively.

Incorrect Answers:

A: You should not select this collection class because this class is used if the total number of elements to be stored in a collection is less than 10 elements in length.

C: You should not select this collection class because you need to access transaction records using a transaction identifier, not in sequential order.

D: You should not select this collection class because this class is used to manage a collection of string values.

QUESTION 246

You work as an application developer at Certkiller .com. Certkiller .com has been hired by a small local private school to develop a class library that will be used in an application named ManageAttendance for the purpose of managing student records.

You are responsible for developing this class library. Certkiller .com has instructed you to create a collection in the application to store learners' results.

The school has informed you that they currently only have seven learners, but that this value will triple in the following year. Due to the limited resources, you need to ensure that the collection you create consumes a minimum amount of resources.

What should you use to create the collection?

A. The HybridDictionary collection class.

B. The HashTable collection class.

C. The ListDictionary collection class.

D. The StringCollection collection class.

Answer: A

Explanation: You should use the HybridDictionary class to create the collection because this class is useful in scenarios where the number of elements is unknown or could grow in size. A collection of the HybridDictionary type manages the collection depending on the number of elements. The HybridDictionary type collection uses the ListDictionary class to manage the collection when there are only a few elements. When the number of elements exceeds ten, the HybridDictionary type collection automatically converts the elements into HashTable management.

Incorrect Answers:

B: You should not use this collection class because this class is used if the total number of elements to be stored in a collection is known and is greater than ten elements in length.

C: You should not use this collection class because this class is used if the total number of elements to be stored in a collection is known and is less than ten elements in length.

D: You should not use this collection class because this class is used to manage a collection of string values.

QUESTION 247

You work as an application developer at Certkiller .com. You are in the process of developing an application that makes use of a Queue class object named MyQueue. This Queue class object will be used to store messages sent by the user during application run time. The application that you are developing provides an interface for administrators and an interface for users to create message reports.

You want to ensure that all user messages stored in the MyQueue object are removed when an administrator selects the reset option.
What should you do?

- A. Use the Enqueue method of the MyQueue object.
- B. Use the Clear method of the MyQueue object.
- C. Use the Dequeue method of the MyQueue object.
- D. Use the TrimToSize method of the MyQueue object.

Answer: B

Explanation: The clear method sets the Count property of the Queue class object to 0 after removing all the elements from the queue. When you call the Clear method for a Queue object, the capacity of the Queue object is not changed.

Incorrect Answers:

- A: You should not use this method because it is used to add a new element at the beginning of a Queue object.
- C: You should not use this method because it is used to remove an element at the beginning of a Queue object.
- D: You should not use this method because it is used to resize a Queue object.

QUESTION 248

You work as an application developer at Certkiller .com. You are in the process of developing an application that makes use of a Queue class object named MyQueue. This Queue class object will be used to store messages sent by the user during application run time.

You would like to access the message at the beginning of the queue, prior to processing the user messages, without removing it.
What should you do?

- A. Use the Enqueue method of the MyQueue object.
- B. Use the Contains method of the MyQueue object.
- C. Use the Dequeue method of the MyQueue object.
- D. Use the Peek method of the MyQueue object.

Answer: D

Explanation: The Peek method accesses the element at the beginning of the object of the Queue class without removing it from the queue. The Queue class is a data structure for handling elements based on the First In First Out (FIFO) concept. According to this concept, elements that are stored first are processed first.

Incorrect Answers:

- A: You should not use this method of the Queue class because it is used to add a new element at the end of a Queue object.
- B: You should not use this method of the Queue class because it is used to verify whether

the specified element exists for the Queue object instance or not.

C: You should not use this method of the Queue class because it is used to remove the next element at the beginning of a Queue object.

QUESTION 249

You work as the application developer at Certkiller .com. The Certkiller .com network consists of a single Active Directory domain named Certkiller .com. All servers on the Certkiller .com network run Windows Server 2003 and all client computers run Windows XP Professional.

You are in the process of developing a .NET Framework 2.0 application that uses a Dictionary generic class and you write the following code to create the dictionary.

```
Dim value As String = ""
```

```
Dim openWith As Dictionary(Of String, String) = _
```

```
New Dictionary(Of String, String)()
```

```
openWith.Add("txt", "notepad.exe")
```

```
openWith.Add("gif", "paint.exe")
```

```
openWith.Add("png", "paint.exe")
```

```
openWith.Add("rtf", "wordpad.exe")
```

```
openWith.Add("log", "notepad.exe")
```

You are required to write the code that displays the value corresponding to a key if the key exists in the dictionary, but the code frequently tries keys that are not in the dictionary. The solution you propose must minimize the number of times you access the dictionary and offer the fastest performance.

What should you do?

A. If openWith.ContainsKey("tif") Then

```
Console.WriteLine("For key =" "tif" ", value = {0}. ", openWith("tif"))
```

```
Else
```

```
Console.WriteLine("Key =" "tif" "is not found.")
```

```
End If
```

B. Try

```
Console.WriteLine("For key =" "tif" ", value = {0}. ", openWith("tif"))
```

```
Catch knfe As KeyNotFoundException
```

```
Console.WriteLine("Key =" "tif" "is not found.")
```

```
End Try
```

C. Try

```
Console.WriteLine("For key =" "tif" ", value = {0}. ", openWith("tif"))
```

```
Catch ae As ArgumentException
```

```
Console.WriteLine("Key =" "tif" "is not found.")
```

```
End Try
```

D. If (openWith.TryGetValue("tif", value)) Then

```
Console.WriteLine("For key =" "tif" ", value = {0}. ", openWith("tif"))
```

```
Else
```

```
Console.WriteLine("Key =" "tif" "is not found.")
```

```
End If
```

Answer: D

Explanation: By making use of the TryGetValue method you efficiently retrieve values in a program that frequently tries keys that are not in the dictionary. By using this method the return will simply be a null reference(nothing).

Incorrect Answers:

A: The contains key is an effective way to check if a key exists but in this scenario it would require an additional operation to retrieve the value corresponding to the key.

B: Better performance can be attained by using the TryGetValue method in the scenario.

C: The method in question about catching the ArgumentException is not correct as nothing will be caught that is thrown when a key is not found.

QUESTION 250

You work as the application developer at Certkiller .com. The Certkiller .com network consists of a single Active Directory domain named Certkiller .com. All servers on the Certkiller .com network run Windows Server 2003 and all client computers run Windows XP Professional.

You are in the process of developing a .NET Framework 2.0 application class library and create a class named Test:

Class Test

'Additional code goes here

End Class

In the code you wrote you created a SortedList collection with the Test objects as keys, the SortedList collection must be able to sort the items in a collection so that they are arranged in order from biggest to smallest. You must ensure that the class you wrote complies with the .NET Framework standard contracts.

What should you do?

- A. The Test class should be modified to implement the Icomparer interface
- B. The Test class should be modified to implement the IEquatable interface
- C. The Test class should be modified to implement the IConvertible interface
- D. The Test class should be modified to implement the IComparable interface

Answer: D

Explanation: The Test class must be modified to implement the IComparable interface as it determines the sort order of the two objects of the class.

Incorrect Answers:

A: This method is not recommended because the key type (Test) implements Icomparable , the default comparer of the SortedList will use Icomparable defined in the Test class to compare two objects.

B: This method should not be implemented as it only checks the two type instances for equality.

C: This interface is used to define methods that allow you to convert the value of the Test object to an equivalent value of any other type.

QUESTION 251

You work as the application developer at Certkiller .com. The Certkiller .com network consists of a single Active Directory domain named Certkiller .com. All servers on the Certkiller .com network run Windows Server 2003 and all client computers run Windows XP Professional.

You are in the process of developing a .NET Framework 2.0 application that uses the queue data structure. You are required to create a solution that allows you to enumerate a queue's contents whilst providing type safety.

What should you do?

- A. `Dim t As Queue = Test Queue()
q.Enqueue("one")
q.Enqueue("two")
For Each s As String In t
Console.WriteLine(s)
Next`
- B. `Dim t As Queue(Of String) = Test Queue(Of String)()
q.Enqueue("one")
q.Enqueue("two")
For Each s As String In t
Console.WriteLine(s)
Next`
- C. `Dim t As Queue = Test Queue()
q.Enqueue("one")
q.Enqueue("two")
Dim safeT As Queue = Queue.Synchronized(t)
For Each s As String In t
Console.Writeline(s)
Next`
- D. `Dim t As Queue = Test Queue()
q.Enqueue("one")
q.Enqueue("two")
For Each s As String in t
Console.WriteLine(s)
Next`

Answer: B

Explanation: If you are to ensure type safety the generic version of the Queue class should be used, if you used the non-generic Queue class you would be able to add or insert objects of any type.

Incorrect Answers:

A, C, D: The usage of the SyncRoot property and the Synchronized method is useful for using the queue in a multithreaded scenario but does not provide any type safety.

QUESTION 252

You work as the application developer at Certkiller .com. The Certkiller .com network consists of a single Active Directory domain named Certkiller .com. All servers on the Certkiller .com network run Windows Server 2003 and all client computers run Windows XP Professional.

You are in the process of developing a .NET Framework 2.0 application that will be used to store a list of names and e-mail addresses. The number of elements in the list are currently unknown and may vary at runtime. You are required to choose a data structure that provides the highest performance as you work with your data.

What should you do?

- A. A HybridDictionary should be used
- B. A HashTable should be used
- C. The ListDictionary should be used
- D. OrderedDictionary should be used

Answer: A

Explanation: Since the number of Elements in the dictionary is unknown the HybridDictionary class is recommended as it takes advantage of the improved performance of a ListDictionary with small collections.

Incorrect Answers:

B, C: The class used in the answer to the scenario takes advantage of all that is offered by these classes and these classes should not be used.

D: In the scenario at hand the use of a OrderedDictionary class does not provide any performance advantage.

QUESTION 253

You work as an application developer at Certkiller .com. You are in the process of developing a collection class named ClientCollection, which is to be used for storing the names of Certkiller .com's clients that are situated in various geographical areas. These client names are represented by the Client class. You are planning to create a method named SortClients in the ClientCollection class to arrange Client objects in ascending order.

You need to ensure that the appropriate interface is implemented by the Client class to allow sorting.

What interface should be used?

- A. IDictionary
- B. IComparable
- C. IComparer
- D. IEqualityComparer

Answer: B

Explanation: The IComparable interface provides only one method named

CompareTo, which takes on generic object, compares it to the current instance, and returns an Integer value representing whether the current instance is equal to, greater than, or less than the object. The IComparable interface is typically used when you want to create a class whose objects can be sorted in either a list or collection.

Incorrect Answers:

A: This interface should not be implemented because it is used to create a collection that is managed by key/value pairs.

C: This interface should not be implemented because it should be implemented by collection or comparer classes, not comparable classes.

D: This interface should not be implemented because it provides methods to compare two objects for equality only.

QUESTION 254

You work as the application developer at Certkiller .com. The Certkiller .com network consists of a single Active Directory domain named Certkiller .com. All servers on the Certkiller .com network run Windows Server 2003 and all client computers run Windows XP Professional.

You are in the process of developing a .NET Framework 2.0 application that handles the inventory and you develop the following class:

```
Public Class Inventory
Public Event Reorder As EventHandler
Private quantity As Integer
Protected Overridable Sub OnReorder _
(ByVAL e As EventArgs)
RaiseEvent Reorder(Me, e)
End Sub
End Class
```

You need to have code added for a new method named TestOne. The new method will be used to decrease the quantity variable by one unit and raises the Reorder event when the quantity becomes 0. You must additionally avoid rewriting any functionality that is already available.

What should you do?

A. Public Sub TestOne()
quantity = quantity -1
If quantity = 0 Then
RaiseEvent Reorder(Me, EventArgs.Empty)
End If
End Sub

B. Public Sub TestOne()
quantity = quantity -1
If quantity = 0 Then
AddHandler Reorder, _
AddressOfInventory_Reorder
End If


```
End Sub
Public Sub Inventory_Reorder(_
ByVal sender As Object Object, ByVal e As EventArgs)
OnReorder(e)
End Sub
C. Public Sub TestOne()
quantity = quantity -1
If quantity = 0 Then
RaiseEvent Reorder(Me,New EventArgs())
End If
End Sub
D. Public Sub TestOne()
quantity = quantity -1
If quantity =0 Then
OnReorder(New EventArgs())
End If
End Sub
```

Answer: D

Explanation: The method in the answer is the correct choice because when the quantity reaches 0 it calls the OnReorder method which raises the Reorder event.

Incorrect Answers:

A: The method in this answer should not be used as an AddHandler statement is used to add an event handler to the Reorder event which in turn calls the OnReorder method raising the Reorder event in an infinite loop.

B, C: The following methods should not be used because you should call the already available OnReorder method to correctly raise the Reorder event without rewriting the functionality which already exists.

QUESTION 255

You work as the application developer at Certkiller .com. The Certkiller .com network consists of a single Active Directory domain named Certkiller .com. All servers on the Certkiller .com network run Windows Server 2003 and all client computers run Windows XP Professional.

You are in the process of developing a .NET Framework 2.0 class library and write the following code:

```
Public Delegate Sub NumberDelegate(ByVal number As Integer)
Public Class NumberClass
Public Sub Method1(ByVal number As Integer)
Dim output As String = "Zero"
If (number > 0) Then output = "Positive"
If (number < 0) Then output = "Negative"
Console.WriteLine(output)
End Sub
Public Sub Method2(ByVal number As Integer)
```

```
Dim output As String = String.Empty
If (number > 0) Then output = "+"
If (number < 0) Then output = "-"
Console.WriteLine(output)
End Sub
End Class
```

The following piece of code you write to test the class:

```
Dim num As NumberClass = Test NumberClass()
Dim del1 As NumberDelegate = Test NumberDelegate(AddressOf num.Method1)
Dim del2 As NumberDelegate = Test NumberDelegate(AddressOf num.Method2)
[Delegate].combine(del2, del1)
del1(5)
```

You are required to select the output that you would receive.
What should you do?

- A. Positive
- B. Positive
+
- C. +
positive
- D. +

Answer: A

Explanation: It is possible to combine two delegates objects but it does not alter the existing delegates, therefore the received output would be Positive.

Incorrect Answers:

B, C, D: There will be only one line of output generated because only one delegate (del1) is invoked in the scenario.

QUESTION 256

You work as the application developer at Certkiller .com. The Certkiller .com network consists of a single Active Directory domain named Certkiller .com. All servers on the Certkiller .com network run Windows Server 2003 and all client computers run Windows XP Professional.

You are in the process of developing an inventory application by using the .NET Framework 2.0 and you develop the following class:

```
Public Class Inventory
Public Event Reorder As EventHandler
Private quantity As Integer
Public Sub SellOne()
quantity = quantity - 1
If quantity = 0 Then
OnReorder(Me, New EventArgs())
End If
End Sub
```

End Class

You are required to define the OnReorder method to raise the Reorder event.
What should you do?

- A. Protected Overridable Sub OnReorder _
(ByVal sender As Object, ByVal e As EventArgs)
RaiseEvent Reorder(Me, e)
End Sub
- B. Protected Overridable Sub OnReorder _
(ByVAL sender As Object, ByVal e As EventArgs)
AddHandler Reorder, AddressOf OnReorder
RaiseEvent Reorder(Nothing, e)
End Sub
- C. Protected Overridable Sub OnReorder _
(ByVal sender As Object, ByVAL e As EventArgs)
If e Is Nothing Then
RaiseEvent Reorder(Me, e)
End If
End Sub
- D. Protected Overridable Sub OnReorder _
(ByVal sender As Object, ByVal e As EventArgs)
AddHandler Reorder, AddressOf OnReorder
End Sub

Answer: A

Explanation: By using the code specified in the answer, the RaiseEvent statement raises the specified event by calling all the event handlers attached to the event.

Incorrect Answers:

B, D: This statement about AddHandler is incorrect as you have to raise the event not add event handlers.

C: This is also incorrect as there is no need for checking whether the event argument is nothing before invoking the event.

QUESTION 257

You work as the application developer at Certkiller .com. The Certkiller .com network consists of a single Active Directory domain named Certkiller .com. All servers on the Certkiller .com network run Windows Server 2003 and all client computers run Windows XP Professional.

You are in the process of developing a .NET Framework 2.0 application Windows Forms. You are required to create a new class that raises a large number of events and keep memory usage of the class as low as possible. This task must be accomplished using the minimum amount of code possible.
What should you do?

- A. One instance of the EventHandlerList class should be used to store the delegate

defined for each event in the class

- B. One instance of the EventInstance class should be used for each event in the class
- C. The EventBuilder class should be used to define the events for the class
- D. One member variable per event delegate should be created per event delegate instance in the class

Answer: A

Explanation: The best option in this scenario would be to make use of the EventHandlerList class since the number of events is large and this method provides a memory efficient mechanism for storing a list of delegates.

Incorrect Answers:

- B: This method is used for representing information for an event log entry.
- C: This method is used for defining events for a dynamically generated class and in the scenario the class is not dynamically generated.
- D: This method should not be used as it is not a memory efficient solution which is what is required of you.

Topic 23, VB, Implementing service processes, threading, and application domains in a .NET Framework application (18 Questions)

QUESTION 258

You work as the application developer at Certkiller .com. The Certkiller .com network consists of a single Active Directory domain named Certkiller .com. All servers on the Certkiller .com network run Windows Server 2003 and all client computers run Windows XP Professional. You make use of Visual Studio 2005 for creating the applications.

You are in the process of developing a .NET Framework 2.0 Windows Service application named TestScannerSync that will be used to constantly monitor for a scanner to be connected to the computer. The TestScannerSync class inherits its functionality from the ServiceBase class. When you connect a scanner the service synchronizes its data with the data in a SQL Server database.

You decide to override the OnStop method in the TestScannerSync class and write code to close database connections. You are required to identify a place in the code where you can open the connection to the database.

What should you do?

- A. The database connection is opened in the constructor of TestScannerSync class
- B. The database connection is opened in the OnContinue method of TestScannerSync class
- C. The database connection is opened in the OnStart method of the TestScannerSync class
- D. The database connection is opened in the OnPowerEvent method of the TestScannerSync class

Answer: C

Explanation: The constructor for a service class derived from ServiceBase is called the first time you call Start on the service, the OnStart command-handling method is called immediately after the constructor executes.

Incorrect Answers:

A: The constructor is the incorrect choice as this is only called upon once and not again.

B: This method should not be used as this code will be executed when a Continue command is sent to a service in a paused state.

D: This method should not be considered as this method will execute when the computer's power state has changed.

QUESTION 259

You work as the application developer at Certkiller .com. The Certkiller .com network consists of a single Active Directory domain named Certkiller .com. All servers on the Certkiller .com network run Windows Server 2003 and all client computers run Windows XP Professional. You make use of Visual Studio 2005 for creating the applications.

You are in the process of developing a .NET Framework 2.0 application that will be used to connect and control the behavior of existing services installed on a network server named Certkiller -SR01.

What should you do? (Choose two)

- A. ServiceController.MachineName
- B. ServiceController.ServiceName
- C. ServiceController.Site
- D. ServiceInstaller.Site
- E. ServiceInstaller.ServiceName
- F. ServiceInstaller.DisplayName

Answer: A, B

Explanation: The proper way to connect and control the behavior of existing services is by using the ServiceController class after which you are required to set two properties on it to identify the service to interact with. The MachineName property is used to define the computer Certkiller -SR01.

Incorrect Answers:

C, D: The Site property of the ServiceController and ServiceInstaller class should not be used because they bind a component to a container and enables communication between them.

E, F: This property should not be used as it is meant to specify the name of the service at the time of installation. The DisplayName property is used to specify the friendly name of the service at the time of installation.

QUESTION 260

You work as the application developer at Certkiller .com. The Certkiller .com network

consists of a single Active Directory domain named Certkiller .com. All servers on the Certkiller .com network run Windows Server 2003 and all client computers run Windows XP Professional. You make use of Visual Studio 2005 for creating the applications.

You are in the process of developing a .NET Framework 2.0 Windows Service application that consists of two Services. The first service monitors a directory for new orders while the other service replicates a database table with up-to-date information. You are required to develop a project installer class to install these services.

What should you do? (Choose two)

- A. One ServiceProcessInstaller instance must be Instantiate and add it to the project installer class
- B. Two ServiceInstaller instances must be Instantiate and add them to the project installer class
- C. Two ServiceProcessInstaller instances must be Instantiate and add them to the project installer class
- D. One ComponentInstaller instance must be Instantiate and add them to the project installer class
- E. Two ComponentInstaller instances must be Instantiate and add them to the project installer class
- F. One ServiceInstaller instance must be Instantiate and add them to the project installer class

Answer: A, B

Explanation: The proper way to do what the scenario requires of you would be to create one ServiceProcessInstaller instance per service application and one ServiceInstaller instance for each service in the application which have to be Instantiate.

Incorrect Answers:

C, F: You must create one ServiceProcessInstaller instance per service application and one ServiceInstaller instance for each service in the application which have to be Instantiate.

D, E: The ComponentInstaller class should not be considered for use as this class is an abstract class that can not be Instantiate.

QUESTION 261

You work as the application developer at Certkiller .com. The Certkiller .com network consists of a single Active Directory domain named Certkiller .com. All servers on the Certkiller .com network run Windows Server 2003 and all client computers run Windows XP Professional. You make use of Visual Studio 2005 for creating the applications.

You are in the process of developing a .NET Framework 2.0 Windows Service application and you need to change the security context in which the service runs. The service will be run in context of a non-privileged user on the local computer and

present anonymous credentials to any remote server.

You are required to set the Account property of the ServiceProcessInstaller class to specify the service account.

What should you do?

- A. ServiceAccount.User
- B. ServiceAccount.LocalService
- C. ServiceAccount.LocalSystem
- D. ServiceAccount.NetworkService

Answer: B

Explanation: The proper way to complete the operation is to use the ServiceAccount.LocalService as the value of the Account property of the ServiceProcessInstaller class, setting this value will run the service in context of the non-privileged user on the local computer.

Incorrect Answers:

A: This method should not be used as you will be specifying the service to run in the security context of a specified user account.

C: This method should not be considered as you will run the service in the security context of a highly privileged user account.

D: The scenario requires the service to run in the security context of a non-privileged user on the local system not the network.

QUESTION 262

You work as the application developer at Certkiller .com. The Certkiller .com network consists of a single Active Directory domain named Certkiller .com. All servers on the Certkiller .com network run Windows Server 2003 and all client computers run Windows XP Professional. You make use of Visual Studio 2005 for creating the applications.

You are in the process of developing a .NET Framework 2.0 Windows Service application which contains three different Windows services. You are required to only set one Windows service to start automatically when the system is restarted.

What should you do?

- A. ServiceController
- B. ServiceBase
- C. ServiceProcessInstaller
- D. ServiceInstaller

Answer: D

Explanation: The proper and best way to achieve the scenario would be to use the ServiceInstaller class, the StartType property of the ServiceInstaller class allows you to specify how and when a service is started.

Incorrect Answers:

A: This method used here is incorrect as it can not be used to specify the start type of a Windows service.

B: This method is the base type for all Windows services but does not allow you to specify the start type for a Windows service.

C: This class should not be used because it has a method that affects all services in an executable.

QUESTION 263

You work as the application developer at Certkiller .com. The Certkiller .com network consists of a single Active Directory domain named Certkiller .com. All servers on the Certkiller .com network run Windows Server 2003 and all client computers run Windows XP Professional. You make use of Visual Studio 2005 for creating the applications.

You are in the process of developing a .NET Framework 2.0 Windows Service application and are busy writing the following installation code for the Windows service:

```
<RunInstallerAttribute(True)> _  
Public Class TestServiceInstaller  
Implements Installer  
'Additional code to go here  
End Class
```

You are required to install the Windows service and write the values associated with the service in the Windows Registry.

What should you do?

- A. The Assembly Registration Tool (Regasm.exe) should be used
- B. The Global Assembly Cache Tool (Gacutil.exe) should be used
- C. The .NET Services Installation Tool (Regsvcs.exe) should be used
- D. The Installer Tool (InstallUtil.exe) should be used

Answer: D

Explanation: The InstallUtil.exe utility is the correct tool that should be used because it will install the classes in the specified assembly that derive from the installer class and have the RunInstallAttribute attribute set to True.

Incorrect Answers:

A: This tool should not be used in the scenario as this tool registers .Net assemblies so that COM clients can access .NET classes.

B: This tool should not be used as it is used to install and uninstall assemblies from the global assembly cache.

C: This tool should not be considered for usage as the tool is used for installing classes for Enterprise Services.

QUESTION 264

You work as the application developer at Certkiller .com. The Certkiller .com network consists of a single Active Directory domain named Certkiller .com. All servers on the

Certkiller .com network run Windows Server 2003 and all client computers run Windows XP Professional.

You are in the process of developing a .NET Framework 2.0 Windows service application that is used to perform several short tasks that require background processing. You are not required to actively manage threads in your application but you are required to ensure that security checks are performed during the execution of the task.

What should you do?

- A. ThreadPool.queueUserWorkItem
- B. ThreadPool.UnsafeQueueUserWorkItem
- C. Thread.Resume
- D. Thread.Start

Answer: A

Explanation: The scenario requires several short tasks to be run which requires background processing. Using the ThreadPool class is ideal in this situation as the system manages the thread pool meaning you have less overhead involved.

Incorrect Answers:

B: This method should not be considered for use as the security check the scenario requires will not be performed.

C, D: This method should not be considered because the Thread class is useful for creating threads that run in the foreground that are actively managed.

QUESTION 265

You work as the application developer at Certkiller .com. The Certkiller .com network consists of a single Active Directory domain named Certkiller .com. All servers on the Certkiller .com network run Windows Server 2003 and all client computers run Windows XP Professional.

You are in the process of developing a .NET Framework 2.0 Windows application and need to create a foreground thread to draw lines in your application. When the thread is started you must provide a data value that specifies the number of lines drawn.

What should you do? (Choose two)

- A. A WaitCallback delegate should be created
- B. A ThreadStart delegate should be created
- C. A ParameterizedThreadStart delegate should be created
- D. The ThreadStart method should be called
- E. The ThreadPool.QueueUserWorkItem method should be called

Answer: C, D

Explanation: The first order of operations would be to create a ParameterizedThreadStart delegate then use the ThreadStart method to start the

thread. The ThreadStart method can be used to create actively managed foreground threads. The Parameterized ThreadStart delegate allows the passing of data when starting a thread.

Incorrect Answers:

A: This method should not be used as this method is for executing in a background thread that is part of a thread pool.

B: The ThreadStart delegate should not be used because you first need to pass parameters when starting a thread.

E: The method in this option should not be used because this method is used to create system managed background threads.

QUESTION 266

You work as the application developer at Certkiller .com. The Certkiller .com network consists of a single Active Directory domain named Certkiller .com. All servers on the Certkiller .com network run Windows Server 2003 and all client computers run Windows XP Professional. You make use of Visual Studio 2005 for creating the applications.

You are in the process of developing a .NET Framework 2.0 Windows Service application and you write the following code:

```
Dim teTimer As Timer = Test Timer(statusDelegate, Nothing, 1000, 250)
```

You already correctly defined the delegate statusDelegate and are required to modify the code to start so that the callback method is not invoked periodically. What should you do?

- A. Dim teTimer As Timer = _
Test Timer(statusDelegate, Nothing, Timeout.Infinite, 0)
- B. Dim teTimer As Timer = _
Test Timer(statusDelegate, Nothing, 0, 32767)
- C. Dim teTimer As Timer = _
Test Timer(statusDelegate, Nothing, Timeout.Infinite, 250)
- D. Dim teTimer As Timer = _
Test Timer(statusDelegate, Nothing, 1000, Timeout.Infinite)

Answer: D

Explanation: This is the correct method if you do not want the callback method to be called periodically, the second last parameter is used to specify when the timer must fire for the first time whilst the last parameter indicates the interval for the callback method.

Incorrect Answers:

A, B, C: The methods in question in the options here should not be used as one option will try the callback method after 32767 milliseconds and the other option has a value of infinite meaning the callback is never invoked and the timer is disabled.

QUESTION 267

You work as the application developer at Certkiller .com. The Certkiller .com network

consists of a single Active Directory domain named Certkiller .com. All servers on the Certkiller .com network run Windows Server 2003 and all client computers run Windows XP Professional. You make use of Visual Studio 2005 for creating the applications.

You are in the process of developing a .NET Framework 2.0 graphics application and write a Point class with two Integer fields shown below:

Class Point

Dim x, y As Integer

Public Sub New(ByVal x As Integer, ByVal y As Integer)

Me.x = x

Me.y = y

End Sub

End Class

You are required to write a method named GetPointPosition that will be used to provide read access to the two Integer fields in the class. You must additionally permit read access to multiple threads at the same time whilst your solution results in fast response time and high throughput.

What should you do?

A. Private rwlock As ReaderWriterLock

Public Sub GetPointPosition(ByRef x As Integer, ByRef y As Integer)

rwlock.AcquireReaderLock(Timeout.Infinite)

Try

x = Me.x

y = Me.y

Finally

rwlock.ReleaseReaderLock()

End Try

End Sub

B. Public Sub GetPointPosition(ByRef X As Integer, ByRef y As Integer)

SyncLock (Me)

x = Me.x

y = Me.y

End SyncLock

End Sub

C. Public Sub GetPointPosition(ByRef x As Integer, ByRef y As Integer)

Dim lockAcquired As Boolean

lockAcquired = Monitor.TryEnter(Me, 2000)

If (lockAcquired) Then

Try

x = Me.x

y = Me.y

Finally

Monitor.Exit(Me)

End Try

End If

```
End Sub
D. Public Sub GetPointPosition(ByRef x As Integer, ByRef y As Integer)
Monitor.Enter(Me)
Try
x = Me.x
y = Me.y
Finally
Monitor.Exit(Me)
End Try
End Sub
```

Answer: A

Explanation: The method chosen in the scenario allows you to design a synchronization scheme that employs shared locks together with exclusive locks making it possible to access multiple reader threads at the same time.

Incorrect Answers:

B, C, D: The other methods in questions should not be used as they all have an exclusive locking mechanism which does not take into consideration that not all threads are readers or writers.

QUESTION 268

You work as the application developer at Certkiller .com. The Certkiller .com network consists of a single Active Directory domain named Certkiller .com. All servers on the Certkiller .com network run Windows Server 2003 and all client computers run Windows XP Professional.

You are in the process of developing a .NET Framework 2.0 application class library. You make use of a custom class named TestResource in the application, you create two instances of the TestResource class shown below:

```
Dim sr1, sr2 As TestResource
```

```
'Additional code goes here
```

You want object sr2 to be assigned to object sr1 if the values of the sr1 object is Nothing. The code may be shared by multiple threads and you are required to write code that is thread-safe and provides the best performance.

What should you do?

- A. System.Threading.Monitor.TryEnter(Me)
If (sr1 Is Nothing) Then sr1 = sr2
System.Threading.Monitor.Exit(Me)
- B. System.Threading.Interlocked.Exchange(sr1, sr2)
- C. If(sr1 Is Nothing) Then
SyncLock (Me)
If sr1 Is Nothing) Then sr1 = sr2
End SyncLock
End If
- D. System.Threading.Interlocked.CompareExchange(sr1, sr2, Nothing)

Answer: D

Explanation: The statement used in the answer should be used because the statement performs two operations comparison and exchange. The value of the first operand with the third operand if there is a match the first operand replaces the second operand.

Incorrect Answers:

A, C: This method should not be used in the scenario because it makes use of two atomic operations comparison and exchange where as the CompareExchange method uses just one.

B: This statement should not be considered for usage as the first operand will always replace the second operand.

QUESTION 269

You work as the application developer at Certkiller .com. The Certkiller .com network consists of a single Active Directory domain named Certkiller .com. All servers on the Certkiller .com network run Windows Server 2003 and all client computers run Windows XP Professional. You make use of Visual Studio 2005 for creating the applications.

You are in the process of developing a .NET Framework 2.0 Windows Service application that will be used on a multiprocessor system. You are writing code for a class that contains globally accessible Integer variable named Testcounter. The value of the Testcounter will be incremented or decremented from other classes running in separate threads.

You are required to provide atomic and non-blocking updates for the Testcounter whilst your solution provides the best performance.

What should you do?

- A. The Interlocked class should be used
- B. The Overlapped class should be used
- C. The SynchronizationContext class should be used
- D. The SyncLock statement should be used

Answer: A

Explanation: For this particular scenario the Interlocked class is ideal because you are required to provide atomic and non-blocking updates for a data item.

Incorrect Answers:

B: This option should not be used in the scenario because it is used to transfer information to Win32 API functions.

C: This operation should not be used as you will not be providing atomic and non-blocking updates.

D: This option should not be used as it does not offer atomic operations and offers inferior performance compared to the Interlocked class.

QUESTION 270

You work as the application developer at Certkiller .com. The Certkiller .com network consists of a single Active Directory domain named Certkiller .com. All servers on the Certkiller .com network run Windows Server 2003 and all client computers run Windows XP Professional. You make use of Visual Studio 2005 for creating the applications.

You are in the process of developing a .NET Framework 2.0 Windows Service application. You are required to synchronize execution of some resources across multiple processes.

What should you do?

- A. Mutex
- B. Interlocked
- C. Monitor
- D. ReaderWriterLock

Answer: A

Explanation: The Mutex class can be used for the synchronization of thread execution across multiple processes.

Incorrect Answers:

B, C, D: The classes in question in these options can not be used in the scenario because they can only be used within a single process.

QUESTION 271

You work as the application developer at Certkiller .com. The Certkiller .com network consists of a single Active Directory domain named Certkiller .com. All servers on the Certkiller .com network run Windows Server 2003 and all client computers run Windows XP Professional. You make use of Visual Studio 2005 for creating the applications.

You are in the process of developing a .NET Framework 2.0 graphics application and are busy writing a Point class with two Integer fields shown below:

Class Point

Dim x, y As Integer

Public Sub New(ByVal x As Integer, ByVal y As Integer)

Me.x = x

Me.y = y

End Sub

'Additional code

End Class

You are required to write a method named GetPointPosition that will be used to provide read access to the two Integer fields in the class and prevent inconsistent reads where another reader thread would be able to see a Point object at an invalid position. The Point class makes use of additional code that other applications may use over which you have no control. You must ensure you protect your code against deadlocks.

What should you do?

A. Public Sub GetPointPosition(ByRef x As Integer, ByRef y As Integer)
Dim lockAcquired As Boolean
lockAcquired = Monitor.TryEnter(Me, 2000)
If (lockAcquired) Then
Try
x = Me.x
y = Me.y
Finally
Monitor.Exit(Me)
End Try
End If
End Sub

B. Public Sub GetPointPosition(ByRef x As Integer, ByRef y As Integer)
Monitor.Enter(Me)
Try
x = Me.x
y = Me.y
Catch
Monitor.Exit(Me)
End Try
End Sub

C. Public Sub GetPointPosition(ByRef x As Integer, ByRef y As Integer)
Synclock (Me)
x = Me.x
y = Me.y
End SyncLock
End Sub

D. Public Sub GetPointPosition(ByRef x As Integer, ByVal y As Integer)
Monitor.Enter(Me)
Try
x = Me.x
y = Me.y
Finally
Monitor.Exit(Me)
End Try
End Sub

Answer: A

Explanation: To have your code protected from being deadlocked you should avoid using the SyncLock statement and replace calls to Monitor.Enter with calls to Monitor.TryEnter.
Incorrect Answers

B, C, D: If a class instance is access publicly the code is beyond your control and may lock an instance in your class which could create deadlocks.

QUESTION 272

You work as the application developer at Certkiller .com. The Certkiller .com network consists of a single Active Directory domain named Certkiller .com. All servers on the Certkiller .com network run Windows Server 2003 and all client computers run Windows XP Professional. You make use of Visual Studio 2005 for creating the applications.

You are in the process of developing a .NET Framework 2.0 application that uses the CreateDomain method of the AppDomain class to create an application domain.

You are required to set the following properties for the new application domain:

- * Root directory
- * Location of the configuration file
- * Search path that the Common Language Runtime uses to load the assemblies into the domain

You must ensure that these properties values are passed to the CreateDomain method.

What should you do?

- A. An AppDomainFactory
- B. An AppDomainIsolatedTask object
- C. An AppDomainHelper object
- D. An AppDomainSetup object

Answer: D

Explanation: The correct method for achieving your scenario objective is to pass an AppDomainSetup object as parameter to the CreateDomain method. The AppDomainSetup object is used to allow you to specify the root directory and required.

Incorrect Answers:

A: This method is used to create a new AppDomain instance for the Web applications and can not be used to specify setup information for an application domain.

B: The method in question here can be used to create build tasks that can be instantiated in their own application domain but can not be used to specify setup information.

C: This method should not be used in the scenario as it switches into the given application domain and does a callback on the given function and can not be used to specify setup information.

QUESTION 273

You work as the application developer at Certkiller .com. The Certkiller .com network consists of a single Active Directory domain named Certkiller .com. All servers on the Certkiller .com network run Windows Server 2003 and all client computers run Windows XP Professional. You make use of Visual Studio 2005 for creating the applications.

You are in the process of developing a .NET Framework 2.0 application that will be used for geographical mapping. Whenever you load a plug-in you create a separate application domain and you want to specify a list of directories that are searched for private assemblies. You are required to add the application's base directory as part of your search and need to configure an application domain to meet the requirements.

What should you do?

- A. The AppDomainSetup.PrivateBinPathProbe property should be used
- B. The AppDomain.BaseDirectory property should be used
- C. The AppDomain.DynamicDirectory property should be used
- D. The AppDomainSetup.PrivateBinPath property should be used

Answer: D

Explanation: The method used in the answer is used to specify a list of directories under the application's base directory that are probed for private assemblies. This property must be set to specify the locations that should be searched.

Incorrect Answers:

A: This property is set to a non-empty value and excludes the ApplicationBase from the searches and should not be used.

B: This method only specifies the base directory for the application domain and does not specify all the different locations to be searched for private assemblies.

C: This property is used to get the directory that the assembly resolver uses to probe for dynamically created assemblies and is a read-only assembly.

QUESTION 274

You work as the application developer at Certkiller .com. The Certkiller .com network consists of a single Active Directory domain named Certkiller .com. All servers on the Certkiller .com network run Windows Server 2003 and all client computers run Windows XP Professional. You make use of Visual Studio 2005 for creating the applications.

You are in the process of developing a .NET Framework 2.0 application class library and decide to use the AppDomainSetup class to create an application domain. You are required to create an instance of a type named BillSpace.BillType. You are additionally required to configure the new application domain so that it probes for the assembly containing the type in a specified directory.

What should you do?

- A. The ApplicationBase property of the AppDomainSetup class should be used
- B. The ActivationArguments property of the AppDomainSetup class should be used
- C. The CachePath property of the AppDomainSetup class should be used
- D. The AppDomainInitializerArguments property of the AppDomainSetup class should be used

Answer: A

Explanation:

It is possible to provide the common language runtime with configuration information for a new application domain using the AppDomainSetup class. The most important property is the ApplicationBase when creating your own application domains which is used to define the root directory of the application.

Incorrect Answers:

B: This method is incorrect and should not be used because it sets or gets data about activation of an application domain.

C: This method is incorrect and should not be used because it sets or gets the name of an area specific to the application where files are shadow copied.

D: This method is incorrect and should not be used because it sets or gets AppDomainInitializer delegate which represents a callback method.

QUESTION 275

You work as the application developer at Certkiller .com. The Certkiller .com network consists of a single Active Directory domain named Certkiller .com. All servers on the Certkiller .com network run Windows Server 2003 and all client computers run Windows XP Professional.

You are in the process of developing a .NET Framework 2.0 system utility application and are required to write some code that allows you to examine assemblies compiled for other platforms of the .NET Framework. You create a new application domain and load assemblies into it. You are required to ensure that code loaded into this context can be examined but not executed. You know the path name of the file containing the assembly but you do not know the name of the assembly. What should you do?

- A. The Assembly.ReflectionOnlyLoadFrom method should be used
- B. The Assembly.LoadFrom method should be used
- C. The Assembly.ReflectionOnlyLoad method should be used
- D. The Assembly.Load method should have been used

Answer: A

Explanation: The correct method for what is required would be to use the reflection-only load context because this allows you to only examine the assembly and not execute it.

Incorrect Answers:

B, D: These methods should not be considered for usage because the methods allow you to execute code and create objects.

C: The method in question should not be considered for usage when you only know the path name to where the assembly resides.

Topic 24, VB, Embedding configuration, diagnostic, management, and installation features into a .NET

Framework application(19 Questions)

QUESTION 276

You work as the application developer at Certkiller .com. The Certkiller .com network consists of a single Active Directory domain named Certkiller .com. All servers on the Certkiller .com network run Windows Server 2003 and all client computers run Windows XP Professional. You make use of Visual Studio 2005 for creating the applications.

You are in the process of developing a .NET Framework 2.0 Web application and you need to access the configuration data for the application. You do not need read-only access to the configuration data whilst your solution provides the maximum performance.

What should you do?

- A. The GetSection Configuration class should be used
- B. The GetSection ConfigurationManager class should be used
- C. The GetSectionGroup method of the Configuration class should be used
- D. The GetSection method of the WebConfigurationManager class should be used

Answer: D

Explanation: The configuration class in question is designed to programmatically access configuration information for Web applications. The GetSection static method retrieves the cached configuration information.

Incorrect Answers:

A: The method in question does allow programmatic access to all configuration files but it does not cache configuration values for the current application.

B: This should be avoided at all costs as it is best suited for retrieving information for Windows client applications.

C: This method is used to only retrieve specific section groups from the configuration object similar to the GetSection method.

QUESTION 277

You work as the application developer at Certkiller .com. The Certkiller .com network consists of a single Active Directory domain named Certkiller .com. All servers on the Certkiller .com network run Windows Server 2003 and all client computers run Windows XP Professional. You make use of Visual Studio 2005 for creating the applications.

You are in the process of developing a .NET Framework 2.0 Web application and are busy creating a Configuration object in your application that inherits settings from the applications' web.config file and machine.config file. You modify several of the Configuration objects settings and want to save the Configuration object to a file named testconf.config. You require only the values that differ from the inherited values to be written to the configuration file.

What should you do? (Choose two)

- A. The Save method on the Configuration object should be called
- B. The ConfigurationSaveMode.Full value must be passed as a parameter
- C. The ConfigurationSaveMode.Modified value must be passed as a parameter
- D. The SaveAs method on the configuration object should be called
- E. The ConfigurationSaveMode.Minimal value should be passed as a parameter

Answer: C, D

Explanation: When you are required to write configuration settings to a different file the SaveAs method should be called. If you wish to write only values which differ from inherited values the ConfigurationSaveMode.Minimal value should be passed as a parameter.

Incorrect Answers:

A: This method is used to have the SaveAs method to save all the values to the configuration file that you specified in the scenario.

B: This method is used to have the SaveAs method to only the modified values to the configuration file that you specified in the scenario.

QUESTION 278

You work as the application developer at Certkiller .com. The Certkiller .com network consists of a single Active Directory domain named Certkiller .com. All servers on the Certkiller .com network run Windows Server 2003 and all client computers run Windows XP Professional. You make use of Visual Studio 2005 for creating the applications.

You are in the process of developing a .NET Framework 2.0 Web application and you are required to extend the standard configuration setting by adding a custom configuration section using the following class:

```
Public Class ConfigHandler
Public Sub New()
End Sub
End Class
```

You are required to ensure that the class ConfigHandler allows reading and writing to the custom configuration section whilst providing strongly typed access to the custom configuration elements.

What should you do?

- A. The ConfigHandler class must be inherited from the ConfigurationSection class
- B. The ISettingsProviderService interface must be implemented in the ConfigHandler
- C. The IConfigurationSectionHandler interface must be implemented in the ConfigHandler class
- D. The IApplicationSettingsProvider interface must be implemented in the ConfigHandler class

Answer: A

Explanation: The ConfigurationSection is a new class in .NET Framework 2.0

which should be used as it allows you to read and write custom configuration sections. The method in the answer also provides strongly typed access to the custom configuration sections.

Incorrect Answers:

B: This method is used to provide support for specific application settings that are required by the design-time tools and will not help in the scenario.

C: This is an old method of working with custom configuration sections and does not provide the required strongly typed access.

D: This method is only use full when it comes to Windows client applications and you are busy with a Web application.

QUESTION 279

You work as the application developer at Certkiller .com. The Certkiller .com network consists of a single Active Directory domain named Certkiller .com. All servers on the Certkiller .com network run Windows Server 2003 and all client computers run Windows XP Professional. You make use of Visual Studio 2005 for creating the applications.

You are in the process of maintaining a .NET Framework 1.0 Windows application and need to configure the application to run using the .NET Framework 1.1. The network computers of Certkiller .com all have three versions of .NET Framework (version 1.0, 1.1, and 2.0 installed side-by-side. You are required to modify the application configuration file to target the .NET Framework 1.1 runtime.

What should you do?

A. <configuration>

<startup>

<supportedRuntime version="v2.0.50727"/>

<supportedRuntime version="V1.1.4322"/>

<supportedRuntime version="v1.0.3705"/>

</startup>

</configuration>

B. <configuration>

<startup>

<supportedRuntime version="V1.1.4322"/>

<supportedRuntime version="v1.0.3705"/>

</startup>

</configuration>

C. <configuration>

<startup>

<requiredRuntime version="v1.1.4322"/>

</startup>

</configuration>

D. <configuration>

<startup>

<supportedRuntime version="v1.1.4322"/>

</startup>

</configuration>

Answer: D

Explanation: To have your applications run under the required runtime in the scenario you should use the configuration section provided in the answer, this is the only correct method.

Incorrect Answers:

A: The method you are trying to use here is incorrect as you would be executing against .NET Framework v2.0.

B: The method you are trying to use here is incorrect as you would be executing against .NET Framework v1.1.

C: This method is used to indicate that the application only supports .Net Framework v1.0 and should not be used in the scenario.

QUESTION 280

You work as the application developer at Certkiller .com. The Certkiller .com network consists of a single Active Directory domain named Certkiller .com. All servers on the Certkiller .com network run Windows Server 2003 and all client computers run Windows XP Professional. You make use of Visual Studio 2005 for creating the applications.

You are in the process of developing a .NET Framework 2.0 Windows application that will make use of an assembly named BillAssembly. The assembly file BillAssembly.dll is deployed in a folder named Test20 under the application root directory. The BillAssembly assembly was not strongly named

You are required to configure the Windows application to specify the location of the BillAssembly assembly whilst any settings that you change not affect other applications installed on the system.

What should you do?

A. The application configuration file must be modified to add the following setting to the <assemblyBinding> section:

<probing privatePath="Test20\BillAssembly.dll"/>

B. The machine configuration file should be modified to add the following setting to the <assemblyBinding> section:

<codeBase href="Test20"/>

C. The machine configuration file must be modified to add the following setting to the <assemblyBinding> section for the BillAssembly assembly:

<codeBase href="Test20/BillAssembly.dll"/>

D. The application configuration file should be modified to add the following section to the <assemblyBinding> section:

<probing privatePath="Test20"/>

Answer: D

Explanation: Since the BillAssembly assembly is not strongly named the

configuration will have to be made at the local level by making use of the application configuration files as is the case in the scenario.

Incorrect Answers:

A, B: The modification of the machine configuration file is incorrect as the assembly in question does not have a unique identity and should not be used.

C: The path here is incorrect since you only need point to the Test20 path in the scenario.

QUESTION 281

You work as the application developer at Certkiller .com. The Certkiller .com network consists of a single Active Directory domain named Certkiller .com. All servers on the Certkiller .com network run Windows Server 2003 and all client computers run Windows XP Professional. You make use of Visual Studio 2005 for creating the applications.

You are in the process of developing a .NET Framework 2.0 application and are busy developing the shared assembly called BillSharedObjects which resides in a file named BillSharedObjects.dll, upon compiling you store the assembly in the C:\BillSharedObjects\Debug directory. You do not want the assembly to be repeatedly installed in the global assembly cache while you develop and debug. You want the application to load the assembly from its current location by .Net Framework when testing whilst any changes made to the system not affect any other applications that are deployed or will be deployed.

What should you do? (Choose two)

- A. C:\SharedObjects\Debug must be put in the PATHEXT environment variable
- B. C:\SharedObjects\Debug must be put in the PATH environment variable
- C. C:\SharedObjects\Debug must be put in the DEVPATH environment variable
- D. The following code should be added to the application configuration file:

```
<configuration>
<runtime>
<assemblyBinding xmlns="urn:schemas-microsoft-com:asm.v1">
<probing privatePath="c:\SharedObjects\Debug"/>
</assemblyBinding>
</runtime>
</configuration>
```

- E. The following code should be added to the machine configuration file:

```
<configuration>
<runtime>
<assemblyBinding xmlns="urn:schemas-microsoft-com:asm.v1">
<dependantAssembly>
<assemblyIdentity name="BillSharedObjects"
publicKeyToken="12ac3ab67e0a34b5"
culture="en-us"/>
<codeBase version="2.0.0.0"
href="BillSharedObjects\Debug"/>
</dependantAssembly>
</assemblyBinding>
```


</runtime>

</configuration>

F. The following code should be added to the machine configuration file:

<configuration>

<runtime>

<developmentMode developerInstallation="true"/>

</runtime>

</configuration>

Answer: C F

Explanation: In order for you to achieve the scenario objective you must use the <developmentMode> element and set the developerInstallation attribute to "true" this will let .NET Framework search for assemblies in the DEVPATH environment variable.

Incorrect Answers:

A, B: This method is incorrect as these environment variables are used by Windows and are not used by .NET Framework.

D, E: The usage of the <codeBase> and <probing> elements are incorrect as the one is useful for specifying the search path for private assemblies and the other will affect settings of applications that are already deployed.

QUESTION 282

You work as the application developer at Certkiller .com. The Certkiller .com network consists of a single Active Directory domain named Certkiller .com. All servers on the Certkiller .com network run Windows Server 2003 and all client computers run Windows XP Professional. You make use of Visual Studio 2005 for creating the applications.

You are in the process of developing a .NET Framework 2.0 Windows service application that has three distinct Windows services. You create a custom installation class named BillAppInstaller which derives from the Installer class. Within the class you decide to customize installation for each Windows service by using the ServiceInstaller objects and add them to the installer collection below:

Installers.Add(serviceInstaller1)

Installers.Add(serviceInstaller2)

Installers.Add(serviceInstaller3)

You later compile the class and store in a file named BillAppInstaller.dll and you are required to programmatically access and install the Windows services in the BillAppInstaller.dll file.

What should you do?

- A. ManagedInstallerClass
- B. ComponentInstaller
- C. InstallContext
- D. AssemblyInstaller

Answer: D

Explanation: The AssemblyInstaller class should be used in the scenario because the AssemblyInstaller class is capable of loading available installers in an assembly and install them.

Incorrect Answers:

A: This class should not be used in the scenario as this is not for the .NET Framework internal use.

B: This method is used to install components such as event logs and performance counters and should not be used in the scenario.

C: This class should not be used because by itself the class can not help install the installers in an assembly.

QUESTION 283

You work as the application developer at Certkiller .com. The Certkiller .com network consists of a single Active Directory domain named Certkiller .com. All servers on the Certkiller .com network run Windows Server 2003 and all client computers run Windows XP Professional. You make use of Visual Studio 2005 for creating the applications.

You are in the process of developing a .NET Framework 2.0 Remoting application with the name of your class BillType and the name of the assembly TestAssembly which will be accessed using the Transmission Control Protocol (TCP) at port 1234. You are required to expose BillType as a server-activated object for remote access whilst you must use a configuration file to register the remote object. What should you do?

- A. <configuration>
<system.runtime.remoting>
<application>
<service>
<activated type = "BillType, TestAssembly"/>
</service>
</application>
</system.runtime.remoting>
</configuration>
- B. <configuration>
<system.runtime.remoting>
<application>
<client url="tcp://localhost:1234/BillType.rem">
<activated type = "BillType, TestAssembly"/>
</client>
</application>
</system.runtime.remoting>
</configuration>
- C. <configuration>
<system.runtime.remoting>

```
<application>
<service>
<wellknown mode = "Singleton"
type = "BillType, TestAssembly"
objectUri = "BillType.rem"
/>
</service>
</application>
</system.runtime.remoting>
</configuration>
D. <configuration>
<system.runtime.remoting>
<application>
<client>
<wellknown type = "BillType, TestAssembly"
url = "tcp://localhost:1234/BillType.rem"
/>
</client>
</application>
</system.runtime.remoting>
</configuration>
```

Answer: C

Explanation: In order to successfully set up an object for remote access the configuration used in the answer is the proper method if you want the object to be activated as a server object.

Incorrect Answers:

A, B, D:

The usage of the <client> element is incorrect as this will be used to configure a program that will consume the remote object and in the scenario you must expose an object for remote access.

QUESTION 284

You work as the application developer at Certkiller .com. The Certkiller .com network consists of a single Active Directory domain named Certkiller .com. All servers on the Certkiller .com network run Windows Server 2003 and all client computers run Windows XP Professional. You make use of Visual Studio 2005 for creating the applications.

You are in the process of developing a .NET Framework 2.0 application. You complete the application but as soon as users attempt to log on to the application the application fails and you need to have an entry written to the Windows event log.

When you look at the event log viewer you want the source of the events to be listed as TestApp. You are required to create an event source that can be used to write entries to the event log.

What should you do?

```
A. If Not EventLog.SourceExists("TestApp") Then
EventLog.CreateEventSource("TestApp", "Application")
End If
B. EventLog.LogNameFromSourceName("TestApp", "Application")
C. EventLog.LogNameFromSourceName("TestApp", "Security")
D. If Not EventLog.SourceExists("TestApp") Then
EventLog.CreateEventSource("TestApp", "Security")
End If
```

Answer: A

Explanation: The code that is used in the answer is the proper code that should be used to create entries into the Application event log.

Incorrect Answers:

B, C, D: The other methods that are used are not correct because the security log is read-only and furthermore the LogNameSourceName method returns the name of an event log for the given event and does not help in creating an event source.

QUESTION 285

You work as the application developer at Certkiller .com. The Certkiller .com network consists of a single Active Directory domain named Certkiller .com. All servers on the Certkiller .com network run Windows Server 2003 and all client computers run Windows XP Professional. You make use of Visual Studio 2005 for creating the applications.

You are in the process of developing a .NET Framework 2.0 application that will be used to capture application errors like failure to send e-mail messages are logged in the Windows event log. You are required to write only non-localized string messages to the event log. You already previously wrote the event source and need to write code to create an entry in the error log.

What should you do?

```
A. Dim failedEvent As EventInstance = _
Test EventInstance(1001, 0, EventLogEntryType.Error)
Dim messageStrings As Strings() = {"Process1", "Value1"}
myEventLog.WriteEvent(failedEvent, messageStrings)
B. Dim messageStrings As String() = {"Process1", "Value1"}
myEventLog.WriteEntry(String.Join(", ", messageStrings), _
EventLogEntryType.FailureAudit)
C. Dim failedEvent As EventInstance = _
Test EventInstance(1001, 0, EventLogEntryType.FailureAudit)
Dim messageStrings As String() = {"Process1", "Value1"}
myEventLog.WriteEvent(failedEvent, messageStrings)
D. Dim messageStrings As String() = {"Process1", "Value1"}
meEventLog.WriteEntry(String.Join(", ", messageStrings), _
EventLogEntryType.Error)
```

Answer: D

Explanation: The WriteEntry method of the EventLog class should be used in the scenario as this method is used to write the localized messages to the event log. The usage of the EventLogEntryType.Error value as a parameter is the proper way to use the WriteEntry method.

Incorrect Answers:

A, B, C: The other methods in question are not correct as you would be auditing and you are required to write to the error log of the Windows event log and should not be considered to use.

QUESTION 286

You work as the application developer at Certkiller .com. The Certkiller .com network consists of a single Active Directory domain named Certkiller .com. All servers on the Certkiller .com network run Windows Server 2003 and all client computers run Windows XP Professional. You make use of Visual Studio 2005 for creating the applications.

You are in the process of developing a .NET Framework 2.0 Windows application named TestAnalyzer.exe that will be used to monitor the Application event log of the local computer to find if any new events are generated by another application named BillNotify.exe which runs on the local computer named Certkiller -WS11. Whenever a new event log entry is recorded the application must invoke the applicationLog_EntryWritten method in response.

You write the code below for the notification of new event log entries:

```
Dim applicationLog As EventLog = Bill EventLog("Application", ".")  
AddHandler applicationLog.EntryWritten, AddressOf  
applicationLog_EntryWritten
```

When you test the application you discover that there are no notifications generated. You are required to ensure that you are notified of a new event log entries.

What should you do?

- A. The applicationLog.EnableRaisingEvents property must be set to True
- B. The applicationLog.Log property must be set to BillNotify.exe
- C. The applicationLog.MachineName property must be set to Certkiller -WS11
- D. The applicationLog.EnableRaisingEvents property must be set to False

Answer: A

Explanation: The EnableRaisingEvents property of the applicationLog object must be set to true if you want to be notified whenever new entries have been written to the specified event log.

Incorrect Answers:

B: This method is incorrect as the Log property should be used to specify the name of the event log.

C: This is incorrect as this is a redundant operation and the EventLog object is already pointing to Certkiller -WS11.

D: This step is almost what you require but the property of the EnableRaisingEvents should be set to True.

QUESTION 287

You work as the application developer at Certkiller .com. The Certkiller .com network consists of a single Active Directory domain named Certkiller .com. All servers on the Certkiller .com network run Windows Server 2003 and all client computers run Windows XP Professional. You make use of Visual Studio 2005 for creating the applications.

You are in the process of developing a .NET Framework 2.0 application that will be used for publishing its own custom performance counter. You additionally require the value of a performance counter to increase by 5 and must minimize the amount of code needed to write.

What should you do?

- A. NextValue
- B. Decrement
- C. Increment
- D. IncrementBy

Answer: D

Explanation: To have the value of a counter decreased by the desired amount the best choice of method requiring the least amount of code would be the IncrementBy method.

Incorrect Answers:

A: This is the code used to return the value of the counter and should not be used in the scenario.

B: The method is used if you want to have the value decreased and in the scenario an increase is needed.

C: This method is used to only increase the value of the counter by one and should not be used.

QUESTION 288

You work as the application developer at Certkiller .com. The Certkiller .com network consists of a single Active Directory domain named Certkiller .com. All servers on the Certkiller .com network run Windows Server 2003 and all client computers run Windows XP Professional. You make use of Visual Studio 2005 for creating the applications.

You are in the process of developing a .NET Framework 2.0 time management application that requires opening a file named BillTimeManagement.als programmatically. All the client computers are equipped with Microsoft Office and file associations have not been modified after installation of the software. You are required to create a ProcessStatInfo object to provide file details to open the file.

What should you do?

- A. Dim psi As ProcessStartInfo = Test ProcessStartInfo("BillTimeManagement.xls", "Excel")
- B. Dim psi As ProcessStartInfo = Test ProcessStartInfo("Excel BillTimeManagement.xls")
- C. Dim psi As ProcessStartInfo = Test ProcessStartInfo("Excel", "BillTimeManagement.xls")
- D. Dim psi As ProcessStartInfo = Test ProcessStartInfo("BillTimeManagement.xls")

Answer: D

Explanation: To successfully complete your objective you should use the ProcessStartInfo class that is used to specify an application file name with which the process should start.

Incorrect Answers:

- A: This option should not be used because BillTimeManagement the file to be opened would be used as a command line argument.
- B: This method should not be used as the file name Excel BillTime Management.xls will be treated as the file name in the scenario.
- C: This option should not be considered for use as Excel would be the file name and BillTimeManagement would be a command line argument

QUESTION 289

You work as the application developer at Certkiller .com. The Certkiller .com network consists of a single Active Directory domain named Certkiller .com. All servers on the Certkiller .com network run Windows Server 2003 and all client computers run Windows XP Professional. You make use of Visual Studio 2005 for creating the applications.

You are in the process of developing a .NET Framework 2.0 Windows application that provides a user interface similar to Microsoft Excel and allows users to manage their expenses. You recently wrote a wrapper around the expense management application which performs security checks. If the users has the sufficient rights the wrapper application launches the expense management application, if no sufficient rights the application should be forced to close. You must decide which method of the Process class to use.

What should you do?

- A. Kill
- B. Close
- C. Dispose
- D. CloseMainWindows

Answer: A

Explanation: To successfully have an application forcefully close or shutdown the

Kill method should be used as it forces an immediate termination of the process.

Incorrect Answers:

B: This method should not be used as the Close method is used to free resources associated with the application process.

C: This method should not be used in the scenario as it is generally used to implement cleaning of unmanaged resources.

D: This method should not be used as this method requests that the application be closed and we require closing the application forcefully.

QUESTION 290

You work as the application developer at Certkiller .com. The Certkiller .com network consists of a single Active Directory domain named Certkiller .com. All servers on the Certkiller .com network run Windows Server 2003 and all client computers run Windows XP Professional. You make use of Visual Studio 2005 for creating the applications.

You are in the process of developing a .NET Framework 2.0 Windows application that has the following configuration settings.

```
<system.diagnostics>
```

```
<switches>
```

```
<add name="BooleanSwitch" value="1"/>
```

```
<add name="TraceLevelSwitch" value="1"/>
```

```
</Switches>
```

```
</system.diagnostics>
```

You started coding your Windows application further by creating switch objects using the following statements:

```
Dim ts As BooleanSwitch = Test BooleanSwitch("BooleanSwitch", "BooleanSwitch")
```

```
Dim ks As TraceSwitch = Bill TraceSwitch("TraceLevelSwitch", "TraceSwitch")
```

You are required to select what the outcome would be of executing the commands in the scenario.

What should you do? (Choose two)

- A. The TraceLevelSwitch switch objects trace level is set to TraceLevel.Info
- B. The BooleanSwitch switch object is disabled
- C. The TraceLevelSwitch switch objects trace level is set to TraceLevel.Warning
- D. The BooleanSwitch switch object is enabled
- E. The TraceLevelSwitch switch objects trace level is set to TraceLevel.Error

Answer: D, E

Explanation: The Boolean objects can be considered to be either On or Off. The value 0 corresponds to being off whereas a non-zero value indicates the objects are On.

Incorrect Answers:

A, C: The usage of the TraceSwitch class is used to provide different levels of tracing

switches which are defined by the enumeration as Off -0, Error -1, Warning -2, Info -3 and Verbose -4.

B: The value 1 will have the BooleanSwitch object enabled and a value of 1 will set the TraceLevelSwitch objects to have a trace level to TraceLevel.Error.

QUESTION 291

You work as the application developer at Certkiller .com. The Certkiller .com network consists of a single Active Directory domain named Certkiller .com. All servers on the Certkiller .com network run Windows Server 2003 and all client computers run Windows XP Professional. You make use of Visual Studio 2005 for creating the applications.

You are in the process of developing a .NET Framework 2.0 application and write the following code in you Bill program:

```
Dim logFile As Stream = File.Create("C:\BillLogFile.tct")
Dim twtl As TextWriterTraceListner = Test
TextWriterTraceListner(logFile)
Trace.Listners.Add(twtl)
Trace.WriteLine("Bill Message 1")
Debug.WriteLine("Bill Message 2")
Trace.Flush()
```

You need to know what output will be generated in the C:\BillLogFile.txt file when you run the Bill program in debug mode.

What should you do?

- A. Bill Message 1
- B. Bill Message 2
- C. The C:\BillLogFile.txt file is empty
- D. Bill Message 1
Bill Message 2

Answer: D

Explanation: The program if run in debug mode both the Trace and Debug statements will be ewxecuted as their object is sent to the listener object.

Incorrect Answers:

A, B, C: The other mentioned methods are all incorrect because if you run the application in debug mode both the Tracer and Debug statements will be executed.

QUESTION 292

You work as the application developer at Certkiller .com. The Certkiller .com network consists of a single Active Directory domain named Certkiller .com. All servers on the Certkiller .com network run Windows Server 2003 and all client computers run Windows XP Professional. You make use of Visual Studio 2005 for creating the applications.

You are in the process of developing a .NET Framework 2.0 console application that will be used to enumerate all disk drives on the local computer and list their drive

letter and available free space. You are required to make use of the functionality in the System.Management namespace to accomplish the task.
What should you do?

```
A. Dim tq As SelectQuery = Test SelectQuery _  
("Win32_LogicalDisk")  
Dim tos As ManagementObjectSearcher = _  
Test ManagementObjectSearcher(tq)  
For Each to As ManagementObject In Tos.Get()  
Console.WriteLine("Drive {0}, Free Space {1}". _  
to("DeviceID"), to("NumberOfBlocks"))  
Next  
B. Dim tq As SelectQuery = Test SelectQuery _  
("Select *from Win32_LogicalDisk")  
Dim tos As ManagementObjectSearcher = _  
Test ManagementObject Searcher(tq)  
For Each To As ManagementObject In tos.Get()  
Console.WriteLine("Drive {0}, to("FreeSpace"))  
Next  
C. Dim tq As SelectQuery = TestSelectQuery _  
("Win32_LogicalDisk")  
Dim tos As ManagementObjectSearcher = _  
Test ManagementObjectSearcher(tq)  
For Each to As ManagementObject In tos.Get()  
Console.WriteLine("Drive {0}, FreeSpace {1}", _  
to("DeviceID"), to("NumberOfBlocks"))  
Next  
D. Dimts As SelectQuery = Test SelectQuery _  
("Win32_LogicalDisk")  
Dim tos As ManagemeObjectSearcher = _  
Test ManagementObjectSearcher(tq)  
For Each to As ManagementObject In tos.Get()  
Console.WriteLine("Drive {0}, Free Space {1}", _  
to("Name"), to("FreeSpace"))  
Next
```

Answer: D

Explanation: The correct way to have your code display what is required in the scenario would be to write the code specified in the answer this will list the drive letters and available free space.

Incorrect Answers:

A, B, C: The usage of the Win32_LogicalDisk management object is incorrect as this will not return the drive letter and furthermore the usage of the NumberOfBlocks property should not be used because it will return the block size of each disk rather than the free space.

QUESTION 293

You work as the application developer at Certkiller .com. The Certkiller .com network consists of a single Active Directory domain named Certkiller .com. All servers on the Certkiller .com network run Windows Server 2003 and all client computers run Windows XP Professional. You make use of Visual Studio 2005 for creating the applications.

You are in the process of developing a .NET Framework 2.0 Windows application. You require finding the current IP address of the local computer and need to create a SelectQuery object in your application that enables the retrieval of the current IP address.

What should you do?

- A. Dim tq As SelectQuery = Test SelectQuery ("SELECT IPAddress FROM _Win32_NetworkAdapterConfiguration")
- B. Dim tq As SelectQuery = Test SelectQuery ("SELECT IPXAddress FROM _Win32_NetworkAdapterConfiguration")
- C. Dim tq As SelectQuery = Test SelectQuery ("SELECT NetworkAddress FROM _Win32_NetworkAdapter")
- D. Dim tq As SelectQuery = Test SelectQuery ("SELECT MacAddress FROM Win32_NetworkAdapter")

Answer: A

Explanation: The proper way to go in the scenario would be to query the Win32_NetworkAdapterConfiguration object as this property is associated with the network adapter configuration.

Incorrect Answers:

B: This method should not be used as there is no statement about an IPXAddress in the scenario.

C: This should not be used as it is an unimplemented method which returns nothing by default.

D: This method is used to return the machine address for a network adapter which is a unique 48-bit id assigned to the network card by the manufacturer.

QUESTION 294

You work as the application developer at Certkiller .com. The Certkiller .com network consists of a single Active Directory domain named Certkiller .com. All servers on the Certkiller .com network run Windows Server 2003 and all client computers run Windows XP Professional. You make use of Visual Studio 2005 for creating the applications.

You are in the process of developing a .NET Framework 2.0 Windows application. You are required to asynchronously monitor the creation of new Windows processes and write the following code:

```
Dim query As WqlEventQuery = Test
WqlEventQuery("_InstanceCreationEvent",_
```

```
Bill TimeSpan(o, o, 5), "TargetInstance is a ""Win32_Process""")
Dim watcher As ManagementEventWatcher = Test ManagementEventWatcher()
watcher.Query = query
```

You are in the process of adding additional code for the asynchronous monitor to work and need to know which code segment to use.
What should you do? (Choose two)

- A. watcher.Stop()
- B. Dim e As ManagementBaseObject = watcher.WaitForNextEvent()
- C. AddHandler watcher.EventArrived, AddressOf Process_Created
- D. watcher.Start

Answer: C, D

Explanation: The correct method would be for you to start with using the Start method of the ManagementEventWatcher class to asynchronously monitor the creation of processes. In order for you to receive notifications an event handler should be added.

Incorrect Answers:

- A: This is the correct method used to have the monitor stop monitoring events.
- B: The usage of the method is used for waiting for when the events occur and leads to synchronous processing.

Topic 25, VB, Implementing serialization and input/output functionality in a .NET Framework application(14 Questions)

QUESTION 295

You work as the application developer at Certkiller .com. The Certkiller .com network consists of a single Active Directory domain named Certkiller .com. All servers on the Certkiller .com network run Windows Server 2003 and all client computers run Windows XP Professional. You make use of Visual Studio 2005 for creating the applications.

You are in the process of developing a .NET Framework 2.0 class library and you create the classes below:

```
Public Class Book
Public Name As String
End Class
Public Class Encyclopedia
Inherits Book
Public Volume As Integer
End Class
```

You are required to serialize the objects in the encyclopedia class to a disk file.
What should you do?

- A. The <Serializable> attribute should be added to the Book class and the <Serializable> attribute should be added to the Encyclopedia class

- B. The <Serializable> attribute should be added to the Book class only
- C. The <Serializable> attribute should be added to the Encyclopedia class only
- D. The <Serializable> attribute should be added to the Encyclopedia class and the <NonSerialized> attribute should be added to the Name field

Answer: A

Explanation: As the Serializable attribute is not inherited by the derived classes you should add the attribute to both classes in the scenario.

Incorrect Answers:

- B, C: If you only marked one of the classes with the Serializable attribute you would not be capable of completing your scenario objective.
- D: If you configured the application this way the program would return a runtime error, meaning this should not be used.

QUESTION 296

You work as the application developer at Certkiller .com. The Certkiller .com network consists of a single Active Directory domain named Certkiller .com. All servers on the Certkiller .com network run Windows Server 2003 and all client computers run Windows XP Professional. You make use of Visual Studio 2005 for creating the applications.

You are in the process of developing a .NET Framework 2.0 application and create the following class in the application:

```
Public Class Model
Public Name As String
End Class
```

You are required to deserialize the data in testmodel.xml in an object of the Model type. The contents of testmodel.xml are shown below, if you encounter unknown elements the method named Model_Unknown should be executed:

```
<?xml version="1.0" encoding="utf-8"?>
<Model xmlns:xsi=http://www.Certkiller.com/XMLSchema-instance
xmlns:xsd=http://www.Certkiller.com/XMLSchema>
<Number>123</Number>
<Name>Model1</Name>
<Style>Business</Style>
<Size>Large</Large>
</Model>
```

What should you do?

```
A. Private Sub DeserializeModel(ByVal filename As String)
Dim xs As XmlSerializer = Test XmlSerializer(GetType(Model))
AddHandler xs.UnknownElement, AddressOf Model_Unknown
Using fs As FileStream = _
    File.Open(filename, FileMode.Open)
Dim testModel As Model = CType(xs.Deserialize(fs), Model)
End Using
```

```
End Sub
B. Private Sub DeserializeModel(ByVal filename As String)
Dim xs As XmlSerializer = Test XmlSerializer(GetType(Model))
Using fs As FileStream = _
Bill FileStream(filename, FileMode.Open)
Dim testMofel As Model = CType(xs.Deserialize(fs), Model)
End Using
End Sub
C. Private Sub DeserializeModel(ByVal filename As String)
Dm xs As XmlSerializer = Test XmlSerializer(GetType(Model))
AddHandler xs.UnknownAttribute, AddressOf Model_Unknown
Using fs As FileStream = _
Bill FileStream(filename, FileMode.Open)
Dim testModel As Model = CType(xs.Deserialize(fs), Model)
End Using
End Sub
D. Private Sub DeserializeModel(ByVal filename As String)
Dim xs As XmlSerializer = Test XmlSerializer(GetType(Model))
Using fs As FileStream = _
Bill FileStream(filename, FileMode.Open)
Dim testModel As Model = CType(xs.Deserialize(fs), Model)
End Using
End Sub
```

Answer: A

Explanation: The proper way to achieve the scenario objective is shown in the answer, the UnknownElement event will be raised when the XmlSerializer encounters an XML element such as number, style and size.

Incorrect Answers:

B, C, D: The other events should not be considered for use in the scenario because the UnknownAttribute event is raised when such an event is encountered. Further more the unreferencedObject should not be used as this event is raised when types are encountered that are not being used.

QUESTION 297

You work as an application developer at Certkiller .com. You have just completed the creation of an application that receives order data from Certkiller .com's partner company in XML format.

The XML has to be utilized to create an Order object that is consumed by the new application.

The following exhibit displays an example of Certkiller .com's partner company's XML data:

```
<?xml version="1.0" encoding="utf-8"?>
<Order id="101">
<Shipping>
```

```
<Instructions>
Come to front door and ring door bell.
No other options.
</Instructions>
<Address>
<Street> 786 Certkiller .com Lane</Street>
<City>Atlanta</City>
<State>GA</State>
<Zip>30350</Zip>
</Address>
</Shipping>
<Date>2007-07-12T00:00:00-04:00</Date>
<Details>
<SalesProduct InStock="true" Taxable="true">
<Name>Lounge Suite</Name>
<Quantity>1</Quantity>
<Price>2000.00</Price>
</SalesProduct>
<Product InStock="false">
<Name>Plasma Television</Name>
<Quantity>2</Quantity>
<Price>26.999.00</Price>
</Product>
</Details>
</Order>
```

You plan to use the XmlSerializer class to deserialize the XML data into an Order object. When you learn that Certkiller .com's partner company's XML also contains Shipping object data, you decide to deserialize the shipping object after the Shipping element is detected during deserialization.

To achieve this, you need to use a certain event of the XmlSerializer class.

What event should you use?

- A. UnknownElement
- B. UnknownNode
- C. UnreferencedObject
- D. UnknownAttribute

Answer: B

Explanation: The UnknownNode event is fired when an unexpected element or node is detected that does not map to the XmlSerializer object's expected type. The UnknownNode event included the XmlNodeEventArgs, which allows access to the entire node of the XML data. This would allow easy deserialization for the Shipping object.

Incorrect Answers:

A, C, D: These options would not allow easy deserialization for the Shipping object.

QUESTION 298

You work as the application developer at Certkiller .com. The Certkiller .com network consists of a single Active Directory domain named Certkiller .com. All servers on the Certkiller .com network run Windows Server 2003 and all client computers run Windows XP Professional. You make use of Visual Studio 2005 for creating the applications.

You are in the process of developing a .NET Framework 2.0 application and write the code below as your own code:

```
Public Class Book
Public Name As String
End Class
Public Class Library
<XmlArray("ID1")
<AmlArrayItem("ID2")
Public Book As Book()
End Class
```

You are required to create an object of the Library type and serialize it to disk in a file named Certkiller books.xml and write the following code:

```
Dim books As Book() = Test Book()
{ Test Book(), Test Book(), Test Book()}
books(0).Name = "Book Name 1"
books(1).Name = "Book Name 2"
books(2).Name = 'Book Name 3"
Dim library As Library = Bill Library()
library.Books = books
Dim testSerializer As XmlSerializer = _
New XmlSerializer(GetType(Library))
Using BillWriter As StreamWriter = _
New StreamWriter(" Certkiller books.xml")
testSerializer.Serialize(BillWriter, library)
End Using
```

You are required to choose from the following selection which output will be generated by the program.

What should you do?

A. <Library>
<ID1>
<Book>
<ID2>Book Name 1</ID2>
</Book>
<Book>
<ID2>Book Name 2</ID2>
</Book>
<Book>
<ID2>Book Name 3</ID2>

```
</Book>
</ID1>
</Library>
B. <Library>
<Books>
<ID1>
<ID2>Book Name 1</ID2>
</ID1>
<ID1>
<ID2>Book Name 2</ID2>
</ID1>
<ID1>
<ID2>Book Name 3</ID2>
</ID1>
</Books>
</Library>
C. <Library>
<ID2>
<ID1>
<Name>Book Name 1</Name>
</ID1>
<ID1>
<Name>Book Name 2</Name>
</ID1>
<ID1>
<Name>Book Name 3</Name>
</ID1>
</ID2>
</Library>
D. <Library>
<ID1>
<ID2>
<Name>Book Name 1</Name>
</ID2>
<ID2>
<Name>Book Name 2</Name>
</ID2>
<ID2>
<Name>Book Name 3</Name>
</ID2>
</ID1>
</Library>
```

Answer: D

Explanation: The proper and best way for you to achieve your scenario objective

would be to use the code specified in the answer this will serialize the required data into the Certkiller books.xml file.

Incorrect Answers:

A, B, C: The other mentioned methods should not be considered for use as they will most likely change the name of the array element to which it is applied.

QUESTION 299

You work as the application developer at Certkiller .com. The Certkiller .com network consists of a single Active Directory domain named Certkiller .com. All servers on the Certkiller .com network run Windows Server 2003 and all client computers run Windows XP Professional. You make use of Visual Studio 2005 for creating the applications.

You are in the process of developing a .NET Framework 2.0 remoting application. Your computer system relies on run-time type validation. You are required to deserialize a remote stream by using the BinaryFormatter class in your application whilst you configure the BinaryFormatter object to protect against any deserialization attacks by deserializing only certain types associated with only the most basic remoting functionality.

What should you do?

- A. The TypeFormat property should be set to FormatterTypeStyle.TypesAlways
- B. The TypeFormat property should be set to FormatterTypeStyle.TypesWhenNeeded
- C. The FilterLevel property should be set to TypeFilterLevel.Full
- D. The FilterLevel property must be set to TypeFilterLevel.Low

Answer: D

Explanation: The best choice for you in the scenario would be to use the FilterLevel property of the BinaryFormatter object set to TypeFilter.Low which deserializes only the most basic remoting functionality helping to protect against deserialization attacks.

Incorrect Answers:

A, B: The setting can not be used to set the deserialization of types because it just configures how the types are laid out in the deserialiazation stream.

C: This setting should no be used as you will be deserializing all types and this offers no protection against deserialization attacks in the scenario.

QUESTION 300

You work as the application developer at Certkiller .com. The Certkiller .com network consists of a single Active Directory domain named Certkiller .com. All servers on the Certkiller .com network run Windows Server 2003 and all client computers run Windows XP Professional. You make use of Visual Studio 2005 for creating the applications.

You are in the process of developing a .NET Framework 2.0 geographical information system for the company and create a class named Certkiller GeogCode.

You are required to serialize all public and non-public data of the

Certkiller GeogCode class whilst you ensure that you produce the smallest byte stream so that the smallest load is placed upon network resources.
What should you do?

- A. The XmlSerializationWriter class should be used
- B. The XmlSerializer class should be used
- C. The BinaryFormatter class should be used
- D. The SoapFormatter class should be used

Answer: C

Explanation: To successfully serialize all the public and non-public data you should make use of the BinaryFormatter class because in addition the BinaryFormatter class produces the most compact byte stream compared to other serialization classes.

Incorrect Answers:

A, B: The XmlSerializer class should not be used as this class only serializes public properties and fields and the XmlSerializationWriter class is used to controls serialization by using the XmkSerialization class and fails to meet requirements.
D: The SoapFormatter class could be used as it will allow you to serialize public and non-public data but the result of the stream will be a verbose and will consume more network resources.

QUESTION 301

You work as the application developer at Certkiller .com. The Certkiller .com network consists of a single Active Directory domain named Certkiller .com. All servers on the Certkiller .com network run Windows Server 2003 and all client computers run Windows XP Professional. You make use of Visual Studio 2005 for creating the applications.

You are in the process of developing a .NET Framework 2.0 resource management utility and you write the code below as part of your program:

```
Dim dirInfo As DirectoryInfo = Bill DirectoryInfo("c:\Test1")  
dirInfo.MoveTo("c:\Bill2")
```

Both of the required folders exist when you run the application and the code has the required permissions to work with c:\Test1 and c:\Bill2. You are required to select the outcome when you execute your application.

What should you do?

- A. The c:\Test1 directory will be moved within the c:\Bill2 to become c:\Bill2\Test1
- B. The c:\Test1 directory will be renamed to c:\Bill2
- C. An ArgumentException will be thrown by the code
- D. An IOException will be thrown by the code

Answer: D

Explanation: In the scenario the target directory already exists therefore the

method in question will throw an IOException as it wants to create the folder.

Incorrect Answers:

A: This will not be the outcome of the situation you should have specified c:\Bill2\Test1 as the target directory then this would be correct.

B: The Directory will only be renamed if the target does not exist in the scenario the targets exists.

C: This will only be thrown if in the event the target directory is an empty string.

QUESTION 302

You work as the application developer at Certkiller .com. The Certkiller .com network consists of a single Active Directory domain named Certkiller .com. All servers on the Certkiller .com network run Windows Server 2003 and all client computers run Windows XP Professional. You make use of Visual Studio 2005 for creating the applications.

You are in the process of developing a .NET Framework 2.0 financial application and are busy developing a module that backs up the critical data on a separate hard drive. You are required to decide which properties of the DriveInfo class to use and find the type of file system like FAT or NTFS and the drive free space and the user disk quota should be ignored by the application.

What should you do? (Choose two)

- A. DriveFormat
- B. TotalFreeSpace
- C. AvailableFreeSpace
- D. DriveType
- E. VolumeLabel
- F. TotalSize

Answer: A, B

Explanation: The only choice that would work with your requirement is the DriveFormat and TotalFreeSpace properties of the DriveInfo class, this will display what you need.

Incorrect Answers:

C: The property should not be used as the user disk quota would be taken into account.

D: This property should not be used as it only specifies whether the drive is a DVD ROM or fixed drive etc.

E: This property should not be used in the scenario as it is used to give a name to the fixed disk.

F: This property should not be used as it will specify the entire disk space not just free space.

QUESTION 303

You work as the application developer at Certkiller .com. The Certkiller .com network consists of a single Active Directory domain named Certkiller .com. All servers on the Certkiller .com network run Windows Server 2003 and all client computers run

Windows XP Professional. You make use of Visual Studio 2005 for creating the applications.

You are in the process of developing a .NET Framework 2.0 resource management utility that will be used to monitor for the creation of a file with the .res extension in c:\Test1. When such a file is created you will execute code to read and process its contents. You are required to write the code that enables you to monitor the creation of the .res file.

What should you do? (Choose two)

- A. Dim watcher As FileSystemWatcher = Test FileSystemWatcher()
watcher.path = "c:\Test1"
watcher.Filter = "*.res"
- B. Watcher.WaitForChanged(WatcherChangeTypes.Created)
- C. watcher.NotifyFilter = NotifyFilters.CreationTime
- D. watcher.EnableRaisingEvents = True
- E. Dim watcher As FileSystemWatcher = Test FileSystemWatcher()
watcher.Filter = c:\Test1*.res"

Answer: A, B

Explanation: The first step will be to create the FileSystemWatcher object and set its path and filter properties and finally the WaitForChanged method should be invoked in the scenario this will let you achieve your objective.

Incorrect Answers:

- C: This method should not be used in the scenario as it is used to specify which of the notification events are invoked in the scenario when a file is changed.
- D: This property should only be created when you have coded event handlers in the scenario that is the only time this method would be use full.
- E: This method should not ever be considered for use in the scenario because the filter property is used to specify the file pattern only the path should not be included there.

QUESTION 304

You work as the application developer at Certkiller .com. The Certkiller .com network consists of a single Active Directory domain named Certkiller .com. All servers on the Certkiller .com network run Windows Server 2003 and all client computers run Windows XP Professional. You make use of Visual Studio 2005 for creating the applications.

You are in the process of developing a .NET Framework 2.0 data analysis application. You have no information about the inherent structure of a file when it is supplied to the program for reading data. You are required to read the contents of the file byte-by-byte and make use of a custom algorithm to find its format whilst selecting a class that allows you to read the files contents byte-by-byte.

What should you do?

- A. FileStream
- B. BinaryReader

- C. StreamReader
- D. StringReader

Answer: A

Explanation: The purpose and function of the FileStream class is to allow the user to be able to view the required files byte-by-byte.

Incorrect Answers:

B: The BinaryReader class is use full if you know the binary format for the data to read but should not be considered for use in the scenario.

C: This method is use full if you want to read character data in a particular encoding, but is not useful for reading any other data.

D: This class is used for reading text from a string and is not use full for reading any other data.

QUESTION 305

You work as the application developer at Certkiller .com. The Certkiller .com network consists of a single Active Directory domain named Certkiller .com. All servers on the Certkiller .com network run Windows Server 2003 and all client computers run Windows XP Professional. You make use of Visual Studio 2005 for creating the applications.

You are in the process of developing a .NET Framework 2.0 text-processing application and you have access to an array of bytes named BillArray that contains your data. You are busy writing code that will be used to write the contents of the array to a disk file. If you are done with the write operation you also display the contents of the stream on the console to make sure that the write operation completes successfully. The code segment to read and write from the stream is shown below and the line numbers are reference only:

```
01: Using fs As FileStream = Test FileStream("TestFile.txt",  
    FileMode.Create)  
02: For I As Integer = 0 To BillArray.Length  
03: fs.WriteByte(BillArray(i))  
04: Next i  
05: 'Code to be added here  
06: For I As Integer = 0 To fs.Length  
07 Console.WriteLine(fs.ReadByte())  
08: Next i  
09: End Using
```

You are required to insert the required code at line 05 to correctly print the contents of the stream.

What should you do?

- A. Fs.Seek(0, SeekOrigin.End)
- B. Fs.Position = fs.Length
- C. Fs.Seek(0, SeekOrigin.Current)
- D. Fs.Seek(0, SeekOrigin.Begin)

Answer: D

Explanation: Because after every write operation is completed you need to reposition the stream so that you can read the contents from the beginning which is done with the statement in the answer, the first parameter will specify the offset, the second the reference point for the seek operation and the value `SeekOrigin.Begin` indicates that the reader should be positioned at the beginning of the stream.

Incorrect Answers:

A, C: The method in the statement is incorrect because you are referencing the end or the current part of the stream which you are trying to manipulate.

B: This statement should not be used because it sets the current position of the stream to its length effectively referencing the end of the stream.

QUESTION 306

You work as the application developer at Certkiller .com. The Certkiller .com network consists of a single Active Directory domain named Certkiller .com. All servers on the Certkiller .com network run Windows Server 2003 and all client computers run Windows XP Professional. You make use of Visual Studio 2005 for creating the applications.

You are in the process of developing a .NET Framework 2.0 banking Windows Forms application and are busy working on a function that retrieves the images of cancelled checks and displays them on the form. You currently have access to a method that reads the images from Microsoft SQL server as a series of bytes. You are required to select a class that allows you to transfer the image from SQL Server to the Windows Forms application whilst your solution reduces the need of a temporary buffers and files

What should you do?

- A. `MemoryStream`
- B. `NetworkStream`
- C. `FileStream`
- D. `BufferedStream`

Answer: A

Explanation: With the given scenario objective you should use the `MemoryStream` class which allows you to read the image data in memory and stream it to a Windows Forms application without creating any temporary buffers or files.

Incorrect Answers:

B: There is no connection established directly to the SQL Server database so using this option is out of the question.

C, D: The streaming class in question in this option is incorrect because both require the creation of temporary files or buffers.

QUESTION 307

You work as the application developer at Certkiller .com. The Certkiller .com network consists of a single Active Directory domain named Certkiller .com. All servers on the Certkiller .com network run Windows Server 2003 and all client computers run Windows XP Professional. You make use of Visual Studio 2005 for creating the applications.

You are in the process of developing a .NET Framework 2.0 text manipulation application and you make use of the code below in your application:

```
Dim tb As StringBuilder = Test StringBuilder(":string:")  
Dim b() As Char = {"a"c,"b"c, "c"c, "d"c, "e"c, "f"c, "g"c}  
Dim tw As StringWriter = New StringWriter(tb)  
tw.Write(b, 0, 3)  
Console.WriteLine(tb)  
tw.Close()
```

You are required to select from the following what the output will be when you execute the application.

What should you do?

- A. :stabcdefg
- B. abc:string:
- C. abcring:
- D. :string:abc

Answer: D

Explanation: Since the specific overload of the Write method takes character array and reads three characters starting from the index 0 and appends them to the underlying StringBuilder object this is the proper choice in the scenario.

Incorrect Answers:

A, C: Both of the streams are incorrect and should not be used because the StringWriter is sequential and will not go back and overwrite the characters that already exist in the underlying StringBuilder object.

B: This is the incorrect response because the characters will append to the end of the underlying StringBuilder object in the scenario.

QUESTION 308

You work as the application developer at Certkiller .com. The Certkiller .com network consists of a single Active Directory domain named Certkiller .com. All servers on the Certkiller .com network run Windows Server 2003 and all client computers run Windows XP Professional. You make use of Visual Studio 2005 for creating the applications.

You are in the process of developing a .NET Framework 2.0 graphical analysis application. You are about to save a graphical object from the application which is a collection of x and y points, each represented by using a single precision floating point number. You are required to keep the disk space usage to a minimum by the saved object.

What should you do?

- A. TextWriter
- B. StreamWriter
- C. StringWriter
- D. BinaryWriter

Answer: D

Explanation: The BinaryWriter class is used to store data in a binary format, which is used to provide the most compact format for storing data among the given classes.

Incorrect Answers:

A, B, C: The classes in question all save or store data in the text format, which will require more space than the binary format and therefore should not be used in the scenario.

QUESTION 309

You work as the application developer at Certkiller .com. The Certkiller .com network consists of a single Active Directory domain named Certkiller .com. All servers on the Certkiller .com network run Windows Server 2003 and all client computers run Windows XP Professional. You make use of Visual Studio 2005 for creating the applications.

You are in the process of developing a .NET Framework 2.0 Windows application that uses a shared assembly personalizing the user interface of the application. The assembly in question is used by several other applications on the user's computer and any changes made to the user preferences in one application should be carried over to other applications. You are required to access the user's preferences for displaying the user interface.

What should you do?

- A. The IsolatedStorageFile.GetUserStoreForDomain method should be used
- B. The IsolatedStorageFile.GetMachineStoreForDomain method should be used
- C. The IsolatedStorageFile.GetMachineStoreForAssembly method should be used
- D. The IsolatedStorageFile.GetUserStoreForAssembly method should be used

Answer: D

Explanation: To successfully read the user's preferences you should make use of the IsolatedStorageFile.GetUserStoreForAssembly method should be used. The method retrieves assembly-specific and user-specific data from the isolated storage.

Incorrect Answers:

A: This method should not be used in the scenario as it is designed too retrieve isolated storage that is application domain and assembly specific.

B, C: The settings in question should not be used because the methods are machine-scoped rather than user scoped.

Topic 26, VB, Improving the security of the .NET Framework applications by using the .NET Framework 2.0 security features(16 Questions)

QUESTION 310

You work as the application developer at Certkiller .com. The Certkiller .com network consists of a single Active Directory domain named Certkiller .com. All servers on the Certkiller .com network run Windows Server 2003 and all client computers run Windows XP Professional. You make use of Visual Studio 2005 for creating the applications.

You are in the process of developing a .NET Framework 2.0 application on a workstation used as collateral and you write the following code in the application line numbers are for reference only:

```
01: Public Function Proc Count() As Integer
02: Dim envPerm As EnvironmentPermission = _
03: New EnvironmentPermission(_
04: EnvironmentPermissionAccess.Read,_
05: "NUMBER_OF_PROCESSORS")
06:
07: Return Environment.ProcessorCount
08: End Function
```

The ProcCount method in the code will be used to return the number of processors on the computer running the code and the implementation of the method is completely transparent to the callers of the methods. You ensured that the ProcCount method has been granted permission to access environment variables and the callers to the code may not have permission to access the variables.

The classes in the other assemblies are required to be able to successfully call the ProcCount method. You must additionally write code at line 06 to override the security check whilst you ensure that any code you write does not affect the permissions that your code already has.

What should you do?

- A. envPerm.PermitOnly()
- B. envPerm.Demand()
- C. encPerm.Deny()
- D. envPerm.Assert()

Answer: D

Explanation: The envPerm.Assert() method should be used in the scenario because the method allows your code and any code that you call to perform actions that your code has permissions to perform however the callers may not have permissions to perform.

Incorrect Answers:

A: The PermitOnly method should not be used in the scenario because it will result to the same action as calling Deny on all permissions other than the permission P and this will

affect other permissions.

B: This method should not be considered for use in the scenario because the Demand method requires all the callers to have permissions to perform the specific action.

C: The Deny method should not be considered for usage in the scenario because the method will explicitly cause the Permission P to be denied and you are required to ensure permissions are applied to the code.

QUESTION 311

You work as an application developer at Certkiller .com. A fellow developer named Amy Walsh recently created an assembly that implements a custom permission set. Certkiller .com has asked you to test this assembly. You start by copying the assembly to a test server named Certkiller -SR15 that has the Microsoft .NET 2.0 Framework installed. You then log on to the Certkiller -SR15 as a member of the local Administrators Windows group.

You run the assembly, and receive a security exception. You perform a brief analysis of the security issues involved, and find that the assembly has not been assigned the appropriate permissions to run.

You need to ensure that this assembly runs.

What should you do?

- A. Use the permview.exe tool to modify the assembly's granted permissions.
- B. Use the sn.exe tool to modify the assembly's granted permissions.
- C. Use the caspol.exe tool to modify the assembly's granted permissions.
- D. Use the gacutil.exe tool to modify the assembly's granted permissions.

Answer: C

Explanation: The caspol.exe command-line tool allows users to modify security permissions, permission sets, and code groups for an assembly at the machine, user, and enterprise policy levels.

Incorrect Answers:

A: The permview.exe tool only allows users to view declarative security of an assembly.

B: The sn.exe tool allows developers to create a strong-named asymmetric key pair for strong-named assemblies.

D: The gacutil.exe tool allows users to manage the contents of the global assembly and download cache.

QUESTION 312

You work as an application developer at Certkiller .com. Certkiller .com has a test server named Certkiller -SR09 that is frequently used by other Certkiller .com developers to test assemblies and applied security policies.

You have just completed creating an assembly and want to test it on Certkiller -SR09. You need to ensure that all security policies on Certkiller -SR09 are reset to their default settings.

What should you do?

- A. Execute the caspol all -rollback command.
- B. Execute the caspol all -reset command.
- C. Execute the machine all -rollback command.
- D. Execute the machine all -reset command.

Answer: B

Explanation: The caspol.exe command-line tool allows users to modify security permissions, permission sets, and code groups for an assembly at the machine, user, and enterprise policy levels. The reset switch will set the specified security policy or policies back to their default state. The all switch refers to machine, user, and enterprise policy levels.

Incorrect Answers:

- A, C: The rollback switch does not exist for the caspol.exe tool.
- D: This option will not set all security policies back to their default state.

QUESTION 313

You work as the application developer at Certkiller .com. The Certkiller .com network consists of a single Active Directory domain named Certkiller .com. All servers on the Certkiller .com network run Windows Server 2003 and all client computers run Windows XP Professional. You make use of Visual Studio 2005 for creating the applications.

You are in the process of developing a .NET Framework 2.0 application and are about to examine the code groups in machine, user, and enterprise policies. The user security policy file is located in c:\test\Bill\config\ Certkiller Security.config and belongs to a user other than the currently logged on user.

You are required to use code access security policy tool to inspect the security policy and need the required command.

What should you do?

- A. caspol -customall -resolvegroup "c:\test\Bill\config\ Certkiller Security.config"
- B. caspol -customer "c:\test\Bill\config\ Certkiller Security.config" -listgroups
- C. caspol -customer -resolvegroup "c:\test\Bill\config\ Certkiller Security.config"
- D. caspol -customall "c:\test\Bill\config\ Certkiller Security.config" -listgroups

Answer: D

Explanation: Since the -customall option is used to specify that the command applies to the enterprise, machine and custom user policy stored in the "c:\test\Bill\config\ Certkiller Security.config" file making this the correct option to use in the scenario. The -listgroup option is used to specify the code groups in the specified policies that need to be listed.

Incorrect Answers:

- A, C: The usage of the -resolvegroup option in the scenario is incorrect because the -resolvegroup option is used to show the code groups that the specified user belongs to.

B: The option in question in this answer should not be used in the scenario because the option is used to specify only the code groups of the specified user policy.

QUESTION 314

You work as the application developer at Certkiller .com. The Certkiller .com network consists of a single Active Directory domain named Certkiller .com. All servers on the Certkiller .com network run Windows Server 2003 and all client computers run Windows XP Professional. You make use of Visual Studio 2005 for creating the applications.

You are in the process of developing a .NET Framework 2.0 application on a workstation used as collateral and you create an assembly that implements a custom security object. The assembly resides in the CusPerm.exe file, CusPerm.exe references the classes in the BasePerm.exe assembly. You are required to write a script that will be used to add the assembly to the full trust assembly list of the currently logged on user whilst the user will never have write access to the machine policy file.

What should you do? (Choose two)

- A. caspol -addfulltrust CusPerm.exe
- B. caspol -addfulltrust BasePerm.exe
- C. caspol -enterprise -addfulltrust BasePerm.exe
- D. caspol -enterprise - addfulltrust CusPerm.exe
- E. caspol -machine - addfulltrust BasePerm.exe
- F. caspol -machine - addfulltrust CusPerm.exe

Answer: A, B

Explanation: The caspol.exe tool is used to allow you to modify the code access security policy at the user level, machine level as well as the enterprise level and using the -addfulltrust option adds an assembly that implements a custom security object to a list of fully trusted assemblies.

Incorrect Answers:

C, D, E, F: In the event that there is no policy level specified the caspol.exe tool checks if the user has write permission to the machine policy file if so the machine level security policy will be used other wise the user-level policy will be used.

QUESTION 315

You work as the application developer at Certkiller .com. The Certkiller .com network consists of a single Active Directory domain named Certkiller .com. All servers on the Certkiller .com network run Windows Server 2003 and all client computers run Windows XP Professional. You make use of Visual Studio 2005 for creating the applications.

You are in the process of developing a .NET Framework 2.0 application on a workstation used as collateral and you must add a new code group which adds FullTrust permissions to the code originating from www. Certkiller .com. You are required to use the code access security policy tool (Caspol.exe to add the code

group whilst you ensure that you only affect the user level policy for the user running Caspol.exe
What should you do?

- A. Caspol -user -addgroup -site www. Certkiller .com FullTrust
- B. Caspol -user -addgroup -zone Internet
- C. Caspol -user -addgroup -url www. Certkiller .com FullTrust
- D. Caspol -user -addgroup -pub - cert test.cer FullTrust

Answer: A

Explanation: The correct thing to do in the scenario would be to make use of the segment that used -user to specify only the user level policy, the -addgroup argument to add a new code group to the code hierarchy and the -site argument that targets code that originated only from www. Certkiller .com.

Incorrect Answers:

B: This method should not be used in the scenario because it is used to simply add a new code group that is a member of the Internet Zone.

C: This command should not be used in the scenario because it should be used to specify a complete url including the protocol like http"// etc.

D: The command should not be used in the scenario as the method does not specify a Web site and the -pub argument is used to identify the software publisher.

QUESTION 316

You work as an application developer at Certkiller .com. Certkiller .com has been contracted by a local doctor's clinic to develop a client application using Microsoft .NET 2.0 that sends patient visit information to a remote server at the clinic's main office.

This data must be transmitted via a secure network stream because it contains patient protected health information (PHI). The data will be sent from a windows application client on the doctor's notebook computer to a windows service hosted on a remote server. Both of these applications employ a certificate store for network identification.

You need to create a secure data stream by adding certain classes to the client application.

What classes should you add? (Choose three)

- A. The MD5CryptoServiceProvider class.
- B. The X509Certificate class.
- C. The NetworkStream class.
- D. The SslStream class.
- E. The TcpListener class.
- F. The TcpClient class.

Answer: B, D, F

Explanation: You should use the X509Certificate class to store the server certificate and encrypt data, the SslStream class to create a secure channel, and the TcpClient class to establish the connection with the server application.

Incorrect Answers:

A: Using this option would only hash the data using the MD5 algorithm.

C: Using this option would not necessarily create a secure channel.

E: This class is used by the server application.

QUESTION 317

You work as the application developer at Certkiller .com. The Certkiller .com network consists of a single Active Directory domain named Certkiller .com. All servers on the Certkiller .com network run Windows Server 2003 and all client computers run Windows XP Professional. You make use of Visual Studio 2005 for creating the applications.

You are in the process of developing a .NET Framework 2.0 application that will be used for transmitting contents over the Internet and you need to encrypt a data file before transmitting the file. The encryption is required to prevent any spoofing of the identity of the publisher of the data file. You decide to sign the data using the publisher's private key and you encrypt the data with the publisher's public key as well.

The receiver of the file will use a private key that only he knows to decrypt the data and the receiver has access to the publisher's public key also. The intended receiver of the file should be able to decrypt the encrypted file after it was received through the Internet transmission whilst the receiver should additionally be able to detect if the contents of the data file were tampered with.

What should you do?

- A. The RSACryptoServiceProvider class should be used in the scenario
- B. The RijndaeManaged class should be used in the scenario
- C. The SHA1CryptoServiceProvider class should be used in the scenario
- D. The SHA1Managed class should be used in the scenario

Answer: A

Explanation: Since the RSACryptoServiceProvider class implements an asymmetric cryptography algorithm that makes use of a set of related keys to encrypt and decrypt data this class is the correct choice in the scenario.

Incorrect Answers:

B: This class should not be used in the scenario because the RijndaeManaged class implements a symmetric cryptography algorithm that uses a single shared secret key for encrypting and decrypting data.

C, D: The classes in these two options should not be used in the scenario because the classes both implement a hash algorithm that can be used to detect tampering but they can not be used to establish the identity of the data file's publisher.

QUESTION 318

You work as the application developer at Certkiller .com. The Certkiller .com network consists of a single Active Directory domain named Certkiller .com. All servers on the Certkiller .com network run Windows Server 2003 and all client computers run Windows XP Professional. You make use of Visual Studio 2005 for creating the applications.

You are in the process of developing a .NET Framework 2.0 application and are busy creating a default instance of the Rijndael symmetric algorithm class and configure it with a key that is generated from a password. The following code you wrote, line numbers are for reference only:

```
01: Dim val1 As Double = 0
02: Dim salt(16) As Byte
03: Dim passDerBytes As PasswordDeriveBytes = Test
    PasswordDeriveBytes(password, salt)
04: Dim key As Byte() = passDerBytes.GetBytes(16)
05: Dim cryptoRij As = Rijndael.Create()
06: cryptorij.Key = key
```

The variable that is named salt acts as a seed to the key derivation algorithm and you are required to insert additional code before line 03 that stores a random number in the salt variable.

What should you do?

- A. Dim rNum As RandomNumberGenerator = RandomNumberGenerator.Create()
rNum.GetBytes(salt)
- B. Dim guid as Guid = Test Guid()
salt = guid.ToArray()
- C. Dim enc as Encoding = New ASCIIEncoding()
salt = enc.GetBytes(DateTime.Now.ToString())
- D. Dim rNum as Random = Test Random()
rNum.NextBytes(salt)

Answer: A

Explanation: The correct thing to do in the scenario at hand would be for you to use the code segment RandomNumberGenerator class as it represents a cryptographically secure random number.

Incorrect Answers:

B: The Guid method should not be considered for use in the scenario as this is only use full for creating a unique number that will be use full for computer, network and component identification.

C: The Date and time should not ever be considered as an instance because that would be a very predictable number.

D: The class should never be considered for use because the Random class generates pseudo random numbers that may be repeatable or predictable.

QUESTION 319

You work as the application developer at Certkiller .com. The Certkiller .com network consists of a single Active Directory domain named Certkiller .com. All servers on the Certkiller .com network run Windows Server 2003 and all client computers run Windows XP Professional. You make use of Visual Studio 2005 for creating the applications.

You are in the process of developing a .NET Framework 2.0 Windows application on a workstation named Certkiller -WS12 which is used as collateral and you write the following code in the application:

```
Dim testplain As Byte()
```

The byte array testplain contains the data that needs to be protected and the length of the data stored in the byte array is always a multiple of 16. You want only the threads running under the current user context to be able to unprotect the data whilst the protected data will be stored in a different byte array. The original contents from the testplain byte array must remain unmodified. You are required to select which code segment to use if the application will be executed on computers running Windows XP Professional.

What should you do?

- A. Use ProtectedMemory.Protect(testplain, MemoryProtectionScope.SameLogon)
- B. Use ProtectedMemory.Protect(testplain, Nothing, DataProtectionScope.LocalMachine)
- C. Use ProtectedMemory.Protect(testplain, MemoryProtectionScope.SameProcess)
- D. Use ProtectedData.Protect(testplain, Nothing, DataProtectionScope.CurrentUser)

Answer: D

Explanation: The ProtectedData.Protect method is used to return a protected copy of the data in the testplain byte array whilst the content of the byte array remains unaffected making this the correct option to use in the scenario.

Incorrect Answers:

A, C: The methods in the option should not be used in the scenario because this method is used to store the protected data in the original copy of the byte array and the original array should remain unaffected.

B: The usage of this method is incorrect as you will allow any process running on the local computer to be able to unprotect the data.

QUESTION 320

You work as the application developer at Certkiller .com. The Certkiller .com network consists of a single Active Directory domain named Certkiller .com. All servers on the Certkiller .com network run Windows Server 2003 and all client computers run Windows XP Professional. You make use of Visual Studio 2005 for creating the applications.

You are in the process of developing a .NET Framework 2.0 application on a workstation used as collateral, the application will be used to send data over the internet. You are required to ensure that the sent data is not modified or tampered with during transmission, the secrecy of the data transmission is not considered

important.

You recently decided to implement a hash value for the data by using a secret key and transmit the data along with the hash value. The receiver of the data should be able to detect whether the data or the hash value has been modified whilst the receiver should have access to the secret key that was used for computing the hash value. You must additionally ensure that a key sequence of 160 bits should be acceptable.

What should you do?

- A. The DESCryptoServiceProvider class should be used to encode the data prior to transmission
- B. The HMACMD5 class should be used to encode the data prior to transmission
- C. The MACTripleDES class should be used to encode the data prior to transmission
- D. The HMACSHA1 class should be used to encode the data prior to transmission

Answer: D

Explanation: The SHA1 has function is used by the HMACSHA1 class to compute a Has-based Message Authentication Code (HMAC) and additionally HMAC can be used to check if a message has been modified during the transmission.

Incorrect Answers:

- A: The class should not be considered for use in the scenario because the class is used to encode the data to protect and maintain its secrecy.
- B: The class should not be used because the scenario requires a hash sequence of 160 bits and the class only provides a hash sequence of 128 bits.
- C: The class should never be considered for use in the scenario because the class uses a secret key of length 16 or 24 bytes whilst producing a hash sequence of 8 bytes.

QUESTION 321

You work as the application developer at Certkiller .com. The Certkiller .com network consists of a single Active Directory domain named Certkiller .com. All servers on the Certkiller .com network run Windows Server 2003 and all client computers run Windows XP Professional. You make use of Visual Studio 2005 for creating the applications.

You are in the process of developing a .NET Framework 2.0 Windows application that will be used to allow users to download video files to the local hard drive. The application will require permissions for file input and output operations in order to execute, if no permissions are available for input or output operations the program should not execute whilst you ensure the application is secure.

What should you do?

- A. The following attribute should be applied at the assembly level:
<Assembly: FileIOPermission(SecurityAction.RequestOptional, Unrestricted:=True)>
- B. The following attribute should be applied at the class level:
<FileIOPermission(SecurityAction.Assert, Unrestricted:=True)>
- C. The following attribute should be applied at the class level:

<FileIOPermission(SecurityAction.Demand, Unrestricted:=True)>

D. The following attribute should be applied at the assembly level:

<Assembly: FileIOPermission(SecurityAction.RequestRefuse, Unrestricted:=True)>

E. The following attribute should be applied at the assembly level:

<Assembly: FileIOPermission(SecurityAction.RequestMinimum, Unrestricted:=True)>

Answer: E

Explanation: The best choice seems to be requesting the minimum permissions that the application requires to perform the operations it was intended to perform in the scenario which is to download video files to the local hard drive.

Incorrect Answers:

A: The option in question specifies that the permissions required by the application are optional and should not be used in the scenario.

B C: The security in the scenario is required at the application level and this attributes should not be applied at the class level in the scenario.

D: This option should not be used as this will specify that the application be refused the required permissions to perform the required operations.

QUESTION 322

You work as the application developer at Certkiller .com. The Certkiller .com network consists of a single Active Directory domain named Certkiller .com. All servers on the Certkiller .com network run Windows Server 2003 and all client computers run Windows XP Professional. You make use of Visual Studio 2005 for creating the applications.

You are in the process of developing a .NET Framework 2.0 application on a workstation used as collateral and you create a class named Certkiller DataAccess and you must configure the Certkiller DataAccess class to disallow access to the c:\test\Bill\cfg.dat file and you also want to restrict the access to c:\test\Bill\cfg.dat through a Universal Naming Convention (UNC) path or a mapped drive letter path. You are required additionally to be able to access all other files on the c: drive of the computer running the program

What should you do? (Choose two)

A. <FileIOPermissionAttribute(SecurityAction.RequestOptional, All:="C:\test\Bill\cfg.dat")>

B. <FileIOPermissionAttribute(SecurityAction.RequestRefuse, All:="C:\test\Bill\cfg.dat")>

C. <FileIOPermissionAttribute(SecurityAction.Demand, All:="C:\")>

D. <FileIOPermissionAttribute(SecurityAction.RequestMinimum, All:="C:\")>

E. <FileIOPermissionAttribute(SecurityAction.Deny, All:="C:\test\Bill\cfg.dat")>

F. <FileIOPermissionAttribute (SecurityAction.PermitOnly, All:="C:\")>

Answer: E F

Explanation: The correct option in the scenario applies permissions only to the specified pathname so if the file is access using a different path such as

\\Worstation1\C\$\test\Bill\cfg.dat or by mapping a drive the permissions do not apply.

Incorrect Answers:

A, B, C, D: It is possible to use a combination of PermitOnly and deny to deny access to specific resources as in the above segment the first line uses SecurityAction.PermitOnly to specify access permissions are only available for path names starting c:\.

QUESTION 323

You work as the application developer at Certkiller .com. The Certkiller .com network consists of a single Active Directory domain named Certkiller .com. All servers on the Certkiller .com network run Windows Server 2003 and all client computers run Windows XP Professional. You make use of Visual Studio 2005 for creating the applications.

You are in the process of developing a .NET Framework 2.0 assembly using the code shown below:

```
Public NotInheritable Class UtilProc
Public Sub DoWork()
'Additional code to go here
End Sub
End Class
```

The code is capable of being called by a Web application or Web service. You are required to restrict the assemblies that are capable of calling the DoWork method so only assemblies signed with a specific public key should be able to call the DoWork method.

What should you do?

- A. SecurityAction.LinkDemand should be passed as a parameter to the attribute
- B. The StrongNameIdentityPermission attribute should be applied to the DoWork method
- C. SecurityAction.InheritanceDemand should be passed as a parameter to the attribute
- D. The SecurityAction.Demand should be passed as a parameter to the attribute
- E. The GacIdentityPermission should be applied to the DoWork method
- F. The KeyContainerPermission should be applied to the DoWork method

Answer: A, B

Explanation: By using the StrongNameIdentityPermission attribute you effectively ensure that only the assemblies that have been signed by a specific public key are capable of calling the DoWork method in the scenario, the SecurityAction.LinkDemand value further ensures that only the immediate caller is authorized.

Incorrect Answers:

- C: This method should be used if you want to limit the scope of the attribute to only inheriting classes and the class is declared NotInheritable.
- D: This should not be used because you would be forcing everything in the call stack to be signed using the same public key and you can not sign dynamically created assemblies.
- E: This option should not be considered for usage as you will ensure that calling code

should originate from the global assembly cache (GAC).

F: This method should not be used in the scenario because this method is used to control access to specific key containers.

QUESTION 324

You work as the application developer at Certkiller .com. The Certkiller .com network consists of a single Active Directory domain named Certkiller .com. All servers on the Certkiller .com network run Windows Server 2003 and all client computers run Windows XP Professional. You make use of Visual Studio 2005 for creating the applications.

You are in the process of developing a .NET Framework 2.0 application on a workstation used as collateral and you write the class named TestScrapData and you are required to configure the TestScrapData class and limit its access to only the code originating from a specific Web site, www. Certkiller .com and it's subdomains.

The Web sites will be required to be access using HTTP, HTTPS and the FTP protocols. You are required to additionally configure code access permissions for the TestScrapData class

What should you do?

- A. The SiteIdentityPermission class should be used in the scenario
- B. The PublisherIdentityPermission class should be used in the scenario
- C. The ZoneIdentityPermission class should be used in the scenario
- D. The UrlIdentityPermission class should be used in the scenario

Answer: A

Explanation: To successfully achieve your scenario objective you must use the SiteIdentityPermission class to configure code access permissions for the callers from a specific Web site.

Incorrect Answers:

B: This class should not be used as it is designed for usage to configure permissions based on the identity of the software publisher.

C: This class should not be used because it is used to configure code access permissions for the zone where the code originates and the Internet zone may contain to many Web-sites.

D: This class should not be considered for use as it is used to configure access permissions for a Uniform Resource Locator (URL).

QUESTION 325

You work as the application developer at Certkiller .com. The Certkiller .com network consists of a single Active Directory domain named Certkiller .com. All servers on the Certkiller .com network run Windows Server 2003 and all client computers run Windows XP Professional. You make use of Visual Studio 2005 for creating the applications.

You are in the process of developing a .NET Framework 2.0 application that will be

deployed throughout the network on all workstations which are all networked as part of a Microsoft Windows domain. The application you wrote requires certain permissions in order to run. As the domain administrator you configure the enterprise policy to grant the required permissions to the application which may be part of one or more code group.

You must ensure that your application receives the sufficient permissions to run at all times whilst you override any policy changes made by the end users that lower the permissions required by the application to run.

What should you do?

- A. The LevelFinal attribute should be applied to the application's code group on the enterprise policy level
- B. The Exclusive attribute should be applied to the application's code group on the user policy level
- C. The LevelFinal attribute should be applied to the application's code group on the user policy level
- D. The Exclusive attribute should be applied to the application's code group on the enterprise policy level

Answer: A

Explanation: The FinalLevel attribute should be applied in the scenario to the application's code group on the enterprise level as this is the highest level of policy.

Incorrect Answers:

B, D: The Exclusive attribute should not be considered in the scenario for usage as the runtime will never grant permissions associated with the code group marked with the Exclusive attribute.

C: This should not be done as you would enable the end users the capability of changing or altering security settings that will restrict the applications execution.

QUESTION 326

You work as an application developer at Certkiller .com. You are currently creating an application that requires role-based security. You are planning to utilize a database to store the user accounts and group membership data.

You need to ensure that users are able to log on and off. You also need to ensure that the application you have created tracks the user accounts of these users, and restrict or allow access to code based on their group membership. You need to achieve this objective with as little developer effort as possible.

What should you do to implement role-based security?

- A. Inherit from the GenericIdentity and GenericPrincipal classes.
- B. Make use of GenericIdentity and GenericPrincipal objects.
- C. Implement the IIdentity and IPrincipal interfaces.
- D. Make use of WindowsIdentity and WindowsPrincipal objects.

Answer: B

Explanation: in this scenario, the GenericIdentity and GenericPrincipal objects could be implemented as follows:

```
GenericIdentity curIdentity = new GenericIdentity ("CurrentUser");
```

```
string [] roles = { "Users", "Administrators" };
```

```
thread.CurrentPrincipal = GenericPrincipal (curIdentity, roles);
```

This code instantiates a GenericIdentity object based upon a user name as a string object, instantiates a string array representing the roles to which that user belongs, instantiates a GenericPrincipal object specifying the GenericIdentity object and string array of roles as arguments, and assigns the new GenericPrincipal object to the CurrentPrincipal property of the current thread. By assigning the new principal to the CurrentPrincipal property of the current thread, role membership checks can be performed using the IsInRole method

Incorrect Answers:

A, C: These options require more developer effort than necessary.

D: The WindowsIdentity and WindowsPrincipal classes are intended for use with windows domain stored accounts and groups only.

QUESTION 327

You work as the application developer at Certkiller .com. The Certkiller .com network consists of a single Active Directory domain named Certkiller .com. All servers on the Certkiller .com network run Windows Server 2003 and all client computers run Windows XP Professional. You make use of Visual Studio 2005 for creating the applications.

You are in the process of developing a .NET Framework 2.0 application on a workstation used as collateral and you write the following code in the application, line numbers are for reference:

```
01: Dim ts As FileSecurity =
```

```
File.GetAccessControl("c:\Bill\root\config.crn")
```

```
02: Dim ownerName As String = String.Empty
```

```
03: Console.WriteLine("Owner name: {0}", ownerName)
```

You are required to write additional code before line 03 that will be used to allow you to print a user-friendly owner name of the c:\Bill\root\config.crn.

What should you do?

A. Dim sid As SecurityIdentifier = ts.GetGroup(GetTyp(SecurityIdentifier))
ownerName = sid.Value

B. Dim sid As SecurityIdentifier = ts.GetOwner(GetType(SecurityIdentifier))
ownerName = sid.Value

C. Dim acc As NTAccount = ts.GetGroup(GetType(NTAccount))
ownerName = acc.Value

D. Dimm acc As NTAccount = ts.GetOwner(GetType(NTAccount))
ownerName = acc.Value

Answer: D

Explanation: Since the GetOwner method of the FileSecurity class gets the owner

associated with the given file and the Value property of the NTAccount class represents a user-friendly owner name this particular code segment should be used.

Incorrect Answers:

A, B: In the scenario you are required to get the file owner instead of the primary group to which the owner belong and there for you should not use the two GetGroup method code segments.

C: The Value of the security identifier class provides a long string containing the security identifier corresponding to the windows account.

Topic 27, VB, Implementing interoperability, reflection, and mailing functionality in a .NET Framework application (108 Questions)

QUESTION 328

You work as the application developer at Certkiller .com. The Certkiller .com network consists of a single Active Directory domain named Certkiller .com. All servers on the Certkiller .com network run Windows Server 2003 and all client computers run Windows XP Professional. You make use of Visual Studio 2005 for creating the applications.

You are in the process of developing a .NET Framework 2.0 application on a workstation that is used as collateral and you write the code shown below:

```
Public Class Shape
Private shapeName As String
Public Sub Shape(ByVal shapeName As String)
Test.shapeName = shapeName
End Sub
Public Overridable Function GetName() As String
Return shapeName
End Function
Private Sub DrawShape()
'Add additional code
End Sub
End Class
```

You later decide to have the application compiled and registered for COM interoperability. The other developers on your team complain that they are unable to create an instance of the Shape class in their COM applications. You are required to ensure that COM applications are able to create an instance of the Shape class. What should you do?

A. The following code should be added to the Shape class:

```
Public Sub New()
End Sub
```

B. The following ComVisible attribute to the Shape class:

```
<ComVisible(True)>
```

C. The definition of the GetName method should be modified as below:

```
Public Function GetName() As String
```


Return shapeName

End Function

D. The following ComVisible attribute should be added to each method of the Shape class:

<ComVisible(True)>

Answer: A

Explanation: Remember that only the classes that have a public default constructor can be instantiated from a COM application and the parameterized constructor which is not used by the COM and therefore you should add the code used in the answer.

Incorrect Answers:

B, D: The lines of code that are used in the scenario will not make any difference to the situation at hand currently in the scenario and should not be used.

C: The class and public members are already visible to COM applications so your only problem lays with instantiating the class.

QUESTION 329

You work as the application developer at Certkiller .com. The Certkiller .com network consists of a single Active Directory domain named Certkiller .com. All servers on the Certkiller .com network run Windows Server 2003 and all client computers run Windows XP Professional. You make use of Visual Studio 2005 for creating the applications.

You are in the process of developing a .NET Framework 2.0 application on a workstation used as collateral. You write a new class named Certkiller Process as shown below:

```
Public Class Certkiller Process
```

```
Public Sub New()
```

```
End Sub
```

```
Public Sub GetState()
```

```
'Additional code to go here
```

```
End Sub
```

```
Public Function ChangeCase(ByVal s As String) As String
```

```
Return s.ToUpper()
```

```
End Function
```

```
End Class
```

You compile the class to a file named Certkiller Process.dll, the Component Object Model (COM) applications are required to be able to create instances of this class and invoke methods. The Com applications may need to bind type information at compile time and you are required to select which command line tool to use.

What should you do?

A. The Type Library Exporter tool Tlbexp.exe) should be used

B. The Type Library Importer tool Tlbimp.exe) should be used

C. The Assembly Registration tool (Regasm.exe) should be used

D. The Native Image Generator tool (Ngen.exe) should be used

Answer: C

Explanation: Because the Com applications expect to find runtime information about types in the Windows registry the usage of the Assembly Registration tool (Regasm.exe) reads an assembly creates entries required by the Com applications.

Incorrect Answers:

A: This tool is used to generate a Com library from an assembly and should not be considered for usage in the scenario.

B: This tool does exactly the opposite of the exporter tool and should also not be considered for usage in the scenario.

D: The tool is used to generate a native image for managed code and reduces load times for the application but does not convert assemblies for use in COM applications.

QUESTION 330

You work as the application developer at Certkiller .com. The Certkiller .com network consists of a single Active Directory domain named Certkiller .com. All servers on the Certkiller .com network run Windows Server 2003 and all client computers run Windows XP Professional. You make use of Visual Studio 2005 for creating the applications.

You are in the process of developing a .NET Framework 2.0 application on a workstation used as collateral and you are trying to port an old Certkiller .com management application that was written in unmanaged Windows code with no COM interfaces. The application you are developing makes calls to the old Certkiller .com management unmanaged library named BillPerformance.dll.

You are required to make a call to the GetPerformanceScore method of the unmanaged Performance.dll library.

What should you do?

- A. The Type Library Exporter tool (tlbexp.exe) should be used
- B. The Type Library Importer tool (tlbimp.exe) should be used
- C. The Assembly Registration tool (regasm.exe) should be used
- D. The Platform Invoke (DllImportAttribute) should be used

Answer: D

Explanation: The feature Platform Invoke is used to allow you to call methods that are in unmanaged libraries but you need to declare the unmanaged method in the managed code using the extern and static keywords with the DllImport attribute which is used to specify the unmanaged library.

Incorrect Answers:

A, B, C: The tool should not be considered for usage in the scenario because the unmanaged dll file is not in COM and it only processes COM type libraries.

QUESTION 331

You work as the application developer at Certkiller .com. The Certkiller .com network consists of a single Active Directory domain named Certkiller .com. All servers on the Certkiller .com network run Windows Server 2003 and all client computers run Windows XP Professional. You make use of Visual Studio 2005 for creating the applications.

You are in the process of developing a .NET Framework 2.0 Windows application on a workstation used as collateral. Your application needs to call the GetComputerName method in the library named kernel32.dll to display the computer name and write the code below:

```
<DllImport("kernel32.dll")>_  
Public Shared Function GetComputerName(  
ByVal IpBuffer As StringBuilder, ByRef IpSize As Integer) As Boolean  
End Function
```

You are required to call the method as ComputerName based on your coding standards whilst you ensure that your code can be cancelled on any Windows operating system. You need to know how to modify the DllImport attribute to call the GetComputerName method.

What should you do?

- A. The EntryPoint property must be set to "ComputerName"
- B. The CharSet property must be set to CharSet.Unicode
- C. The CharSet property must be set to CharSet.Ansi
- D. The EntryPoint property must be set to "GetComputerName"
- E. The CharSet property must be set to CharSet.Auto

Answer: D, E

Explanation: The correct method to use in the scenario is to modify the DllImport attribute and set the EntryPoint property to "GetComputerName" which is the name of the method invoked in kernel32.dll but the .NET method should be declared as ComputerName.

Incorrect Answers:

A, B, C: The methods used in the options could be used but require that the code be changed significantly and you should not consider using the options in the scenario as they are bound to fail.

QUESTION 332

You work as the application developer at Certkiller .com. The Certkiller .com network consists of a single Active Directory domain named Certkiller .com. All servers on the Certkiller .com network run Windows Server 2003 and all client computers run Windows XP Professional. You make use of Visual Studio 2005 for creating the applications.

You are in the process of developing a .NET Framework 2.0 Windows application that will be used to copy the text of a specified window's title bar on a workstation used as collateral. You decided to make use of the GetWindowText method of the

user32.dll unmanaged DLL in your application and the method is declared below:

```
Int GetWindowText(HWND hWnd,LPTSTR IpString, int nMaxCount);
```

The hWnd parameter is used to act as a handle to the windows containing the text, Ipstring is the pointer to the buffer that will receive the text, and the nMaxCount is the maximum number of characters to copy to the buffer. You are required to declare the GetWindowText method in your managed application whilst your solution requires minimal changes when ported from a 32-bit to 64-bit computer. What should you do?

- A. <DllImport("user32.dll", SetLastError:=True, CharSet:=CharSet.Auto)>_
Public Shared Function GetWindowText(ByVal hWnd As Integer,_
ByVal IpString As String, ByVal nMaxCount As Integer) As Integer
End Function
- B. <DllImport("user32.dll", SetLastError:=True, CharSet:=CharSet.Auto)>_
Public Shared Function GetWindowText(ByVal hWnd As Integer,_
ByVal IpString As StringBuilder, ByVal nMaxCount As Integer) As Integer
End Function
- C. <DllImport("user32.dll", SetLastError:=True, CharSet:=CharSet.Auto)>_
Public Shared Function GetWindowText(ByVal hWnd As IntPtr,_
ByVal IpString As String, ByVal nMaxCount As Integer) As Integer
End Function
- D. <DllImport("user32.dll", SetLastError:=True, CharSet:=CharSet.Auto)>_
Public Shared Function GetWindowText(ByVal hWnd As Integer,_
ByVal IpString As String, ByVal nMaxCount As Integer) As Integer
End Function

Answer: A

Explanation: In order for you to modify the actual string you are required to make use of the StringBuilder object instead of a String object because string objects in the .NET Framework are considered to be immutable.

Incorrect Answers:

B, C, D: If you decided to make use of the String object to represent the Ipstring parameter you will receive an empty string because the modifications made will not be preserved and further more the window handles require to be defined in such a way that they are 32 bits in size on a 32-bit computer and 64 bits in size on a 64-bit computer.

QUESTION 333

You work as the application developer at Certkiller .com. The Certkiller .com network consists of a single Active Directory domain named Certkiller .com. All servers on the Certkiller .com network run Windows Server 2003 and all client computers run Windows XP Professional. You make use of Visual Studio 2005 for creating the applications.

You are in the process of developing a .NET Framework 2.0 application on a workstation named Certkiller -WS01 used as collateral. The application will be used to list the available public types and methods in the Certkiller .com assembly.

You named the assembly strongly and it is installed in the global assembly cache (GAL) and an assembly with the same identity is stored at
c:\Certkiller\assemb\Certkiller.com.dll.

You are required to dynamically load the Certkiller .com assembly into your application whilst you ensure that the assembly is loaded from
c:\Certkiller\assemb\Certkiller.com.dll rather than the global assembly cache (GAL).
What should you do?

- A. Dim assemb As Assembly =
Assembly.LoadFrom("c:\Certkiller\assemb\Certkiller.com.dll")
- B. Dim assemb As Assembly =
Assembly.LoadFile("c:\Certkiller\assemb\Certkiller.com.dll")
- C. Dim assemb As Assembly = Assembly.ReflectionOnlyLoad("Certkiller.com")
- D. Dim assemb As Assembly = Assembly.Load("Certkiller.com")
- E. Dim assemb As Assembly = _
Assembly.ReflectionOnlyLoadFrom("c:\Certkiller\assemb\Certkiller.com.dll")

Answer: E

Explanation: To correctly load the Assembly class from the location
c:\Certkiller\assemb\Certkiller.com.dll you should make use of the method used in the option of the scenario.

Incorrect Answers:

A, B, C, D: The other methods of the assembly class will request the common language runtime (CLR) to resolve the location of the assembly based on its identity therefore these options should not be used in the scenario even though you provide the full absolute path as a parameter.

QUESTION 334

You work as the application developer at Certkiller .com. The Certkiller .com network consists of a single Active Directory domain named Certkiller .com. All servers on the Certkiller .com network run Windows Server 2003 and all client computers run Windows XP Professional. You make use of Visual Studio 2005 for creating the applications.

You are in the process of developing a .NET Framework 2.0 application on a workstation named Certkiller -WS11 used as collateral. The application's assembly is named Certkiller App and is stored in Certkiller App.exe. You are busy using .NET Framework's Strong Name tool to generate a pair for Certkiller App.exe shown below:

```
Sn.exe -k Certkiller AppKey
```

You are required to use the key pair to build the Certkiller App.exe as a strong named assembly.

What should you do?

- A. The AssemblyKeyFileAttribute class should be used
- B. The AssemblyDelaySignAttribute class should be used

- C. The AssemblyConfigurationAttribute class should be used
- D. The AssemblyKeyNameAttribute should be used

Answer: A:

Explanation: The Strong name tool is used to allow you to generate and manage keys for the strong name signing and by using the -k switch the tool generates a new key pair and stores it in the specified file. So using the AssemblyKeyFileAttribute is the correct way to go in the scenario.

Incorrect Answers:

- B: This class should not be considered for use as it is designed to specify whether or not delayed signing should be used.
- C: The class should not be used in the scenario because the class is used to specify a build configuration for an assembly.
- D: This class should not be used in the scenario because it is used to specify the name of a key container that should be used.

QUESTION 335

You work as the application developer at Certkiller .com. The Certkiller .com network consists of a single Active Directory domain named Certkiller .com. All servers on the Certkiller .com network run Windows Server 2003 and all client computers run Windows XP Professional. You make use of Visual Studio 2005 for creating the applications.

You are in the process of developing a .NET Framework 2.0 application on a workstation used as collateral, the application will allow users to send e-mails. The users are required to be able to send e-mail containing information like budget documents and images. You decide to use the .NET Framework 2.0 Attachment class to create the e-mail attachments within your application.

You are required to specify the content in an attachment by using the attachment class constructors.

What should you do? (Choose two)

- A. The Stream object attachment class should be used in the scenario
- B. The String object attachment class should be used in the scenario
- C. The Image object attachment class should be used in the scenario
- D. The XmlDocument object attachment class should be used in the scenario
- E. The SqlDataReader object attachment class should be used in the scenario

Answer: A, B

Explanation: In the scenario the Attachment constructors allow you to create attachments from a filename, a String object, or a Stream object.

Incorrect Answers:

- C: This method is incorrect and should not be used in the scenario because the Image object Attachment class cannot directly use an Image object.
- D: This method is incorrect and should not be used in the scenario because the

XmlDocument Attachment class cannot directly use an XmlDocument object.
E: This method is incorrect and should not be used in the scenario because the SqlDataReader Attachment class cannot directly make use of a SqlDataReader object.

QUESTION 336

You work as the application developer at Certkiller .com. The Certkiller .com network consists of a single Active Directory domain named Certkiller .com. All servers on the Certkiller .com network run Windows Server 2003 and all client computers run Windows XP Professional. You make use of Visual Studio 2005 for creating the applications.

You are in the process of developing a .NET Framework 2.0 application that will be used to send e-mail on a workstation used as collateral and you develop the code below, line numbers for reference:

```
01: Public Sub SendMessage(ByVal message As MailMessage, ByVal host As String)
02: Dim client As SmtpClient = Test SmtpClient(host)
03: Try
04: client.Send(message)
05: Catch ex As SmtpFailedRecipientsException
06:
07: For I As Integer =1 To ex.InnerExceptions.Length
08:
09: Next
10: End Try
11: End Sub
```

The parameter MailMessage will be used to represent an e-mail message and the parameter host contains the address of a SMTP server. During the day the code will encounter SMTP error 450 (mailbox busy) errors, when this occurs an attempt should be made to resend the mail message after five seconds. In the event that you encounter another error it should be recorded in the event log.

You are required to add additional code at line 08 for handling the errors and need to write an expression that allows you to find the specific SMTP error returned by the SMTP server.

What should you do?

- A. The ex.InnerExceptions(i).Data expression should be used
- B. The ex.InnerExceptions(i).Message expression should be used
- C. The ex.InnerExceptions(i).FailedRecipient expression should be used
- D. The ex.InnerExceptions(i).StatusCode expression should be used

Answer: D

Explanation: In the scenario you should make use of the StatusCode expression because the expression can be used to return an enumeration of type SmtpStatusCode and gets the error code returned by the SMTP server in the scenario.

Incorrect Answers:

A: This expression should not be used in the scenario because this expression will be used to return a set of user-defined values corresponding to the exception.

B: This expression should not be used in the scenario because it returns a descriptive message about the error and does not provide you specific information of the error returned by the SMTP server

C: This expression should not be used in the scenario because it is used to have the e-mail address that had the problems returned and gives no information about the SMTP error.

QUESTION 337

You work as the application developer at Certkiller .com. The Certkiller .com network consists of a single Active Directory domain named Certkiller .com. All servers on the Certkiller .com network run Windows Server 2003 and all client computers run Windows XP Professional. You make use of Visual Studio 2005 for creating the applications.

You are in the process of developing a .NET Framework 2.0 enterprise application on a workstation used as collateral. The application will be used to allow the users to send e-mail messages and should allow users to send HTML-based e-mails, but the users should not be able to use the HTML tag to embed images in the HTML document

The images are not externally hosted so instead the images must be sent as part of the e-mail message. You are required to select which class to use.

What should you do?

- A. The AlternateView class should be used in the scenario
- B. The Attachment class should be used in the scenario
- C. The MailAddress class should be used in the scenario
- D. The LinkedResource class should be used in the scenario

Answer: D

Explanation: In the scenario you should make use of the LinkedResource class as it is used to embed external resources in an e-mail attachment such as images in an HTML attachment.

Incorrect Answers:

A: The class in question could be used in the scenario but the AlternateView class itself cannot be used to embed images in the HTML document.

B: The Attachment class should not be used in the scenario as the class only allows you to send images as an attachment.

C: The usage of this class is incorrect as it is used to store the address information for e-mail messages in the scenario.

Topic 28, VB, Implementing globalization, drawing, and text manipulation functionality in a .NET Framework application(10 Questions)

QUESTION 338

You work as the application developer at Certkiller .com. The Certkiller .com network consists of a single Active Directory domain named Certkiller .com. All servers on the Certkiller .com network run Windows Server 2003 and all client computers run Windows XP Professional. You make use of Visual Studio 2005 for creating the applications.

You are in the process of developing a .NET Framework 2.0 Windows Forms application using a workstation used as collateral. The Windows Forms application will be used by regional offices of Certkiller .com in various countries.

You are required to customize the application so that the language, callender and cultural conventions are changed based on the user's operating system settings. You additionally are required to identify the .Net Framework class that should be used for this requirement.

What should you do?

- A. The cultureInfo class should be used
- B. The TextInfo class should be used
- C. The DateTimeFormtaInfo should be used
- D. The CharUnicodeInfo should be used
- E. The RegionInfo should be used

Answer: A

Explanation: The CultureInfo class should be used in the scenario because it contains culture-specific information and provides the information required for performing culture-specific operations like changing casing, formatting dates and numbers and comparing strings.

Incorrect Answers:

B: This class should not be used in the scenario because this class only affects the behavior such as text casing.

C: This class should not be used in the scenario because this class only defines how the Date and Time values are formatted.

D: This class should not be used in the scenario because this class is used to only retrieve information about a Unicode character.

E: This class should not be used in the scenario because this class does not represent any preferences of the user and does not depend upon the culture.

QUESTION 339

You work as the application developer at Certkiller .com. The Certkiller .com network consists of a single Active Directory domain named Certkiller .com. All servers on the Certkiller .com network run Windows Server 2003 and all client computers run Windows XP Professional. You make use of Visual Studio 2005 for creating the applications.

You are in the process of developing a .NET Framework 2.0 Windows Forms application that must provide support for multiple languages and regional

differences on a workstation that is used as collateral. You are required to define a custom culture based on an existing culture and region. An administrative user will install the custom culture on the end user's computer prior to the applications deployment and you are required to select which class to use.

What should you do?

- A. The CultureAndRegionInfoBuilder class should be used
- B. The CustomAttributeBuilder class should be used
- C. The RegioInfo class should be used
- D. The CultureInfo class should be used

Answer: A

Explanation: The correct option in the scenario would be to make use of the CultureAndRegionInfoBuilder class as this class is used to define a custom culture that is new or based upon an existing region and culture.

Incorrect Answers:

B: This class should not be used in the scenario because this class is used to define custom attributes which are used to associate declarative information.

C: This class should not be used in the scenario because this class is used to access the region data for an already installed culture.

D: This class should not be used in the scenario because this class can only be used to make use of cultures that have already been installed.

QUESTION 340

You work as the application developer at Certkiller .com. The Certkiller .com network consists of a single Active Directory domain named Certkiller .com. All servers on the Certkiller .com network run Windows Server 2003 and all client computers run Windows XP Professional. You make use of Visual Studio 2005 for creating the applications.

You are in the process of developing a .NET Framework 2.0 application on a workstation used as collateral and you require to provide locale-specific services to employees with the application. You must additionally ensure that you use a unique country identifier that can be used as a key to access a database record that contains specific information about a country whilst you use the minimum storage for storing the key.

What should you do?

- A. CultureInfo.Name should be used as an identifier for a country
- B. CultureInfo.GetHashCode should be used as an identifier for a country
- C. RegionInfo.GetHashCode should be used as an identifier for a country
- D. RegionInfo.Name should be used as an identifier for a country

Answer: D

Explanation: In the scenario you should make use of the RegionInfo.Name property

as this property gets the name or ISO 3166 two-letter country/region code for the current RegionInfo object.

Incorrect Answers:

A: This method should not be used in the scenario as you will only receive the culture name instead of the country name and does not meet the objective.

B, C: The usage of the GetHashCode property in the scenario is incorrect as the hash value generated can be used to tell whether the RegionInfo or CultureInfo objects are the same or not.

QUESTION 341

You work as the application developer at Certkiller .com. The Certkiller .com network consists of a single Active Directory domain named Certkiller .com. All servers on the Certkiller .com network run Windows Server 2003 and all client computers run Windows XP Professional. You make use of Visual Studio 2005 for creating the applications.

You are in the process of developing a .NET Framework 2.0 enterprise application on a workstation used as collateral and you create the following variable in your code:

```
Dim dateValue As DateTime
```

You additionally write code to store time in the local time to the dateValue variable.

You are required to serialize the value of the dateValue variable, if you serialize the DateTime object in one time zone and deserialized in a different time zone, the local time represented as a result should be automatically adjusted to the second time zone. You are to decide which expression to use.

What should you do?

- A. The dateValue.ToString("yyyy-MM-ddTHH:mm:ss.ffffff", CultureInfo.InvariantCulture)
- B. The dateValue.ToBinary() expression should be used
- C. The dateValue.Kind expression should be used
- D. The dateValue.Ticks expression should be used

Answer: B

Explanation: To preserve the information that you are required to preserve in the scenario you should make use of the newToBinary and FromBinary method as these methods can be used to automatically adjust the local times.

Incorrect Answers:

A: The expression in question should not be used in the scenario because the expression will not preserve any of the required reserved information.

C: This expression will be used to check whether the value indicates whether time is represented by the instance is based on local time.

D: This expression is used to super fast serialize the required information but should not be considered when working with the local time.

QUESTION 342

You work as the application developer at Certkiller .com. The Certkiller .com network consists of a single Active Directory domain named Certkiller .com. All servers on the Certkiller .com network run Windows Server 2003 and all client computers run Windows XP Professional. You make use of Visual Studio 2005 for creating the applications.

You are in the process of developing a .NET Framework 2.0 enterprise application on a workstation named CertK INMG-WS02 used as collateral and you write the code below in your application, line numbers are reference:

01: Dim num As String

02: Dim val As Integer

03: num = " (37)"

04:

You are required to write additional code at line 04 that will be used to correctly parse the string value and assigns the result to the Integer variable named val. When you execute the code the variable is required to hold a value of -37 and you must decide which code to use.

What should you do?

- A. val=Int32.Parse(num, NumberStyles.AllowLeadingSign And NumberStyles.AllowLeadingWhite)
- B. val=Int32.Parse(num, NumberStyles.AllowParentheses And NumberStyles.AllowLeadingWhite)
- C. val=Int32.Parse(num, NumberStyles.AllowLeadingSign Or NumberStyles.AllowLeadingWhite)
- D. val=Int32.Parse(num, NumberStyles.AllowParentheses Or NumberStyles.AllowLeadingWhite)

Answer: D

Explanation: The NumberStyles.AllowParentheses value is used to indicate that the numeric string can have one pair of parentheses enclosing the number and the NumberStyles.AllowLeadingWhite value is used to indicate that a leading white-space character must be ignored during the parse.

Incorrect Answers:

A, B: This code should not be used in the scenario because the code is used to indicate that the numeric string can have a leading sign.

C: The code in question should not be used in the scenario because the attributes of NumberStyles are set by using the bitwise inclusive Or on the field flags.

QUESTION 343

You work as the application developer at Certkiller .com. The Certkiller .com network consists of a single Active Directory domain named Certkiller .com. All servers on the Certkiller .com network run Windows Server 2003 and all client computers run Windows XP Professional. You make use of Visual Studio 2005 for creating the applications.

You are in the process of developing a .NET Framework 2.0 Windows Forms application that will be used by several Certkiller .com employees in several countries on a workstation used as collateral. The application is required to fully support customization of the user interface based on the user's preferences like the language currency and date and time formats.

You are required to write code that will compare the name of two employees which are stored in variables named employee1 and employee2. You are required to ensure correct comparisons whilst taking care of the regional settings selected. What should you do?

- A. The String.Compare(Fileemployee1, Fileemployee2, true, CultureInfo.CurrentCulture) segment should be used
- B. The String.Compare(Fileemployee1, Fileemployee2, true, CultureInfo.InvariantCulture) segment should be used
- C. The String.Compare(Fileemployee1, Fileemployee2, true, CultureInfo.InstalledUICulture) segment should be used
- D. The String.Compare(Fileemployee1, Fileemployee2, true, CultureInfo.CurrentUICulture) segment should be used

Answer: A

Explanation: The default behavior of the segment in question is to perform culture-sensitive comparisons and should definitely be considered for use in the scenario.

Incorrect Answers:

- B: This code segment is incorrect and should not be used in the scenario because it will lead to culture-insensitive operations.
- C: This code segment is incorrect and should not be used in the scenario because this will used the culture that is installed with the operating system.
- D: This code segment is incorrect and should not be used in the scenario because this settings only used for changing the user's interface culture used by a thread.

QUESTION 344

You work as the application developer at Certkiller .com. The Certkiller .com network consists of a single Active Directory domain named Certkiller .com. All servers on the Certkiller .com network run Windows Server 2003 and all client computers run Windows XP Professional. You make use of Visual Studio 2005 for creating the applications.

You are in the process of developing a large .NET Framework 2.0 application that is required to provide support for culture-specific information using a workstation used as collateral. You are required to parse a date and time string generated for a custom culture and to help the success of the parse operation you designate parse patterns that are likely to succeed. You must additionally prevent the operation from failing whilst you select the method to use for parsing the string.

What should you do?

- A. The ParseExact method should be used
- B. The Parse method should be used
- C. The TryParseExact method should be used
- D. The TryParse method should be used

Answer: C

Explanation: The TryParseExact method should be used if you require parsing a date and time string generated from a custom culture.

Incorrect Answers:

A, B: The usage of these methods in the scenario would be incorrect because the methods do not provide error handling and the custom culture can be complicated and difficult to parse.

D: If you decide to use the TryParse method which attempt to parse a string using several implicit parse patterns that may all fail you will not achieve the scenario objective.

QUESTION 345

You work as the application developer at Certkiller .com. The Certkiller .com network consists of a single Active Directory domain named Certkiller .com. All servers on the Certkiller .com network run Windows Server 2003 and all client computers run Windows XP Professional. You make use of Visual Studio 2005 for creating the applications.

You are in the process of developing a .NET Framework 2.0 application that will be used to manipulate graphics files in GIF, JPG and PNG formats using a workstation named Certkiller -WS32 which is used as collateral. You are required to choose an appropriate data type to store graphic files whilst your solution must use the least amount of code.

What should you do?

- A. The Icon class should be used
- B. The Metafile class should be used
- C. The Image class should be used
- D. The Bitmap class should be used

Answer: D

Explanation: Because the Bitmap class is an implementation of the Image abstract class that is capable of working with several types of image formats this class should be considered for usage in the scenario.

Incorrect Answers:

A: This class should not be used in the scenario because the Icon class only allows you to work with small bitmap images.

B: This class should not be used in the scenario because this class can not be used to manipulate images in different formats.

C: This class should not be used in the scenario because this class is an abstract class which requires functionality to be implemented which requires programming effort.

QUESTION 346

You work as the application developer at Certkiller .com. The Certkiller .com network consists of a single Active Directory domain named Certkiller .com. All servers on the Certkiller .com network run Windows Server 2003 and all client computers run Windows XP Professional. You make use of Visual Studio 2005 for creating the applications.

You are in the process of developing a .NET Framework 2.0 text-processing application on a workstation used as collateral and are busy defining the regular expression of currency values:

```
Dim tx As Regex = Test Regex("^-?\d+(\.\d{2})?$")
```

You are required to write code that will be used to find whether a string in the variable named Bill matches the regular expression or not and you are also required to use this code as the expression in a conditional statement and need to know which code segment to use.

What should you do?

- A. The tx.Matches(Bill)
- B. The tx.Equals(Bill)
- C. The tx.Match(Bill)
- D. The tx.IsMatch(Bill)

Answer: D

Explanation: In order for you to successfully indicate whether the regular expression finds a match in the input string you should make use of the IsMatch(Bill) segment in the scenario.

Incorrect Answers:

A: This segment should not be used in the scenario because the Matches method is used to search an input string for all occurrences of a regular expression and returns all the successful matches.

B: This segment should not be used in the scenario because this method is used to determine whether any two Object instances are equal.

C: This segment should not be used in the scenario because the Match method is used to search an input string for an occurrence of a regular expression and returns the precise results as a single successful match.

QUESTION 347

You work as the application developer at Certkiller .com. The Certkiller .com network consists of a single Active Directory domain named Certkiller .com. All servers on the Certkiller .com network run Windows Server 2003 and all client computers run Windows XP Professional. You make use of Visual Studio 2005 for creating the applications.

You are in the process of developing a .NET Framework 2.0 application on a workstation used as collateral. The application will be used globally and must be able to represent characters in the following languages: English, Chinese

Traditional, Hebrew and Tamil. Your application is required to provide error detection for invalid sequences of characters whilst your application must also optimize storage.

What should you do?

- A. Encode the characters in your application using the UTF8Encoding class
- B. Encode the characters in your application using the UTF7Encoding class
- C. Encode the characters in your application using the UTF32Encoding class
- D. Encode the characters in your application using the UTF16Encoding class

Answer: A

Explanation: To successfully enable error detection and make the class instance more secure you should make use of the UTF8Encoding class in the scenario.

Incorrect Answers:

B: The Encoding class used in this option UTF7Encoding does not provide any error detection and should not be used in the scenario.

C, D: The Encoding classes in these options should not be used in the scenario because the UTF16Encoding class represents each character as a sequence of one to two 16-bit integers and the UTF32Encoding represents each code point as a 32-bit integer.

Topic 29, General Questions (19 Questions)

QUESTION 348

You work as the application developer at Certkiller .com. To get information on a specific method named myMethod, you use Reflection. You need to find out if myMethod can be accessed from a derived class.

Which of the following properties should you call from the myMethod class?

- A. Call the IsAssembly property.
- B. Call the IsVirtual property.
- C. Call the IsStatic property.
- D. Call the IsFamily property.

Answer: D

Explanation: The IsFamily property determines whether the method is accessible onlsecy to the class and descendant classes.

IsAssembly determines accessibility from within the assembly.

IsVirtual indicates whether the method is virtual.

IsStatic indicates whether the method is static.

QUESTION 349

You work as the application developer at Certkiller .com. You create a new class that uses unmanaged resources, but which still has references to managed resources on other objects.

You want users of the new class to be able to explicitly release resources when the class instance is no longer required.

What should you do next?

Choose the three actions which you should perform. Each correct answer presents only part of the complete solution.

- A. Define the existing class so that it inherits from the WeakReference class.
- B. Define the existing class so that it applies the IDisposable interface.
- C. Create a new class destructor which calls methods on other objects to release the managed resources.
- D. Create a new class destructor that releases the unmanaged resources.
- E. Create a new Dispose method that calls System.GC.Collect to force garbage collection.
- F. Create a new Dispose method that releases unmanaged resources and which also calls methods on other objects to release the managed resources.

Answer: B,D,F

Explanation:

It is necessary to implement the IDisposable interface if you need to release unmanaged resources or want explicit control of the life of managed resources. A class destructor should be created to release the unmanaged resources and this should be called from within the Dispose method. The dispose method should also release the managed resources.

Inheriting from WeakReference would result in the garbage collector releasing resources even though there may be valid references.

The managed resources should be released in the Dispose method.

System.GC.Collect could be used, however it is more efficient to manually release the managed resources. The GC incurs overhead and may have only recently been called anyway. The question states resources should be released explicitly.

QUESTION 350

You work as the application developer at Certkiller .com. You are developing a debug build of an existing application. You want to locate a specific line of code which resulted in the exception occurring.

Choose the property of the Exception class that you should use to accomplish the task.

- A. Data property
- B. Message property
- C. StackTrace property
- D. Source property

Answer: C

Explanation: The StackTrace property provides a listing of the current call stack.

Information such as the method calls and line numbers are shown.

Data will return additional user-defined information about the exception

Message describes the current exception but will not give details about the source code line number.

Source represents the name of the application or object that caused the error.

QUESTION 351

You work as the application developer at Certkiller .com. You need to modify the code of an application. The application uses two threads named thread A and thread B. You want thread B to complete executing before thread A starts executing.

How will you accomplish the task?

- A. Define thread A to run at a lower priority.
- B. Define thread B to run at a higher priority.
- C. Implement the WaitCallback delegate to synchronize the threads.
- D. Call the Sleep method of thread A.
- E. Call the SpinLock method of thread A.

Answer: C

Explanation:

Note: Some confusion why the answer is C. Using the ThreadPool and WaitCallback will not synchronise the threads, they will run in the background in parallel

QUESTION 352

DRAG DROP

You work as the application developer at Certkiller .com. You have been instructed to create an application that can provide information on the local computer only.

The application is configured with a form that provides information on all logical drives and associated drive properties of the local computer.

You must script a procedure that retrieves the properties of each logical drive of the local computer.

How will you accomplish the task? Answer by arranging the relevant actions in the proper order.

Actions, select from these	Actions, place here
Retrieve an instance of the FileSystemInfo class.	Place first, if any, here
Retrieve an instance of the DriveInfo class.	Place second, if any, here
Retrieve the drive capacity by using the DrdriveInfo TotalSize property	Place third, if any, here
Determine if the drive is available by using the FileSystemInfo.Attributes property.	Place fourth, if any, here
Retrieve the drive names of all logical drives on a computer by using the DriveInfo.GetDrives method.	Place fifth, if any, here
Retrieve the drive capacity by using the FileSystemInfo.Attributes property.	Place sixth, if any, here

Answer:

Actions, select from these	Actions, place here
Retrieve an instance of the FileSystemInfo class.	Retrieve the drive names of all logical drives on a computer by using the DriveInfo.GetDrives method.
	Retrieve an instance of the DriveInfo class.
	Retrieve the drive capacity by using the DrdriveInfo TotalSize property
Determine if the drive is available by using the FileSystemInfo.Attributes property.	Place fourth, if any, here
	Place fifth, if any, here
Retrieve the drive capacity by using the FileSystemInfo.Attributes property.	Place sixth, if any, here

Explanation:

To retrieve the properties of each logical drive on the system call DriveInfo.GetDrives. Iterate through the collection retrieving each instance and access the TotalSize property. FileSystemInfo is for file\directory manipulation.

QUESTION 353

You work as the application developer at Certkiller .com. The global cache contains an assembly named Certkiller Ass10. You are busy working on an assembly named Certkiller Ass09. Certkiller Ass9 includes a public method.

You want the public method to be called from only Certkiller Ass10.

Choose the permission class which you should use.

- A. Use the GacIdentityPermission
- B. Use the PublisherIdentityPermission
- C. Use the DataProtectionPermission
- D. Use the StrongNameIdentityPermission

Answer: D

Explanation: StrongNameIdentityPermission can be used to verify the identity of a calling assembly.

GACIdentityPermission can be used to test whether a file is in the global assembly cache or not.

PublisherIdentityPermission can be used to verify the identity of a publisher.

DataPublisherPermission is used to control the ability to access encrypted data and memory.

QUESTION 354

You work as the application developer at Certkiller .com. You are developing a new application named Certkiller App12.

Certkiller App12 must be configured to receive events asynchronously. You define two instances named Wq1EventQuery and ManagementEventWatcher respectively.

Wq1EventQuery will list those events and event conditions for which

Certkiller App12 should respond. ManagementEventWatcher will subscribe to all events matching the query.

Which two additional actions should you still perform to enable Certkiller App12 to receive events asynchronously?

Choose two correct answers. Each answer presents only part of the complete solution.

A. Call the Start method of the ManagementEventWatcher to start listening for events.

B. To configure a listener for events, use the EventArrived event of the ManagementEventWatcher.

C. To wait for the events, use the WaitFor NextEvent method of the ManagementEventWatcher.

D. Create an event handler class that contains a method which receives an ObjectReadyEventArgs parameter.

E. Use the Stopped event of the ManagementEventWatcher to configure a listener for events.

Answer: A,B

Explanation: The ManagementEventWatcher will not start to listen (hence the app cannot respond to Async messages) until the start method is called. Once the ManagementEventWatcher is listening it will trigger an EventArrived event every time an event occurs that matches the query. You should provide a listener for the EventArrived event to perform any custom handling.

WaitForNextEvent method is synchronous i.e the current thread will wait until a matching event occurs

ObjectReadyEventArgs holds data for the ObjectReadyEvent.

The Stopped event is triggered when the ManagementEventWatcher cancels it's subscription i.e is no longer interested in receiving notification of events.

QUESTION 355

You work as the application developer at Certkiller .com. You must specify a class which is optimized for key-based item retrieval from collections. Your class must cater for key-based item retrieval for small and large collections. Which of the following class types should you specify?

- A. Select the OrderedDictionary class.
- B. Select the HybridDictionary class.
- C. Select the ListDictionary class.
- D. Select the Hashtable class.

Answer: B

Explanation: A HybridDictionary is implemented as a ListDictionary for small collections and a Hashtable for large collections. Hence it provides very efficient storage for both small and large collections.

OrderedDictionary supports sorting based on the key. It has similar disadvantages for small collections to Hashtable on which it is based.

ListDictionary is ideal for small collections because it is implemented as a light-weight linked list. Performance will suffer for large collections.

HashTable is ideal for large collections, for small collections the overheads of such a sophisticated data structure do not compensate for the benefits.

QUESTION 356

You work as the application developer at Certkiller .com. You are working on an application and want to use platform invoke services to call an unmanaged function from managed code.

How will you accomplish the task?

- A. Create a class to store DLL functions. Create prototype methods by using the managed code.
- B. Use COM to register the assembly. Reference the managed code from COM.
- C. Export a type library for the managed code.
- D. Import a type library as an assembly. Create instances of COM object.

Answer: A

Explanation: It is good practice to wrap the messy P-Invoke code with a .net class.

The main benefit is to keep the client code tidy as the messy and cryptic code will be hidden away. Also better for maintenance e.g dll name or version changes.

The question explicitly says the unmanaged code should be called with platform invoke services. Importing\exporting a type library is relevant for interoperation with COM.

QUESTION 357

You work as the application developer at Certkiller .com. You must identify which

specific type meets this criteria: ?

Is always a number.?

Is not greater than 65,535.

Select the type you should use to meet the criteria.

- A. Choose System.UInt16
- B. Choose int
- C. Choose System.String
- D. Choose System.IntPtr

Answer: A

Explanation: System.UInt16 is the most efficient type for storing positive whole numbers up to 65,536.

An int type could be used but it is a lot wider than necessary.

System.String is intended for storing immutable strings.

System.IntPtr is a pointer to a memory address and it's size is determined by the runtime platform. It is primarily used for interoperation.

QUESTION 358

You work as the application developer at Certkiller .com. You are working on an application named Certkiller App11. Certkiller App11 must be configured to execute a series of mathematical computations simultaneously.

What should you do next to configure Certkiller App11 to execute a series of mathematical computations simultaneously?

- A. Configure the IdealProcessor property of the ProcessThread object.
- B. Configure the ProcessorAffinity property of the ProcessThread object.
- C. Call the QueueUserWorkItem method of the ThreadPool class for each calculation which should be performed by Certkiller App11.
- D. Configure the Process.GetCurrentProcess().BasePriority property to be High.

Answer: C

Explanation: The ThreadPool class allows background tasks to run in parallel hence calculations can be queued to run as soon as a ThreadPool Worker thread becomes available. Because the ThreadPool can manage many worker threads, calculations will run in parallel.

ProcessThread.IdealProcessor requests a preferred processor for the thread to run on, it will not however spawn a new thread - which is what is required here to enable concurrency.

ProcessorAffinity gets or sets the processors that this thread can be scheduled to run on.

Process.BasePriority gets the base priority of the process.

QUESTION 359

You work as the application developer at Certkiller .com. An existing application

used by Certkiller .com is named Certkiller App15. Certkiller App15 runs on a shared computer, and was compiled using .NET Framework version 1.0. The .NET Framework version 1.0 and .NET Framework version 1.1 is installed on the shared computer.

You have been instructed to move Certkiller App15 to a new computer. This computer has .NET Framework version 1.1 and .NET Framework version 2.0 installed. You verify that Certkiller App15 is only compatible with the .NET Framework 1.1.

You must configure Certkiller App15 to use .NET Framework version 1.1 after it has been moved to the new computer.

What should you do next?

A. Add this XML element to the Certkiller App15 configuration file:

```
<configuration>
<startup>
<supportedRuntime version="1.1.4322" />
<startup>
</configuration>
```

B. Add this XML element to the Certkiller App15 configuration file:

```
<configuration>
<runtime>
<assemblyBinding
xmlns="urn:schemas-microsoft-com:asm.v1">
<dependentAssembly>
<assemblyIdentity name="Application1"
publicKeyToken="32ab4ba45e0a69a1"
culture="neutral" />
<bindingRedirect oldVersion="1.0.3075.0"
newVersion="1.1.4322.0"/>
</dependentAssembly>
</assemblyBinding>
</runtime>
</configuration>
```

C. Add this XML element to the computer configuration file:

```
<configuration>
<startup>
<requiredRuntime version="1.1.4322" />
<startup>
</configuration>
```

D. Add this XML element to the computer configuration file:

```
<configuration>
<runtime>
<assemblyBinding
xmlns="urn:schemas-microsoft-com:asm.v1">
<dependentAssembly>
<assemblyIdentity name="Application1"
```

```
publicKeyToken="32ab4ba45e0a69a1"  
culture="neutral" />  
<bindingRedirect oldVersion="1.0.3075.0"  
newVersion="1.1.4322.0"/>  
</dependentAssembly>  
</assemblyBinding>  
</runtime>  
</configuration>
```

Answer: A

QUESTION 360

You work as the application developer at Certkiller .com. You are developing a strong-named assembly named Certkiller Ass3. Certkiller Ass3 will be used by multiple applications. You plan to frequently rebuild Certkiller Ass3 during the development lifecycle. Whenever Certkiller Ass3 is rebuilt, you must ensure that it works as expected with all applications that will use it.

You must configure the computer that you are using to create Certkiller Ass3 so that all applications reference the latest build of Certkiller Ass3.

Choose the two actions which you should perform to achieve your goal. Each correct answer presents only part of the complete solution.

A. Create a DEVPATH environment variable which points to the build output directory for Certkiller Ass3.

B. Include this XML element in the computer configuration file:

```
<developmentMode developerInstallation="true"/>
```

C. Include this XML element in the computer configuration file:

```
<dependentAssembly>  
<assemblyIdentity name=" Certkiller Ass3"  
publicKeyToken="32ab4ba45e0a69a1"  
language="en-US" version="*.*.*.*" />  
<publisherPolicy apply="no" />  
</dependentAssembly>
```

D. Include this XML element in the configuration file of each application that must use Certkiller Ass3:

```
<supportedRuntime version="*.*.*.*" />
```

E. Include this XML element in the configuration file of each application that must use Certkiller Ass3:

```
<dependentAssembly>  
<assemblyIdentity name=" Certkiller Ass3"  
publicKeyToken="32ab4ba45e0a69a1"  
language="en-US" version="*.*.*.*" />  
<bindingRedirect newVersion="*.*.*.*"/>  
</dependentAssembly>
```

Answer: A,B

Explanation: The developmentmode element in the machine configuration file tells the .net runtime to locate the assembly by using the DevPath environment variable. The SupportedRuntime element specifies which .net runtime versions the assembly supports.

The DependentAssembly element is used to encapsulate the binding policy and assembly location for each assembly.

QUESTION 361

You work as the application developer at Certkiller .com. You are developing a new class named Certkiller Class. Certkiller Class contains a method named Certkiller Method, and a number of child objects which are serializable. Certkiller Method will execute actions on all child objects.

You want make to certain that Certkiller Method is applied whenever Certkiller Class and its associated child objects are rebuilt.

Choose the two actions which you should perform next? Each correct answer presents only part of the complete answer.

- A. Apply the OnDeserializing attribute to the Certkiller Method method.
- B. Define Certkiller Class to implement the IDeserializationCallback interface.
- C. Define Certkiller Class to inherit from the ObjectManager class.
- D. Apply the OnSerialized attribute to Certkiller Method.
- E. Create a GetObjectData method that calls Certkiller Method.
- F. Create an OnDeserialization method that calls Certkiller Method.

Answer: B,F

Explanation: The iDeserializationCallback interface allows some custom code to be called after the complete object graph has been deserialized via the onDeserialization method. In this case the Certkiller Method should be called in the onDeserialization method.

Applying OnDeserializingAttribute to Certkiller Method will not work because there is not guarantee that the complete object graph will have been deserialized.

If Certkiller Class inherits from ObjectManager it will still have to implement iDeserializationCallback to perform actions after the complete object graph has been deserialized.

The OnSerialized attribute signifies that a method should be called immediately after serialization of the object.

QUESTION 362

You work as the application developer at Certkiller .com. You have created a new service application named Certkiller App33. Certkiller App33 must still be deployed into the Certkiller .com network. A Certkiller .com network administrator named Mia Hamm has already created a user account for Certkiller App33.

You must configure Certkiller App33 to run in the context of this new user account. What should you do next?

- A. Before deploying Certkiller App33, specify the StartType property of the ServiceInstaller class.
- B. Before deploying Certkiller App33, specify the Account, Username, and Password properties of the ServiceProcessInstaller class.
- C. Install the service by using the CONFIG option of the net.exe command-line tool.
- D. Install the service by using the installutil.exe command-line tool.

Answer: B

Explanation: The ServiceProcessInstaller class is automatically called during installation. It is the ideal place to specify the default service settings such as account credentials.

ServiceInstaller.StartType controls how the service will start up e.g automatically or manually. It has nothing to do with a specific account.

Net.exe with the config option is used to configure the server or workstation services.

Installutil.exe can be used to install the service but it is not possible to specify or override service account credentials. They have to be specified in the ServiceProcessInstaller class.

QUESTION 363

DRAG DROP

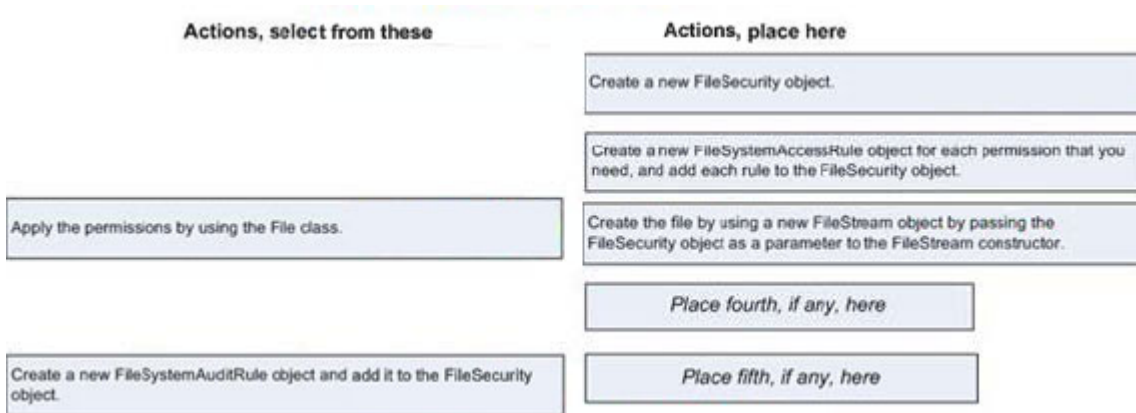
You work as the application developer at Certkiller .com. You are working on an application named Certkiller App05. Certkiller App05 is configured to create a new file on the local file system.

You must set specific security settings for the new file. You must ensure that file inheritance of any default security settings is denied.

What should you do next? Answer by arranging the relevant actions in the proper order.

Actions, select from these	Actions, place here
Create the file by using a new FileStream object by passing the FileSecurity object as a parameter to the FileStream constructor.	Place first, if any, here
Create a new FileSecurity object.	Place second, if any, here
Apply the permissions by using the File class.	Place third, if any, here
Create a new FileSystemAccessRule object for each permission that you need, and add each rule to the FileSecurity object.	Place fourth, if any, here
Create a new FileSystemAuditRule object and add it to the FileSecurity object.	Place fifth, if any, here

Answer:



Explanation:

The FileSecurity class should be used to apply the security settings to the file. Once an instance of FileSecurity is created, FileSystemAccessRule objects should can be added to achieve the correct security settings. Finally the FileStream class has a constructor that takes a FileSecurity object and will create the file with the specified security settings. The File class could have been used to apply the permissions (via SetAccessControl()). However this would demand an option to create the file independently of applying the security permissions that is not listed. FileSystemAuditRule class is used to specify the conditions when access to a file\directory is audited.

QUESTION 364

You work as the application developer at Certkiller .com.

You are working on method to call a COM component, and must use declarative security to explicitly request the runtime to perform a full stack walk. Before allowing any callers to execute the method, they must have the required level of trust for COM interop.

Choose the attribute that should be used on the method.

- A. Use this attribute: [SecurityPermission(SecurityAction::Demand, Flags=SecurityPermissionFlag::UnmanagedCode)]
- B. Use this attribute: [SecurityPermission(SecurityAction::LinkDemand, Flags=SecurityPermissionFlag::UnmanagedCode)]
- C. Use this attribute: [SecurityPermission(SecurityAction::Assert, Flags = SecurityPermissionFlag::UnmanagedCode)]
- D. Use this attribute: [SecurityPermission(SecurityAction::Deny, Flags = SecurityPermissionFlag::UnmanagedCode)]

Answer: A

Explanation: A Demand should be used on the SecurityPermission attribute with

the UnmanagedCode flag to force all callers in the call stack to have permission to call unmanaged components.

LinkDemand will only force the immediate caller to have the permission.

Assert will ignore the permissions of callers and allow them indiscriminately.

Deny will explicitly deny access if the caller has the specified permission. This is the reverse of what is required.

QUESTION 365

DRAG DROP

You work as the application developer at Certkiller .com. You are developing a new application named Certkiller App09. Certkiller App09 is configured to monitor free space on a hard disk drive.

You must perform the configuration that will result in Certkiller App09 monitoring free space at one minute intervals. You must also configure Certkiller App09 to run in the background.

What should you do next? Answer by arranging the relevant actions in the proper order.

Actions, select from these	Actions, place here
Add code to the default constructor of the Service class to monitor the free space on the hard disk drive.	Place first, if any, here
Add code to the OnStart method of the Service class to monitor the free space on the hard disk drive.	Place second, if any, here
Add an instance of teh System.Windows.Forms.Timer class to the Service class and configure it to fire every minute.	Place third, if any, here
Add an instance of teh System.Timers.Timer class to the Service class and configure it to fire every minute.	Place fourth, if any, here
Add code to the OnStart method of the Service class to start the timer.	Place fifth, if any, here
Add code to the Elapsed event handler of the timer to monitor the free space on the hard disk drive.	Place sixth, if any, here
Add code to the Tick event handler of the timer to monitor the free space on the hard disk drive.	Place 7th, if any, here

Answer:

Actions, select from these	Actions, place here
Add code to the default constructor of the Service class to monitor the free space on the hard disk drive.	Add an instance of the System.Timers.Timer class to the Service class and configure it to fire every minute.
Add code to the OnStart method of the Service class to monitor the free space on the hard disk drive.	Add code to the OnStart method of the Service class to start the timer.
Add an instance of the System.Windows.Forms.Timer class to the Service class and configure it to fire every minute.	Add code to the Elapsed event handler of the timer to monitor the free space on the hard disk drive.
	Place fourth, if any, here
	Place fifth, if any, here
	Place sixth, if any, here
Add code to the Tick event handler of the timer to monitor the free space on the hard disk drive.	Place 7th, if any, here

Explanation:

System.Timers.Timer should be added to the Service class and set with an Interval of 1 minute. The Timer should be started on the OnStart method of the service. The Elapsed event of the Timer will fire every minute an event handler can be coded to perform the monitoring of the free space on the hard disk.

Initialisation should not be performed in the constructor because if the service is stopped and restarted, constructor may not be called and the service will not re-start correctly.

The OnStart method is guaranteed to be called following a restart.

Adding code to the OnStart method of the Service class to monitor free space will work once when the service is started but there will be no continual periodic monitoring as the question requests.

The System.Windows.Forms.Timer class designed to be used on a windows forms application and not a service based application. It must be used within a window.

QUESTION 366

You work as the application developer at Certkiller .com. You are creating a new custom-collection class.

You must create the method that will be contained within the class. The method you need to create must return a type which is compatible with the Foreach statement.

Choose the criterion which your method must meet to match your requirement.

- A. Your method has to return a type of either IEnumerator or IEnumerable.
- B. Your method has to return a type of IComparable.
- C. Your method has to explicitly contain a collection.
- D. Your method has to be the only iterator in the class.

Answer: A

Explanation: Returning an IEnumerator will enable the Foreach statement. IEnumerable is a subtype of IEnumerator hence can also be up cast to IEnumerator.

IComparable is used to enable comparisons for a user type.
Explicitly containing a collection within the method will have no impact on the methods return type which is what the ForEach statement will operate on.

Topic 30, C# Mixed (56 Questions)

QUESTION 367

You work as the application developer at Certkiller .com. You are creating a new custom event handler that will be set up to automatically print all open documents. The custom event handler must also assist in identifying how many document copies must be printed.

You must determine which custom event arguments class to pass as a parameter to the custom event handler.

Choose the code segment which you should use to accomplish this task.

- A. `public class PrintingArgs {
private int copies;
public PrintingArgs(int numberOfCopies) {
this.copies = numberOfCopies;
}
public int Copies {
get { return this.copies;
}
}}}`
- B. `public class PrintingArgs : EventArgs {
private int copies;
public PrintingArgs(int numberOfCopies) {
this.copies = numberOfCopies;
}
public int Copies {
get { return this.copies;
}
}}}`
- C. `public class PrintingArgs {
private EventArgs eventArgs;
public PrintingArgs(EventArgs ea) {
this.eventArgs = ea;
}
public EventArgs Args {get { return eventArgs;
}}}`
- D. `public class PrintingArgs : EventArgs {
private int copies;
}`

Answer: B

Explanation: The event handler will require a parameter of type EventArgs or a

derived type. The derived type in this example will question states that the event handler helps specify the number of documents that require printing, this information will have to come from the derived EventArgs class in the form of an instance variable.

A & C do not derive from EventArgs hence cannot fit into the event handling model. D does not expose the copies instance variable.

QUESTION 368

You work as the application developer at Certkiller .com. You are working on a new method named PersistToDB. PersistToDB returns no value, and takes the EventLogEntry parameter type.

You must create the specific code segment which will enable you to test whether the new method works as expected. The code segment you use must be able to access entries from the application log of local computers, and must then pass only specific entries on to PersistToDB. The relevant entries to be passed to PersistToDB are Error events and Warning events from the source named mySource.

Choose the code segment which would achieve your goal in these circumstances.

```
A. EventLog myLog = new EventLog("Application", ".");
foreach (EventLogEntry entry in myLog.Entries)
{
    if (entry.Source == "MySource")
    {
        PersistToDB(entry);
    }
}
```

```
B. EventLog myLog = new EventLog("Application", ".");
myLog.Source = "MySource";
foreach (EventLogEntry entry in myLog.Entries)
{
    if (entry.EntryType == (EventLogEntryType.Error &
        EventLogEntryType.Warning))
    {
        PersistToDB(entry);
    }
}
```

```
C. EventLog myLog = new EventLog("Application", ".");
foreach (EventLogEntry entry in myLog.Entries)
{
    if (entry.Source == "MySource")
    {
        if (entry.EntryType == EventLogEntryType.Error ||
            entry.EntryType == EventLogEntryType.Warning)
        {
            PersistToDB(entry);
        }
    }
}
```

```
D. EventLog myLog = new EventLog("Application", ".");
myLog.Source = "MySource";
```

```
foreach (EventLogEntry entry in myLog.Entries)
{
    if (entry.EntryType == EventLogEntryType.Error ||
        entry.EntryType == EventLogEntryType.Warning)
    {
        PersistToDB(entry);
    }
}
```

Answer: C

Explanation: It is necessary to create a new Application EventLog, iterate over all the EventLogEntries and call the PersistToDB method if the entry is a warning or error and the source is MySource.

A will PersistToDB irrespective of the type of log entry. The question explicitly states only warnings and errors should be persisted.

B features an incorrect test for warnings and errors.

D&B do not ensure that only MySource entries are persisted. Instead they overwrite the source.

QUESTION 369

You work as the application developer at Certkiller .com. You have created a new application named Certkiller App05. Certkiller App05 is configured to forward an e-mail message. The SMTP server on the local subnet is named Certkiller -SR31. You want to test Certkiller App05. You decide to use a source address of mia@ Certkiller .com; and a target address of dest@ Certkiller .com. Choose the code segment which you should use to test whether Certkiller App05 sends e-mail messages.

A. MailAddress addrFrom =
new MailAddress("mia@ Certkiller .com", "Mia");
MailAddress addrTo =
new MailAddress("dest@ Certkiller .com", "Dest");
MailMessage message = new MailMessage(addrFrom, addrTo);
message.Subject = "Hello";
message.Body = "Test Message";
message.Dispose();
B. string strSmtpClient = " Certkiller -SR31";
string strFrom = " mia@ Certkiller .com";
string strTo = "dest@ Certkiller .com";
string strSubject = "Hello";
string strBody = "Test Message";
MailMessage msg =
new MailMessage(strFrom, strTo, strSubject, strSmtpClient);
C. MailAddress addrFrom = new MailAddress("mia@ Certkiller .com");
MailAddress addrTo = new MailAddress("dest@ Certkiller .com");
MailMessage message = new MailMessage(addrFrom, addrTo);


```
message.Subject = " Hello";
message.Body = "Test Message ";
SmtpClient client = new SmtpClient(" Certkiller -SR31");
client.Send(message);
D. MailAddress addrFrom =
new MailAddress("mia@ Certkiller .com", "Mia");
MailAddress addrTo =
new MailAddress("dest@ Certkiller .com", "Dest");
MailMessage message = new MailMessage(addrFrom, addrTo);
message.Subject = " Hello";
message.Body = " Test Message";
SocketInformation info = new SocketInformation();
Socket client = new Socket(info);
System.Text.ASCIIEncoding enc =
new System.Text.ASCIIEncoding();
byte[] msgBytes = enc.GetBytes(message.ToString());
client.Send(msgBytes);
```

Answer: C

Explanation: To Send a simple mail message construct a MailMessage object and a SmtpClient object. Call the SmtpClient.Send instance method supplying the MailMessage object as a parameter.

A creates a MailMessage but then destroys it.

B creates a MailMessage but then does not do anything with it.

D tries to do something with sockets, this is unnecessary because there is a SMTP server available. The question implies delivering the mail via SMTP.

QUESTION 370

You work as the application developer at Certkiller .com. You are working on a new application named Certkiller App20. Certkiller App20 is configured to perform a series of mathematical calculations. You create a class named Certkiller AppClass and create a procedure named Certkiller AppSP. Certkiller AppSP must execute on an instance of the class.

You must configure the application's user interface so that it continues to respond for the duration that calculations are performed. You must write the code segment for calling the Certkiller AppSP procedure which will accomplish your objective. Choose the code segment which you should use.

```
A. private void Certkiller AppSP() {...} private void DoWork(){
Certkiller AppClass myValues = new Certkiller AppClass();
Thread newThread = new Thread(
new ThreadStart( Certkiller AppSP));
newThread.Start(myValues);
}
```

```
B. private void Certkiller AppSP() {...} private void DoWork(){
```



```
Certkiller AppClass myValues = new Certkiller AppClass();
ThreadStart delStart = new
ThreadStart( Certkiller AppSP);
Thread newThread = new Thread(delStart);
if (newThread.IsAlive) {newThread.Start(myValues);
}}
C. private void Certkiller AppSP ( Certkiller AppClass values) {...} private void
DoWork(){
Certkiller AppClass myValues = new Certkiller AppClass();
Application.DoEvents();
Certkiller AppSP(myValues);
Application.DoEvents();
}
D. private void Certkiller AppSP(object values) {...} private void DoWork(){
Certkiller AppClass myValues = new Certkiller AppClass();
Thread newThread = new Thread(
new ParameterizedThreadStart( Certkiller AppSP));
newThread.Start(myValues);
}
```

Answer: D

Explanation: It is a requirement that the UI continues to respond, hence Certkiller AppSP should execute in a separate thread. Certkiller AppSP requires a parameter hence you should use the ParameterizedThreadStart delegate. A& B attempt to supply a parameter to the ThreadStart delegate. This is not possible. C Does not run in a new thread and hence may leave the UI unresponsive.

QUESTION 371

You work as the application developer at Certkiller .com. You create the following code segment:

```
public delegate void FaxDocs(object sender, FaxArgs args);
```

What should you do next to configure an event that will call FaxDocs?

Choose the code segment which you should use.

```
A. public static event FaxDocs Fax;
B. public static event Fax FaxDocs;
C. public class FaxArgs : EventArgs {
private string coverPageInfo;
public FaxArgs(string coverInfo) {
this.coverPageInfo = coverPageInfo;
}
public string CoverPageInformation {
get {return this.coverPageInfo;
}
}}
D. public class FaxArgs : EventArgs {
private string coverPageInfo;
public FaxArgs(string coverInfo) {
this.coverPageInfo = coverPageInfo;
}
public string CoverPageInformation {
get {return this.coverPageInfo;
}
}}
E. public class FaxArgs : EventArgs {
private string coverPageInfo;
public FaxArgs(string coverInfo) {
this.coverPageInfo = coverPageInfo;
}
public string CoverPageInformation {
get {return this.coverPageInfo;
}
}}
F. public class FaxArgs : EventArgs {
private string coverPageInfo;
public FaxArgs(string coverInfo) {
this.coverPageInfo = coverPageInfo;
}
public string CoverPageInformation {
get {return this.coverPageInfo;
}
}}
G. public class FaxArgs : EventArgs {
private string coverPageInfo;
public FaxArgs(string coverInfo) {
this.coverPageInfo = coverPageInfo;
}
public string CoverPageInformation {
get {return this.coverPageInfo;
}
}}
H. public class FaxArgs : EventArgs {
private string coverPageInfo;
public FaxArgs(string coverInfo) {
this.coverPageInfo = coverPageInfo;
}
public string CoverPageInformation {
get {return this.coverPageInfo;
}
}}
```

```
D. public class FaxArgs : EventArgs {  
    private string coverPageInfo;  
    public string CoverPageInformation {  
        get {return this.coverPageInfo;  
        }  
    }  
}}
```

Answer: A

Explanation: An event is declared by using the event keyword followed by a delegate type and then a name for the event.

B fax is not a delegate type.

C&D do not declare events.

QUESTION 372

You work as the application developer at Certkiller .com. You create a code segment that will call a function from the Win32 Application Programming Interface (API) via platform invoke. The precise code segment is:

```
string personName = "N?el";
```

```
string msg = "Thank you " + personName + " for coming !";
```

```
bool rc = User32API.MessageBox(0, msg, personName, 0);
```

You must specify the prototype method that will efficiently assemble the string data.

Choose the code segment which will accomplish the task.

A. [DllImport("user32", CharSet = CharSet.Ansi)]public static extern bool
MessageBox(int hWnd, String text, String caption, uint type);
}

B. [DllImport("user32", EntryPoint = "MessageBoxA", CharSet = CharSet.Ansi)]public
static extern bool MessageBox(int hWnd,
[MarshalAs(UnmanagedType.LPWStr)]String text,
[MarshalAs(UnmanagedType.LPWStr)]String caption,
uint type);
}

C. [DllImport("user32", CharSet = CharSet.Unicode)]public static extern bool
MessageBox(int hWnd, String text, String caption, uint type);
}

D. [DllImport("user32", EntryPoint = "MessageBoxA", CharSet =
CharSet.Unicode)]public static extern bool MessageBox(int hWnd,
[MarshalAs(UnmanagedType.LPWStr)]String text,
[MarshalAs(UnmanagedType.LPWStr)]String caption,
uint type);
}

Answer: C

QUESTION 373

You work as the application developer at Certkiller .com. You create a method which will compress an array of bytes. A parameter named document is used to pass the array to your method.

You want to compress the received array of bytes or data, and then want to return the result as an array of bytes.

Choose the code segment which will achieve your goal.

- A. `MemoryStream strm = new MemoryStream(document);
DeflateStream deflate = new DeflateStream(strm,
CompressionMode.Compress);
byte[] result = new byte[document.Length];
deflate.Write(result, 0, result.Length);
return result;`
- B. `MemoryStream strm = new MemoryStream(document);
DeflateStream deflate = new DeflateStream(strm,
CompressionMode.Compress);
deflate.Write(document, 0, document.Length);
deflate.Close();
return strm.ToArray();`
- C. `MemoryStream strm = new MemoryStream();
DeflateStream deflate = new DeflateStream(strm,
CompressionMode.Compress);
deflate.Write(document, 0, document.Length);
deflate.Close();
return strm.ToArray();`
- D. `MemoryStream inStream = new MemoryStream(document);
DeflateStream deflate = new DeflateStream(inStream,
CompressionMode.Compress);
MemoryStream outStream = new MemoryStream();
int b;
while ((b = deflate.ReadByte()) != -1) {
outStream.WriteByte((byte)b);
} return outStream.ToArray();`

Answer: C

Explanation: The document is compressed and written to a new MemoryStream using the Deflate class. Finally the compressed data can be returned as an array of bytes using the ToArray method of the MemoryStream.

A does not compress and write the document, instead it is compressing and writing an empty array

B & D are reading and writing to the same document.

QUESTION 374

You work as the application developer at Certkiller .com. You are developing an

application named Certkiller App05. Certkiller App05 is configured to use SOAP to exchange data with other applications deployed on the Certkiller .com network. In your configuration, you specify that a class named Department inherits from ArrayList to pass objects to the other application. The Department object is named department.

You must perform the configuration which will enable the application to serialize the Department object for transport via SOAP.

Choose the code segment which will accomplish this task.

- A. SoapFormatter formatter = new SoapFormatter();
byte[] buffer = new byte[Certkiller .Capacity];
MemoryStream stream = new MemoryStream(buffer);-
foreach (object o in department) {
formatter.Serialize(stream, o);
}
- B. SoapFormatter formatter = new SoapFormatter();
byte[] buffer = new byte[department.Capacity];
MemoryStream stream = new MemoryStream(buffer);
formatter.Serialize(stream, department);
- C. SoapFormatter formatter = new SoapFormatter();
MemoryStream stream = new MemoryStream();
foreach (object o in department) {
formatter.Serialize(stream, o);
}
- D. SoapFormatter formatter = new SoapFormatter();
MemoryStream stream = new MemoryStream();
formatter.Serialize(stream, department);

Answer: D

Explanation: Simply serialize the entire object to a stream using a SoapFormatter.

A&C attempt to serialize components of the object rather the object itself.

B attempts to serialize to an array, however the array will not be big enough to store the serialized object because it is not sized on the entire object.

QUESTION 375

You work as the application developer at Certkiller .com. You are developing a class definition. Your class definition must be able to interoperate with COM applications.

You must create a code segment that will allow COM applications to create instances of the class. COM applications must also be able to call the method named GetAddress.

Choose the code segment which you should use.

- A. public class Customer {
string addressString;

```
public Customer(string address) { addressString = address;
}
public string GetAddress() { return addressString;
}}
```

```
B. public class Customer {
static string addressString;
public Customer() { }
public static string GetAddress() { return addressString;
}}
```

```
C. public class Customer {
string addressString;
public Customer() { }
public string GetAddress() { return addressString;
}}
```

```
D. public class Customer {
string addressString;
public Customer() { }
internal string GetAddress() { return addressString;
}}
```

Answer: C

Explanation: The class should be declared with a parameter less constructor and the getAddress() method should be public.

A uses a constructor with Parameters.

B uses static members that are not supported in COM

D the method GetAddress() must be public to be accessible by COM.

QUESTION 376

You work as the application developer at Certkiller .com. You are creating a class library which must be able to access system environment variables.

You must set a call method which will only force a runtime SecurityException if the callers which are higher in the call stack, fail to have the required permissions.

Choose the call method which will do this.

- A. Use set.Demand();
- B. Use set.Assert();
- C. Use set.PermitOnly();
- D. Use set.Deny();

Answer: A

Explanation: Demand forces all callers in the call stack to have the specified permission.

PermitOnly will instruct the runtime to reduce the access by only allowing callers with the permissions explicitly stated and nothing else.

Assert will ignore the permissions of callers and allow them indiscriminately.
Deny will explicitly deny access if the caller has the specified permission.

QUESTION 377

You work as the application developer at Certkiller .com. You are creating a new method that will hash specific data with the Secure Hash Algorithm (SHA-1). The data must be passed to your method as a byte array named hashdata. The resultant data must then be passed to a byte array named hash. Choose the code segment which will achieve your goal.

- A. SHA1 sha = new SHA1CryptoServiceProvider();
byte[] hash = null;
sha.TransformBlock(
hashdata, 0, hashdata.Length, hash, 0);
- B. SHA1 sha = new SHA1CryptoServiceProvider();
byte[] hash = BitConverter.GetBytes(sha.GetHashCode());
- C. SHA1 sha = new SHA1CryptoServiceProvider();
byte[] hash = sha.ComputeHash(hashdata);
- D. SHA1 sha = new SHA1CryptoServiceProvider();
sha.GetHashCode();
byte[] hash = sha.Hash;

Answer: C

Explanation: Initialise SHA1 object and call the ComputeHash method supplying the hashdata as a parameter to return the hash code as an array of bytes.
A TransferBlock is more appropriate for hashing part of a hashdata. Also it should be called with TransferEndBlock.
B&C GetHashCode is the method inherited from the Object class. It will not perform a hash on the incoming hashdata.

QUESTION 378

You work as the application developer at Certkiller .com. You are creating a new method that must hash specific data by applying the MD5 algorithm. You must write the hash of the incoming parameter by using the MD5 algorithm. The data must be passed to your method as a byte array named message. The resultant data must then be placed into a byte array. Choose the code segment which will achieve your goal.

- A. HashAlgorithm algo = HashAlgorithm.Create("MD5");
byte[] hash = algo.ComputeHash(message);
- B. HashAlgorithm algo = HashAlgorithm.Create("MD5");
byte[] hash = BitConverter.GetBytes(algo.GetHashCode());
- C. HashAlgorithm algo;
algo = HashAlgorithm.Create(message.ToString());
byte[] hash = algo.Hash;

```
D. HashAlgorithm algo = HashAlgorithm.Create("MD5");  
byte[] hash = null;  
algo.TransformBlock(hashdata, 0, message.Length, message, 0);
```

Answer: A

Explanation: Create a HashAlgorithm object based on the MD5 algorithm and call the ComputerHash method that will return the hash as an array of bytes.

B GetHashCode() will call the method inherited from object, it will not hash the message.

C The parameter of the Create method should specify the type of hashing algorithm to use not the message to be hashed.

D TransferBlock is more appropriate for hashing part of a message. Also it should be called with TransferEndBlock.

QUESTION 379

You work as the application developer at Certkiller .com. You have created a new dynamic assembly named Certkiller Assembly and must ensure that the assembly is saved to disk.

Choose the code segment which you should use.

```
A. AssemblyName myAssemblyName =  
new AssemblyName();  
myAssemblyName.Name = " Certkiller Assembly";  
AssemblyBuilder myAssemblyBuilder =  
AppDomain.CurrentDomain.DefineDynamicAssembly  
(myAssemblyName, AssemblyBuilderAccess.Run);  
myAssemblyBuilder.Save(" Certkiller Assembly.dll");  
B. AssemblyName myAssemblyName =  
new AssemblyName();  
myAssemblyName.Name = " Certkiller Assembly";  
AssemblyBuilder myAssemblyBuilder =  
AppDomain.CurrentDomain.DefineDynamicAssembly  
(myAssemblyName, AssemblyBuilderAccess.Save);  
myAssemblyBuilder.Save(" Certkiller Assembly.dll");  
C. AssemblyName myAssemblyName =  
new AssemblyName();  
AssemblyBuilder myAssemblyBuilder =  
AppDomain.CurrentDomain.DefineDynamicAssembly  
(myAssemblyName, AssemblyBuilderAccess.RunAndSave);  
myAssemblyBuilder.Save(" Certkiller Assembly.dll");  
D. AssemblyName myAssemblyName =  
new AssemblyName(" Certkiller Assembly");  
AssemblyBuilder myAssemblyBuilder =  
AppDomain.CurrentDomain.DefineDynamicAssembly  
(myAssemblyName, AssemblyBuilderAccess.Save);  
myAssemblyBuilder.Save("c:\\ Certkiller Assembly.dll");
```

Answer: B

Explanation: Create an AssemblyName object and use it to construct an AssemblyBuilder with save privilege. Finally call the Save method on the AssemblyBuilder to write the assembly to disk.

A Creates an assembly that does not have the privilege to save to disk.

C does not provide a name the assembly

D attempts to define a physical file location, this is not compatible with AssemblyBuilder.Save

QUESTION 380

You work as the application developer at Certkiller .com. You are creating a new code segment which is to be used for user authentication and authorization purposes. The current application data store already stores the username, password, and roles.

You must establish the user security context, which should be used for the authorization checks like IsInRole. To authorize the user, you have started developing the following code segment:

```
if (!TestPassword(userName, password))
```

```
throw new Exception("user not authenticated");
```

```
String[] userRolesArray = LookupUserRoles(userName);
```

From the options below, choose the code which will make the code segment complete.

A. GenericIdentity ident = new GenericIdentity(userName);

GenericPrincipal currentUser =

new GenericPrincipal(ident, userRolesArray);

Thread.CurrentPrincipal = currentUser;

B. WindowsIdentity ident = new WindowsIdentity(userName);

WindowsPrincipal currentUser = new WindowsPrincipal(ident);

Thread.CurrentPrincipal = currentUser;

C. NTAccount userNTName = new NTAccount(userName);

GenericIdentity ident = new GenericIdentity(userNTName.Value);

GenericPrincipal currentUser= new GenericPrincipal(ident, userRolesArray);

Thread.CurrentPrincipal = currentUser;

D. IntPtr token = IntPtr.Zero;

token = LogonUserUsingInterop(userName, encryptedPassword);

WindowsImpersonationContext ctx =

WindowsIdentity.Impersonate(token);

Answer: A

Explanation: Because the application storing the credentials, the GenericIdentity & GenericPrincipal classes should be used instead of the WindowsIdentity\Principal classes.

B uses WindowsIdentity & WindowsPrincipal

C incorrectly uses NTAccount to initialise a GenericPrincipal. GenericPrincipal requires an implementation of IIdentity.

D the WindowsIdentity.Impersonate() is used for running code in the context of another user. Impersonation is not what is required.

QUESTION 381

You work as the application developer at Certkiller .com. You are creating a new application named at Certkiller App11. Certkiller App11 will be used for a Certkiller .com business partner. The Certkiller business partner has offices in Hong Kong.

You must write the code segment which will show all negative currency values by using a minus sign.

Choose the code segment which you should use.

- A. NumberFormatInfo culture =
new CultureInfo("zh-HK").NumberFormat;
culture.NumberNegativePattern = 1;
return numberToPrint.ToString("C", culture);
- B. NumberFormatInfo culture =
new CultureInfo("zh-HK").NumberFormat;
culture.CurrencyNegativePattern = 1;
return numberToPrint.ToString("C", culture);
- C. CultureInfo culture =
new CultureInfo("zh-HK");
return numberToPrint.ToString("-(0)", culture);
- D. CultureInfo culture =
new CultureInfo("zh-HK");
return numberToPrint.ToString("()", culture);

Answer: B

Explanation: Use CurrencyNegativePattern property set to 1 to display negative currency values with a minus sign.

A will give a minus sign for negative numbers but not for negative currencies.

C & D The culture has not been to display a minus sign for currency.

QUESTION 382

You work as the application developer at Certkiller .com. You are developing a new application. You must define the code segment which will create a common language runtime (CLR) unit of isolation within the new application.

Choose the code segment which you should use to accomplish this task.

- A. AppDomainSetup mySetup = AppDomain.CurrentDomain.SetupInformation;
mySetup.ShadowCopyFiles = "true";
- B. System.Diagnostics.Process myProcess;

```
myProcess = new System.Diagnostics.Process();  
C. AppDomain domain;  
domain = AppDomain.CreateDomain("CertkillerDomain");  
D. System.ComponentModel.Component myComponent;  
myComponent = new System.ComponentModel.Component();
```

Answer: C

Explanation: Create a new ApplicationDomain using the AppDomain.CreateDomain() method.

A ShadowCopyFiles property of AppDomainSetup controls whether shadow copying is enabled or disabled.

B the Process class is used to represent an existing process running on a computer.

D The ComponentModel.Component class is used for sharing components between applications.

QUESTION 383

You work as the application developer at Certkiller .com. You are working on a new application named Certkiller App05. Certkiller App05 is configured to dynamically load assemblies from the application directory.

You must define the code segment that will dynamically load an assembly named Certkiller Ass25.dll into the current application domain.

Choose the code segment which you should use to accomplish this task.

```
A. AppDomain domain = AppDomain.CurrentDomain;  
string myPath = Path.Combine(domain.BaseDirectory, " Certkiller Ass25.dll");  
Assembly asm = Assembly.LoadFrom(myPath);  
B. AppDomain domain = AppDomain.CurrentDomain;  
string myPath = Path.Combine(domain.BaseDirectory, " Certkiller Ass25.dll  
Assembly asm = Assembly.Load(myPath);  
C. AppDomain domain = AppDomain.CurrentDomain;  
string myPath = Path.Combine(domain.DynamicDirectory, " Certkiller Ass25.dll");  
Assembly asm = AppDomain.CurrentDomain.Load(myPath);  
D. AppDomain domain = AppDomain.CurrentDomain;  
Assembly asm = domain.GetData(" Certkiller Ass25.dll");
```

Answer: A

Explanation: The Assembly.LoadFrom() method can be called to dynamically load an assembly from file.

B the Load method requires an AssemblyName object as a parameter.

C it is not possible to use AppDomain.Load to load an assembly from file.

D AppDomain.GetData gets information stored in the AppDomain for the specified assembly. It cannot load an assembly.

QUESTION 384

You work as the application developer at Certkiller .com. You are creating a new code segment. You must ensure that the data contained within an isolated storage file, named Settings.dat, is returned as a string. Settings.dat is machine-scoped. Choose the code segment which will achieve your goal.

- A. `IsolatedStorageFileStream isoStream;`
`isoStream = new IsolatedStorageFileStream("Settings.dat", FileMode.Open);`
`string result = new StreamReader(isoStream).ReadToEnd();`
- B. `IsolatedStorageFile isoFile;`
`isoFile = IsolatedStorageFile.GetMachineStoreForAssembly();`
`IsolatedStorageFileStream isoStream;`
`isoStream = new IsolatedStorageFileStream("Settings.dat", FileMode.Open, isoFile);`
`string result = new StreamReader(isoStream).ReadToEnd();`
- C. `IsolatedStorageFileStream isoStream;`
`isoStream = new IsolatedStorageFileStream("Settings.dat", FileMode.Open);`
`string result = isoStream.ToString();`
- D. `IsolatedStorageFile isoFile;`
`isoFile = IsolatedStorageFile.GetMachineStoreForAssembly();`
`IsolatedStorageFileStream isoStream;`
`isoStream = new IsolatedStorageFileStream("Settings.dat", FileMode.Open, isoFile);`
`string result = isoStream.ToString();`

Answer: B

Explanation: Retrieve the `IsolatedStorageFile` for the machine store. Use an `IsolatedStorageFileStream` to read from the desired file within the machine store.

A & C do not get the `IsolatedStorageFile` for the machine context.

D returns a string representation of the `IsolatedStorageFileStream` object not a String of the files contents as the question requests.

QUESTION 385

You work as the application developer at Certkiller .com. You are creating a new class which contains a method named `GetCurrentRate`. `GetCurrentRate` extracts the current interest rate from a variable named `currRate`. `currRate` contains the current interest rate which should be used.

You develop serialized representations of the class and now need to write a code segment which updates the `currRate` variable with the current interest rate if an instance of the class is deserialized.

Choose the code segment which will accomplish this task.

- A. `[OnSerializing]internal void UpdateValue (StreamingContext context) {`
`currRate = GetCurrentRate();`
`}`
- B. `[OnSerializing]internal void UpdateValue(SerializationInfo info) {`
`info.AddValue("currentRate", GetCurrentRate());`

```
}  
C. [OnDeserializing]internal void UpdateValue(SerializationInfo info) {  
    info.AddValue("currentRate", GetCurrentRate());  
}  
D. [OnDeserialized]internal void UpdateValue(StreamingContext context) {  
    currRate = GetCurrentRate();  
}
```

Answer: D

Explanation: A method with the OnDeserialized attribute will be called after Deserialization and any instance variables can be set.

A & B the method will fire during serializing, the question is concerned with reconstructing the object during deserialization.

C the OnDeserializing attribute is useful for default values. OnDeserializing attribute works with a method that contains a StreamContext parameter and not a SerializationInfo parameter.

QUESTION 386

You work as the application developer at Certkiller .com. You have to develop a method which will clear a queue named badqueue.

Choose the code segment which will accomplish this task.

```
A. foreach (object e in badqueue) {  
    q.Dequeue();  
}  
B. foreach (object e in badqueue) {  
    Enqueue(null);  
}  
C. badqueue.Clear();  
D. badqueue.Dequeue();
```

Answer: C

Explanation: Simply call the Clear() method to empty a queue.

A Dequeueing all of the items in a queue will also serve the same affect but it is a lot more roundabout.

B attempts to re-queue items that are already in the queue

D will de-queue only one item that is at the front of the queue.

QUESTION 387

You work as the application developer at Certkiller .com. You have to develop an application named Certkiller App21. When deployed, Certkiller App21 will be used by numerous users on the same computer. Certkiller App21 uses more than one assembly, and is configured to use isolated storage to store certain user information. You must create a new directory named UserInfo in the isolated storage area which

is scoped to the current Microsoft Windows identity and assembly.
Choose the code segment which will accomplish this task.

- A. IsolatedStorageFile store;
store = IsolatedStorageFile.GetUserStoreForAssembly();
store.CreateDirectory("UserInfo");
- B. IsolatedStorageFile store;
store = IsolatedStorageFile.GetMachineStoreForAssembly();
store.CreateDirectory("UserInfo");
- C. IsolatedStorageFile store;
store = IsolatedStorageFile.GetUserStoreForDomain();
store.CreateDirectory("UserInfo");
- D. IsolatedStorageFile store;
store = IsolatedStorageFile.GetMachineStoreForApplication();
store.CreateDirectory("UserInfo");

Answer: A

Explanation: The user store for the assembly is the correct store that is required. It is returned by IsolatedStorageFile.GetUserStoreForAssembly().
B,C & D return Isolated Storage File stores of incorrect scope

QUESTION 388

You work as the application developer at Certkiller .com. You are working on an existing application and must load a new assembly into this application. You must write the code segment that will require the common language runtime (CLR) to grant the assembly a permission set, as though the assembly was loaded from the local intranet zone. You must ensure that the default evidence for the assembly is overridden and must create the evidence collection. Choose the code segment which will accomplish this task.

- A. Evidence evidence = new Evidence(Assembly.GetExecutingAssembly().Evidence);
- B. Evidence evidence = new Evidence();
evidence.AddAssembly(new Zone(SecurityZone.Intranet));
- C. Evidence evidence = new Evidence();
evidence.AddHost(new Zone(SecurityZone.Intranet));
- D. Evidence evidence = new Evidence(AppDomain.CurrentDomain.Evidence);

Answer: C

Explanation: Use the evidence.AddHost method to add Zone evidence. A simply gets the evidence of the Executing Assembly and assigns it to a new object,

the question explicitly wants Intranet zone evidence.

B Adds assembly evidence, the question asks for host evidence because it is concerned with where the assembly was loaded from.#

D does not create an Evidence object with Intranet zone evidence.

QUESTION 389

You work as the application developer at Certkiller .com. You are working on a new requirement. You have to create a class library that will open the network socket connections to computers on the Certkiller .com network.

The class library must be deployed to the global assembly cache, with full trust granted. To cater for network socket connections being used, you develop this code segment:

```
SocketPermission permission =  
new SocketPermission(PermissionState.Unrestricted);  
permission.Assert();
```

You discover though that there are certain existing applications which do not have the required permissions to open the network socket connections. You decide to cancel the assertion.

Choose the code segment which will accomplish this task.

- A. CodeAccessPermission.RevertAssert();
- B. CodeAccessPermission.RevertDeny();
- C. permission.Deny();
- D. permission.PermitOnly();

Answer: A

Explanation: CodeAccessPermission.ReverAssert() should be used to undo a previous Assert call.

B is used to revert a previous deny call.

C & D are used to reduce the CAS permissions, they do not undo a previous Assert call.

QUESTION 390

You work as the application developer at Certkiller .com. You create a new service application named Certkiller App29. You install Certkiller App29 on five application servers running in the Certkiller .com network. You then apply the code segment shown below. Note that line numbers are only included for reference pruposes.

```
01 public void StartService(string serverName){  
02 ServiceController ctrl = new  
03 ServiceController(" Certkiller App29");  
04 if (ctrl.Status == ServiceControllerStatus.Stopped){  
05 }  
06 }
```

You want Certkiller App29 to start if it stops. You must create the routine which will start Certkiller App29 on the server defined by the serverName input parameter.

Choose the two lines of code which you should include in your code segment. Each

correct answer presents only part of the complete solution. Choose two answers.

- A. Add this line of code between line 03 and line 04: `ctrl.ServiceName = serverName;`
- B. Add this line of code between line 03 and line 04: `ctrl.MachineName = serverName;`
- C. Add this line of code between line 03 and line 04: `ctrl.Site.Name = serverName;`
- D. Add this line of code between line 04 and line 05: `ctrl.Continue();`
- E. Add this line of code between line 04 and line 05: `ctrl.Start();`
- F. Add this line of code between line 04 and line 05: `ctrl.ExecuteCommand(0);`

Answer: B,E

Explanation: The ServiceController is capable of controller services on other computers, the MachineName should be specified. The service should be started with the Start() method if it is in the stopped state.

Setting the ServiceName to the machine name is incorrect.

No such property as SiteName

Continue cannot re-start a stopped service only a paused one.

ExecuteCommand is used to fire a custom command on the service.

QUESTION 391

You work as the application developer at Certkiller .com. You must write the code segment which will enable you to read the entire contents of a file named Data.txt into a single string variable.

Choose the code segment that will do this.

- A. `string result = null;`
`StreamReader reader = new StreamReader("Data.txt");`
`result = reader.Read().ToString();`
- B. `string result = null;`
`StreamReader reader = new StreamReader("Data.txt");`
`result = reader.ReadToEnd();`
- C. `string result = string.Empty;`
`StreamReader reader = new StreamReader("Data.txt");`
`while (!reader.EndOfStream) {`
`result += reader.ToString();`
`}`
- D. `string result = null;`
`StreamReader reader = new StreamReader("Data.txt");`
`result = reader.ReadLine();`

Answer: B

Explanation: Create a StreamReader based on the file and call the ReadToEnd() method to quickly read the entire file and return a string.

A & D does not read the entire file.

Calling ToString() on the reader will give a string representation of the stream and will not read from the stream.

QUESTION 392

You work as the application developer at Certkiller .com. You are writing a method that will run through the credentials of the end user. Microsoft Windows groups must be used to authorize the user.

You must develop the code segment which will recognize if the user exists in the local group named Sales.

Choose the code segment that will do this.

- A. `WindowsIdentity currentUser = WindowsIdentity.GetCurrent();
foreach (IdentityReference grp in currentUser.Groups) {
NTAccount grpAccount =
((NTAccount)grp.Translate(typeof(NTAccount)));
isAuthorized = grpAccount.Value.Equals(Environment.MachineName + @"\Sales");
if (isAuthorized) break;
}`
- B. `WindowsPrincipal currentUser =
(WindowsPrincipal)Thread.CurrentPrincipal;
isAuthorized = currentUser.IsInRole("Sales");`
- C. `GenericPrincipal currentUser =
(GenericPrincipal) Thread.CurrentPrincipal;
isAuthorized = currentUser.IsInRole("Sales");`
- D. `WindowsPrincipal currentUser =
(WindowsPrincipal)Thread.CurrentPrincipal;
isAuthorized = currentUser.IsInRole(Environment.MachineName);`

Answer: B

Explanation: To check the role membership of the current Windows user, use the IsInRole() method of the WindowsPrincipal in the current thread.

A it is a lot more complicated to iterate through all the groups the user belongs to and checking for matches. The Principal classes are for this very purposes and should be used.

C uses GenericPrincipal. WindowsPrincipal should be used for windows accounts. There is an invalid cast from WindowsPrincipal to GenericPrincipal.

D does not specify the group correctly.

QUESTION 393

You work as the application developer at Certkiller .com. You must create a code segment that will perform these tasks:

1. Retrieves the name of each paused service.
2. Passes the name to the Add method of Collection5.

Choose the code segment which you should use.


```
A. ManagementObjectSearcher searcher =  
new ManagementObjectSearcher(  
"Select * from Win32_Service where State = 'Paused'");  
foreach (ManagementObject svc in searcher.Get()) {  
Collection5.Add(svc["DisplayName"]);  
}  
B. ManagementObjectSearcher searcher =  
new ManagementObjectSearcher( "Select * from Win32_Service", "State = 'Paused'");  
foreach (ManagementObject svc in searcher.Get()) {  
Collection5.Add(svc["DisplayName"]);  
}  
C. ManagementObjectSearcher searcher =  
new ManagementObjectSearcher(  
"Select * from Win32_Service");  
foreach (ManagementObject svc in searcher.Get()) {  
if ((string) svc["State"] == "Paused") {  
Collection5.Add(svc["DisplayName"]);  
}}  
D. ManagementObjectSearcher searcher =  
new ManagementObjectSearcher();  
searcher.Scope = new ManagementScope("Win32_Service");  
foreach (ManagementObject svc in searcher.Get()) {  
if ((string)svc["State"] == "Paused") {  
Collection5.Add(svc["DisplayName"]);  
}}}
```

Answer: A

Explanation: Use the ManagementObjectSearcher to search for all services with a paused state. Iterate over the returned collection and add the display name to Collection5.

B The constructor is invoked incorrectly.

C & D the query is incorrect. The searcher does not restrict to paused services.

QUESTION 394

You work as the application developer at Certkiller .com. You must create a code segment that will identify the first 100 bytes from a stream variable named Certkiller stream5.

The initial 100 bytes must be transferred to a byte array named byteArray. The code segment you write must assign the transferred bytes to an integer variable named bytesTransferred

Choose the code segment which you should use.

A. bytesTransferred = Certkiller stream5.Read(byteArray, 0, 100);

B. for (int i = 0;
i < 100;

```
i++) {  
    Certkiller stream5.WriteByte(byteArray[i]);  
    bytesTransferred = i;  
    if (! Certkiller stream5.CanWrite) {  
        break;  
    }  
    C. while (bytesTransferred < 100) {  
        Certkiller stream5.Seek(1, SeekOrigin.Current);  
        byteArray[bytesTransferred++] =  
        Convert.ToByte( Certkiller stream5.ReadByte());  
    }  
    D. Certkiller stream5.Write(byteArray, 0, 100);  
    bytesTransferred = byteArray.Length;
```

Answer: A

Explanation: The Read() method accepts a byte array and the start position and number of bytes to read as parameters.

B & D The question indicates that data should be read from the stream not written to it.

C it is unnecessary to attempt to read byte by byte, the Read() method provides a very efficient way of reading into a byte array.

QUESTION 395

You work as the application developer at Certkiller .com. You are developing a new application named Certkiller App12. Certkiller App12 will be used to store customer information on Certkiller .com's customers who are dispersed across the continent.

You need to create internal utilities for Certkiller App12, and need to collect information on all Certkiller .com's customers that are located in Canada.

Choose the code segment which will perform this task.

```
A. foreach (CultureInfo culture in  
    CultureInfo.GetCultures(CultureTypes.SpecificCultures)) { // Output the region  
    information...}  
B. CultureInfo cultureInfo = new CultureInfo("CA");  
    // Output the region information...  
C. RegionInfo regionInfo = new RegionInfo("CA");  
    // Output the region information...  
D. RegionInfo regionInfo = new RegionInfo("");  
    if (regionInfo.Name == "CA") {  
        // Output the region information...}
```

Answer: C

Explanation: The RegionInfo class can be used to get information about a region.

A & B CultureInfo is used to control formatting, sorting & comparing of culture sensitive

data. E.g currencies, calendar dates etc.

D Does not initialise the RegionInfo object correctly i.e to Canada.

QUESTION 396

You work as the application developer at Certkiller .com. You are developing a new application named Certkiller App06.

Certkiller App06 will be used to transmit confidential financial information over the network. To secure the confidential data, you create an X509 Certificate object named certificate and create a TcpClient object named client.

You must now create the code segment that creates an SslStream for communication by applying the Transport Layer Security 1.0 protocol.

Choose the code segment which you should use.

- A. SslStream ssl = new SslStream(client.GetStream());
ssl.AuthenticateAsServer(
certificate, false, SslProtocols.None, true);
- B. SslStream ssl = new SslStream(client.GetStream());
ssl.AuthenticateAsServer(
certificate, false, SslProtocols.Ssl3, true);
- C. SslStream ssl = new SslStream(client.GetStream());
ssl.AuthenticateAsServer(
certificate, false, SslProtocols.Ssl2, true);
- D. SslStream ssl = new SslStream(client.GetStream());
ssl.AuthenticateAsServer(
certificate, false, SslProtocols.Tls, true);

Answer: D

QUESTION 397

You work as the application developer at Certkiller .com. You are developing a new method that must pass data to another method named Certkiller Me2. Your method accepts a string parameter named message.

The method you are writing must break the message parameter into individual lines of text. Each individual line must then be passed to the Certkiller Me2 method.

Choose the code segment which you should use.

- A. StringReader reader = new StringReader(message);
Certkiller Me2 (reader.ReadToEnd());
reader.Close();
- B. StringReader reader = new StringReader(message);
while (reader.Peek() != -1) {
string line = reader.Read().ToString();
Certkiller Me2 (line);
}reader.Close();
- C. StringReader reader = new StringReader(message);
Certkiller Me2 (reader.ToString());

```
reader.Close();
D. StringReader reader = new StringReader(message);
while (reader.Peek() != -1) {
    Certkiller Me2 (reader.ReadLine());
}reader.Close();
```

Answer: D

Explanation: StringReader.ReadLine() allows for lines to be read line by line.

A ReadToEnd() will read the entire stream.

B Read() will not read the line but only the next character.

C will not read from the message but will just give a string representation of the reader.

QUESTION 398

You work as the application developer at Certkiller .com. You are developing a new method that must encrypt confidential data. The method must use the Data Encryption Standard (DES) algorithm. Your new method takes these parameters:

1. A byte array, named message, that must be encrypted by applying the DES algorithm.
2. A key, named key, which will be used to encrypt the data.
3. The initialization vector, named iv.

Once the data is encrypted, it must be added to the MemoryStream object.

Choose the code segment which will encrypt the specified data and add it to the MemoryStream object.

```
A. DES des = new DESCryptoServiceProvider();
des.BlockSize = message.Length;
ICryptoTransform crypto = des.CreateEncryptor(key, iv);
MemoryStream cipherStream = new MemoryStream();
CryptoStream cryptoStream = new CryptoStream(cipherStream,
crypto, CryptoStreamMode.Write);
cryptoStream.Write(message, 0, message.Length);
B. DES des = new DESCryptoServiceProvider();
ICryptoTransform crypto = des.CreateDecryptor(key, iv);
MemoryStream cipherStream = new MemoryStream();
CryptoStream cryptoStream = new CryptoStream(cipherStream,
crypto, CryptoStreamMode.Write);
cryptoStream.Write(message, 0, message.Length);
C. DES des = new DESCryptoServiceProvider();
ICryptoTransform crypto = des.CreateEncryptor();
MemoryStream cipherStream = new MemoryStream();
CryptoStream cryptoStream = new CryptoStream(cipherStream,
crypto, CryptoStreamMode.Write);
cryptoStream.Write(message, 0, message.Length);
D. DES des = new DESCryptoServiceProvider();
ICryptoTransform crypto = des.CreateEncryptor(key, iv);
```

```
MemoryStream cipherStream = new MemoryStream();
CryptoStream cryptoStream = new CryptoStream(cipherStream,
crypto, CryptoStreamMode.Write);
cryptoStream.Write(message, 0, message.Length);
```

Answer: D

Explanation: Use the DesCryptoServiceProvider to create a new encryptor. Create a CryptoStream that encrypt directly to the MemoryStream and call the Write() method to perform the encryption.

A Uses a blocksize set to size of the entire message

B creates a decryptor instead of an encryptor.

C does not initialize the encryptor with the key and iv correctly.

QUESTION 399

You work as the application developer at Certkiller .com. You have to create a new security policy for an application domain which must enforce the new Certkiller .com security policy. You write the code segment to do this:

```
PolicyLevel policy = PolicyLevel.CreateAppDomainLevel();
```

```
PolicyStatement noTrustStatement =
```

```
new PolicyStatement(
```

```
policy.GetNamedPermissionSet("Nothing"));
```

```
PolicyStatement fullTrustStatement =
```

```
new PolicyStatement(
```

```
policy.GetNamedPermissionSet("FullTrust"));
```

You must now ensure that all loaded assemblies default to the Nothing permission set. In addition to this, when an assembly comes from a trusted zone, your security policy must grant the assembly the FullTrust permission set. You must create the code groups to do this.

Choose the code segment which will achieve this objective.

A. CodeGroup group1 = new FirstMatchCodeGroup(
new ZoneMembershipCondition(SecurityZone.Trusted),
fullTrustStatement);

```
CodeGroup group2 = new UnionCodeGroup(  
new AllMembershipCondition(),  
noTrustStatement);
```

```
group1.AddChild(group2);
```

B. CodeGroup group1 = new FirstMatchCodeGroup(
new AllMembershipCondition(),
noTrustStatement);

```
CodeGroup group2 = new UnionCodeGroup(  
new ZoneMembershipCondition(SecurityZone.Trusted),  
fullTrustStatement);
```

```
group1.AddChild(group2);
```

C. CodeGroup group = new UnionCodeGroup(

```
new ZoneMembershipCondition(SecurityZone.Trusted),
fullTrustStatement);
D. CodeGroup group = new FirstMatchCodeGroup(
new AllMembershipCondition(),
noTrustStatement);
```

Answer: B

QUESTION 400

You work as the application developer at Certkiller .com. You have to define the code segment that will transfer the data of a byte array. The byte array is named dataToSend. Your code segment must use a NetworkStream object named netStream when transferring the data of the byte array. The cache size you use must be 8,192 bytes.

Which code segment should you use to accomplish the task?

- A. MemoryStream memStream = new MemoryStream(8192);
memStream.Write(dataToSend, 0, (int) netStream.Length);
- B. MemoryStream memStream = new MemoryStream(8192);
netStream.Write(dataToSend, 0, (int) memStream.Length);
- C. BufferedStream bufStream = new BufferedStream(netStream, 8192);
bufStream.Write(dataToSend, 0, dataToSend.Length);
- D. BufferedStream bufStream = new BufferedStream(netStream);
bufStream.Write(dataToSend, 0, 8192);

Answer: C

Explanation: To send data using a cache it is necessary to use a BufferedStream.

The BufferedStream should be created with the cache size of 8192 bytes.

A & B do not employ caching.

D does not correctly initialise the BufferedStream to have a cache size of 8192 bytes.

QUESTION 401

You work as the application developer at Certkiller .com. You are developing a new client application named Certkiller App09. Certkiller App09 must have a utility screen. The screen must show a thermometer; which must indicate what the current status of processes are which are being executed by the application.

A rectangle, which will be the background of the thermometer, must be drawn on the screen. The rectangle must be filled with gradient shading, as shown in the accompanying exhibit.



Which code segment should you use to accomplish the task?

```

A. Rectangle rectangle = new Rectangle(10, 10, 450, 25);
LinearGradientBrush rectangleBrush =
new LinearGradientBrush(rectangle, Color.AliceBlue,
Color.CornflowerBlue,
LinearGradientMode.ForwardDiagonal);
Pen rectanglePen = new Pen(rectangleBrush);
Graphics g = this.CreateGraphics();
g.DrawRectangle(rectanglePen, rectangle);
B. Rectangle rectangle = new Rectangle(10, 10, 450, 25);
LinearGradientBrush rectangleBrush =
new LinearGradientBrush(rectangle, Color.AliceBlue,
Color.CornflowerBlue,
LinearGradientMode.ForwardDiagonal);
Pen rectanglePen = new Pen(rectangleBrush);
Graphics g = this.CreateGraphics();
g.FillRectangle(rectangleBrush, rectangle);
C. RectangleF rectangle = new RectangleF(10f, 10f, 450f, 25f);
Point[] points = new Point[] { new Point(0, 0),
new Point(110, 145)};
LinearGradientBrush rectangleBrush =
new LinearGradientBrush(rectangle, Color.AliceBlue,
Color.CornflowerBlue,
LinearGradientMode.ForwardDiagonal);
Pen rectanglePen = new Pen(rectangleBrush);
Graphics g = this.CreateGraphics();
g.DrawPolygon(rectanglePen, points);
D. RectangleF rectangle = new RectangleF(10f, 10f, 450f, 25f);
SolidBrush rectangleBrush =
new SolidBrush(Color.AliceBlue);
Pen rectanglePen = new Pen(rectangleBrush);
Graphics g = this.CreateGraphics();
g.DrawRectangle(rectangleBrush, rectangle);

```

Answer: B

Explanation: Create a LinearGradientBrush and supply to the FillRectangle() method of the graphics object.

A DrawRectangle() will draw the outline of a rectangle without filling it.

C draws an unfilled Polygon..

D Uses a SolidBrush and will not achieve the desired gradient fill

QUESTION 402

You work as the application developer at Certkiller .com. You are creating a new method. Your method must be localized to Italy, and must search a string named searchList for a specific substring named searchValue.

Which code segment should you use to perform this task?

```
A. return searchList.IndexOf(searchValue);
B. CompareInfo comparer =
new CultureInfo("it-IT").CompareInfo;
return comparer.Compare(searchList, searchValue);
C. CultureInfo comparer = new CultureInfo("it-IT");
if (searchList.IndexOf(searchValue)
> 0) {
return true;
} else {
return false;
}
D. CompareInfo comparer =
new CultureInfo("it-IT").CompareInfo;
if (comparer.IndexOf(searchList,
searchValue) > 0) {
return true;
} else {
return false;
}
```

Answer: D

QUESTION 403

You work as the application developer at Certkiller .com. You are developing a new method that must decrypt, encrypted confidential data. The confidential data to decrypt is encrypted via the Triple DES (3-DES) algorithm.

Your new method takes these parameters:

1. A byte array, named cipherMessage that must be decrypted.
2. A key, named key
3. The initialization vector, named iv.

Choose the code segment which will decrypt the specified data via the TripleDES class. The decrypted data must be in string.

```
A. TripleDES des = new TripleDESCryptoServiceProvider();
des.BlockSize = cipherMessage.Length;
ICryptoTransform crypto = des.CreateDecryptor(key, iv);
MemoryStream cipherStream = new MemoryStream(cipherMessage);
CryptoStream cryptoStream =
new CryptoStream(
cipherStream, crypto, CryptoStreamMode.Read);
string message;
message = new StreamReader(cryptoStream).ReadToEnd();
B. TripleDES des = new TripleDESCryptoServiceProvider();
des.FeedbackSize = cipherMessage.Length;
ICryptoTransform crypto = des.CreateDecryptor(key, iv);
```



```
MemoryStream cipherStream = new MemoryStream(cipherMessage);
CryptoStream cryptoStream =
new CryptoStream(
cipherStream, crypto, CryptoStreamMode.Read);
string message;
message = new StreamReader(cryptoStream).ReadToEnd();
C. TripleDES des = new TripleDESCryptoServiceProvider();
ICryptoTransform crypto = des.CreateDecryptor();
MemoryStream cipherStream = new MemoryStream(cipherMessage);
CryptoStream cryptoStream =
new CryptoStream(
cipherStream, crypto, CryptoStreamMode.Read);
string message;
message = new StreamReader(cryptoStream).ReadToEnd();
D. TripleDES des = new TripleDESCryptoServiceProvider();
ICryptoTransform crypto = des.CreateDecryptor(key, iv);
MemoryStream cipherStream = new MemoryStream(cipherMessage);
CryptoStream cryptoStream =
new CryptoStream(
cipherStream, crypto, CryptoStreamMode.Read);
string message;
message = new StreamReader(cryptoStream).ReadToEnd();
```

Answer: D

QUESTION 404

You work as the application developer at Certkiller .com. You are developing a new application named Certkiller 06. Certkiller 06 will be used by users to perform an electronic survey that contains 30 True-or-False based questions.

You must set each answer to True. You also want to limit the amount of memory used by each survey.

Choose the storage option that you should use.

- A. BitVector32 answers = new BitVector32(1);
- B. BitVector32 answers = new BitVector32(-1);
- C. BitArray answers = new BitArray (1);
- D. BitArray answers = new BitArray(-1);

Answer: B

Explanation: C & D BitVector32 is more efficient than a BitArray when 32 or less binary flags are required. Primarily because it is a value type.

Note: we are not sure why B is preferred to A.

QUESTION 405

You work as the application developer at Certkiller .com. You are developing a new

application named Certkiller 15. Certkiller 15 will be used to show processes running on remote computers. You need to write a method for the application. Your method must accomplish the following:

1. Accept the name of the remote computer as a string parameter named strComputer.
2. Return an ArrayList object that lists the names of each process running on that specific remote computer.

Choose the code segment that will accomplish the task.

```
A. ArrayList al = new ArrayList();
Process[] procs = Process.GetProcessesByName(strComputer);
foreach (Process proc in procs) {
    al.Add(proc);
}
B. ArrayList al = new ArrayList();
Process[] procs = Process.GetProcesses(strComputer);
foreach (Process proc in procs) {
    al.Add(proc);
}
C. ArrayList al = new ArrayList();
Process[] procs = Process.GetProcessesByName(strComputer);
foreach (Process proc in procs) {
    al.Add(proc.ProcessName);
}
D. ArrayList al = new ArrayList();
Process[] procs = Process.GetProcesses(strComputer);
foreach (Process proc in procs) {
    al.Add(proc.ProcessName);
}
```

Answer: D

Explanation: Call Processes.GetProcesses() supplying the name of the computer and then iterate through the returned collection of processes adding the process name to the arraylist.

A & C use GetProcessByName() and return processes on the current computer only. B adds the entire process to the arraylist rather than just the process name.

QUESTION 406

You work as the application developer at Certkiller .com. You are developing a new application and must write a code segment that will serialize an object named data, of type List<int>, in a binary format.

Choose the code segment that will accomplish the task.

```
A. BinaryFormatter formatter = new BinaryFormatter();
MemoryStream stream = new MemoryStream();
```

```
formatter.Serialize(stream, data);
B. BinaryFormatter formatter = new BinaryFormatter();
MemoryStream stream = new MemoryStream();
for (int i = 0;
i < data.Count;
i++) {
formatter.Serialize(stream, data[i]);
}
C. BinaryFormatter formatter = new BinaryFormatter();
byte[] buffer = new byte[data.Count];
MemoryStream stream = new MemoryStream(buffer, true);
formatter.Serialize(stream, data);
D. BinaryFormatter formatter = new BinaryFormatter();
MemoryStream stream = new MemoryStream();
data.ForEach(delegate(int num)
{ formatter.Serialize(stream, num);
})
);
```

Answer: A

Explanation: create a BinaryFormatter and a MemoryStream and simply use the formatter to serialize the data to the stream.

B Collections support serialization, hence it is not required to try to serialize each item independently.

C The MemoryStream is created to be non resizeable and it is not the correct size.

QUESTION 407

You work as the application developer at Certkiller .com. You are developing a new method that must compress an array of bytes. The array of bytes which should be compressed must be passed to the method in a parameter named document
Choose the code segment which will perform your task.

```
A. MemoryStream inStream = new MemoryStream(document);
GZipStream zipStream = new GZipStream(inStream,
CompressionMode.Compress);
byte[] result = new byte[document.Length];
zipStream.Write(result, 0, result.Length);
return result;
B. MemoryStream stream = new MemoryStream(document);
GZipStream zipStream = new GZipStream(stream,
CompressionMode.Compress);
zipStream.Write(document, 0, document.Length);
zipStream.Close();
return stream.ToArray();
C. MemoryStream outStream = new MemoryStream();
```

```
GZipStream zipStream = new GZipStream(outStream,
CompressionMode.Compress);
zipStream.Write(document, 0, document.Length);
zipStream.Close();
return outStream.ToArray();
D. MemoryStream inStream = new MemoryStream(document);
GZipStream zipStream = new GZipStream(inStream,
CompressionMode.Compress);
MemoryStream outStream = new MemoryStream();
int b;
while ((b = zipStream.ReadByte()) != -1) {
outStream.WriteByte((byte)b);
} return outStream.ToArray();
```

Answer: C

Explanation: Create a new GZipStream that can compress data and writes to a new MemoryStream object. Call the Write() method of the GZipStream to compress the bytes to the MemoryStream.

A & B the GZipStream constructor should take a target stream not a source stream when compressing. The source data to compress is specified in the Write() method of GZipStream.

D attempts to process byte by byte. This is unnecessary because the Write method can handle any number of bytes in one go.

QUESTION 408

You work as the application developer at Certkiller .com. You are working on code segment that must use platform invoke to call a function from the Win32 Application Programming Interface (API). The code segment you have written is as follows:

```
int rc = MessageBox(hWnd, text, caption, type);
```

You must choose a method prototype. Choose the code segment that provides for this.

- A. [DllImport("user32")]public static extern int MessageBox(int hWnd, String text, String caption, uint type);
- B. [DllImport("user32")]public static extern int MessageBoxA(int hWnd, String text, String caption, uint type);
- C. [DllImport("user32")]public static extern int Win32API_User32_MessageBox(int hWnd, String text, String caption, uint type);
- D. [DllImport(@"C:\WINDOWS\system32\user32.dll")]public static extern int MessageBox(int hWnd, String text, String caption, uint type);

Answer: A

Explanation: Mark the prototype with the Dllimport attribute specifying the library\ddl that the function resides in.

B creates a prototype for the MessageBoxA function not MessageBox .

C it is not necessary to specify the physical path because user32.dll will be in the path environment variable. Also it will not work with versions of windows (some may use c:\winnt\system32)

QUESTION 409

You work as the application developer at Certkiller .com. You are developing a new application that will print a report. The report must list language codes and region codes.

Choose the code segment that will accomplish this task.

- A. `foreach (CultureInfo culture in
CultureInfo.GetCultures(CultureTypes.SpecificCultures)) {
// Output the culture information...}`
- B. `CultureInfo culture = new CultureInfo("");
CultureTypes types = culture.CultureTypes;
// Output the culture information...`
- C. `foreach (CultureInfo culture in
CultureInfo.GetCultures(CultureTypes.NeutralCultures)) {
// Output the culture information...}`
- D. `foreach (CultureInfo culture in
CultureInfo.GetCultures(CultureTypes.ReplacementCultures)) {
// Output the culture information...}`

Answer: A

Explanation: CultureTypes.SpecificCultures will filter all language codes that are specific to a country\region.

B The CultureInfo object created is not associated with any cultures.

C will yield only neutral cultures, they will not be specific to a country\region.

D Replacement cultures are user-defined custom cultures.

QUESTION 410

You work as the application developer at Certkiller .com. Certkiller .com has its headquarters in Chicago and a branch office in Mexico.

You are developing a new application that will print a report. When the report is generated and printed by users in the Mexico branch office, the report must show the current date in the Mexican Spanish format.

Which of the following code segments will accomplish the task?

- A. `DateTimeFormatInfo dtfi = new CultureInfo("es-MX", false).DateTimeFormat;
DateTime dt = new DateTime(DateTime.Today.Year, DateTime.Today.Month,
DateTime.Today.Day);
string dateString = dt.ToString(dtfi.LongDatePattern);`

B. `Calendar cal = new CultureInfo("es-MX", false).Calendar;`
`DateTime dt = new DateTime(DateTime.Today.Year, DateTime.Today.Month,`
`DateTime.Today.Day);`
`Strong dateString = dt.ToString();`
C. `string dateString = DateTimeFormatInfo.CurrentInfo`
`GetMonthName(DateTime.Today.Month);`
D. `string dateString = DateTime.Today.Month.ToString("es-MX");`

Answer: A

Explanation: Create a Mexican Spanish `CultureInfo` object. Convert the date to a string using the `DateTimeFormatInfo` returned by the `CultureInfo` object.

B does not use the `CultureInfo` object to convert the date to a string.

C does not use the Mexican Spanish culture.

D the `DateTime.ToString()` method cannot take a string code representation of the culture.

QUESTION 411

You work as the application developer at Certkiller .com. You are developing an application named Certkiller App09.

You are creating a method and want to view its output that returns a string. You are using Microsoft Visual Studio 2005 IDE to examine the method's output. You define the output of the method to the string variable named `fName`. You want certain information printed in a single line:

1. This message must be printed: Test Unsuccessful

1. When the value of `fName` is not equal to " Kara Lang", the value of `fName` must be printed.

The code segment that you use must simultaneously facilitate uninterrupted execution of Certkiller App09.

Which of the following code segments should you use to achieve your goal?

A. `Debug.Assert(fName == " Kara Lang", "Test Unsuccessful: ", fName);`
B. `Debug.WriteLineIf(fName != " Kara Lang", fName, "Test Unsuccessful");`
C. `if (fName != " Kara Lang") {`
`Debug.Print("Test Unsuccessful: ");`
`Debug.Print(fName);`
`}`
D. `if (fName != " Kara Lang") {`
`Debug.WriteLine("Test Unsuccessful: ");`
`Debug.WriteLine(fName);`
`}`

Answer: B

Explanation: `Debug.WriteLineIf()` will conditionally write the "Test Unsuccessful", it will not interrupt execution of the application.

A an Assert will stop execution of the application in debug mode if the condition is not met.

C & D could be used but they execute in the release configurations

QUESTION 412

You work as the application developer at Certkiller .com. You are working on an application named Certkiller App10. Certkiller App10 must be configured to use role-based security and authentication.

You must develop the code segment which will result in the runtime assigning an unauthenticated principal object to each running thread.

Choose the code segment which will accomplish the task.

- A. AppDomain domain = AppDomain.CurrentDomain;
domain.SetPrincipalPolicy(PrincipalPolicy.WindowsPrincipal);
- B. AppDomain domain = AppDomain.CurrentDomain;
domain.SetThreadPrincipal(new WindowsPrincipal(null));
- C. AppDomain domain = AppDomain.CurrentDomain;
domain.SetAppDomainPolicy(
PolicyLevel.CreateAppDomainLevel());
- D. AppDomain domain = AppDomain.CurrentDomain;
domain.SetPrincipalPolicy(
PrincipalPolicy.UnauthenticatedPrincipal);

Answer: D

Explanation: Setting the PrincipalPolicy for the AppDomain to UnauthenticatedPrincipal will default the Principal for each thread to an unauthenticated principal .

A sets the policy to WindowsPrincipal, threads will have their principal set according the windows account that they are running as.

B SetThreadPrincipal() does not set the default policy for all new threads. Also a WindowsPrincipal is used instead of UnauthenticatedPrincipal.

C SetAppDomainPolicy is used to set the security policy level for the domain.

QUESTION 413

You work as the application developer at Certkiller .com. You are developing an application named Certkiller App12. You must the write multicast delegate that accepts a DateTime argument.

Choose the code segment which will accomplish the task.

- A. public delegate int PowerDeviceOn(bool result,
DateTime autoPowerOff);
- B. public delegate bool PowerDeviceOn(object sender,
EventArgs autoPowerOff);
- C. public delegate void PowerDeviceOn(DateTime autoPowerOff);
- D. public delegate bool PowerDeviceOn(DateTime autoPowerOff);

Answer: C

Explanation: A & B the delegates do not accept an argument of type DateTime
D The question does not explicitly mention a return type. Also with multicasting only the return value of the last method called as part of a multicast chain is returned. Hence return values do not tend to be very useful as far as multicasting is concerned.

QUESTION 414

You work as the application developer at Certkiller .com. You create a new class named User. The User class contains this code segment:

```
public class User {  
    string userId, userName, jobTitleName;  
    public string GetName() { return userName;  
    }  
    public string GetTitle() { return jobTitleName;  
    }  
}
```

You want to expose the User class to COM in a type library. You also want the COM interface to facilitate forward-compatibility across new versions of the User class.

What should you do to achieve your goal in these circumstances?

A. Include this attribute with the class definition:

```
[ClassInterface(ClassInterfaceType.None)]public class User {
```

B. Include this attribute with the class definition:

```
[ClassInterface(ClassInterfaceType.AutoDual)]public class User {
```

C. Include this attribute with the class definition: [ComVisible(true)]public class User {

D. Specify the interface for the User class and then add this attribute with the class definition: [ClassInterface(ClassInterfaceType.None)]public class User : IUser {

Answer: D

QUESTION 415

You work as the application developer at Certkiller .com. You have been tasked with writing a multicast delegate that accepts a DateTime argument, and then returns a Boolean value.

Which code segment should you use to accomplish the task?

A. public delegate int PowerDeviceOn(bool, DateTime);

B. public delegate bool PowerDeviceOn(Object, EventArgs);

C. public delegate void PowerDeviceOn(DateTime);

D. public delegate bool PowerDeviceOn(DateTime);

Answer: D

Explanation: A & C does not return a type Bool
B does not accept a parameter of type DateTime

QUESTION 416

You work as the application developer at Certkiller .com. You must write a code segment that includes an undo buffer function. You want the undo function to store data modifications, but it must only allow the storage of strings. You want the undo function to undo the most recently performed data modifications first. Which code segment should you use to achieve your goal?

- A. Use: `Stack<string> undoBuffer = new Stack<string>();`
- B. Use: `Stack undoBuffer = new Stack();`
- C. Use: `Queue<string> undoBuffer = new Queue<string>();`
- D. Use: `Queue undoBuffer = new Queue();`

Answer: A

Explanation: A Stack caters for a last in first out scenario similar to what is required in an undo buffer. By using Generics you can force a strongly typed collection that takes strings only.

B is not strongly typed for strings, it will take any type of object.

C & D Queue is a First in First out collection, it is not appropriate in this instance.

QUESTION 417

You work as the application developer at Certkiller .com. You write the definition for a class named Vehicle by defining the following code segment:

```
public class Vehicle {  
    [XmlAttribute(AttributeName = "category")]  
    public string vehicleType;  
    public string model;  
    [XmlIgnore]  
    public int year;  
    [XmlElement(ElementName = "mileage")]  
    public int miles;  
    public ConditionType condition;  
    public Vehicle() {  
    }  
    public enum ConditionType {  
        [XmlEnum("Poor")] BelowAverage,  
        [XmlEnum("Good")] Average,  
        [XmlEnum("Excellent")] AboveAverage  
    }  
}
```

You next create an instance of the Vehicle class, and add the following data in the defined fields of the class instance:

Member	Value
vehicle Type	car
model	racer
year	2002
miles	15000
condition	AboveAverage

You must now identify the XML block that is generated when the Vehicle class instance is serialized.

Choose the XML block that signifies the output of serializing the Vehicle class instance.

A. `<?xml version="1.0" encoding="utf-8"?>`
`<Vehicle`
`xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance"`
`xmlns:xsd="http://www.w3.org/2001/XMLSchema"`
`vehicleType="car">`
`<model>racer</model>`
`<miles>15000</miles>`
`<condition>AboveAverage</condition>`
`</Vehicle>`

B. `<?xml version="1.0" encoding="utf-8"?>`
`<Vehicle`
`xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance"`
`xmlns:xsd="http://www.w3.org/2001/XMLSchema"`
`category="car">`
`<model>racer</model>`
`<mileage>15000</mileage>`
`<condition>Excellent</condition>`
`</Vehicle>`

C. `<?xml version="1.0" encoding="utf-8"?>`
`<Vehicle`
`xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance"`
`xmlns:xsd="http://www.w3.org/2001/XMLSchema"`
`category="car">`
`<model>racer</model>`
`<mileage>15000</mileage>`
`<conditionType>Excellent</conditionType>`
`</Vehicle>`

D. `<?xml version="1.0" encoding="utf-8"?>`
`<Vehicle`
`xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance"`
`xmlns:xsd="http://www.w3.org/2001/XMLSchema"`
`<category>car</category>`
`<model>racer</model>`
`<mileage>15000</mileage>`
`<condition>Excellent</condition>`
`</Vehicle>`

Answer: B

Explanation: The XML produced in B matches the class definition provided in the question.

Category is declared to be an attribute of the Vehicle element, this is not the case in answer A and D.

During XML Serialization by default the user type variables are mapped to XML elements. In the case of answer C, the type itself has been mapped instead of the instance variable.

QUESTION 418

You work as the application developer at Certkiller .com. You create a code segment which will implement the class named Certkiller Class1. The code segment is shown here:

```
MyMethod function. public class Certkiller Class1 {  
public int MyMethod(int arg) {  
return arg;  
}}  

```

You want the Certkiller Class1.MyMethod function to be dynamically called from a separate class within the assembly.

Choose the code segment which you should use to accomplish the task.

```
A. Certkiller Class1 myClass = new Certkiller Class1();  
Type t = typeof( Certkiller Class1);  
MethodInfo m = t.GetMethod("MyMethod");  
int i = (int)m.Invoke(this, new object[] { 1 });  
B. Certkiller Class1 myClass = new Certkiller Class1();  
Type t = typeof( Certkiller Class1);  
MethodInfo m = t.GetMethod("MyMethod");  
int i = (int) m.Invoke(myClass, new object[] { 1 });  
C. Certkiller Class1 myClass = new Certkiller Class1();  
Type t = typeof( Certkiller Class1);  
MethodInfo m = t.GetMethod(" Certkiller Class1.MyMethod");  
int i = (int)m.Invoke(myClass, new object[] { 1 });  
D. Type t = Type.GetType(" Certkiller Class1");  
MethodInfo m = t.GetMethod("MyMethod");  
int i = (int)m.Invoke(this, new object[] { 1 });
```

Answer: B

Explanation: Use reflection to get MethodInfo object that corresponds to the MyMethod member function. Call the Invoke() method of MethodInfo

A & D the Invoke method requires the object that the method will fire upon if its an instance method. myClass should have been passed.

C the getMethod() does not require the classname .

QUESTION 419

You work as the application developer at Certkiller .com. You are working on a component which serializes the Meeting class instances. The definition of the Meeting class is as follows:

```
public class Meeting {  
    private string title;  
    public int roomNumber;  
    public string[] invitees;  
    public Interview(){  
    }  
    public Interview (string t){  
        title = t;  
    } }  

```

You configure the following procedure for your component:

```
Meeting myMeeting = new Meeting("Objectives");  
myMeeting.roomNumber=20;  
string[] attendees = new string[2]{ "Amy", "Ally"};  
myMeeting.invitees = attendees;  
XmlSerializer xs = new XmlSerializer(typeof(Meeting));  
StreamWriter writer = new StreamWriter(@"C:\Meeting.xml");  
xs.Serialize(writer, myMeeting);  
writer.Close();
```

You want to find out which XML block will be written to the C:\Meeting.xml file when the procedure is executed.

Choose the XML block that shows which content will be written to the C:\Meeting.xml file?

A. <?xml version="1.0" encoding="utf-8"?>
<Meeting xmlns:xsd="http://www.w3.org/2001/XMLSchema"
xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance">
<title>Objectives</title>
<roomNumber>20</roomNumber>
<invitee>Amy</invitee>
<invitee>Ally</invitee>
</Meeting>

B. <?xml version="1.0" encoding="utf-8"?>
<Meeting xmlns:xsd="http://www.w3.org/2001/XMLSchema"
xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance">
<roomNumber>20</roomNumber>
<invitees>
<string>Amy</string>
<string>Ally</string>
</invitees>
</Meeting>

C. <?xml version="1.0" encoding="utf-8"?>
<Meeting xmlns:xsd="http://www.w3.org/2001/XMLSchema"

```
xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance"
title="Objectives">
<roomNumber>20</roomNumber>
<invitees>
<string>Amy</string>
<string>Ally</string>
</invitees>
</Meeting>
D. <?xml version="1.0" encoding="utf-8"?>
<Meeting xmlns:xsd="http://www.w3.org/2001/XMLSchema"
xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance">
<roomNumber>20</roomNumber>
<invitees>
<string>Amy</string>
</invitees>
<invitees>
<string>Ally</string>
</invitees>
</Meeting>
```

Answer: B

Explanation: A & C show title member in the XML. Title is a private member hence will not be serialized to XML.

D Shows multiple Invitees. There is only one object of type Invitees in the class definition.

QUESTION 420

You work as the application developer at Certkiller .com. You want to modify the current security settings of a file named Certkiller Data.xml, as follows:

1. You must preserve all existing inherited access rules.
2. You must prevent the access rules from inheriting future modifications

Choose the code segment which will accomplish the task.

- A. FileSecurity security = new FileSecurity(" Certkiller data.xml",
AccessControlSections.All);
security.SetAccessRuleProtection(true, true);
File.SetAccessControl(" Certkiller data.xml", security);
- B. FileSecurity security = new FileSecurity();
security.SetAccessRuleProtection(true, true);
File.SetAccessControl(" Certkiller data.xml", security);
- C. FileSecurity security = File.GetAccessControl(" Certkiller data.xml");
security.SetAccessRuleProtection(true, true);
- D. FileSecurity security = File.GetAccessControl(" Certkiller data.xml");
security.SetAuditRuleProtection(true, true);
File.SetAccessControl(" Certkiller data.xml", security);

Answer: A

Explanation: Retrieve the full access control list for the file, prevent access rules from inheriting in the future by calling `Security.SetAccessRuleProtection()`. Finally call `File.SetAccessControl()` to apply the amended `FileSecurity` to the file.

B does not preserve the existing access rules. It overwrites them.

C does not apply the amended `FileSecurity` object back to the file.

D `FileSecurity.SetAuditRuleProtection()` is used for controlling audit rules not access rules.

QUESTION 421

You work as the application developer at Certkiller .com. You want to modify a method that returns an `ArrayList` named `Certkiller AL`. You want to write a code segment which will result in all changes made to `Certkiller AL` being performed in a thread-safe way.

Choose the code segment which will accomplish the task.

- A. `ArrayList Certkiller al = new ArrayList();`
`lock (Certkiller al.SyncRoot){`
`return Certkiller al;`
`}`
- B. `ArrayList Certkiller al = new ArrayList();`
`lock (Certkiller al.SyncRoot.GetType()){`
`return Certkiller al;`
`}`
- C. `ArrayList Certkiller al = new ArrayList();`
`Monitor.Enter(Certkiller al);`
`Monitor.Exit(Certkiller al);`
`return Certkiller al;`
- D. `ArrayList Certkiller al = new ArrayList();`
`ArrayList sync_ Certkiller al = ArrayList.Synchronized(Certkiller al);`
`return sync_ Certkiller al;`

Answer: D

Explanation: A & C the lock will be released when the method returns.

B Does not lock the arraylist but attempts to lock its type.

QUESTION 422

You work as the application developer at Certkiller .com. You want to test a new method that examines running processes. Your method is configured to return an `ArrayList` that reveals the name and full path of each module loaded by a running process named `C:\Certkiller Apps\Process5`.

Choose the code segment that will show each module loaded by the specific running process?

```
A. ArrayList ar = new ArrayList();
Process[] procs;
ProcessModuleCollection modules;
procs = Process.GetProcesses(@"Process5");
if (procs.Length > 0) {modules = procs[0].Modules;
foreach (ProcessModule mod in modules) {
ar.Add(mod.ModuleName);
}}
B. ArrayList ar = new ArrayList();
Process[] procs;
ProcessModuleCollection modules;
procs =
Process.GetProcesses(@"C:\ Certkiller Apps\Process5.exe");
if (procs.Length > 0) {
modules = procs[0].Modules;
foreach (ProcessModule mod in modules) {
ar.Add(mod.ModuleName);
}}
C. ArrayList ar = new ArrayList();
Process[] procs;
ProcessModuleCollection modules;
procs = Process.GetProcessesByName(@"Process5");
if (procs.Length > 0) {
modules = procs[0].Modules;
foreach (ProcessModule mod in modules) {
ar.Add(mod.FileName);
}}
D. ArrayList ar = new ArrayList();
Process[] procs;
ProcessModuleCollection modules;
procs = Process.GetProcessesByName(@"C:\ Certkiller Apps\Process5.exe");
if (procs.Length > 0) {
modules = procs[0].Modules;
foreach (ProcessModule mod in modules) {
ar.Add(mod.FileName);
}}
```

Answer: C

Explanation: Process.GetProcessesByName() should be used to return all the processes that match a process name. The modules collection exposes all the modules loaded by the process and can be added to an ArrayList.

A & B GetProcesses() accepts a computer name for retrieving the processes on a remote computer. GetProcessesByName() should be used to return processes by their name.

D the path of the process is not part of the process name.

Topic 31, Visual Basic Mixed (65 Questions)

QUESTION 423

You work as the application developer at Certkiller .com. You create a new custom dictionary named MyDictionary.

Choose the code segment which will ensure that MyDictionary is type safe?

- A. Class MyDictionary Implements Dictionary(Of String, String)
 - B. Class MyDictionary Inherits HashTable
 - C. Class MyDictionary Implements IDictionary
 - D. Class MyDictionary
- End Class
- Dim t As New Dictionary(Of String, String)
- Dim dict As MyDictionary = CType(t, MyDictionary)

Answer: A

QUESTION 424

You work as the application developer at Certkiller .com. You create a new class named User. The User class contains the following code segment:

```
Private m_UserId As String
Private m_UserName As String
Private m_JobTitleName As String
Public Function GetName() As String
Return m_UserName
End Function
Public Function GetTitle() As String
Return m_JobTitleName
End Function
End Class
```

You want the User class exposed to COM in a type library. You want the COM interface to facilitate forward-compatibility over all new versions of the User class. How should you go about generating the COM interface to accomplish these tasks?

- A. Include this attribute with the class:
definition.<ClassInterface(ClassInterfaceType.None)> _
Public Class User
- B. Include this attribute with the class:
definition.<ClassInterface(ClassInterfaceType.AutoDual)> _
Public Class User
- C. Include this attribute with the class definition: <ComVisible(True)> _
Public Class User
- D. Specify the interface for the User class, and then include this attribute with the class definition: <ClassInterface(ClassInterfaceType.None)> _
Public Class User Implements IUser

Answer: D

QUESTION 425

You work as the application developer at Certkiller .com. You are developing a new application and must serialize the data object of type List(Of Integer) in a binary format.

Choose the code segment which will implement this task.

- A. Dim formatter As New BinaryFormatter()
Dim ms As New MemoryStream()formatter.Serialize(ms, data)
- B. Dim formatter As New BinaryFormatter()
Dim ms As New MemoryStream() For i As Integer = 1 To 20
formatter.Serialize(ms, data(i - 1))
Next
- C. Dim formatter As New BinaryFormatter()
Dim buffer As New Byte(data.Count) { }
Dim ms As New MemoryStream(buffer, True)formatter.Serialize(ms, data)
- D. Dim formatter As New BinaryFormatter()
Dim ms As New MemoryStream()While ms.CanRead
formatter.Serialize(ms, data)
End While

Answer: A

QUESTION 426

You work as the application developer at Certkiller .com. Certkiller .com has its headquarters in Chicago and a branch office in Hong Kong. The application you are developing will be used by all users located at the Hong Kong branch office. You want to show all negative currency values by using a minus sign.

Which of the following code segments will accomplish the task?

- A. Dim objCulture As NumberFormatInfo = _
New CultureInfo("zh-HK").NumberFormatobjCulture.NumberNegativePattern = 1
Return NumberToPrint.ToString("C", objCulture)
- B. Dim objCulture As NumberFormatInfo = _
New CultureInfo("zh-HK").NumberFormatobjCulture.CurrencyNegativePattern = 1
Return NumberToPrint.ToString("C", objCulture)
- C. Dim objCulture As NumberFormatInfo = _
New CultureInfo("zh-HK").NumberFormatReturn NumberToPrint.ToString("-{0}",
objCulture)
- D. Dim objCulture As NumberFormatInfo = _
New CultureInfo("zh-HK").NumberFormatReturn NumberToPrint.ToString("()",
objCulture)

Answer: B

Explanation: Use CurrencyNegativePattern property set to 1 to display negative currency values with a minus sign.

A will give a minus sign for negative numbers but not for negative currencies.

C & D The culture has not been to display a minus sign for currency.

QUESTION 427

You work as the application developer at Certkiller .com. You are creating a new method that will hash specific data with the Secure Hash Algorithm (SHA-1).

The data must be passed to your method as a byte array named message. The resultant data must then be passed to a byte array named hash.

Choose the code segment which will achieve your goal.

- A. Dim objSHA As New SHA1CryptoServiceProvider
Dim hash() As Byte = NothingobjSHA.TransformBlock(message, 0, message.Length, hash, 0)
- B. Dim objSHA As New SHA1CryptoServiceProvider
Dim hash() As Byte = BitConverter.GetBytes(objSHA.GetHashCode())
- C. Dim objSHA As New SHA1CryptoServiceProvider
Dim hash() As Byte = objSHA.ComputeHash(message)
- D. Dim objSHA As New SHA1CryptoServiceProviderobjSHA.GetHashCode()
Dim hash() As Byte = objSHA.Hash

Answer: C

Explanation: Initialise SHA1 object and call the ComputeHash method supplying the message as a parameter to return the hash code as an array of bytes.

A TransferBlock is more appropriate for hashing part of a message. Also it should be called with TransferEndBlock.

B&C GetHashCode is the method inherited from the Object class. It will not perform a hash on the incoming message.

QUESTION 428

You work as the application developer at Certkiller .com. You create the following code segment:

```
Public Delegate Sub FaxDocs(ByVal sender As Object, _  
ByVal args as FaxArgs)
```

What should you do next to configure an event that will call FaxDocs?

Choose the code segment which you should use.

- A. Public Shared Event Fax As FaxDocs
- B. Public Shared Event FaxDocs As FaxArgs
- C. Public Class FaxArgs
Inherits EventArgs
Private coverPageInfo As String
Public Sub New(ByVal coverInfo As String)

```
Me.coverPageInfo = coverInfo
End Sub
Public ReadOnly Property CoverPageInformation As String
Get
Return Me.coverPageInfo
End Get
End Property
End Class
D. Public Class FaxArgs
Inherits EventArgs
Private coverPageInfo As String
Public ReadOnly Property CoverPageInformation As String
Get
Return Me.coverPageInfo
End Get
End Property
End Class
```

Answer: A

Explanation: An event is declared by using the event keyword followed by a delegate type and then a name for the event.

B fax is not a delegate type.

C&D do not declare events.

QUESTION 429

You work as the application developer at Certkiller .com. You are developing a new application. You must define the code segment which will create a common language runtime (CLR) unit of isolation within the new application. Choose the code segment which you should use to accomplish this task.

- A. Dim mySetup As AppDomainSetup = _
AppDomain.CurrentDomain.SetupInformationmySetup.ShadowCopyFiles = "true"
- B. Dim myProcess As System.Diagnostics.Process myProcess = New
System.Diagnostics.Process()
- C. Dim domain As AppDomain domain =
AppDomain.CreateDomain("CertkillerDomain")
- D. Dim myComponent As System.ComponentModel.ComponentmyComponent = New
System.ComponentModel.Component()

Answer: C

Explanation: Create a new ApplicationDomain using the
AppDomain.CreateDomain() method.

A ShadowCopyFiles property of AppDomainSetup controls whether shadow copying is enabled or disabled.

B the Process class is used to represent an existing process running on a computer.
D The ComponentModel.Component class is used for sharing components between applications.

QUESTION 430

You work as the application developer at Certkiller .com. You are creating a class library which must be able to access system environment variables.
You must set a call method which will only force a runtime SecurityException if the callers which are higher in the call stack, fail to have the required permissions.
Choose the call method which will do this.

- A. Demand()
- B. Assert()
- C. PermitOnly()
- D. Deny()

Answer: A

Demand forces all callers in the call stack to have the specified permission.
PermitOnly will instruct the runtime to reduce the access by only allowing callers with the permissions explicitly stated and nothing else.
Assert will ignore the permissions of callers and allow them indiscriminately.
Deny will explicitly deny access if the caller has the specified permission.

QUESTION 431

You work as the application developer at Certkiller .com. You are creating a new custom event handler that will be set up to automatically print all open documents.
The custom event handler must also assist in identifying how many document copies must be printed.
You must determine which custom event arguments class to pass as a parameter to the custom event handler.
Choose the code segment which you should use to accomplish this task.

- A. Public Class PrintingArgs
Private _copies As Integer
Public Sub New(ByVal numberOfCopies As Integer)
Me._copies = numberOfCopies
End Sub
Public ReadOnly Property Copies() As Integer
Get
Return Me._copies
End Get
End Property
End Class
- B. Public Class PrintingArgs
Inherits EventArgs
Private _copies As Integer

```
Public Sub New(ByVal numberOfCopies As Integer)
Me._copies = numberOfCopies
End Sub
Public ReadOnly Property Copies() As Integer
Get
Return Me._copies
End Get
End Property
End Class
C. Public Class PrintingArgs
Private eventArgs As EventArgs
Public Sub New(ByVal args As EventArgs)
Me.eventArgs = args
End Sub
Public ReadOnly Property Args() As EventArgs
Get
Return eventArgs
End Get
End Property
End Class
D. Public Class PrintingArgs
Inherits EventArgs
Private copies As IntegerEnd Class
```

Answer: B

Explanation: The event handler will require a parameter of type EventArgs or a derived type. The derived type in this example will question states that the event handler helps specify the number of documents that require printing, this information will have to come from the derived EventArgs class in the form of an instance variable.

A & C do not derive from EventArgs hence cannot fit into the event handling model. D does not expose the copies instance variable.

QUESTION 432

You work as the application developer at Certkiller .com. You are working on a new application named Certkiller App05. Certkiller App05 is configured to dynamically load assemblies from the application directory.

You must define the code segment that will dynamically load an assembly named Certkiller Ass25.dll into the current application domain.

Choose the code segment which you should use to accomplish this task.

- A. Dim domain As AppDomain = AppDomain.CurrentDomain
Dim myPath As String = _ Path.Combine(domain.BaseDirectory, " Certkiller Ass25.dll")
Dim asm As [Assembly] = [Assembly].LoadFrom(myPath)
- B. Dim domain As AppDomain = AppDomain.CurrentDomain

```
Dim myPath As String = _ Path.Combine(domain.BaseDirectory, " Certkiller Ass25.dll")
Dim asm As [Assembly] = [Assembly].Load(myPath)
C. Dim domain As AppDomain = AppDomain.CurrentDomain
Dim myPath As String = _ Path.Combine(domain.DynamicDirectory,
" Certkiller Ass25.dll")
Dim asm As [Assembly] = _ AppDomain.CurrentDomain.Load(myPath)
D. Dim domain As AppDomain = AppDomain.CurrentDomain
Dim asm As [Assembly] = domain.GetData(" Certkiller Ass25.dll")
```

Answer: A

Explanation: The Assembly.LoadFrom() method can be called to dynamically load an assembly from file.

B the Load method requires an AssemblyName object as a parameter.

C it is not possible to use AppDomain.Load to load an assembly from file.

D AppDomain.GetData gets information stored in the AppDomain for the specified assembly. It cannot load an assembly.

QUESTION 433

You work as the application developer at Certkiller .com. You must write the code segment which will enable you to read the entire contents of a file named Data.txt into a single string variable.

Choose the code segment that will do this.

```
A. Dim result As String = Nothing
Dim reader As New StreamReader("Data.txt")result = reader.Read().ToString()
B. Dim result As String = Nothing
Dim reader as New StreamReader("Data.txt")result = reader.ReadToEnd()
C. Dim result As String = string.EmptyDim reader As New StreamReader("Data.txt")
While Not reader.EndOfStream
result &= reader.ToString()
End While
D. Dim result as String = Nothing
Dim reader As New StreamReader("Data.txt")result = reader.ReadLine()
```

Answer: B

Explanation: Create a StreamReader based on the file and call the ReadToEnd() method to quickly read the entire file and return a string.

A & D does not read the entire file.

C calling ToString() on the reader will give a string representation of the stream and will not read from the stream.

QUESTION 434

You work as the application developer at Certkiller .com. You must create a code segment that will perform these tasks: ?

Gets the name of each paused service. ?

Passes the name to the Add method of Collection5. Gets the name of each paused service. ?

Choose the code segment which you should use.

A. Dim searcher As ManagementObjectSearcher = _New ManagementObjectSearcher(_
"Select * from Win32_Service where State = 'Paused'")For Each svc As
ManagementObject In searcher.Get()
Collection5.Add(svc("DisplayName"))
Next

B. Dim searcher As ManagementObjectSearcher = _New ManagementObjectSearcher (_
"Select * from Win32_Service", "State = 'Paused'")For Each svc As ManagementObject
In searcher.Get()
Collection5.Add(svc("DisplayName"))
Next

C. Dim searcher As ManagementObjectSearcher = _ New ManagementObjectSearcher(_
"Select * from Win32_Service")For Each svc As ManagementObject In searcher.Get()
If svc("State").ToString() = "Paused" Then
Collection5.Add(svc("DisplayName"))
End If
Next

D. Dim searcher As New ManagementObjectSearcher()searcher.Scope = New
ManagementScope("Win32_Service")For Each svc As ManagementObject In
searcher.Get()
If svc("State").ToString() = "Paused" Then
Collection5.Add(svc("DisplayName"))
End If
Next

Answer: A

Explanation: Use the ManagmentObjectSearcher to search for all services with a paused state. Iterate over the returned collection and add the display name to Collection5.

B The constructor is invoked incorrectly.

C & D the query is incorrect. The searcher does not restrict to paused services.

QUESTION 435

You work as the application developer at Certkiller .com. You are developing a new method that must pass data to another method named Process. Your method accepts a string parameter named message.

The method you are writing must break the message parameter into individual lines of text. Each individual line must then be passed to the Process method.

A. Dim reader As New
StringReader(message)ProcessMessage(reader.ReadToEnd())reader.Close()

```
B. Dim reader As New StringReader(message) While reader.Peek() <> -1
Dim line as String = reader.Read().ToString()
ProcessMessage(line)
End While reader.Close()
C. Dim reader As New
StringReader(message) ProcessMessage(reader.ToString()) reader.Close()
D. Dim reader As New StringReader(message) While reader.Peek() <> -1
ProcessMessage(reader.ReadLine())
End While reader.Close()
```

Answer: D

Explanation: StringReader.ReadLine() allows for lines to be read line by line.

A ReadToEnd() will read the entire stream.

B Read() will not read the line but only the next character.

C will not read from the message but will just give a string representation of the reader.

QUESTION 436

You work as the application developer at Certkiller .com. You are writing a method that will execute by using the credentials of the end user. Microsoft Windows groups must be used to authorize the user.

You must develop the code segment which will recognize if the user exists in the local group named Sales.

Choose the code segment that will do this.

```
A. Dim objUser As WindowsIdentity = WindowsIdentity.GetCurrent
For Each objGroup As IdentityReference In objUser.Groups
Dim objNT As NTAccount = _
DirectCast(objGroup.Translate( _
Type.GetType("NTAccount")), NTAccount)
Dim blnAuth As Boolean = objNT.Value.Equals( _
Environment.MachineName & "\Sales")
If blnAuth Then Exit For
Next
B. Dim objUser As WindowsPrincipal = _
DirectCast(Thread.CurrentPrincipal, WindowsPrincipal)
Dim blnAuth As Boolean = objUser.IsInRole("Sales")
C. Dim objUser As GenericPrincipal = _
DirectCast(Thread.CurrentPrincipal, GenericPrincipal)
Dim blnAuth As Boolean = objUser.IsInRole("Sales")
D. Dim objUser As WindowsPrincipal = _
DirectCast(Thread.CurrentPrincipal, WindowsPrincipal)
Dim blnAuth As Boolean = _
objUser.IsInRole(Environment.MachineName)
```

Answer: B

Explanation: To check the role membership of the current windows user, user the `IsInRole()` method of the `WindowsPrincipal` in the current thread.

A it is a lot more complicated to iterate through all the groups the user belongs to and checking for matches. The `Principal` classes are for this very purposes and should be used.

C uses `GenericPrincipal`. `WindowsPrincipal` should be used for windows accounts. There is an invalid cast from `WindowsPrincipal` to `GenericPrincipal`.

D does not specify the group correctly.

QUESTION 437

You work as the application developer at Certkiller .com. You are creating a new method that must hash specific data by applying the MD5 algorithm.

You must write the hash of the incoming parameter by using the MD5 algorithm.

The data must be passed to your method as a byte array named `message`. The resultant data must then be placed into a byte array.

Choose the code segment which will achieve your goal.

- A. `Dim objAlgo As HashAlgorithm = HashAlgorithm.Create("MD5")`
`Dim hash() As Byte = objAlgo.ComputeHash(message)`
- B. `Dim objAlgo As HashAlgorithm = HashAlgorithm.Create("MD5")`
`Dim hash() As Byte = BitConverter.GetBytes(objAlgo.GetHashCode)`
- C. `Dim objAlgo As HashAlgorithmobjAlgo = HashAlgorithm.Create(message.ToString)`
`Dim hash() As Byte = objAlgo.Hash`
- D. `Dim objAlgo As HashAlgorithm = HashAlgorithm.Create("MD5")`
`Dim hash() As ByteobjAlgo.TransformBlock(message, 0, message.Length, hash, 0)`

Answer: A

Explanation: Create a `HashAlgorithm` object based on the MD5 algorithm and call the `ComputeHash` method that will return the hash as an array of bytes.

B `GetHashCode()` will call the method inherited from object, it will not hash the message.

C The parameter of the `Create` method should specify the type of hashing algorithm to use not the message to be hashed.

D `TransformBlock` is more appropriate for hashing part of a message. Also it should be called with `TransformEndBlock`.

QUESTION 438

You work as the application developer at Certkiller .com. Certkiller .com has its headquarters in Chicago and a branch office in Mexico.

You are developing a new application that will print a report. When the report is generated and printed by users in the Mexico branch office, the report must show the current date in the Mexican Spanish format.

Which of the following code segments will accomplish the task?

- A. `Dim DTFormat As DateTimeFormatInfo = _`

```
New CultureInfo("es-MX", False).DateTimeFormatDim DT As New DateTime( _
DateTime.Today.Year, DateTime.Today.Month, DateTime.Today.Day)
Dim strDate As String = _
DT.ToString(DTFormat.LongDatePattern)
B. Dim objCalendar As Calendar = _
New CultureInfo("es-MX", False).CalendarDim DT As New DateTime( _
DateTime.Today.Year, DateTime.Today.Month, DateTime.Today.Day)
Dim strDate As String = DT.ToString
C. Dim strDate As String = _
DateTimeFormatInfo.CurrentInfo.GetMonthName( _
DateTime.Today.Month)
D. Dim strDate As String = _
DateTime.Today.Month.ToString("es-MX")
```

Answer: A

Create a Mexican Spanish CultureInfo object. Convert the date to a string using the DateTimeFormatInfo returned by the CultureInfo object.

B does not use the CultureInfo object to convert the date to a string.

C does not use the Mexican Spanish culture.

D the DateTime.ToString() method cannot take a string code representation of the culture.

QUESTION 439

You work as the application developer at Certkiller .com. You are working on an application named Certkiller App10. Certkiller App10 must be configured to use role-based security and authentication.

You must develop the code segment which will result in the runtime assigning an unauthenticated principal object to each running thread.

Choose the code segment which will accomplish the task.

```
A. Dim objDomain As AppDomain =
AppDomain.CurrentDomainobjDomain.SetPrincipalPolicy( _
PrincipalPolicy.WindowsPrincipal)
B. Dim objDomain As AppDomain =
AppDomain.CurrentDomainobjDomain.SetThreadPrincipal(New
WindowsPrincipal(Nothing))
C. Dim objDomain As AppDomain =
AppDomain.CurrentDomainobjDomain.SetAppDomainPolicy( _
PolicyLevel.CreateAppDomainLevel())
D. Dim objDomain As AppDomain =
AppDomain.CurrentDomainobjDomain.SetPrincipalPolicy( _
PrincipalPolicy.UnauthenticatedPrincipal)
```

Answer: D

Explanation: Setting the PrincipalPolicy for the AppDomain to

UnauthenticatedPrincipal will default the Principal for each thread to an unauthenticated principal .

A sets the policy to WindowsPrincipal, threads will have their principal set according to the windows account that they are running as.

B SetThreadPrincipal() does not set the default policy for all new threads. Also a WindowsPrincipal is used instead of UnauthenticatedPrincipal.

C SetAppDomainPolicy is used to set the security policy level for the domain.

QUESTION 440

You work as the application developer at Certkiller .com. You have to develop a method which will clear a queue named badqueue.

Choose the code segment which will accomplish this task.

- A. Dim e As Object For Each e In badqueueq.Dequeue()
Next
- B. Dim e As Object For Each e In badqueueq.Enqueue(Nothing)
Next
- C. badqueue.Clear()
- D. badqueue.Dequeue()

Answer: C

Explanation: Simply call the Clear() method to empty a queue.

A Dequeueing all of the items in a queue will also serve the same affect but it is a lot more roundabout.

B attempts to re-queue items that are already in the queue

D will de-queue only one item that is at the front of the queue.

QUESTION 441

You work as the application developer at Certkiller .com. You are working on a new requirement. You have to create a class library that will open the network socket connections to computers on the Certkiller .com network.

The class library must be deployed to the global assembly cache, with full trust granted. To cater for network socket connections being used, you develop this code segment:

```
Dim objPermission As SocketPermission = New  
_SocketPermission(System.Security.Permissions.PermissionState.Unrestricted)objPermission.Assert()
```

You discover though that there are certain existing applications which do not have the required permissions to open the network socket connections. You decide to cancel the assertion.

Choose the code segment which will accomplish this task.

- A. CodeAccessPermission.RevertAssert()
- B. CodeAccessPermission.RevertDeny()
- C. objPermission.Deny()
- D. objPermission.PermitOnly()

Answer: A

Explanation: CodeAccessPermission.ReverAssert() should be used to undo a previous Assert call.

B is used to revert a previous deny call.

C & D are used to reduce the CAS permissions, they do not undo a previous Assert call.

QUESTION 442

You work as the application developer at Certkiller .com. You are developing an application named Certkiller App05. Certkiller App05 is configured to use SOAP to exchange data with other applications deployed on the Certkiller .com network. In your configuration, you specify that a class named Department inherits from ArrayList to pass objects to the other application. The Department object is named depart.

You must perform the configuration which will enable the application to serialize the Department object for transport via SOAP.

Choose the code segment which will accomplish this task.

- A. Dim formatter As New SoapFormatter()
Dim buffer As Byte() = New Byte(dept.Capacity) {}
Dim myStream As New MemoryStream(buffer) Dim o As Object For Each o In dept
formatter.Serialize(myStream, o)
Next
- B. Dim formatter As New SoapFormatter()
Dim buffer As Byte() = New Byte(dept.Capacity)
Dim myStream As New MemoryStream(buffer) formatter.Serialize(myStream, dept)
- C. Dim formatter As New SoapFormatter()
Dim myStream As New MemoryStream()
Dim o as Object For Each o In dept
formatter.Serialize(myStream, o)
Next
- D. Dim formatter As New SoapFormatter()
Dim myStream As New MemoryStream() formatter.Serialize(myStream, dept)

Answer: D

Explanation: Simply serialize the entire object to a stream using a SoapFormatter.

A&C attempt to serialize components of the object rather the object itself.

B attempts to serialize to an array, however the array will not be big enough to store the serialized object because it is not sized on the entire object.

QUESTION 443

You work as the application developer at Certkiller .com. You are working on code segment that must use platform invoke to call a function from the Win32 Application Programming Interface (API). The code segment you have written is as

follows:

Dim r As Integer = MessageBox(hWnd, strText, strCaption, strType)

You must choose a method prototype. Choose the code segment that provides for this.

- A. <DllImport("user32")> _Function MessageBox(_
ByVal hWnd As IntPtr, ByVal text As String, _
ByVal Caption As String, ByVal t As UInt32) As IntegerEnd Function
- B. <DllImport("user32")> _Function MessageBoxA(_
ByVal hWnd As IntPtr, ByVal text As String, _
ByVal Caption As String, ByVal t As UInt32) As IntegerEnd Function
- C. <DllImport("user32")> _Function Win32API_User32_MessageBox (_
ByVal hWnd As IntPtr, ByVal text As String, _
ByVal Caption As String, ByVal t As UInt32) As IntegerEnd Function
- D. <DllImport("C:\WINDOWS\system32\user32.dll ")> _Function MessageBox(_
ByVal hWnd As IntPtr, ByVal text As String, _
ByVal Caption As String, ByVal t As UInt32) As IntegerEnd Function

Answer: A

Explanation: Mark the prototype with the Dllimport attribute specifying the library\dll that the function resides in.

B creates a prototype for the MessageBoxA function not MessageBox .

C it is not necessary to specify the physical path because user32.dll will be in the path environment variable. Also it will not work with versions of windows (some may use c:\winnt\system32)

QUESTION 444

You work as the application developer at Certkiller .com. You want to modify the current security settings of a file named Certkiller Data.xml, as follows:

1. You must preserve all existing inherited access rules.
2. You must prevent the access rules from inheriting future modifications

Choose the code segment which will accomplish the task.

- A. Dim objSecurity As New FileSecurity(_
" Certkiller Data.xml",
AccessControlSections.All)objSecurity.SetAccessRuleProtection(True, True)
File.SetAccessControl(" Certkiller Data.xml", objSecurity)
- B. Dim objSecurity As New FileSecurity()objSecurity.SetAccessRuleProtection(True, True)
File.SetAccessControl(" Certkiller Data.xml", objSecurity)
- C. Dim objSecurity As FileSecurity =
_File.GetAccessControl(" Certkiller Data.xml")objSecurity.SetAccessRuleProtection(True, True)
- D. Dim objSecurity As FileSecurity =_
File.GetAccessControl(" Certkiller Data.xml")objSecurity.SetAuditRuleProtection(True,

True)
File.SetAccessControl(" Certkiller Data.xml", objSecurity)

Answer: A

Explanation: Retrieve the full access control list for the file, prevent access rules from inheriting in the future by calling Security.SetAccessRuleProtection(). Finally call File.SetAccessControl() to apply the amended FileSecurity to the file.

B does not preserve the existing access rules. It overwrites them.

C does not apply the amended FileSecurity object back to the file.

D FileSecurity.SetAuditRuleProtection() is used for controlling audit rules not access rules.

QUESTION 445

You work as the application developer at Certkiller .com. You are developing an application named Certkiller App09.

You are creating a method and want to view its output that returns a string. You are using Microsoft Visual Studio 2005 IDE to examine the method's output. You define the output of the method to the string variable named fName. You want certain information printed in a single line:

1. This message must be printed: Test Unsuccessful

1. When the value of fName is not equal to "Kara Lang", the value of fName must be printed.

The code segment that you use must simultaneously facilitate uninterrupted execution of Certkiller App09.

Which of the following code segments should you use to achieve your goal?

- A. Debug.Assert(fName = " Kara Lang", "Test Unsuccessful: ", fName)
- B. Debug.WriteLineIf(fName <> " Kara Lang", _ fName, "Test Unsuccessful")
- C. If fName <> " Kara Lang" Then
Debug.Print("Test Unsuccessful: ")
Debug.Print(fName)
End If
- D. If fName <> " Kara Lang" Then
Debug.WriteLine("Test Unsuccessful: ")
Debug.WriteLine(fName)
End If

Answer: B

Explanation: Debug.WriteLineIf() will conditionally write the "Test Unsuccessful", it will not interrupt execution of the application.

A an Assert will stop execution of the application in debug mode if the condition is not met.

C & D could be used but they execute in the release configurations

QUESTION 446

You work as the application developer at Certkiller .com. You are developing a new application named Certkiller App12. Certkiller App12 will be used to store customer information on Certkiller .com's customers who are dispersed across the continent. You need to create internal utilities for Certkiller App12, and need to collect information on all Certkiller .com's customers that are located in Canada. Choose the code segment which will perform this task.

- A. For Each objCulture As CultureInfo In
_CultureInfo.GetCultures(CultureTypes.SpecificCultures)
...Next
- B. Dim objCulture As New CultureInfo("CA")
...
C. Dim objRegion As New RegionInfo("CA")
...
D. Dim objRegion As New RegionInfo("") If objRegion.Name = "CA" Then
...End If

Answer: C

Explanation: The RegionInfo class can be used to get information about a region. A & B CultureInfo is used to control formatting, sorting & comparing of culture sensitive data. E.g currencies, calendar dates etc.
D Does not initialise the RegionInfo object correctly i.e to Canada.

QUESTION 447

You work as the application developer at Certkiller .com. You have created a new application named Certkiller App05. Certkiller App05 is configured to forward an e-mail message. The SMTP server on the local subnet is named Certkiller -SR31. You want to test Certkiller App05. You decide to use a source address of mia@ Certkiller .com; and a target address of dest@ Certkiller .com. Choose the code segment which you should use to test whether Certkiller App05 sends e-mail messages.

- A. Dim MailFrom As New MailAddress("mia@ Certkiller .com", "Mia")
Dim MailTo As New MailAddress("dest@ Certkiller .com", "Dest")
Dim Message As New MailMessage(MailFrom, MailTo) Message.Subject =
"Hello" Message.Body = "Testing" Message.Dispose()
- B. Dim SMTPClient As String = " Certkiller -SR31"
Dim MailFrom As String = mia@ Certkiller .com
Dim MailTo As String = dest@ Certkiller .com
Dim Subject As String = "Hello"
Dim Body As String = "Testing" Dim Message As New MailMessage(MailFrom, MailTo,
Subject, SMTPClient)
- C. Dim MailFrom As New MailAddress("mia@ Certkiller .com", "Mia")
Dim MailTo As New MailAddress("dest@ Certkiller .com", "Dest")

```
Dim Message As New MailMessage(MailFrom, MailTo)Message.Subject =  
"Hello"Message.Body = "Testing"  
Dim objClient As New SmtpClient(" Certkiller -SR31")objClient.Send(Message)  
D. Dim MailFrom As New MailAddress("mia@ Certkiller .com", "Mia")  
Dim MailTo As New MailAddress("dest@ Certkiller .com", "Dest")  
Dim Message As New MailMessage(MailFrom, MailTo)Message.Subject =  
"Hello"Message.Body = "Testing"  
Dim Info As New SocketInformationDim Client As New Socket(Info)  
Dim Enc As New ASCIIEncodingDim Bytes() As Byte =  
Enc.GetBytes(Message.ToString)Client.Send(Bytes)
```

Answer: C

Explanation: To Send a simple mail message construct a MailMessage object and a SmtpClient object. Call the SmtpClient.Send instance method supplying the MailMessage object as a parameter.

A creates a MailMessage but then destroys it.

B creates a MailMessage but then does not do anything with it.

D tries to do something with sockets, this is unnecessary because there is a SMTP server available. The question implies delivering the mail via SMTP.

QUESTION 448

You work as the application developer at Certkiller .com. Certkiller .com has its headquarters in Chicago and a branch office in Mexico.

You are developing a new application that will print a report. When the report is generated and printed by users in the Mexico branch office, the report must show the current date in the Mexican Spanish format.

Which of the following code segments will accomplish the task?

A. Dim DTFormat As DateTimeFormatInfo = _
New CultureInfo("es-MX", False).DateTimeFormatDim DT As New DateTime(_
DateTime.Today.Year, DateTime.Today.Month, DateTime.Today.Day)
Dim strDate As String = _
DT.ToString(DTFormat.LongDatePattern)
B. Dim objCalendar As Calendar = _
New CultureInfo("es-MX", False).CalendarDim DT As New DateTime(_
DateTime.Today.Year, DateTime.Today.Month, DateTime.Today.Day)
Dim strDate As String = DT.ToString
C. Dim strDate As String = _
DateTimeFormatInfo.CurrentInfo.GetMonthName(_
DateTime.Today.Month)
D. Dim strDate As String = _
DateTime.Today.Month.ToString("es-MX")

Answer: A

QUESTION 449

You work as the application developer at Certkiller .com. You are creating a new code segment. You must ensure that the data contained within an isolated storage file, named Settings.dat, is returned as a string. Settings.dat is machine-scoped. Choose the code segment which will achieve your goal.

- A. Dim objStream As IsolatedStorageFileStreamobjStream = New IsolatedStorageFileStream(_
"Settings.dat", FileMode.Open)
Dim result As String = New StreamReader(objStream).ReadToEnd
- B. Dim objFile As IsolatedStorageFileobjFile =
IsolatedStorageFile.GetMachineStoreForAssemblyDim objStream As IsolatedStorageFileStreamobjStream = New IsolatedStorageFileStream(_
"Settings.dat", FileMode.Open, objFile)
Dim result As String = New StreamReader(objStream).ReadToEnd
- C. Dim objStream As IsolatedStorageFileStreamobjStream = New IsolatedStorageFileStream(_
"Settings.dat", FileMode.Open)
Dim result As String = objStream.ToString
- D. Dim objFile As IsolatedStorageFileobjFile =
IsolatedStorageFile.GetMachineStoreForAssemblyDim objStream As IsolatedStorageFileStreamobjStream = New IsolatedStorageFileStream(_
"Settings.dat", FileMode.Open, objFile)
Dim result As String = objStream.ToString

Answer: B

Explanation: Retrieve the IsolatedStorageFile for the machine store. Use an IsolatedStorageFileStream to read from the desired file within the machine store. A & C do not get the IsolatedStorageFile for the machine context. D returns a string representation of the IsolatedStorageFileStream object not a String of the files contents as the question requests.

QUESTION 450

You work as the application developer at Certkiller .com. You are developing a new method that must decrypt, encrypted confidential data. The confidential data to decrypt is encrypted via the Triple DES (3-DES) algorithm.

Your new method takes these parameters:

1. A byte array, named cipherMessage that must be decrypted.
2. A key, named key
3. The initialization vector, named iv.

Choose the code segment which will decrypt the specified data via the TripleDES class. The decrypted data must be in string.

- A. Dim objDES As New TripleDESCryptoServiceProviderobjDES.BlockSize = cipherMessage.LengthDim objCrypto As ICryptoTransform = _

```
objDES.CreateDecryptor(key, iv)
Dim cipherStream As New MemoryStream(cipherMessage)
Dim cryptoStream As New CryptoStream( _
cipherStream, objCrypto, CryptoStreamMode.Read)
Dim message As Stringmessage = New StreamReader(cryptoStream).ReadToEnd
B. Dim objDES As New TripleDESCryptoServiceProviderobjDES.FeedbackSize =
cipherMessage.LengthDim objCrypto As ICryptoTransform = _
objDES.CreateDecryptor(key, iv)
Dim cipherStream As New MemoryStream(cipherMessage)
Dim cryptoStream As New CryptoStream( _
cipherStream, objCrypto, CryptoStreamMode.Read)
Dim message As Stringmessage = New StreamReader(cryptoStream).ReadToEnd
C. Dim objDES As New TripleDESCryptoServiceProvider
Dim objCrypto As ICryptoTransform = _
objDES.CreateDecryptor()
Dim cipherStream As New MemoryStream(cipherMessage)
Dim cryptoStream As New CryptoStream( _
cipherStream, objCrypto, CryptoStreamMode.Read)
Dim message As Stringmessage = New StreamReader(cryptoStream).ReadToEnd
D. Dim objDES As New TripleDESCryptoServiceProvider
Dim objCrypto As ICryptoTransform = _
objDES.CreateDecryptor(key, iv)
Dim cipherStream As New MemoryStream(cipherMessage)
Dim cryptoStream As New CryptoStream( _
cipherStream, objCrypto, CryptoStreamMode.Read)
Dim message As Stringmessage = New StreamReader(cryptoStream).ReadToEnd
```

Answer: D

QUESTION 451

You work as the application developer at Certkiller .com. You are creating a new class which contains a method named GetCurrentRate. GetCurrentRate extracts the current interest rate from a variable named currRate. currRate contains the current interest rate which should be used.

You develop serialized representations of the class and now need to write a code segment which updates the currRate variable with the current interest rate if an instance of the class is deserialized.

Choose the code segment which will accomplish this task.

- A. <OnSerializing> _Friend Sub UpdateValue (ByVal context As StreamingContext)
currRate = GetCurrentRate()
End Sub
- B. <OnSerializing> _ Friend Sub UpdateValue(ByVal info As SerializationInfo)
info.AddValue("currentRate", GetCurrentRate())
End Sub
- C. <OnDeserializing> _ Friend Sub UpdateValue(ByVal info As SerializationInfo)

```
info.AddValue("currentRate", GetCurrentRate())
```

```
End Sub
```

```
D. <OnDeserialized> _Friend Sub UpdateValue (ByVal context As StreamingContext)
```

```
currRate = GetCurrentRate()
```

```
End Sub
```

Answer: D

Explanation: A method with the OnDeserialized attribute will be called after Deserialization and any instance variables can be set.

A & B the method will fire during serializing, the question is concerned with reconstructing the object during deserialization.

C the OnDeserializing attribute is useful for default values. OnDeserializing attribute works with a method that contains a StreamContext parameter and not a SerializationInfo parameter.

QUESTION 452

You work as the application developer at Certkiller .com. You have to develop an application named Certkiller App21. When deployed, Certkiller App21 will be used by numerous users on the same computer. Certkiller App21 uses more than one assembly, and is configured to use isolated storage to store certain user information. You must create a new directory named UserInfo in the isolated storage area which is scoped to the current Microsoft Windows identity and assembly. Choose the code segment which will accomplish this task.

A. Dim objStore As IsolatedStorageFileobjStore =

IsolatedStorageFile.GetUserStoreForAssemblyobjStore.CreateDirectory("UserInfo")

B. Dim objStore As IsolatedStorageFileobjStore =

IsolatedStorageFile.GetMachineStoreForAssemblyobjStore.CreateDirectory("UserInfo")

C. Dim objStore As IsolatedStorageFileobjStore =

IsolatedStorageFile.GetUserStoreForDomainobjStore.CreateDirectory("UserInfo")

D. Dim objStore As IsolatedStorageFileobjStore =

IsolatedStorageFile.GetUserStoreForApplicationobjStore.CreateDirectory("UserInfo")

Answer: A

Explanation: The user store for the assembly is the correct store that is required. It is returned by IsolatedStorageFile.GetUserStoreForAssembly().

B,C & D return Isolated Storage File stores of incorrect scope

QUESTION 453

You work as the application developer at Certkiller .com. You are creating a new method. Your method must be localized to Italy, and must search a string named searchList for a specific substring named searchValue.

Which code segment should you use to perform this task?

A. Return SearchList.IndexOf(SearchValue)
B. Dim objComparer As CompareInfo = _
New CultureInfo("it-IT").CompareInfoReturn objComparer.Compare(SearchList,
SearchValue)
C. Dim objComparer As CompareInfo = _
New CultureInfo("it-IT").CompareInfoIf SearchList.IndexOf(SearchValue) > 0 Then
Return TrueElse
Return FalseEnd If
D. Dim objComparer As CompareInfo = _
New CultureInfo("it-IT").CompareInfoIf objComparer.IndexOf(SearchList,
SearchValue) > 0 Then
Return TrueElse
Return FalseEnd If

Answer: D

QUESTION 454

You work as the application developer at Certkiller .com. You are developing a new method that must encrypt confidential data. The method must use the Data Encryption Standard (DES) algorithm. Your new method takes these parameters:

1. A byte array, named message, that must be encrypted by applying the DES algorithm.
2. A key, named key, which will be used to encrypt the data.
3. The initialization vector, named iv.

Once the data is encrypted, it must be added to the MemoryStream object. Choose the code segment which will encrypt the specified data and add it to the MemoryStream object.

A. Dim objDES As New DESCryptoServiceProviderobjDES.BlockSize =
message.Length
Dim objCrypto As ICryptoTransform = obj
DES.CreateDecryptor(key, iv)
Dim cipherStream As New MemoryStream
Dim cryptoStream As New CryptoStream(cipherStream, objCrypto,
CryptoStreamMode.Write)
B. Dim objDES As New DESCryptoServiceProvider
Dim objCrypto As ICryptoTransform = objDES.CreateDecryptor(key, iv)
Dim cipherStream As New MemoryStream
Dim cryptoStream As New CryptoStream(cipherStream, objCrypto,
CryptoStreamMode.Write)
cryptoStream.Write(message, 0, message.Length)
C. Dim objDES As New DESCryptoServiceProvider
Dim objCrypto As ICryptoTransform = obj
DES.CreateDecryptor()
Dim cipherStream As New MemoryStream
Dim cryptoStream As New CryptoStream(cipherStream, objCrypto,

```
CryptoStreamMode.Write)
cryptoStream.Write(message, 0, message.Length)
D. Dim objDES As New DESCryptoServiceProvider
Dim objCrypto As ICryptoTransform = obj
DES.CreateEncryptor(key, iv)
Dim cipherStream As New MemoryStream
Dim cryptoStream As New CryptoStream(cipherStream, objCrypto,
CryptoStreamMode.Write)
cryptoStream.Write(message, 0, message.Length)
```

Answer: D

Explanation: Use the DesCryptoServiceProvider to create a new encryptor. Create a CryptoStream that encrypt directly to the MemoryStream and call the Write() method to perform the encryption.

A Uses a blocksize set to size of the entire message

B creates a decryptor instead of an encryptor.

C does not initialise the encryptor with the key and iv correctly.

QUESTION 455

You work as the application developer at Certkiller .com. You create a new service application named Certkiller App29. You install Certkiller App29 on five application servers running in the Certkiller .com network. You then apply the code segment shown below. Note that line numbers are only included for reference purposes.

```
01 Public Sub StartService(ByVal serverName As String)
02 Dim ctrl As ServiceController = _
03 New ServiceController(" Certkiller App29")
04 If ctrl.Status = ServiceControllerStatus.Stopped Then
05 End If
06 End Sub
```

You want Certkiller App29 to start if it stops. You must create the routine which will start Certkiller App29 on the server defined by the serverName input parameter.

Choose the two lines of code which you should include in your code segment. Each correct answer presents only part of the complete solution. Choose two answers.

- A. Add this of code between line 03 and line 04: ctrl.ServiceName = serverName
- B. Add this of code between line 03 and line 04: ctrl.MachineName = serverName
- C. Add this of code between line 03 and line 04: ctrl.Site.Name = serverName
- D. Add this of code between line 04 and line 05: ctrl.Continue()
- E. Add this of code between line 04 and line 05: ctrl.Start()
- F. Add this of code between line 04 and line 05: ctrl.ExecuteCommand(0)

Answer: B,E

Explanation: The ServiceController is capable of controller services on other computers, the MachineName should be specified. The service should be started

with the Start() method if it is in the stopped state.

Setting the ServiceName to the machine name is incorrect.

No such property as SiteName

Continue cannot re-start a stopped service only a paused one.

ExecuteCommand is used to fire a custom command on the service.

QUESTION 456

You work as the application developer at Certkiller .com. You are working on a new application named Certkiller App20. Certkiller App20 is configured to perform a series of mathematical calculations.

You create a class named Certkiller AppClass and create a procedure named

Certkiller AppSP. Certkiller AppSP must execute on an instance of the class.

You must configure the application's user interface so that it continues to respond for the duration that calculations are performed. You must write the code segment for calling the Certkiller AppSP procedure which will accomplish your objective.

Choose the code segment which you should use.

A. Private Sub Certkiller AppSP()...End Sub Private Sub DoWork()

Dim myValues As New Certkiller AppClass()

Dim newThread As New Thread(_

New ThreadStart(AddressOf Certkiller AppSP))

newThread.Start(myValues)

End Sub

B. Private Sub Certkiller AppSP()...End Sub Private Sub DoWork()

Dim myValues As New Certkiller AppClass()

Dim delStart As New ThreadStart(_AddressOf Certkiller AppSP)

Dim newThread As New Thread(delStart)If newThread.IsAlive

ThennewThread.Start(myValues)

End If

End Sub

C. Private Sub Certkiller AppSP (_ByVal values As Certkiller AppClass)...End Sub

Private Sub DoWork()

Dim myValues As New Certkiller AppClass()

Application.DoEvents()

Certkiller AppSP(myValues)

Application.DoEvents()

End Sub

D. Private Sub Certkiller AppSP (_ByVal values As Object)...End Sub Private Sub

DoWork()

Dim myValues As New Certkiller AppClass()

Dim newThread As New Thread(_

New ParameterizedThreadStart(_AddressOf Certkiller AppSP))

newThread.Start(myValues)

End Sub

Answer: D

Explanation: It is a requirement that the UI continues to respond, hence Certkiller AppSP should execute in a separate thread. Certkiller AppSP requires a parameter hence you should use the ParameterizedThreadStart delegate. A& B attempt to supply a parameter to the ThreadStart delegate. This is not possible. C Does not run in a new thread and hence may leave the UI unresponsive.

QUESTION 457

You work as the application developer at Certkiller .com. You are creating a new method. Your method must be localized to Italy, and must search a string named searchList for a specific substring named searchValue.

Which code segment should you use to perform this task?

- A. Return SearchList.IndexOf(SearchValue)
- B. Dim objComparer As CompareInfo = _
New CultureInfo("it-IT").CompareInfoReturn objComparer.Compare(SearchList, SearchValue)
- C. Dim objComparer As CompareInfo = _
New CultureInfo("it-IT").CompareInfoIf SearchList.IndexOf(SearchValue) > 0 Then
Return TrueElse
Return FalseEnd If
- D. Dim objComparer As CompareInfo = _
New CultureInfo("it-IT").CompareInfoIf objComparer.IndexOf(SearchList, SearchValue) > 0 Then
Return TrueElse
Return FalseEnd If

Answer: D

QUESTION 458

You work as the application developer at Certkiller .com. You are developing a new application named Certkiller 15. Certkiller 15 will be used to show processes running on remote computers. You need to write a method for the application. Your method must accomplish the following:

1. Accept the name of the remote computer as a string parameter named strComputer.
2. Return an ArrayList object that lists the names of each process running on that specific remote computer.

Choose the code segment that will accomplish the task.

- A. Dim al As New ArrayList()
Dim procs As Process() = _ Process.GetProcessesByName(strComputer)
Dim proc As ProcessFor Each proc In procs
al.Add(proc)
Next
- B. Dim al As New ArrayList()


```
Dim procs As Process() = Process.GetProcesses(strComputer)
Dim proc As ProcessFor Each proc In procs
al.Add(proc)
Next
C. Dim al As New ArrayList()
Dim procs As Process() = _ Process.GetProcessesByName(strComputer)
Dim proc As ProcessFor Each proc In procs
al.Add(proc.ProcessName)
Next
D. Dim al As New ArrayList()
Dim procs As Process() = Process.GetProcesses(strComputer)
Dim proc As ProcessFor Each proc In procs
al.Add(proc.ProcessName)
Next
```

Answer: D

Explanation: Call `Processes.GetProcesses()` supplying the name of the computer and then iterate through the returned collection of processes adding the process name to the arraylist.

A & C use `GetProcessByName()` and return processes on the current computer only. B adds the entire process to the arraylist rather than just the process name.

QUESTION 459

You work as the application developer at Certkiller .com. You want to modify a method that returns an ArrayList named Certkiller AL. You want to write a code segment which will result in all changes made to Certkiller AL being performed in a thread-safe way.

Choose the code segment which will accomplish the task.

```
A. Dim Certkiller al As ArrayList = New ArrayList()
SyncLock
Certkiller al.SyncRoot
Return Certkiller al
End SyncLock
B. Dim Certkiller al As ArrayList = New ArrayList()
SyncLock
Certkiller al.SyncRoot.GetType()
Return Certkiller al
End SyncLock
C. Dim Certkiller al As ArrayList = New ArrayList()
Monitor.Enter( Certkiller al)
Monitor.Exit( Certkiller al)
Return Certkiller al
D. Dim al As ArrayList = New ArrayList()
Dim sync_ Certkiller al as ArrayList = ArrayList.Synchronized( Certkiller al)
```


Return sync_ Certkiller al

Answer: D

Explanation: A & C the lock will be released when the method returns.
B Does not lock the arraylist but attempts to lock its type.

QUESTION 460

You work as the application developer at Certkiller .com. You are developing an application named Certkiller App12. You must the write multicast delegate that accepts a DateTime argument.

Choose the code segment which will accomplish the task.

- A. Public Delegate Function PowerDeviceOn(_
ByVal result As Boolean, _
ByVal autoPowerOff As DateTime) _
As Integer
- B. Public Delegate Function PowerDeviceOn(_
ByVal sender As Object, _
ByVal autoPowerOff As EventArgs) _
As Boolean
- C. Public Delegate Sub PowerDeviceOn(_
ByVal autoPowerOff As DateTime)
- D. Public Delegate Function PowerDeviceOn(_
ByVal autoPowerOff As DateTime) _
As Boolean

Answer: C

Explanation: A & B the delegates do not accept an argument of type DateTime
D The question does not explicitly mention a return type. Also with multicasting only the return value of the last method called as part of a multicast chain is returned. Hence return values do not tend to be very useful as far as multicasting is concerned.

QUESTION 461

You work as the application developer at Certkiller .com. You are developing a new application named Certkiller App06.

Certkiller App06 will be used to transmit confidential financial information over the network. To secure the confidential data, you create an X509 Certificate object named certificate and create a TcpClient object named client.

You must now create the code segment that creates an SslStream for communication by applying the Transport Layer Security 1.0 protocol.

Choose the code segment which you should use.

- A. Dim objSSL As New
SslStream(client.GetStream)objSSL.AuthenticateAsServer(certificate, False, _

SslProtocols.None, True)
B. Dim objSSL As New
SslStream(client.GetStream)objSSL.AuthenticateAsServer(certificate, False, _
SslProtocols.Ssl3, True)
C. Dim objSSL As New
SslStream(client.GetStream)objSSL.AuthenticateAsServer(certificate, False, _
SslProtocols.Ssl2, True)
D. Dim objSSL As New
SslStream(client.GetStream)objSSL.AuthenticateAsServer(certificate, False, _
SslProtocols.Tls, True)

Answer: D

QUESTION 462

You work as the application developer at Certkiller .com. You want to test a new method that examines running processes. Your method is configured to return an ArrayList that reveals the name and full path of each module loaded by a running process named C:\ Certkiller Apps\Process5.
Choose the code segment that will show each module loaded by the specific running process?

A. Dim ar As New ArrayList()
Dim procs As Process()
Dim modules As ProcessModuleCollectionprocs = Process.GetProcesses("Process5")If
procs.Length > 0 Thenmodules = procs(0).Modules
For Each pm As ProcessModule In Modules
ar.Add(pm.ModuleName)
Next
End If
B. Dim ar As New ArrayList()
Dim procs As Process()
Dim modules As ProcessModuleCollectionprocs =
Process.GetProcesses("C:\TestApps\Process5.exe")If procs.Length > 0 Thenmodules =
procs(0).Modules
For Each pm As ProcessModule In Modules
ar.Add(pm.ModuleName)
Next
End If
C. Dim ar As New ArrayList()
Dim procs As Process()
Dim modules As ProcessModuleCollectionprocs =
Process.GetProcessesByName("Process5")If procs.Length > 0 Thenmodules =
procs(0).Modules
For Each pm As ProcessModule In Modules
ar.Add(pm.FileName)
Next

```
End If
D. Dim ar As New ArrayList()
Dim procs As Process()
Dim modules As ProcessModuleCollectionprocs =
_Process.GetProcessesByName("C:\TestApps\Process5.exe")If procs.Length > 0
Thenmodules = procs(0).Modules
For Each pm As ProcessModule In Modules
ar.Add(pm.FileName)
Next
End If
```

Answer: C

Explanation: Process.GetProcessesByName() should be used to return all the processes that match a process name. The modules collection exposes all the modules loaded by the process and can be added to an ArrayList.

A & B GetProcesses() accepts a computer name for retrieving the processes on a remote computer. GetProcessesByName() should be used to return processes by their name.

D the path of the process is not part of the process name.

QUESTION 463

You work as the application developer at Certkiller .com. You have to define the code segment that will transfer the data of a byte array. The byte array is named dataToSend. Your code segment must use a NetworkStream object named netStream when transferring the data of the byte array. The cache size you use must be 8,192 bytes.

Which code segment should you use to accomplish the task?

- A. Dim memStream As New MemoryStream(8192)memStream.Write(dataToSend, 0, _CType(netStream.Length, Integer))
- B. Dim memStream As New MemoryStream(8192)netStream.Write(dataToSend, 0, _CType(memStream.Length, Integer))
- C. Dim bufStream As New BufferedStream(netStream, 8192)
bufStream.Write(dataToSend, 0, dataToSend.Length)
- D. Dim bufStream As New BufferedStream(netStream)
bufStream.Write(dataToSend, 0, 8192)

Answer: C

Explanation: To send data using a cache it is necessary to use a BufferedStream. The BufferedStream should be created with the cache size of 8192 bytes.

A & B do not employ caching.

D does not correctly initialise the BufferedStream to have a cache size of 8192 bytes.

QUESTION 464

You work as the application developer at Certkiller .com. You must write a code

segment that includes an undo buffer function. You want the undo function to store data modifications, but it must only allow the storage of strings. You want the undo function to undo the most recently performed data modifications first.

Which code segment should you use to achieve your goal?

- A. Dim undoBuffer As New Stack(Of String)
- B. Dim undoBuffer As New Stack()
- C. Dim undoBuffer As New Queue(Of String)
- D. Dim undoBuffer As New Queue()

Answer: A

Explanation: A Stack caters for a last in first out scenario similar to what is required in an undo buffer. By using Generics you can force a strongly typed collection that takes strings only.

B is not strongly typed for strings, it will take any type of object.

C & D Queue is a First in First out collection, it is not appropriate in this instance.

QUESTION 465

You work as the application developer at Certkiller .com. You are working on an existing application and must load a new assembly into this application.

You must write the code segment that will require the common language runtime (CLR) to grant the assembly a permission set, as though the assembly was loaded from the local intranet zone. You must ensure that the default evidence for the assembly is overridden and must create the evidence collection.

Choose the code segment which will accomplish this task.

- A. Dim objEvidence As New Evidence(_
Assembly.GetExecutingAssembly.Evidence
- B. Dim objEvidence As New EvidenceobjEvidence.AddAssembly(_
New Zone(SecurityZone.Intranet))
- C. Dim objEvidence As New EvidenceobjEvidence.AddHost(_
New Zone(SecurityZone.Intranet))
- D. Dim objEvidence As New Evidence(_
AppDomain.CurrentDomain.Evidence)

Answer: C

Explanation: Use the evidence.AddHost method to add Zone evidence.

A simply gets the evidence of the Executing Assembly and assigns it to a new object, the question explicitly wants Intranet zone evidence.

B Adds assembly evidence, the question asks for host evidence because it is concerned with where the assembly was loaded from.#

D does not create an Evidence object with Intranet zone evidence.

QUESTION 466

You work as the application developer at Certkiller .com. You are creating a new code segment which is to be used for user authentication and authorization purposes. The current application data store already stores the username, password, and roles.

You must establish the user security context, which should be used for the authorization checks like IsInRole. To authorize the user, you have started developing the following code segment:

```
If TestPassword(UserName, Password) = False Then  
Throw New Exception("user not authenticated")  
End If
```

```
Dim RolesArray() As String = LookUpUserRoles(UserName)
```

From the options below, choose the code which will make the code segment complete.

- A. Dim objID As New GenericIdentity(UserName)
Dim objUser As New GenericPrincipal(objID, RolesArray)
Thread.CurrentPrincipal = objUser
- B. Dim objID As New WindowsIdentity(UserName)
Dim objUser As New WindowsPrincipal(objID)
Thread.CurrentPrincipal = objUser
- C. Dim objNT As New NTAccount(UserName)
Dim objID As New GenericIdentity(objNT.Value)
Dim objUser As New GenericPrincipal(objID, RolesArray)
Thread.CurrentPrincipal = objUser
- D. Dim objToken As IntPtr = IntPtr.Zero
objToken = LogonUserUsingInterop(UserName, EncryptedPassword)
Dim objContext As WindowsImpersonationContext =_
WindowsIdentity.Impersonate(objToken)

Answer: A

Explanation: Because the application storing the credentials, the GenericIdentity & GenericPrincipal classes should be used instead of the WindowsIdentity\Principal classes.

B uses WindowsIdentity & WindowsPrincipal

C incorrectly uses NTAccount to initialise a GenericPrincipal. GenericPrincipal requires an implementation of IIdentity.

D the WindowsIdentity.Impersonate() is used for running code in the context of another user. Impersonation is not what is required.

QUESTION 467

You work as the application developer at Certkiller .com. You create a code segment that will call a function from the Win32 Application Programming Interface (API) via platform invoke. The precise code segment is:

```
Dim PersonName as String = "N?el"
```

Dim Msg as String = " Thank you" + PersonName + " for coming!"
Dim r As Boolean= User32API.MessageBox(0, Msg, PersonName, 0)
You must specify the prototype method that will efficiently assemble the string data.
Choose the code segment which will accomplish the task.

- A. <DllImport("user32", CharSet:=CharSet.Ansi)> _Public Function MessageBox(ByVal hWnd As Int32, _ByVal text As String, ByVal caption As String, _ByVal t As UInt32) As BooleanEnd Function
- B. <DllImport("user32", EntryPoint:="MessageBoxA", _CharSet:=CharSet.Ansi)> _Public Function MessageBox(ByVal hWnd As Int32, _<MarshalAs(UnmanagedType.LPWStr)> ByVal text As String, _<MarshalAs(UnmanagedType.LPWStr)> ByVal caption As String, _ByVal t As UInt32) As BooleanEnd Function
- C. <DllImport("user32", CharSet:=CharSet.Unicode)> _Public Function MessageBox(ByVal hWnd As Int32, _ByVal text As String, ByVal caption As String, _ByVal t As UInt32) As BooleanEnd Function
- D. DllImport("user32", EntryPoint:="MessageBoxA", _CharSet:=CharSet.Unicode)> _Public Function MessageBox(ByVal hWnd As Int32, _<MarshalAs(UnmanagedType.LPWStr)> ByVal text As String, _<MarshalAs(UnmanagedType.LPWStr)> ByVal caption As String, _ByVal t As UInt32) As BooleanEnd Function

Answer: C

QUESTION 468

You work as the application developer at Certkiller .com. You have created a new dynamic assembly named MyAssembly and must ensure that the assembly is saved to disk.

Choose the code segment which you should use.

- A. Dim objAssembly As New AssemblyName()objAssembly.Name = "MyAssembly"Dim objBuilder As AssemblyBuilder = _AppDomain.CurrentDomain.DefineDynamicAssembly(_objAssembly, AssemblyBuilderAccess.Run)objBuilder.Save("MyAssembly.dll")
- B. Dim objAssembly As New AssemblyName()objAssembly.Name = "MyAssembly"Dim objBuilder As AssemblyBuilder = _AppDomain.CurrentDomain.DefineDynamicAssembly(_objAssembly, AssemblyBuilderAccess.Save)objBuilder.Save("MyAssembly.dll")
- C. Dim objAssembly As New AssemblyName()objAssembly.Name = "MyAssembly"Dim objBuilder As AssemblyBuilder = _AppDomain.CurrentDomain.DefineDynamicAssembly(_objAssembly, AssemblyBuilderAccess.RunAndSave)objBuilder.Save("MyAssembly.dll")
- D. Dim objAssembly As New AssemblyName()objAssembly.Name = "MyAssembly"Dim objBuilder As AssemblyBuilder = _AppDomain.CurrentDomain.DefineDynamicAssembly(_objAssembly,

AssemblyBuilderAccess.Save)objBuilder.Save("c:\MyAssembly.dll")

Answer: B

Explanation: Create an AssemblyName object and use it to construct an AssemblyBuilder with save privilege. Finally call the Save method on the AssemblyBuilder to write the assembly to disk.

A Creates an assembly that does not have the privilege to save to disk.

C does not provide a name the assembly

D attempts to define a physical file location, this is not compatible with AssemblyBuilder.Save

QUESTION 469

You work as the application developer at Certkiller .com. You create a new class library, which contains the Department class. The class library is accessed by numerous applications. The Department class has this definition:

```
Public Class Department
```

```
Public name As String
```

```
Public manager As String
```

```
End Class
```

Each specific application has its own custom configuration to store department-specific information in its application configuration file. The configuration code is as follows:

```
<Department>
```

```
<name>Hardware</name>
```

```
<manager>AllyWagner</manager>
```

```
</Department>
```

You must define the code segment that creates a Department object instance. You must ensure that the field values retrieved from the application configuration file is used to create the Department object instance.

Choose the code segment which will achieve your goal in these circumstances.

A. Public Class deptElement

Inherits ConfigurationElement

Protected Overrides Sub DeserializeElement(_

ByVal reader As XmlReader, _

ByVal serializeCollectionKey As Boolean)

Dim dept As Department = New Department()

dept.name = ConfigurationManager.AppSettings("name")

dept.manager = _

ConfigurationManager.AppSettings("manager")

End Sub

End Class

B. Public Class deptElement

Inherits ConfigurationElement

Protected Overrides Sub DeserializeElement(_

```
ByVal reader As XmlReader, _
ByVal serializeCollectionKey As Boolean)
Dim dept As Department = New Department()
dept.name = reader.GetAttribute("name")
dept.manager = reader.GetAttribute("manager")
End Sub
End Class
C. Public Class deptHandler
Implements IConfigurationSectionHandler
Public Function Create(ByVal parent As Object, _
ByVal configContext As Object, _
ByVal section As System.Xml.XmlNode) As Object _
Implements IConfigurationSectionHandler.Create
Dim dept As Department = new Department()
dept.name = section.SelectSingleNode("name").InnerText
dept.manager = _
section.SelectSingleNode("manager").InnerText
Return dept
End Function
End Class
D. Public Class deptHandler
Implements IConfigurationSectionHandler
Public Function Create(ByVal parent As Object, _
ByVal configContext As Object, _
ByVal section As System.Xml.XmlNode) As Object _
Implements IConfigurationSectionHandler.Create
Dim dept As Department = new Department()
dept.name = section.Attributes("name").Value
dept.manager = section.Attributes("manager").Value
Return dept
End Function
End Class
```

Answer: C

QUESTION 470

You work as the application developer at Certkiller .com. You write the definition for a class named Vehicle by defining the following code segment:

```
Public Class Vehicle
<XmlAttribute(AttributeName:="category")> _
Public vehicleType As String
Public model As String
<XmlIgnore> _
Public year As Integer
<XmlElement(ElementName:="mileage")> _
Public miles As Integer
```



```

Public condition As ConditionType
Public Sub New()
End Sub
Public Enum ConditionType
<XmlEnum("Poor")> BelowAverage
<XmlEnum("Good")> Average
<XmlEnum("Excellent")> AboveAverage
End Enum
End Class

```

You next create an instance of the Vehicle class, and add the following data in the defined fields of the class instance:

Member	Value
vehicle Type	car
model	racer
year	2002
miles	15000
condition	AboveAverage

You must now identify the XML block that is generated when the Vehicle class instance is serialized.

Choose the XML block that signifies the output of serializing the Vehicle class instance.

- A. <?xml version="1.0" encoding="utf-8"?>
 <Vehicle
 xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance"
 xmlns:xsd="http://www.w3.org/2001/XMLSchema"
 vehicleType="car">
 <model>racer</model>
 <miles>15000</miles>
 <condition>AboveAverage</condition>
 </Vehicle>
- B. <?xml version="1.0" encoding="utf-8"?>
 <Vehicle
 xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance"
 xmlns:xsd="http://www.w3.org/2001/XMLSchema"
 category="car">
 <model>racer</model>
 <mileage>15000</mileage>
 <condition>Excellent</condition>
 </Vehicle>
- C. <?xml version="1.0" encoding="utf-8"?>
 <Vehicle
 xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance"
 xmlns:xsd="http://www.w3.org/2001/XMLSchema"
 category="car">
 <model>racer</model>
 <mileage>15000</mileage>
 <conditionType>Excellent</conditionType>

```
</Vehicle>
D. <?xml version="1.0" encoding="utf-8"?>
<Vehicle
xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance"
xmlns:xsd="http://www.w3.org/2001/XMLSchema">
<category>car</category>
<model>racer</model>
<mileage>15000</mileage>
<condition>Excellent</condition>
</Vehicle>
```

Answer: B

Explanation: The XML produced in B matches the class definition provided in the question.

Category is declared to be an attribute of the Vehicle element, this is not the case in answer A and D.

During XML Serialization by default the user type variables are mapped to XML elements. In the case of answer C, the type itself has been mapped instead of the instance variable.

QUESTION 471

You work as the application developer at Certkiller .com. You create a method which will compress an array of bytes. A parameter named document is used to pass the array to your method.

You want to compress the received array of bytes or data, and then want to return the result as an array of bytes.

Choose the code segment which will achieve your goal.

```
A. Dim objStream As New MemoryStream(document)
Dim objDeflate As New DeflateStream(objStream, CompressionMode.Compress)
Dim result(document.Length) As Byteobj
Deflate.Write(result, 0, result.Length)Return result
B. Dim objStream As New MemoryStream(document)
Dim objDeflate As New DeflateStream(objStream, CompressionMode.Compress)obj
Deflate.Write(document, 0, document.Length)obj
Deflate.Close()Return objStream.ToArray
C. Dim objStream As New MemoryStream()
Dim objDeflate As New DeflateStream(objStream, CompressionMode.Compress)obj
Deflate.Write(document, 0, document.Length)obj
Deflate.Close()Return objStream.ToArray
D. Dim objStream As New MemoryStream()
Dim objDeflate As New DeflateStream(objStream, CompressionMode.Compress)
Dim outStream As New MemoryStreamDim b As IntegerWhile (b =
objDeflate.ReadByte)
outStream.WriteByte(CByte(b))
```

End While
Return outStream.ToArray

Answer: C

Explanation: The document is compressed and written to a new MemoryStream using the Deflate class. Finally the compressed data can be returned as an array of bytes using the ToArray method of the MemoryStream.
A does not compress and write the document, instead it is compressing and writing an empty array
B & D are reading and writing to the same document.

QUESTION 472

You work as the application developer at Certkiller .com. You are developing a new application named Certkiller App11.

Certkiller App11 will be used to retrieve values from a custom section of the application configuration file. The application configuration file's custom section uses XML as follows:

```
<ProjectSection name="NewProject">  
<role name="it administrator" />  
<role name="project manager" />  
<role name="user support" />  
</ProjectSection>
```

You must create a code segment for a class named Role. You want the Role class to be initialized, based on values that are retrieved from the custom section of the application configuration file.

Choose the code segment which will accomplish the task.

A. Public Class RoleInherits ConfigurationElementFriend _ElementName As String = "name"

```
<ConfigurationProperty("role")> _  
Public ReadOnly Property Name() As String  
Get  
Return CType(Me("role"), String)  
End Get  
End Property  
End Class
```

B. Public Class Role

```
Inherits ConfigurationElement  
Friend _ElementName As String = "role"  
<ConfigurationProperty("name", IsRequired:=True)> _  
Public ReadOnly Property Name() As String  
Get  
Return CType(Me("name"), String)  
End Get  
End Property
```

```
End Class
C. Public Class Role
Inherits ConfigurationElement
Friend _ElementName As String = "role"
Private _name As String
<ConfigurationProperty("name")> _
Public ReadOnly Property Name() As String
Get
Return _name
End Get
End Property
End Class
D. Public Class Role
Inherits ConfigurationElement
Friend _ElementName As String = "name"
Private _name As String
<ConfigurationProperty("role", IsRequired:=True)> _
Public ReadOnly Property Name() As String
Get
Return _name
End Get
End Property
End Class
```

Answer: B

QUESTION 473

You work as the application developer at Certkiller .com. You are defining a new class that will compare a specially-formatted string. No default collation comparisons are applicable. Choose the code segment which will enable you to implement the IComparable(Of String) interface.

- A. Public Class Person
Implements IComparable(Of String)Public Function CompareTo(ByVal other As String)
As _Integer Implements IComparable(Of String).CompareTo...End Function
End Class
- B. Public Class Person
Implements IComparable(Of String)Public Function CompareTo(ByVal other As Object)
As _Integer Implements IComparable(Of String).CompareTo...End Function
End Class
- C. Public Class Person
Implements IComparable(Of String)Public Function CompareTo(ByVal other As String)
_As Boolean Implements IComparable(Of String).CompareTo...End Function
End Class
- D. Public Class Person

```
Implements IComparable(Of String)Public Function CompareTo(ByVal other As Object)  
_As Boolean Implements IComparable(Of String).CompareTo...End Function  
End Class
```

Answer: A

QUESTION 474

You work as the application developer at Certkiller .com. You are defining a new custom exception class. Your code written for the custom exception class is as follows:

```
Public Class CustomException  
Inherits ApplicationException  
Public Shared COR_E_ARGUMENT As Int32 = &H80070057  
Public Sub New(ByVal strMessage As String)  
MyBase.New(strMessage)  
HResult = COR_E_ARGUMENT  
End SubEnd Class
```

You want to ensure that the new class is used to immediately return control to the COM caller. You also want the COM caller to have access to the error code. Choose the code segment which you should use to achieve these goals.

- A. Return Marshal.GetExceptionForHR(_
CustomException.COR_E_ARGUMENT)
- B. Return CustomException.COR_E_ARGUMENT
- C. Marshal.ThrowExceptionForHR(_
CustomException.COR_E_ARGUMENT)
- D. Throw New CustomException("Argument is out of bounds")

Answer: D

QUESTION 475

You work as the application developer at Certkiller .com. You are working on a new service application named Certkiller App1. Certkiller App1 periodically calls procedures which are called from a method named Method1. The procedures run quite long. You have written the following code segment:

```
Partial Class Certkiller App1 Inherits ServiceBase  
Dim blnExit As Boolean = False Protected Overrides Sub OnStart(ByVal args() As  
String)  
Do  
Method1()  
LoopWhile Not blnExit  
End Sub  
Protected Overrides Sub OnStop()  
blnExit = True  
End Sub  
Private Sub Method1()
```

End SubEnd Class

You try and start the new service, but find that you cannot. You receive this error message instead: Could not start the Certkiller App1 service on the local computer. Error 1053: The service did not respond to the start or control request in a timely fashion.

You must ensure that Certkiller App1 starts successfully.
How will you accomplish the task?

- A. Shift the loop code into the constructor of the service class from the OnStart method.
- B. Drag a timer component to the design surface of the service, and then shift the calls to the long-running procedure from the OnStart method into the Tick event procedure of the timer. Configure the Enabled property of the timer as True. Call the Start method of the timer from the OnStart method.
- C. Add a class-level System.Timers.Timer variable to the service class code. Shift the call to the Method1 method into the Elapsed event procedure of the timer. Configure the Enabled property of the timer as True. Call the Start method of the timer from the OnStart method.
- D. Shift the loop code from the OnStart method into the Method1 method.

Answer: C

QUESTION 476

You work as the application developer at Certkiller .com. You have to create a new security policy for an application domain which must enforce the new Certkiller .com security policy. You write the code segment to do this:

```
Dim objPolicy As PolicyLevel = PolicyLevel.CreateAppDomainLevelDim
noTrustStatement As New PolicyStatement( _
objPolicy.GetNamedPermissionSet("Nothing"))
Dim fullTrustStatement As New PolicyStatement( _
objPolicy.GetNamedPermissionSet("FullTrust"))
```

You must now ensure that all loaded assemblies default to the Nothing permission set. In addition to this, when an assembly comes from a trusted zone, your security policy must grant the assembly the FullTrust permission set. You must create the code groups to do this.

Choose the code segment which will achieve this objective.

- A. Dim objGroup1 As CodeGroup = New FirstMatchCodeGroup(_
New ZoneMembershipCondition(SecurityZone.Trusted), _
fullTrustStatement)
Dim objGroup2 As CodeGroup = New UnionCodeGroup(_
New AllMembershipCondition, noTrustStatement)
- B. Dim objGroup1 As CodeGroup = New FirstMatchCodeGroup(_
New AllMembershipCondition, noTrustStatement)
Dim objGroup2 As CodeGroup = New UnionCodeGroup(_
New ZoneMembershipCondition(SecurityZone.Trusted), _
fullTrustStatement)

C. Dim objGroup As CodeGroup = New UnionCodeGroup(_
New ZoneMembershipCondition(SecurityZone.Trusted), _
fullTrustStatement)
D. Dim objGroup As CodeGroup = New FirstMatchCodeGroup(_
New ZoneMembershipCondition(SecurityZone.Trusted), _
fullTrustStatement)

Answer: B

QUESTION 477

You work as the application developer at Certkiller .com. You are developing a new client application named Certkiller App09. Certkiller App09 must have a utility screen. The screen must show a thermometer; which must indicate what the current status of processes are which are being executed by the application. A rectangle, which will be the background of the thermometer, must be drawn on the screen. The rectangle must be filled with gradient shading, as shown in the accompanying exhibit.



Which code segment should you use to accomplish the task?

A. Dim objRect As New Rectangle(10, 10, 450, 25)
Dim objBrush As New LinearGradientBrush(_objRect, Color.AliceBlue,
Color.CornflowerBlue, _LinearGradientMode.ForwardDiagonal)
Dim objPen As New Pen(objBrush)
Dim g As Graphics = myForm.CreateGraphicsg.DrawRectangle(objPen, objRect)
B. Dim objRect As New Rectangle(10, 10, 450, 25)
Dim objBrush As New LinearGradientBrush(_
objRect, Color.AliceBlue, Color.CornflowerBlue, _
LinearGradientMode.ForwardDiagonal)
Dim objPen As New Pen(objBrush)
Dim g As Graphics = myForm.CreateGraphicsg.FillRectangle(objBrush, objRect)
C. Dim objRect As New RectangleF(10.0F, 10.0F, 450.0F, 25.0F)
Dim points() As System.Drawing.Point = _
{New Point(0, 0), New Point(110, 145)}
Dim objBrush As New LinearGradientBrush(_
objRect, Color.AliceBlue, Color.CornflowerBlue, _
LinearGradientMode.ForwardDiagonal)
Dim objPen As New Pen(objBrush)
Dim g As Graphics = myForm.CreateGraphicsg.DrawPolygon(objPen, points)
D. Dim objRect As New Rectangle(10, 10, 450, 25)
Dim objBrush As New SolidBrush(Color.AliceBlue)
Dim objPen As New Pen(objBrush)
Dim g As Graphics = myForm.CreateGraphicsg.DrawRectangle(objPen, objRect)

Answer: B

Explanation: Create a LineGradientBrush and supply to the FillRectangle() method of the graphics object.

A DrawRectangle() will draw the outline of a rectangle without filling it.

C draws an unfilled Polygon..

D Uses a SolidBrush and will not achieve the desired gradient fill

QUESTION 478

You work as the application developer at Certkiller .com. You must create a code segment that will identify the first 100 bytes from a stream variable named Certkiller stream5.

The initial 100 bytes must be transferred to a byte array named byteArray. The code segment you write must assign the transferred bytes to an integer variable named bytesTransferred

Choose the code segment which you should use.

A. bytesTransferred = Certkiller stream5.Read(byteArray, 0, 100)

B. For i As Integer = 1 To 100

Certkiller stream5.WriteByte(byteArray(i))

bytesTransferred = i

If Not Certkiller stream5.CanWrite Then

Exit For

End If

Next

C. While bytesTransferred < 100

Certkiller stream5.Seek(1, SeekOrigin.Current)

byteArray(bytesTransferred) = _

Convert.ToByte(Certkiller stream5.ReadByte())bytesTransferred += 1End While

D. Certkiller stream5.Write(byteArray, 0, 100)bytesTransferred = byteArray.Length

Answer: A

Explanation: The Read() method accepts a byte array and the start position and number of bytes to read as parameters.

B & D The question indicates that data should be read from the stream not written to it.

C it is unnecessary to attempt to read byte by byte, the Read() method provides a very efficient way of reading into a byte array.

QUESTION 479

You work as the application developer at Certkiller .com. You are developing a new application named Certkiller 06. Certkiller 06 will be used by users to perform an electronic survey that contains 30 True-or-False based questions.

You must set each answer to True. You also want to limit the amount of memory used by each survey.

Choose the storage option that you should use.

- A. Dim answers As New BitVector32(1)
- B. Dim answers As New BitVector32(-1)
- C. Dim answers As New BitArray(1)
- D. Dim answers As New BitArray(-1)

Answer: B

Explanation: C & D BitVector32 is more efficient than a BitArray when 32 or less binary flags are required. Primarily because it is a value type.

Note: we are not sure why B is preferred to A.

QUESTION 480

You work as the application developer at Certkiller .com. You are working on a new method named PersistToDB. PersistToDB returns no value, and takes the EventLogEntry parameter type.

You must create the specific code segment which will enable you to test whether the new method works as expected. The code segment you use must be able to access entries from the application log of local computers, and must then pass only specific entries on to PersistToDB. The relevant entries to be passed to PersistToDB are Error events and Warning events from the source named mySource.

Choose the code segment which would achieve your goal in these circumstances.

- A. Dim myLog As New EventLog("Application", ".")
For Each entry As EventLogEntry In myLog.Entries
If entry.Source = "MySource" Then
PersistToDB(entry)
End If
Next
- B. Dim myLog as New EventLog("Application", ".")
myLog.Source = "MySource"
For Each entry As EventLogEntry In myLog.Entries
If entry.EntryType = (EventLogEntryType.Error And _
EventLogEntryType.Warning) Then
PersistToDB(entry)
End If
Next
- C. Dim myLog as New EventLog("Application", ".")
For Each entry As EventLogEntry In myLog.Entries
If entry.Source = "MySource" Then
If (entry.EntryType = EventLogEntryType.Error) Or _
(entry.EntryType = EventLogEntryType.Warning) Then
PersistToDB(entry)
End If
End If

```
Next
D. Dim myLog as New EventLog("Application", ".")
myLog.Source = "MySource"
For Each entry As EventLogEntry In myLog.Entries
If (entry.EntryType = EventLogEntryType.Error) Or _
(entry.EntryType = EventLogEntryType.Warning) Then
PersistToDB(entry)
End If
Next
```

Answer: C

Explanation: It is necessary to create a new Application EventLog, iterate over all the EventLogEntries and call the PersistToDB method if the entry is a warning or error and the source is MySource.

A will PersistToDb irrespective of the type of log entry. The question explicitly states only warnings and errors should be persisted.

B features an incorrect test for warnings and errors.

D&B do not ensure that only MySource entries are persisted. Instead they overwrite the source.

QUESTION 481

You work as the application developer at Certkiller .com. You are developing a new method that must compress an array of bytes. The array of bytes which should be compressed must be passed to the method in a parameter named document
Choose the code segment which will perform your task.

```
A. Dim inStream As New MemoryStream(document)
Dim zipStream As New GZipStream( _inStream, CompressionMode.Compress)
Dim result(document.Length) As BytezipStream.Write(result, 0, result.Length)Return
result
B. Dim objStream As New MemoryStream(document)
Dim zipStream As New GZipStream( _
objStream, CompressionMode.Compress)zipStream.Write(document, 0,
document.Length)zipStream.Close()Return objStream.ToArray
C. Dim outStream As New MemoryStreamDim zipStream As New GZipStream(
_outStream, CompressionMode.Compress)zipStream.Write(document, 0,
document.Length)zipStream.Close()Return outStream.ToArray
D. Dim objStream As New MemoryStream(document)
Dim zipStream As New GZipStream( _objStream, CompressionMode.Compress)
Dim outStream As New MemoryStreamDim b As IntegerWhile (b =
zipStream.ReadByte)outStream.WriteByte(CByte(b))
End WhileReturn outStream.ToArray
```

Answer: C

QUESTION 482

You work as the application developer at Certkiller .com. You are developing a class definition. Your class definition must be able to interoperate with COM applications.

You must create a code segment that will allow COM applications to create instances of the class. COM applications must also be able to call the method named GetAddress.

Choose the code segment which you should use.

- A. Public Class Customer
Private m_AddressString As String
Public Sub New(ByVal Address As String)
m_AddressString = Address
End Sub
Public Function GetAddress() As String
Return m_AddressString
End Function
End Class
- B. Public Class Customer
Shared m_AddressString As String
Public Sub New()
End Sub
Public Shared Function GetAddress() As String
Return m_AddressString
End Function
End Class
- C. Public Class Customer
Private m_AddressString As String
Public Sub New()
End Sub
Public Function GetAddress() As String
Return m_AddressString
End Function
End Class
- D. Public Class Customer
Private m_AddressString As String
Public Sub New()
End Sub
Private Function GetAddress() As String
Return m_AddressString
End Function
End Class

Answer: C

Explanation: The class should be declared with a parameter less constructor and

the getAddress() method should be public.

A uses a constructor with Parameters.

B uses static members that are not supported in COM

D the method GetAddress() must be public to be accessible by COM.

QUESTION 483

You work as the application developer at Certkiller .com. You are developing a new application that will print a report. The report must list language codes and region codes.

Choose the code segment that will accomplish this task.

- A. For Each objCulture As CultureInfo In
_CultureInfo.GetCultures(CultureTypes.SpecificCultures)
...Next
- B. Dim objCulture As New CultureInfo("")
Dim objTypes As CultureTypes = objCulture.CultureTypes
...
C. For Each objCulture As CultureInfo In
_CultureInfo.GetCultures(CultureTypes.NeutralCultures)
...Next
- D. For Each objCulture As CultureInfo In
_CultureInfo.GetCultures(CultureTypes.ReplacementCultures)
...Next

Answer: A

Explanation: CultureTypes.SpecificCultures will filter all language codes that are specific to a country\region.

B The CultureInfo object created is not associated with any cultures.

C will yield only neutral cultures, they will not be specific to a country\region.

D Replacement cultures are user-defined custom cultures.

QUESTION 484

You work as the application developer at Certkiller .com. You create a class named Certkiller Age. You want the Age objects to be sorted.

Choose the code segment which you should use.

A. Public Class Age
Public Value As Integer
Public Function CompareTo(ByVal obj As Object) As Object
If TypeOf obj Is Age Then
Dim _age As Age = CType(obj, Age)
Return Value.CompareTo(obj)
End If
Throw New ArgumentException("object not an Age")
End Function

```
End Class
B. Public Class Age
Public Value As Integer
Public Function CompareTo(ByVal iValue As Integer) As Object
Try
Return Value.CompareTo(iValue)
Catch
Throw New ArgumentException ("object not an Age")
End Try
End Function
End Class
C. Public Class Age
Implements IComparable
Public Value As Integer
Public Function CompareTo(ByVal obj As Object) As Integer _
Implements IComparable.CompareTo
If TypeOf obj Is Age Then
Dim _age As Age = CType(obj, Age)
Return Value.CompareTo(_age.Value)
End If
Throw New ArgumentException("object not an Age")
End Function
End Class
D. Public Class Age
Implements IComparable
Public Value As Integer
Public Function CompareTo(ByVal obj As Object) As Integer _
Implements IComparable.CompareTo
Try
Return Value.CompareTo((CType(obj, Age)).Value)
Catch
Return -1
End Try
End Function
End Class
```

Answer: C

QUESTION 485

You work as the application developer at Certkiller .com. You are working on a component which serializes the Meeting class instances. The definition of the Meeting class is as follows:

```
Public Class Meeting
Private title As String
Public roomNumber As Integer
Public invitees As String()
```

```
Public Sub New()  
End Sub  
Public Sub New(ByVal t As String)  
title = t  
End Sub  
End Class
```

You configure the following procedure for your component:

```
Dim myMeeting As New Meeting("Objectives")  
myMeeting.roomNumber = 20  
Dim attendees As String() = New String(1) {" Amy", " Ally"}  
myMeeting.invitees = attendees  
Dim xs As New XmlSerializer(GetType(Meeting))  
Dim writer As New StreamWriter("C:\Meeting.xml")  
xs.Serialize(writer, myMeeting)  
writer.Close()
```

You want to find out which XML block will be written to the C:\Meeting.xml file when the procedure is executed.

Choose the XML block that shows which content will be written to the C:\Meeting.xml file?

A. <?xml version="1.0" encoding="utf-8"?>
<Meeting xmlns:xsd="http://www.w3.org/2001/XMLSchema"
xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance">
<title>Goals</title>
<roomNumber>20</roomNumber>
<invitee>Amy</invitee>
<invitee>Ally</invitee>
</Meeting>

B. <?xml version="1.0" encoding="utf-8"?>
<Meeting xmlns:xsd="http://www.w3.org/2001/XMLSchema"
xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance">
<roomNumber>20</roomNumber>
<invitees>
<string>Amy</string>
<string> Ally</string>
</invitees>
</Meeting>

C. <?xml version="1.0" encoding="utf-8"?>
<Meeting xmlns:xsd="http://www.w3.org/2001/XMLSchema"
xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance"
title="Objectives">
<roomNumber>20</roomNumber>
<invitees>
<string>Amy</string>
<string>Ally</string>
</invitees>

```
</Meeting>
D. <?xml version="1.0" encoding="utf-8"?>
<Meeting xmlns:xsd="http://www.w3.org/2001/XMLSchema"
xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance">
<roomNumber>20</roomNumber>
<invitees>
<string>Amy</string>
</invitees>
<invitees>
<string>Ally</string>
</invitees>
</Meeting>
```

Answer: B

Explanation: A & C show title member in the XML. Title is a private member hence will not be serialized to XML.

D Shows multiple Invitees. There is only one object of type Invitees in the class definition.

QUESTION 486

You work as the application developer at Certkiller .com. You create a code segment which will implement the class named Certkiller Class1. The code segment is shown here:

```
Public Class NewClass
Public Function MyMethod(ByVal Arg As Integer) As Integer
Return Arg
End Function
End Class
```

You want the Certkiller Class1.MyMethod function to be dynamically called from a separate class within the assembly.

Choose the code segment which you should use to accomplish the task.

- A. Dim objNewClass As New NewClassDim objType As Type =
objNewClass.GetTypeDim objInfo As MethodInfo = _
objType.GetMethod("MyMethod")
Dim objParams() As Object = { 1 }
Dim i As Integer = _
DirectCast(objInfo.Invoke(Me, objParams), Integer)
- B. Dim objNewClass As New NewClassDim objType As Type =
objNewClass.GetTypeDim objInfo As MethodInfo = objType.GetMethod("MyMethod")
Dim objParams() As Object = { 1 }
Dim i As Integer = _
DirectCast(objInfo.Invoke(objNewClass, objParams), Integer)
- C. Dim objNewClass As New NewClassDim objType As Type =
objNewClass.GetTypeDim objInfo As MethodInfo = _

```
objType.GetMethod("NewClass.MyMethod")
Dim objParams() As Object = {1}
Dim i As Integer = _
DirectCast(objInfo.Invoke(objNewClass, objParams), Integer)
D. Dim objType As Type = Type.GetType("NewClass")
Dim objInfo As MethodInfo = objType.GetMethod("MyMethod")
Dim objParams() As Object = {1}
Dim i As Integer = _
DirectCast(objInfo.Invoke(Me, objParams), Integer)
```

Answer: B

Explanation: Use reflection to get MethodInfo object that corresponds to the MyMethod member function. Call the Invoke() method of MethodInfo
A & D the Invoke method requires the object that the method will fire upon if its an instance method. myClass should have been passed.
C the getMethod() does not require the classname .

QUESTION 487

You work as the application developer at Certkiller .com. You create a class library that contains a class hierarchy. The class hierarchy is specified in this code segment:

```
01 Public Class Group
02 Public Employees As Employee()
03 End Class
04
05 Public Class Employee
06 Public Name As String
07 End Class
08
09 Public Class Manager
10 Inherits Employee
11 Public Level As Integer
12 End Class
```

Line numbers are only shown above for reference purposes.

You create an instance of the Group class, and then populate the fields of the Group class's instance.

You use the Serialize method of the XmlSerializer class to serialize the instance. You realize that the attempt is unsuccessful when you receive

InvalidOperationException, and an error message which states this: "There was an error generating the XML document."

You must perform the necessary configuration which will allow you to use the Serialize method of the XmlSerializer class to serialize the instances. You want the XML output to include elements for all public fields in the class hierarchy.

What should you do to achieve your goal in these circumstances?

A. Add this code segment between lines 01 and 02 of the code segment:

<XmlArrayItem(Type:=GetType(Employee))> _

<XmlArrayItem(Type:=GetType(Manager))> _

B. Add this code segment between lines 01 and 02 of the code segment:

<XmlElement(Type:=GetType(Employee))> _

C. Add this code segment between lines 01 and 02 of the code segment:

<XmlArray(ElementName:="Employees")> _

D. Add this code segment between lines 05 and 06 of the code segment:

<XmlElement(Type:=GetType(Employee))>

And

Add this code segment between lines 10 and 11 of the code segment:

<XmlElement(Type:=GetType(Manager))>

Answer: A

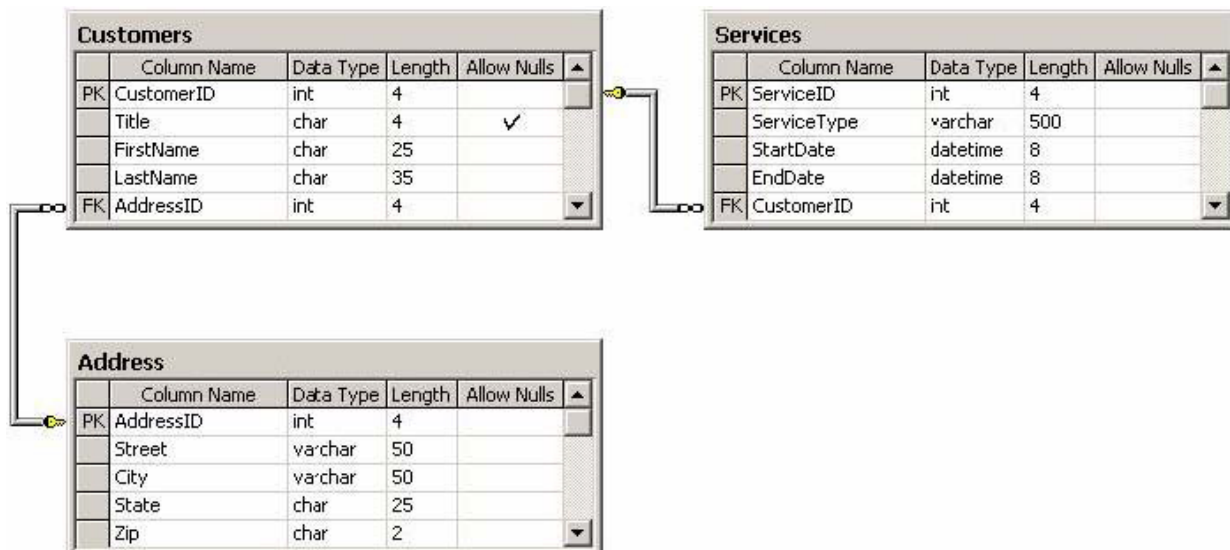
Topic 32, VB, Envisioning and Designing an Application (11 Questions)

QUESTION 488

You work as the Enterprise application developer at Certkiller .com. The Certkiller .com network consists of a single Active Directory domain named Certkiller .com. All servers in the domain run Windows Server 2003. The design of applications forms part of your responsibilities at Certkiller .com. Certkiller .com operates as a company that provides cable television, Digital Subscriber Line (DSL) as well as telephone services.

One factor that should be kept in mind is that only one customer per household may sign up for services from Certkiller .com. However, a customer is allowed to sign up for multiple services. The exhibit below illustrates the logical database design.

Exhibit:



You need to make a decision as to whether the design offers the best performance possible.

What conclusion can you draw?

- A. The design offers the best performance.
- B. The design does not offer the best performance. You need to normalize the Services and Address tables.
- C. The design does not offer the best performance. You need to de-normalize the Customers and Address tables.
- D. The design does not offer the best performance. You need to de-normalize the Customers and Services tables.

Answer: C

Explanation: It shows that the address can be associated with only one customer, thus you should place the address information as close as possible to the customer information as it will enhance the speed of data loads when both the customer and address information is required. This means that you should de-normalize the Customer and Address tables.

Incorrect answers:

- A: This is incorrect since the performance can still be improved by de-normalizing the Customers and Address tables.
- B: This is incorrect since these tables are already normalized and does not result in the best performance under the circumstances.
- D: You should not de-normalize the Customers and Services tables. It is mentioned in the question that a customer may be associated with multiple services and this option suggests an excessive duplication of data to exist in either the Customers table or the Services table. Duplicate data results in a degrading of performance in the event of searches being performed.

QUESTION 489

You work as the developer at Certkiller .com. The Certkiller .com network consists of a single Active Directory domain named Certkiller .com. All servers in the domain run Windows Server 2003. The configuration and customization of Web Service applications forms part of your responsibilities at Certkiller .com. Certkiller .com operates as an information centre for the California Property Title Deeds Office. You are currently busy developing a Microsoft Windows Forms application. This application is intended to allow the California Property Title Deeds Office to perform property deed verifications and renewals for the state of California. The application will be installed at all the California Property Title Deeds Office locations all round California. The application must meet the following requirements:

1. It must negate the possibility of malicious tampering of Property Title deeds data.
2. Users of the application must be authenticated.

The logical design includes the following aspects:

1. Host driver data are to be located on a central server at the California Property Title Deeds Head Quarters.
2. Extensible Markup Language (XML) Web services will be used to access the Property Title data.
3. A Symmetric key will be used to encrypt and decrypt Property Title Deed data at

the Web service.

4. A Custom role-based security mechanism will be used to grant access to the application.

You now need to make a decision as to whether the design meets the security requirements.

What conclusion can you draw?

A. The design meets the requirements.

B. The design does not meet the requirements. You should grant access to the application using Active Directory.

C. The design does not meet the requirements. You should encrypt and decrypt data at the application and the Web service.

D. The design does not meet the requirements. You should encrypt and decrypt data at the Web service using asymmetric keys.

Answer: C

Explanation

: You should encrypt and decrypt the property title deed data at both the application and the Web service. If not you would not meet the requirement or negating the malicious tampering of data. The data needs to be transmitted in an unencrypted form when transmitted to and from the application (this provides a window for individuals to tamper with the data. You need to make use of Secure Sockets Layer (SSL) to provide confidentiality and data integrity. And this can be achieved by should encrypt and decrypt the property title deed data at both the application and the Web service. Thus the design does not meet the requirements.

Incorrect answers:

A: This is incorrect since you will still require encrypting and decrypting data at both the application and the Web Service.

B: There is no need to make use of Active Directory to grant access to the application. You can make use of whatever appropriate mechanism provided the credential store is secure.

D: The problem with this option is that the data is not encrypted or signed during transmission.

QUESTION 490

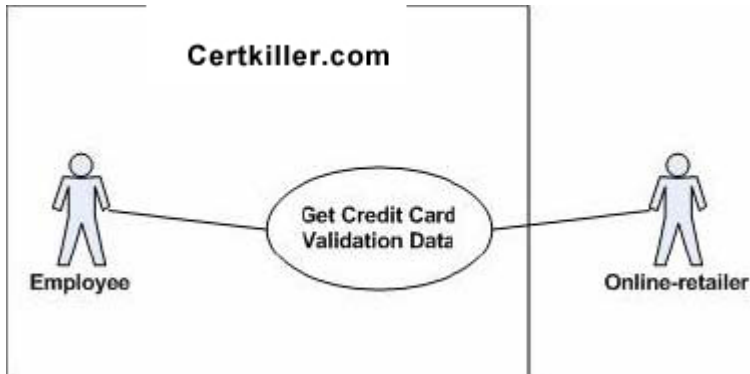
You work as the Enterprise application developer at Certkiller .com. The Certkiller .com network consists of a single Active Directory domain named Certkiller .com. All servers in the domain run Windows Server 2003. The design of applications forms part of your responsibilities at Certkiller .com. Certkiller .com operates as a company offering credit card validation services to online-retailers. You are currently developing a Microsoft Windows Forms application for Certkiller .com. When completed the application must meet the following requirements:

1. It must allow all Certkiller .com employees to access credit card validation data on behalf of the online-retailers.
2. It must allow the online-retailers to build applications that access credit card

validation data on behalf of users.

The following exhibit illustrates the use case diagram that models the above-mentioned requirements:

Exhibit:



The following aspects are included in the design document.

1. Create an Extensible Markup Language (XML) Web service to access the Credit Card Validation Data.
2. Create a Windows Forms application to be used by Certkiller .com employees.
3. Configure the Windows Forms application to access the Web service.
4. Deploy the Web service to a server at Certkiller .com.
5. Deploy the Windows Forms application to client computers at Certkiller .com.

You now need to make a decision as to whether the design will meet the requirements as represented by the use case.

What conclusion can you draw?

- A. The design meets the requirements.
- B. The design does not meet the requirements. You need to deploy the Windows Forms application to the online-retailers.
- C. The design does not meet the requirements. You need to configure the Web service to access the Windows Forms application.
- D. The design does not meet the requirements. You need to allow the online-retailers to host the Web service.

Answer: A

Explanation

: The use case diagram illustrates the roles and actions that can be taken. Both of the roles, Certkiller .com employee and online-retailer, have the ability to access the Credit Card validation data which represents the action. To allow the online-retailers the ability to build applications that access the credit card validation data, you should deploy a Web service with which the online-retailers can interact. This is in fact mentioned in the design.

Incorrect answers:

B: You do not need to deploy Windows Forms application to the online-retailers. Though the online-retailers need to be able to build application that accesses the credit card validation data, they should not be restricted to using Windows Forms applications.

C: The Web service should not be configured to access the Windows Forms application

as it would tightly couple the Web service to a specific type of client application and the online-retailers should not be restricted to using Windows Forms applications.

D: You should not allow the online-retailers to host the Web service because the Web service will access the Credit Card validation data which should be hosted by Certkiller .com.

QUESTION 491

You work as the Enterprise application developer at Certkiller .com. The Certkiller .com network consists of a single Active Directory domain named Certkiller .com. All servers in the domain run Windows Server 2003. The design of applications forms part of your responsibilities at Certkiller .com. Certkiller .com operates as a financial institution.

You are planning to develop a Microsoft Windows Forms application for Certkiller .com. This application, when completed will access data in the Certkiller .com database which is a Microsoft SQL Server 2005 database. The logical design has the following aspects:

1. Every Sunday, at 12:00 A.M. a full database backup must occur.
2. Every 60 minutes on the half hour a transaction log (incremental) backup must occur.
3. Every six hours on the hour a differential database backup must occur.
4. No more than seven tapes will be used to store each backup.

Each backup is expected to require only a single tape, and in the event of a failure there should not be a loss of more than 60 minutes worth of transactions.

It is up to you to ensure that the design will provide complete data recovery in the event of a failure.

What conclusion can you draw?

- A. The design makes provision for complete data recovery.
- B. The design does not make provision for complete data recovery. You should rather use only full backups and transaction log backups.
- C. The design does not make provision for complete data recovery. You should rather use only full backups.
- D. The design does not make provision for complete data recovery. You should rather use only transaction log backups.

Answer: A

Explanation: This design does indeed make adequate provision for complete data recovery. A full backup consists of complete backups; and a transaction log backup consists of transactions that occurred since the last transaction log backup. A differential backup consists of only the changes that occurred since the last full backup. If a full backup is made at 12:00 A.M. every Sunday, you will require one backup tape. Then you will also require a backup tape for each transaction log backup until 6:00 A.M. when the differential backup occurs. Once the differential backup is performed; you can throw away the previous transaction log backups. This way you will not require more than seven tapes.

Incorrect answers:

B: Transaction log backups consist of only the transactions that occurred since the last transaction log backup. And then you would require a new tape every sixty minutes for a whole week. And since you are limited to only seven tapes per day, you cannot make use of only the full backups and transaction log backups.

C: Using only full backups will not allow you to restore data if a failure occurs at any time other than every Sunday at 12:00 A.M. when a full backup is performed.

D: Making use of only transaction log backups will require an infinite supply of tapes and you are only allowed seven tapes.

QUESTION 492

You work as the Enterprise application developer at Certkiller .com. The Certkiller .com network consists of a single Active Directory domain named Certkiller .com. All servers in the domain run Windows Server 2003. The design of applications forms part of your responsibilities at Certkiller .com. Certkiller .com operates as a financial institution. As such they are obligated to comply with the legislation governing the financial institutions while protecting the assets of their customers.

One of these laws governing financial institutions and the rights of the customers involves the assurance that the risk of hackers tampering with information is negated. Another of these laws states that Certkiller .com must be able to submit data to the government in case of them auditing all transactions that involves amounts greater than \$10,000. You are currently developing an application for Certkiller .com. This application will allow Certkiller .com to submit relevant data to the government. This application must thus meet the following requirements:

1. It must prevent malicious users from interpreting the data.
2. It must prevent malicious users from tampering with the data.

Following are the aspects included in the design of the application:

1. Submit data to the government by accessing an Extensible Markup Language (XML) Web service.
2. Encrypt data before transmission by using the government's public key.

It is now up to you to make a decision as to whether the design will meet the data integrity requirement.

What conclusion can you draw?

- A. The design meets the data integrity requirement.
- B. The design does not meet the data integrity requirement. You should use the Certkiller .com private key to sign the data.
- C. The design does not meet the data integrity requirement. You should use the Certkiller .com public key to sign the data.
- D. The design does not meet the data integrity requirement. You should use the government's public key to sign the data.

Answer: B

Explanation:

The design should make provision for the signing of the data to prevent malicious tampering. When you sign data, you in essence hash the data and encrypt the hash with a private key that is only known to the signer. When the government receives the data, they will decrypt the hash by using the Certkiller .com public key, rehash the data, and comparing the hash with the decrypted hash. If the two hash values match, then you have proof that the data was not tampered with. Thus the data integrity requirement is not met in this scenario and you should make use of the Certkiller .com private key to sign the data.

Incorrect answers:

A: This design does not meet with the data integrity requirements.

C: You cannot use the Certkiller .com public key to sign the data. Encryption makes provision for confidentiality, not data integrity. Furthermore if you encrypt data using a public key, then only the corresponding private key can be used to decrypt the data. Because the Certkiller .com private key should only be available to Certkiller .com, the government will not be able to decrypt the data.

D: You cannot use the government public key to sign the data. Public keys are publicly available and will thus allow malicious users to tamper with the data and then resign it as if the data is still intact and not tampered with.

QUESTION 493

You work as the Enterprise application developer at Certkiller .com. The Certkiller .com network consists of a single Active Directory domain named Certkiller .com. All servers in the domain run Windows Server 2003. The design of applications forms part of your responsibilities at Certkiller .com. Certkiller .com offers financial and accounting services to their customers.

You are currently developing a Microsoft Windows Forms application for Certkiller .com. This application will allow users to file their federal and state income taxes. The application will make use of fifty assemblies that will provide the business logic for state income taxes. These assemblies are for the exclusive use of the application, and each assembly will be signed with a strong name.

There is currently an existing design that suggests a deployment of the fifty assemblies to the application runtime directory. The new design suggests a deployment of the fifty assemblies to the global assembly cache (GAC).

You are now required to make a decision as to whether the new design will offer better performance.

What conclusion can you draw?

A. The new design does offer better performance.

B. The new design does not offer better performance. Only shared assemblies should be installed in the GAC.

C. The new design does not offer better performance. The state income tax business logic should be exposed via Extensible Markup Language (XML) Web services.

D. The new design does not offer better performance. Each assembly should be loaded into the application domain of a Microsoft .NET Remoting host application.

Answer: A

Explanation: When one installs strong-named assemblies in a GAC, then one eliminates the performance overhead required to verify strong-name signatures. Thus this option is correct.

Incorrect answers:

B: Even though the GAC is used mainly as a repository for shared assemblies, you are allowed to install non-shared assemblies that are signed with strong names into the GAC to improve performance.

C: The business logic should not be exposed via XML Web services. This will seriously degrade performance because then there would be a need to serialize and deserialize objects every time a Web service method is invoked.

D: There is no need to load each assembly into the application domain of a .NET Remoting host application as this would degrade performance as then there will be a requirement for marshalling between application domains.

QUESTION 494

You work as the Enterprise application developer at Certkiller .com. The Certkiller .com network consists of a single Active Directory domain named Certkiller .com. All servers in the domain run Windows Server 2003. The design of applications forms part of your responsibilities at Certkiller .com. Certkiller .com operates as a financial institution.

You are planning to develop the following three Microsoft Windows Forms applications for Certkiller .com:

1. CashManager
2. CreditManager
3. CustomerCarePro

Each of these applications will be designed to use business logic components, business entity components as well as data access components. Each component will further be specific to an application and each application will be maintained by a different development group. All three applications will be hosted in the same Microsoft Visual Safe database.

This design suggests make use of the following Microsoft Visual Studio 2005 projects:

1. Mex.BusinessLogic
2. Mex.BusinessEntity
3. Mex.DataAccess
4. Mex.CashManager
5. Mex.CreditManager
6. Mex.CustomerCarePro

You now need to make a decision as to whether these applications will be maintainable.

What conclusion can you draw?

- A. The three applications will be maintainable.
- B. The three applications will not be maintainable. The Mex.CashManager, Mex.CreditManager and Mex.CustomerCarePro projects should be consolidated into a

single project.

C. The three applications will not be maintainable. The Business logic, Business entities and data access logic should be separated into multiple projects.

D. The three applications will not be maintainable. The Mex.BusinessLogic, Mec.BusinessEntity and Mex.DataAccess projects should be consolidated into a single project.

Answer: C

Explanation: The three applications do not lend itself to maintainability. The problem is due to the components that are applicable to one application are part of the same projects as components that are applicable to the other two application. This will require the three teams to work with the same projects which make maintenance difficult.

Incorrect answers:

A: This is incorrect since the maintainability requirement will need you to separate the Business logic, Business entities and data access logic into multiple projects

B: The Mex.CashManager, Mex.CreditManager and Mex.CustomerCarePro projects should not be consolidated into a single project. This will require that the three teams will need to work with the same project.

D: The Mex.BusinessLogic, Mec.BusinessEntity and Mex.DataAccess projects should not be consolidated into a single project as this will require that the three teams need to work with the same project.

QUESTION 495

You work as the Enterprise application developer at Certkiller .com. The Certkiller .com network consists of a single Active Directory domain named Certkiller .com. All servers in the domain run Windows Server 2003. The design of applications forms part of your responsibilities at Certkiller .com. Certkiller .com offers financial and accounting services to their customers.

You are planning on developing a Microsoft Windows Forms application for Certkiller .com. This application will allow users to file their federal and state income tax returns. The application must make provision for frequent updates to be made easily since the government revises the laws governing tax frequently and often security vulnerabilities are discovered that has to be addressed. Certkiller .com estimates that approximately 150 million users will make use of the application after it has run for three consecutive years. Currently the design suggests the use of ClickOnce technology that will provide automatic updates from a Web server. You need to make a decision as to whether the design is scalable.

What conclusion can you draw?

A. The design is scalable.

B. The design is not scalable. Make use of Windows Installer technology instead.

C. The design is not scalable. Create a Web application instead.

D. The design is not scalable. Implement a Web service to provide the updates.

Answer: A

Explanation: The design does lend itself to scalability. The ClickOnce type of application allows you to implement horizontal scaling by deploying a Web farm which will also reduce the load on a single Web server.

Incorrect answers:

B: There is no need to make use of Windows Installer technology since the ClickOnce application is scalable. Besides applications using Windows Installer deployment is not able to take full advantage of automatic updates without custom implementation.

C: There is no requirement to create a Web application since the ClickOnce application is deployable to a Web farm, much the same as Web applications.

D: You should not implement a Web service to provide automatic updates because the ClickOnce application does provide scalable automatic updates.

QUESTION 496

You work as the Enterprise application developer at Certkiller .com. The Certkiller .com network consists of a single Active Directory domain named Certkiller .com. All servers in the domain run Windows Server 2003. The design of applications forms part of your responsibilities at Certkiller .com. Certkiller .com operates as a department of the Federal Bureau of Investigation.

You are planning on developing a Microsoft Windows Forms application for Certkiller .com. This application will allow for the sharing of information for the FBI and will be deployed to 60 FBI offices nation-wide. The following aspects are included in the design of the application:

1. Making use of Microsoft .NET Remoting to facilitate inter-office communication.
2. Making use of asymmetric encryption to secure transmission messages.
3. Storing the public key in an ASCII text file in the application's runtime directory.
4. Storing the private key in an ASCII text file in the application's runtime directory.
5. Allowing only users of the application to access files that are used by the application.

You now need to change the design to enhance the security of the application. What should you do?

- A. Make use of Distributed Component Object Model (DCOM) and not .NET Remoting for inter-office communication.
- B. Store the private key in a binary file that is encrypted with a symmetric key.
- C. Store the private key in a key container of a cryptographic storage provider (CSP).
- D. Make use of Extensible Markup Language (XML) Web services and not .NET Remoting for inter-office communication.

Answer: C

Explanation: The private key should be protected and you can do this by storing the key in a key container of a CSP. The key container can be configured to allow only the application to access the private key. If the private key is not protected, then any application running under the same identity as the information sharing application will be

able to access the private key in the text file.

Incorrect answers:

A: You should not make use of DCOM to improve security since the problem is related to the physical location of the private key in this case.

B: The private key should not be stored in a binary file that is encrypted with a symmetric key because then any application that runs under the same identity as the information sharing application will be able to access the private key in the text file.

D: You should not make use of Extensible Markup Language (XML) Web services to improve security since the problem is related to the physical location of the private key in this case.

QUESTION 497

You work as the Enterprise application developer at Certkiller .com. The Certkiller .com network consists of a single Active Directory domain named Certkiller .com. All servers in the domain run Windows Server 2003. The design of applications forms part of your responsibilities at Certkiller .com.

You are currently evaluating the physical design of a Microsoft Windows Forms application for Certkiller .com. This application was designed to access data from a Microsoft SQL Server 2005 database via an Extensible Markup Language (XML) Web service. The application also makes use of Microsoft .Net Remoting to access a digital image device. The physical design is as follows:

1. Host the application on a Terminal server computer named Certkiller -TS01.
2. Host the database on a server computer named Certkiller -DB01.
3. Host the Web service on a Web server computer named Certkiller -SR01.
4. Host the remote components on an application server named Certkiller -APP01.

You then decide to implement a redundant array of independent disks to provide recoverability in case of failure. To this end you need to make a decision as to where you should implement the RAID solution.

What should you do?

- A. Use the Certkiller -APP01 server to implement RAID.
- B. Use the Certkiller -SR01 server to implement RAID.
- C. Use the Certkiller -DB01 server to implement RAID.
- D. Use the Certkiller -TS01 server to implement RAID.

Answer: C

Explanation: Raid is implemented when multiple disks are used to provide fault tolerance. Thus, if one disk fails, the data can be accessed on other disks. Thus the RAIDS solution should be implemented on Certkiller -DB01.

Incorrect answers:

A: The RAID solution should not be implemented on Certkiller -APP01 because it does not store data; it only hosts the remote components that are used to access the digital image device.

B: The RAID solution should not be implemented on Certkiller -SR01 that is hosting the Web service, since there is no data stored on that server.

D: The Raid solution should not be implemented on Certkiller -TS01 since it does not store data; it only hosts the Windows Forms application.

QUESTION 498

You work as the Enterprise application developer at Certkiller .com. The Certkiller .com network consists of a single Active Directory domain named Certkiller .com. All servers in the domain run Windows Server 2003. The design of applications forms part of your responsibilities at Certkiller .com. Certkiller .com operates as a College of Education.

You are planning to develop a Microsoft Windows Forms application for Certkiller .com. This application will allow the Certkiller .com educational centers to manage transcripts. The plan is to make use of Microsoft SQL Server 2005 to store the transcripts for the application. The logical design of the application indicates a many-to-many relationship between candidates and examinations. The physical design suggests making use of three tables that are named Candidate, Examination, and CandidateExamination, respectively. These three tables are to be stored in the same database.

Following is a list of the requirements that should be met by the design:

1. Referential integrity between the candidates and the examinations must be maintained by SQL Server.
2. There should be no excessive duplication of data in existence.

You need to make a decision as to whether the design meets these requirements.

What conclusion can you draw?

- A. The design does meet the requirements.
- B. The design does not meet the requirements. The data of the three tables should be consolidated into one table named Transcript in the same database.
- C. The design does not meet the requirements. The three tables should be placed in different databases on the same server.
- D. The design does not meet the requirements. The data of the three tables should be consolidated into two tables named Candidate and Examination in the same database.

Answer: A

Explanation: Since it is mentioned that there is a many-to-many relationship between two entities, there is a need for a junction table which only exists to hold data that is unique to the relationship. Because the three tables are located in the same database, you can allow SQL Server to enforce referential integrity between the tables.

Incorrect answers:

B: The three tables should not be consolidated into a single table named Transcript in the same database. This will not prevent the excessive duplication of data.

C: The three tables should not be placed in different databases on the same server. This way SQL Server cannot enforce referential integrity between data in different databases.

D: Though this consolidation of the three tables into two tables named Candidate and Examination in the same database will allow SQL Server to enforce referential integrity, it does not prevent excessive duplication of data because either Examination data would

need to be duplicated for each candidate who takes a particular examination, or Candidate data would need to be duplicated for each examination that the candidate takes.

Topic 33, VB, Designing and Developing a User Interface (7 Questions)

QUESTION 499

You work as the Enterprise application developer at Certkiller .com. The Certkiller .com network consists of a single Active Directory domain named Certkiller .com. All servers in the domain run Windows Server 2003. Your responsibilities at Certkiller .com include the design and development of applications. All applications should be in a Microsoft Windows Forms environment. Certkiller .com operates as the Administration department for a College of Education.

You are currently designing the user interface for a form in a student management application. The logical design indicates that the content is divided into sections. The number of sections depends on the identity of the logged-on user. However, this number ranges from one to ten. The main purpose of the form is to allow users to manage the following aspects of student applications.

1. Lecturer assignments
2. Educational history
3. Personal information
4. Religious and philosophical information
5. Courses
6. Bursaries

Now you need to implement the form by using the best mechanism to achieve fulfillment of the purpose of the form.

What should you do?

A. Add a TabControl control to the form.

Dynamically add TabPage controls based on a user's identity.

Map each TabPage control to a section in the logical design.

B. Add 10 GroupBox controls to the form.

Show or hide a GroupBox control based on a user's identity.

Map each GroupBox control to a section in the logical design.

C. Add a FlowLayoutPanel control to the form.

Add input controls to the FlowLayoutPanel control based on the user's identity.

Map a set of input controls to a section in the logical design.

D. Add 10 PropertyGrid controls to the form.

Show or hide a PropertyGrid control based on the user's identity.

Map each PropertyGrid control to a section in the logical design.

Answer: A

Explanation: A TabControl visually resembles dividers in a notebook when one makes use of TabPage controls. The contents of only one TabPage can be visible at any one

time. This makes the TabControl the ideal mechanism to display lots of information that can be grouped together.

Incorrect answers:

B: You should not be adding 10 GroupBox controls to the form. This will result in a situation that when a user is granted access to multiple sections, one would need to display multiple GroupBox controls on the form. This is an adverse effect on the usability of the application and its purpose.

C: When making use of a FlowLayoutPanel and a user is granted access to all section, one would then require displaying all input controls on a single form at the same time. This renders the application unusable.

D: You should not add 10 PropertyGrid controls to the form because this will result in a situation where a user when granted access to multiple sections, one would be compelled to display multiple PropertyGrid controls on the form. This affects the usability of the application negatively.

QUESTION 500

You work as the Enterprise application developer at Certkiller .com. The Certkiller .com network consists of a single Active Directory domain named Certkiller .com. All servers in the domain run Windows Server 2003. Your responsibilities at Certkiller .com include the design and development of applications. All applications should be in a Microsoft Windows Forms environment.

You are instructed to develop a consistent appearance for all the Windows Forms applications that were developed by Certkiller .com. Every form in an application must display a TreeView control and a WebBrowser control. The nodes in the TreeView control open Web pages in the WebBrowser control. But, due to each department within Certkiller .com performing different business activities, the TreeView control must be populated with nodes that are specific and applicable to a particular department.

You need to develop a solution to meet these requirements.

What should you do?

A. You should create a company-wide base form.

Then allow each department to create a specific base form that suits their type of job description.

Then ensure that each department-specific base form references the corporate base form.

B. You should create a department-specific base form for each Certkiller .com department.

Then have each department place on their respective form a TreeView control and a WebBrowser control.

C. You should create a base class that derives from TreeView.

Then create a base class that derives from WebBrowser.

Then allow each Certkiller .com department to create a base form and have each department place on each form the derived controls.

D. You should create a base class that derives from TreeView.

Then create a base class that derives from WebBrowser.

Then allow each Certkiller .com department to ass the derived control classes to each

form.

Answer: A

Explanation: By creating a company-wide base form you afford yourself the opportunity to define a consistent layout that can be used across the company. This will include the display of a TreeView control and a WebBrowser control. You can implement the base form with class members that each Certkiller .com department can use to populate the TreeView control and display the appropriate Web pages in the WebBrowser control.

Incorrect answers:

B: This option will allow each Certkiller .com department to have a different base form. This is not compelling the departments to adhere to a consistent appearance across all applications.

C: You cannot allow each Certkiller .com department to add derived TreeView and WebBrowser controls to applications. This option will not result in a consistent appearance across all applications.

D: You cannot allow each Certkiller .com department to add derived TreeView and WebBrowser controls to applications. This option will not result in a consistent appearance across all applications.

QUESTION 501

You work as the Enterprise application developer at Certkiller .com. The Certkiller .com network consists of a single Active Directory domain named Certkiller .com. All servers in the domain run Windows Server 2003. Your responsibilities at Certkiller .com include the design and development of applications. All applications should be in a Microsoft Windows Forms environment. You are currently developing a Microsoft Windows Forms application. This application will be used in inventory management and will, upon completion, consist of in excess of seventy different forms. What's more, these forms are not all related or required.

You need to make provision for users to navigate the application without being forced to learn how to make use of the user interface. Instructions clearly stated that you need to ensure that your solution does not adversely affect the usability of the application.

What should you do?

- A. Add LinkLabel controls to each form in the application. Then configure each LinkLabel control with a link to a form.
- B. Add a TreeView control to each form in the application. Then configure each tree node with a link to a form.
- C. Configure a main menu for the application. Then configure each main menu item with a link to a form.
- D. Associate a context menu with each form in the application. Then configure each context menu with a link to a form.

Answer: A

Explanation: By adding a LinkLabel control to each form in the application and each form in turn should contain links to other related or required forms, will allow users the ability to navigate easily through the application without having to learn the user interface.

Incorrect answers:

B: You should not configure TreeView controls as this would require that the users will have to navigate a TreeView control to determine which form to open.

C: A main menu to provide links to the forms will require that the users knows which menu items pertains to specific forms.

D: A context menu item will require that the users manually invoke the context menu.

QUESTION 502

You work as the Enterprise application developer at Certkiller .com. The Certkiller .com network consists of a single Active Directory domain named Certkiller .com. All servers in the domain run Windows Server 2003. Your responsibilities at Certkiller .com include the design and development of applications. All applications should be in a Microsoft Windows Forms environment. Certkiller .com offers financial and accounting services to their customers. You are currently developing a Microsoft Windows Forms application for Certkiller .com. This application will allow users to file their federal and state income tax returns. The application must fulfill one requirement: it must provide users with questions that will assist them in making a choice in the types of tax forms that they need to file.

You need to develop a solution that will meet this requirement.

What should you do?

A. You should implement a multiple document interface (MDI) application. Display the appropriate forms based on selections from a context menu.

B. You should implement an application that resembles a tax forms booklet. Display a question at the top of each form.

C. You should implement a Wizard-like application. Use the Back and Next buttons to allow users to navigate to the appropriate forms based on user input.

D. You should implement a single document interface (SDI) application. Display the appropriate forms based on selections from a main menu.

Answer: C

Explanation: With a Wizard-type application you can choose the forms to display based on user input or selections on a previous form. This will eliminate the need to have the user to figure out which tax forms to file.

Incorrect answers:

A: You should not display the appropriate forms in a context menu. This will result in the user being required to invoke the menu and make a menu selection. You cannot effective pose questions in menu items and this solution would thus affect the usability of the application in a negative way.

B: Implementing an application that resembles a booklet of tax forms and displaying a question at the top of each form will require that the user must visit every form to decide and determine whether he/she is filing the correct tax forms and whether that particular tax form is indeed a requirement.

D: You should not display the appropriate forms in a main menu. This will result in the user being required to invoke the menu and make a menu selection. You cannot effectively ask questions in menu items and this solution would thus affect the usability of the application in a negative way.

QUESTION 503

You work as the Enterprise application developer at Certkiller .com. Your responsibilities at Certkiller .com include the design and development of applications. All applications should be in a Microsoft Windows Forms environment. You are planning on developing a Microsoft Windows Forms application that, upon completion, must meet the following requirements:

1. It must have the ability to display different types of legal documents.
2. It must make allowance for users to toggle easily between legal documents and other applications' documents.
3. It must run on Microsoft Windows XP Professional computers.

The following aspects are included in the design:

1. Create a single document interface (SDI) application.
2. Allow users to toggle between documents by means of using the Alt + Tab keys.
3. Allow users to toggle between documents by means of using the Windows Task Bar.

You now need to make a decision as to whether the design meets the requirements. What conclusion can you draw?

- A. The design meets the requirements.
- B. The design does not meet the requirements. You must implement a multiple document interface (MDI) application.
- C. The design does not meet the requirements. Users should be allowed to toggle between documents with the Ctrl + Esc keys.
- D. The design does not meet the requirements. Users should be allowed to toggle between documents with the Ctrl + Tab keys.

Answer: A

Explanation: This design adequately meets the requirements. An SDI application contains a Task Bar icon for each instance of the application that is running. This is a common design choice for Windows XP Professional applications. Users can navigate between different open documents using the Alt + Tab keys or the Windows Task Bar.

Incorrect answers:

B: A MDI application does not make for easy navigation of users between documents of different types of applications. The Windows Task Bar does not display documents in an MDO application as separate Task Bar buttons.

C: The Ctrl + Esc key combination is usually used to invoke the Windows Start menu

and will thus not allow for easy navigation between documents.

D: The Ctrl + Tab key combination is typically used to toggle between documents in an MDO application. Not in this scenario.

QUESTION 504

You work as the Enterprise application developer at Certkiller .com. The Certkiller .com network consists of a single Active Directory domain named Certkiller .com. All servers in the domain run Windows Server 2003. Your responsibilities at Certkiller .com include the design and development of applications. All applications should be in a Microsoft Windows Forms environment. Certkiller .com operates as a toy and specialty store.

Currently Certkiller .com stock, sells, and deals with toys in excess of 100,000 of more than 30 brands. You are currently developing an inventory management application for Certkiller .com. Following are the requirements that the application must meet:

1. It must allow sales personnel to search for toys by type.
2. It must allow sales personnel to search for toys by brand.
3. It must allow sales personnel to quickly find a toy by recognizing a toy's picture.
4. It must allow all toys of a particular brand to be displayed in a grid-like representation.
5. It must allow sales personnel to change how lists of toys are displayed.
6. It must display toy descriptions and specifications in multiple columns.

You now need to determine the most appropriate control to use to display the toy data.

What should you do?

- A. Use the ListBox control.
- B. Use the ComboBox control.
- C. Use the ListView control.
- D. Use the DataGridView control.

Answer: C

Explanation: The ListView control will allow one to choose between different views for displaying information. In addition it also inherently supports sorting, searching, and multiple column display.

Incorrect answers:

A: The ListBox control supports only a single-column, single-view display.

B: The ComboBox control supports only a single-column, single-view display.

D: The DataGridView control supports sorting, searching, as multiple column display, but it does not allow you to choose between different views for displaying information.

QUESTION 505

You work as the Enterprise application developer at Certkiller .com. The Certkiller .com network consists of a single Active Directory domain named Certkiller .com. All servers in the domain run Windows Server 2003. Your

responsibilities at Certkiller .com include the design and development of applications. All applications should be in a Microsoft Windows Forms environment. Certkiller .com offers financial and accounting services to their customers. You are currently developing a Microsoft Windows-based application for Certkiller .com. This application will allow the CertK ign.com employees to manage the customer accounts. The following exhibit illustrates the event handler which is called when a Certkiller .com employee attempts to withdraw funds from an account. Exhibit:

```
01 Private Sub Button_Click(ByVal sender As Object, ByVal e As EventArgs)
02 Try
03 Dim financeAccount As Account = New Account(_account TextBox.Text)
04 financeAccount.Withdraw(Double.Parse(_amountTextBox.Text))
05 Catch ex As AccountOverdraftException
06
07 End Try
08 End Sub
```

You need to notify the Certkiller .com employee if an account overdraft would occur. The Certkiller .com employee would then inform the customer and change the amount of the withdrawal if necessary. To this end you need to add code at line 10 to accomplish this goal. What should you do?

- A. Use the
Throw New ApplicationException("An account overdraft would occur.", ex);
code segment.
- B. Use the
Throw New Exception("An account overdraft would occur.");
code segment.
- C. Use the
MessageBox.Show("An account overdraft would occur.");
code segment.
- D. Use the
MessageBox.Show(ex.ToString() + "An account overdraft would occur.");
code segment.

Answer: C

Explanation: When you call the Show method of the MessageBox class to display a user-friendly message you will allow the Certkiller .com employee to change the amount of the withdrawal without causing the application to fail.

Incorrect answers:

- A: When you throw an exception it will not allow the Certkiller .com employee to change the amount of the withdrawal and the application will fail.
- B: When you throw an exception it will not allow the Certkiller .com employee to change the amount of the withdrawal and the application will fail since the exception will be considered unhandled.

D: You should not pass the value returned from the ToString method of the AccountOverdraftException instance to the Show method of the MessageBox class. This would display a lot of technical information and is in no way user friendly for the Certkiller .com employee to know that an error has occurred.

Topic 34, VB, Designing and Developing a Component (4 Questions)

QUESTION 506

You work as the Enterprise application developer at Certkiller .com. The Certkiller .com network consists of a single Active Directory domain named Certkiller .com. All servers in the domain run Windows Server 2003. Your responsibilities at Certkiller .com include the design and development of applications. Certkiller .com operates as a College of Education.

You are currently designing a three-tier Microsoft Windows Form Student application for Certkiller .com. This application is intended to help the Certkiller .com administrations staff to allow students to register for the year of study, place them in their courses, and to place them with the respective lecturers teaching those courses.

You need to design a mechanism that will allow the administration staff to pass student data between the presentation, business, as well as data access layers in the application.

What should you do?

- A. You should implement a service agent by using Enterprise Services.
- B. You should implement a business entity component using the DataSet class.
- C. You should implement a service interface by creating a Web Service.
- D. You should implement a data access component using Microsoft .NET Remoting.

Answer: B

Explanation: In this scenario you can consider the student as a business object. By implementing a business entity for students, you can pass student data between the presentation, business, as well as data access layers of the application. DataSet instances are serializable and thus you will be able the pass business entities represented as DataSet instances easily between the layers in the application.

Incorrect answers:

A: Service agents hide the complexity of calling multiple services to access external functionality and will thus not be suitable to implement in this case.

C: Service interfaces expose an application's business logic to external systems. This is not what is required.

D: Data access components provide access to data stores. They help to isolate data access functionality from the application code which makes for improved maintenance.

However, this will not allow you to pass the business entities between the layers in the application.

QUESTION 507

You work as the Enterprise application developer at Certkiller .com. The Certkiller .com network consists of a single Active Directory domain named Certkiller .com. All servers in the domain run Windows Server 2003. Your responsibilities at Certkiller .com include the design and development of applications. Certkiller .com operates as a utilities company.

You are currently designing a Microsoft Windows Forms customer relationship management (CRM) application for Certkiller .com. Upon completion, this application must be able to support the following databases:

1. Microsoft SQL Server 2005
2. Microsoft SQL Server 2000
3. Microsoft Access 2000
4. Oracle 10g

The choice of database will depend on the type of customer. To this end you take a decision to create one or more data access components to facilitate the access to data in the databases. Now you need to determine how many data access components should be created. Do bear in mind that the solution must be maintainable.

What should you do?

- A. Create one data access component.
- B. Create two data access components.
- C. Create three data access components.
- D. Create four data access components.

Answer: C

Explanation: Three data access components will be sufficient in this scenario. One for each type of database:

One data access component that will facilitate access to SQL Server 2005 and SQL Server 2000 - benefits to be derived from the Microsoft .NET Framework Data Provider for SQL Server.

One data access component to access the Oracle database - benefits to be derived from .NET Framework Data Provider for Oracle.

One data access component to access the Access database - benefits to be derived from the OLE DB .NET Framework Data Provider.

Incorrect answers:

A, B, D: One, and Two data access components will be too few and four would be over compensating.

QUESTION 508

You work as the Enterprise application developer at Certkiller .com. The Certkiller .com network consists of a single Active Directory domain named Certkiller .com. All servers in the domain run Windows Server 2003. Your responsibilities at Certkiller .com include the design and development of applications. Certkiller .com operates as a Geographic Positioning System service provider.

You are currently developing a Microsoft Windows Forms application. The Exhibit

below illustrates the type definition that exists:

Exhibit:

Public Structure Waypoint

Public Latitude As Double

Public Longitude As Double

Public Function GetNearbyPlaces() As Waypoint()

Throw New NotImplementedException

End Function

End Structure

You now need to allow the application to instantiate the Waypoint type and set the Latitude and Longitude properties by providing a street address.

What should you do?

- A. A default static constructor should be added to the type.
- B. A default instance constructor should be added to the type.
- C. A non-default static constructor should be added to the type.
- D. A non-default instance constructor should be added to the type.

Answer: D

Explanation: When you add a non-default instance constructor to the type it will allow the calling code to initialize the Latitude and Longitude fields of the Waypoint type when the type is instantiated.

Incorrect answers:

A: Static constructors are called only the first time a class is instantiated. This is not the solution, albeit a default static constructor.

B: You should not add a default instance constructor type to the type because only classes support default constructors and not struct types.

C: You should not add a non-default static constructor to the type because static constructors only get called the first time a class is instantiated.

QUESTION 509

You work as the Enterprise application developer at Certkiller .com. The Certkiller .com network consists of a single Active Directory domain named Certkiller .com. All servers in the domain run Windows Server 2003. Your responsibilities at Certkiller .com include the design and development of applications. Certkiller .com has a Microsoft Windows Forms application that makes use of a printing component. This component is configured to accept XmlDocument instances that may contain graphics information. It makes use of data in these instances and GDI+ to print the graphics. You have been instructed to analyze profiling results on this application and make a decision after you have run tests on the application. To this end you then profiled the component and obtained the following information regarding performance after running it on a test computer:

1. When the method is called one, 16 MB of memory is used.
2. When the method is called twice, 32 MB of memory is used.
3. When the method is called ten times, 160 MB of memory is used.

You now need to make a decision as to what the next step of action should be. What should you do?

- A. Keep on profiling the component.
- B. The component should be redesigned.
- C. More memory should be added to the computer.
- D. A larger page file should be specified on the computer.

Answer: B

Explanation: The result clearly indicates that there is a memory leak. It is likely that the component does not dispose GDI+ objects that it creates which results in the memory leaks. The solution and logical next step would be to redesign the component.

Incorrect answers:

- A: There is no need to keep on profiling the component as it is already evident that a memory leak exists.
- C: Adding more memory to the computer will only alleviate the problem of the memory leak, but will not solve it.
- D: There is a memory leak that exists and specifying a larger page file size will not completely solve the problem.

Topic 35, VB, Designing and Developing an Application Framework (4 Questions)

QUESTION 510

You work as the Enterprise application developer at Certkiller .com. The Certkiller .com network consists of a single Active Directory domain named Certkiller .com. All servers in the domain run Windows Server 2003. Your responsibilities at Certkiller .com include the design and development of Application Frameworks.

You are currently developing a Microsoft Windows Forms application. You are required to make use of a stock control in the application. To this end you examine a third party component that implements stock control. This specific component was implemented by using the Microsoft .NET Framework 1.1. You disassemble the code and discovered the following code:

```
Friend MustInherit Class Stock
Inherits Control
Public Sub New()
MyBase.New
End Sub
Protected Overrides Sub OnPaint(ByVal e As PaintEventArgs)
'Paint the control
MyBase.OnPaint(e)
End Sub
End Class
```

You must change the way the Stock control paints itself. Thus you need to take a decision as to whether you can reuse the component to meet this requirement.

What conclusion can you draw?

- A. The component is reusable.
- B. The component is not reusable. The OnPaint method must specify the abstract inheritance modifier.
- C. The component is not reusable. The OnPaint method must specify the virtual inheritance modifier.
- D. The component is not reusable. The Stock class must specify the public access modifier.

Answer: D

Explanation: The component is not reusable as the Stock class is declared with the internal access modifier; it cannot be accessed from outside the assembly in which it exists. It needs to specify the public access modifier. The .NET Framework 2.0 does have the InternalsVisible To attribute, but not the .NET Framework 1.1 version with which this component was created.

Incorrect answers:

- A: The component is not reusable since you will require the Stock class to specify the public access modifier.
- B: The abstract modifier indicates that a class member must be implemented by a derived class. In this case you cannot override the Stock class because it is declared with the internal access modifier.
- C: The virtual inheritance modifier allows derived classes to override a class member, but the override inheritance modifier also allows derived classes to override a class member if the sealed inheritance modifier is not applied to the member. Thus you cannot conclude that the OnPaint method must specify the virtual inheritance modifier.

QUESTION 511

You work as the Enterprise application developer at Certkiller .com. The Certkiller .com network consists of a single Active Directory domain named Certkiller .com. All servers in the domain run Windows Server 2003. Your responsibilities at Certkiller .com include the design and development of Application Frameworks.

You are developing Microsoft Windows Forms applications. You are required to display an opaque stock on a form in a Windows application. To this end you examine a third-party component that implements solid Stock control. This control has all of the functionality that you require, except for the fact that it does not display as an opaque stock. The following exhibit illustrates the class definition:

Exhibit:

```
Public Class Stock
Inherits Control
Protected Overrides Sub OnPaint(ByVal e As PaintEventArgs)
'Paint a solid stock
'Do not call the base OnPaint method
End Sub
```


End Class

You need to reuse the Stock control. You must ensure that your solution allows for changes made to the Stock control to be reflected automatically in the application. What should you do? (Choose the appropriate code segment.)

A. Public Class SolidStock

Inherits Stock

Private _stock As Stock = New Stock()

Protected Overrides Sub OnPaint(ByVal e As PaintEventArgs)

'Paint a solid stock

AddHandler _stock.Paint,AddressOf StockPaint

End Sub

Private Sub StockPaint(ByVal sender As Object, ByVal e As PaintEventArgs)

OnPaint(e)

End Sub

End Class

B. Public Class SolidStock

Private _stock As Stock = New Stock()

Protected Sub OnPaint(ByVal e As PaintEventArgs)

'Paint a solid stock

AddHandler _stock.Paint,AddressOf StockPaint

End Sub

Private Sub StockPaint(ByVal sender As Object, ByVal e As PaintEventArgs)

OnPaint(e)

End Sub

End Class

C. Public class SolidStock

Inherits Control

Protected Overrides Sub OnPaint(ByVal e As PaintEventArgs)

'Paint a solid stock

End Sub

End Class

D. Public Class SolidStock

Inherits Stock

Protected Overrides (Sub OnPaint(ByVal e As PaintEventArgs)

'Paint a solid stock

End Sub

End Class

Answer: D

Explanation

: The SolidStock class must be derived from the Stock class and override the OnPaint method. This will allow you to inherit all the functionality of the Stock control except for painting functionality. In the overridden OnPaint method, you should implement the painting logic for displaying a solid stock.

Incorrect answers:

A: You should not declare the SolidStock class without specifying a Control-derived base class. Only classes that derive directly or indirectly from Control can be visually displayed on forms.

B: There is no need to attach an event handler to the Paint event of the Stock class. The OnPaint method of the Stock class does not call the OnPaint method of the Control class; however, the OnPaint method of the control class is responsible for raising the Paint event. And in this scenario the Paint event never gets raised.

C: You should not derive the SolidStock class from control as it will not allow you to reuse the functionality that is exposed by the Stock control.

QUESTION 512

You work as the Enterprise application developer at Certkiller .com. The Certkiller .com network consists of a single Active Directory domain named Certkiller .com. All servers in the domain run Windows Server 2003. Your responsibilities at Certkiller .com include the design and development of Application Frameworks.

You are currently developing Microsoft Windows Forms applications for Certkiller .com The following exhibit illustrates the code in an application:

Exhibit:

```
Dim _pictureBox As PictureBox = new PictureBox
Private Sub ShowImage()
Try
_pictureBox.Image = Image.FromFile("WeatherMap.bmp")
Catch ex As OutOfMemoryException
MessageBox.Show("The image format is not supported.")
End Try
End Sub
```

You need to make an evaluation regarding the exception handling mechanism for Microsoft best practices.

What conclusion can you draw?

- A. The mechanism is a good practice.
- B. The mechanism is not a good practice. The application should not catch exceptions.
- C. The mechanism is not a good practice. The application should catch only instances of Exception.
- D. The mechanism is not a good practice. The application should catch only instances of ApplicationException.

Answer: A

Explanation: It is illustrated that this code only catches an exception that it knows how to handle. This is a good practice. In this case the exception is a type of OutOfMemoryException. And the exception is raised when you attempt to load an image that is not supported by GDI+ and the application then responds by displaying a message box to the user when this happens.

Incorrect answers:

B: This is incorrect since best practice would mean that the application should catch exceptions that it knows how to handle.

C: If you catch instances of any exception that you know how to handle you would be performing good practice and in general you should not catch instances of Exception unless you need to log the exception. In this scenario, you should still re-throw the exception. Thus this option is incorrect to suggest that only instances of exception are caught.

D: You should not catch only instances of ApplicationException. You should be catching instances of any exception that the application knows how to handle.

QUESTION 513

You work as the Enterprise application developer at Certkiller .com. The Certkiller .com network consists of a single Active Directory domain named Certkiller .com. All servers in the domain run Windows Server 2003. Your responsibilities at Certkiller .com include the design and development of Application Frameworks. Certkiller .com operates as an international retail company.

The Certkiller .com management follows an incentive scheme in the enumeration of their personnel. This incentive scheme is as follows:

1. If a staff member ships goods to the value of \$5,000 they receive \$500
2. If a staff member ships goods of a value greater than \$5,000 and up to \$10,000 they receive \$1,200
3. If a staff member ships goods of a value greater than \$10,000 and up to \$15,000 they receive \$2,500
4. If a staff member ships goods of a value greater than \$15,000 they receive 25% of the value.

You are developing a Microsoft Windows Forms shipping management application for Certkiller .com. You thus need to take into account how the Certkiller .com staff is enumerated. To this end you create two Double variables named shipped and enumeration to represent the shipped goods and enumeration, respectively. The shipped variable is always greater than zero. You now need to select an appropriate decision flow structure to implement the business rules.

What should you do? (Choose the appropriate code segment.)

```
A. If (shipping <= 5000) Then  
    enumeration = 500  
    If (shipping <= 10000) Then  
        enumeration = 1200  
    If (shipping <= 15000) Then  
        enumeration = 2500  
    Else  
        enumeration = shipping * 0.25
```

```
End If  
End If  
End If
```

```
B. Select Case (CType(shipping, Integer))  
    Case 5000
```

```
enumeration = 500
Exit Select
Case 10000
enumeration = 1200
Exit Select
Case 15000
enumeration = 2500
Exit Select
Case Else
enumeration = shipping * 0.25
Exit Select
End Select
C. If (shipping <= 5000) Then
enumeration = 500;
End If
If (shipping <= 10000) Then
enumeration = 1200;
End If
If (shipping <= 15000) Then
enumeration = 2500;
End If
If (shipping > 15000) Then
enumeration = shipping * 0.25;
End If
D. If (shipping <= 5000) Then
enumeration = 500
ElseIf (shipping <= 10000) Then
enumeration = 1200
ElseIf (shipping <= 15000) Then
enumeration = 2500
Else
enumeration = shipping * 0.25
End If
```

Answer: D

Explanation

: You need to make use of if-else statements because these statements control execution based on a single expression. In this scenario, if a staff member ships goods of value less than or equal to \$5,000, the enumeration variable is 500 and execution leaves the entire if-else block. If not the code will determine if the amount shipped is less than or equal to \$10,000, if so then the enumeration variable is set to 1200 and execution leaves the entire if-else block, etc.

Incorrect answers:

A: You should not make use of nested statements as it will result in shipping of a value of less than \$500 to generate enumeration of \$2,500.

B: You should not make use of Switch-case statements as each case statement can be

used to test a single value and this will result in shipping of the value less than \$500 to generate enumeration of 25% of the shipped amount.

C: You should not make use of if statements as it will result in shipping to the value of less than \$500 to generate enumeration of \$2,500.

Topic 36, VB, Testing and Stabilizing an Application (5 Questions)

QUESTION 514

You work as the Enterprise application developer at Certkiller .com. The Certkiller .com network consists of a single Active Directory domain named Certkiller .com. All servers in the domain run Windows Server 2003. Your responsibilities at Certkiller .com include the testing and stabilization of Applications. Certkiller .com operates as a company rendering financial and accounting services to its customers.

Certkiller .com developed a Microsoft Windows Forms application that allows users to file their federal and state income taxes. There are fifty assemblies in the application that provides the business logic for state income taxes. Each of these fifty assemblies contains the business logic for a particular state. It just so happened that California, Florida, and Arkansas changed their tax regulations. These three states are now allowing their taxpayers to deduct all the capital profits that they made on the sales of all properties other than first properties on their state income tax returns. A Certkiller .com developer named Amy Wilson was then instructed to modify three components to accommodate this change. These modifications included method and property additions and changes. Amy Wilson then created the following unit testing strategy:

1. Test all new and changed methods and properties in the California component.
2. If the test passes, conclude that the Florida and Arkansas components also pass testing.

You now need to make a decision as to whether the unit testing strategy is adequate. What conclusion can you draw?

- A. The unit testing strategy is adequate.
- B. The unit testing strategy is adequate. Amy Wilson should test only the new methods and properties in the California component.
- C. The unit testing strategy is adequate. Amy Wilson should test all methods and properties in the California component.
- D. The unit testing strategy is adequate. Amy Wilson should test the methods and properties in the Florida and Arkansas components.

Answer: D

Explanation: The unit testing strategy is inadequate. Unit testing should always be performed whenever you add, remove, or modify exposed members of a component. If you use a driver stub approach in unit testing to verify each functional unit in a component, you ensure that the component work successfully before it is integrated into the overall solution. In this case the methods and properties were added and changed in

three of the fifty components. Thus Amy Wilson should test each new and changed method in all three components.

Incorrect answers:

A: This is an inadequate unit testing strategy since Amy Wilson should be testing all three components that changed and have new methods.

B: If only the California component is tested, it cannot be an adequate unit testing strategy.

C: If only the methods and properties of the California component are tested it is an inadequate unit testing strategy since three of the components have been modified.

QUESTION 515

You work as the Enterprise application developer at Certkiller .com. The Certkiller .com network consists of a single Active Directory domain named Certkiller .com. All servers in the domain run Windows Server 2003. Your responsibilities at Certkiller .com include the testing and stabilization of Applications. Certkiller .com offers financial and accounting services to their customers.

A Certkiller .com team is developing a Microsoft Windows Forms application. This application will allow users to file their federal and state income tax returns. The application access business logic exposed by an internally-developed Extensible Markup Language (XML) Web service. The team is considering performing an integration test by making calls to the Web service from the application.

You now need to make a decision as to whether the testing strategy is correct.

What conclusion can you draw?

A. The testing strategy is correct.

B. The testing strategy is incorrect. The team should perform integration testing by calling the Web methods from a test application.

C. The testing strategy is incorrect. The team should perform integration testing by calling to a dummy Web service from the application.

D. The testing strategy is incorrect. The team should not perform integration testing on internally developed Web services.

Answer: A

Explanation: When performing integration testing, you should test the interactions of all the components in an application. Because the Web service exposes business logic, you need to ensure that the Windows Forms application calls Web methods of the Web service with expected input values and receives expected output values. Thus this testing strategy is correct.

Incorrect answers:

B: The team should not perform integration testing making use of calls from a test application. The point of integration testing is to use the real application to ensure that it interacts as expected with the Web service.

C: The team should not make calls to dummy Web services. The whole point of integration testing is to ensure that the application interacts with all components correctly.

and a dummy Web service will yield dummy results.

D: This would be inadequate since integration testing involves all components.

QUESTION 516

You work as the Enterprise application developer at Certkiller .com. The Certkiller .com network consists of a single Active Directory domain named Certkiller .com. All servers in the domain run Windows Server 2003. Your responsibilities at Certkiller .com include the testing and stabilization of Applications. Certkiller .com operates as a medical technological company that manufactures electronic scanning equipment for medical use. You are currently developing a Microsoft Windows Forms application. This application is destined to allow doctors to perform computed Axial Tomography (CAT) scans on patients. When a CAT scan is carried out, it takes over 1,000 two-dimensional scans that are combined to create a three-dimensional image. There is the matter of performance requirements that the application need to comply with. This performance requirement states that the application must scan 10 images per second.

To this end the testing team deployed a debug build of the application to a staging environment to carry out performance testing. The result of the performance testing was that the application scans nine images per second. You now need to determine whether the performance testing strategy is feasible.

What conclusion can you draw?

- A. The strategy is feasible.
- B. The strategy is not feasible. The team has to test a debug build of the application in a production environment.
- C. The strategy is not feasible. The team has to test a release build of the application in a production environment.
- D. The strategy is not feasible. The team has to test a release build of the application in a staging environment.

Answer: D

Explanation: the debug build of the application scans nine out of ten images. You may attempt to guess that a release build of the application would meet the performance requirements. But it could be just an assumption and thus you should rather attempt to get accurate results and test a release build of the application.

Incorrect answers:

- A: The test yielded nine out of ten images and this means that it is not feasible.
- B: This is incorrect as the tests with the debug build yielded only nine out of ten images.
- C: You should not make use of the production environment to test the application. A staging environment is better suited since you can exercise the proper control, and you can better isolate and analyze performance issues that are associated with the application.

QUESTION 517

You work as the Enterprise application developer at Certkiller .com. The

Certkiller .com network consists of a single Active Directory domain named Certkiller .com. All servers in the domain run Windows Server 2003 and all client computers run Microsoft Windows XP Professional. Your responsibilities at Certkiller .com include the testing and stabilization of Applications.

One of the Certkiller .com Windows Forms applications contains the following production environment specifications:

1. The application is deployed to production desktop computers.
2. A Web service that is used by the application is deployed to a production Web server.

3. The production desktop computers run Microsoft Windows XP Professional. Following is the test environment specification for performance testing that the development team created:

1. The application is deployed to production desktop computers.
2. The Web service is deployed to a staging Web server.
3. The staging Web server's hardware configuration is identical to the production Web server.
4. The Web servers have 1 gigabyte (GB) of memory.

You need to make a decision as to whether the test environment specification is appropriate.

What conclusion can you draw?

- A. The test environment is appropriate.
- B. The test environment is inappropriate. The Web service should be deployed to the production Web server.
- C. The test environment is inappropriate. The staging Web server's hardware configuration should be changed.
- D. The test environment is inappropriate. The application should be deployed to test desktop computers.

Answer: D

Explanation: When testing an application for performance, one should perform testing in an isolated environment that is similar to the production environment and not to the production desktop computers as suggested in the question. The test environment is thus inappropriate. You should also be making use of test desktop computers.

Incorrect answers:

A: This is incorrect since you should not make use of production desktop computers when doing performance testing.

B: You should not be deploying the Web service to the production server; it should be deployed to a staging server so as to facilitate the isolation aspect of performance testing.

C: There is no need to change the hardware configuration of the staging server because the test environment should mimic the production environment which also includes hardware configuration.

QUESTION 518

You work as the Enterprise application developer at Certkiller .com. The

Certkiller .com network consists of a single Active Directory domain named Certkiller .com. All servers in the domain run Windows Server 2003 and all client computers run Microsoft Windows XP Professional. Your responsibilities at Certkiller .com include the testing and stabilization of Applications.

You are currently evaluating an existing performance testing strategy for one of the Microsoft Windows Forms applications for Certkiller .com. This application was developed to allow the Certkiller .com customers to scan checks and submit the images to financial institutions electronically. The performance testing strategy that is under scrutiny now specifies that the actual rate at which checks are imaged and stored into a database will be compared against a preferred rate.

You need to make a decision as to whether the performance strategy is appropriate. What conclusion can you draw?

- A. The performance testing strategy is appropriate.
- B. The performance testing strategy is inappropriate. The number of checks that are imaged correctly should be identified.
- C. The performance testing strategy is inappropriate. The number of checks that are imaged incorrectly should be identified.
- D. The performance testing strategy is inappropriate. The number of checks that cannot be imaged due to physical defects should be identified.

Answer: A

Explanation: The test identifies the rate at which the checks are imaged and stored in a database. This will allow you to determine whether the check imaging process is performing as expected. Thus this strategy is an appropriate one.

Incorrect answers:

B: When one test application performance one does not identify the number of checks that are imaged correctly; one test the application according to predefined thresholds.

C: When one test application performance one does not identify the number of checks that are imaged incorrectly; one test the application according to predefined thresholds.

D: You should not be identifying the number of checks that cannot be imaged due to physical defects when testing application performance. This will not allow you to control the validity of the checks with the application.

Topic 37, VB, Deploying and Supporting an Application (5 Questions)

QUESTION 519

You work as the Enterprise application developer at Certkiller .com. The Certkiller .com network consists of a single Active Directory domain named Certkiller .com. All servers in the domain run Windows Server 2003 and all client computers run Microsoft Windows XP Professional. Your responsibilities at Certkiller .com include the deployment and support of Applications.

You are currently evaluating one of the Microsoft Windows Forms applications for Certkiller .com. This application was developed to allow the Certkiller .com customers to scan checks and submit the images to financial institutions electronically for

processing purposes. The application is deployed to dual processor computers. You scan five checks with check number that ranges from 901 to 905 and obtained the following performance results illustrated in the table below:

Check Number	CPU Usage	Memory Usage	Elapsed Time
901	54%	4,672K	0.801 ms
902	33%	4,676 K	0.749 ms
903	54%	4,680 K	0.800 ms
904	61%	4,684 K	0.852 ms
905	60%	4,688 K	0.834 ms

You now need to analyze the results.
What conclusion can you draw?

- A. Too much processor time is used.
- B. There is a synchronization problem.
- C. There is a memory leak.
- D. Too much memory is used.

Answer: C

Explanation: The table shows clearly that the memory usage increases with 4 K each time a check is scanned. As the number of check increases, memory usage increases. If this persists then there will not be enough memory available on the computer that runs the application. Thus there is a definite memory leak.

Incorrect answers:

A: The average CPU usage is only 52%. This is due to the fact that the application is deployed to dual-processor computers. This means that it is not a case of too much processor time being used.

B: Synchronization issues cannot be deduced from the results in the table. Thus you cannot assume that it is a synchronization problem.

D: Only 4,672 K of memory is being used initially. Apart from the memory leak, the memory consumption itself is not problematic.

QUESTION 520

You work as the Enterprise application developer at Certkiller .com. The Certkiller .com network consists of a single Active Directory domain named Certkiller .com. All servers in the domain run Windows Server 2003 and all client computers run Microsoft Windows XP Professional. Your responsibilities at Certkiller .com include the deployment and support of Applications. Certkiller .com operates as a financial institution.

You need to evaluate a Microsoft Windows Forms application for Certkiller .com. This application allows Certkiller .com employees to access accounts on behalf of their customers. You thus created a Performance Session in Microsoft Visual Studio 2005 for the application. Following is an illustration of the result that you obtained for a method named Validate when running the application:

1. Call the Validate method once - execution time is 0,401 ms
2. Call the Validate method twice - total execution time is 0,802 ms

3. Call the Validate method ten times - total execution time is 4,010 ms

You now need to analyze these performance trends.

What conclusion can you draw?

- A. There is a memory leak.
- B. The execution time is constant.
- C. The memory consumption increases linearly.
- D. The execution time increases exponentially.

Answer: B

Explanation

: Note that the results mention that the total execution time of calling the Validation method twice and ten times yields the increase in time. This it means that the execution time PER call of the Validation method is constant at 0,401 ms.

Incorrect answers:

- A: Execution times do not indicate memory leaks.
- C: You cannot use execution time to measure memory consumption.
- D: The execution time does not increase exponentially.

QUESTION 521

You work as the Enterprise application developer at Certkiller .com. The Certkiller .com network consists of a single Active Directory domain named Certkiller .com. All servers in the domain run Windows Server 2003 and all client computers run Microsoft Windows XP Professional. Your responsibilities at Certkiller .com include the deployment and support of Applications. Certkiller .com operates as a financial institution.

You need to evaluate a Microsoft Windows Forms application for Certkiller .com. This application allows Certkiller .com employees to access accounts on behalf of their customers. The application accesses an Extensible Markup Language (XML) Web service to authenticate users and retrieve account data. At present there are approximately 20,000 users that make use of this application.

You need to evaluate the application's performance while it is in production.

What should you do? (Each correct answer presents part of the solution. Choose two.)

- A. Establish the total number of users that log on to the application on a given day.
- B. Establish the longest elapsed time that a single user is logged on to the application.
- C. Establish the time of day at which the largest number of users are logged on to the application.
- D. Establish the largest number of times that a single user logs on to the application on a given day.
- E. Evaluate the performance of the application for the single user.
- F. Evaluate the performance of the application at that time.

Answer: C, F

Explanation: You should establish the time of day at which the largest number of users are logged on to the application. Then you should evaluate the application's performance at that time. You will be able to establish the time by tracking the user logon times.

Incorrect answers:

A: You should not establish the total number of users that log on to the application on a given day; you need to know when users are logged on to the application at the same time.

B: You should not establish the longest elapsed time that a single user is logged on to the application because multiple users will access the application, you need to establish the time at which the largest number of users are logged on to the application at the same time.

D: You should not establish the largest number of times that a single user logs on to the application on a given day because multiple users will access the application. Instead you need to establish the time at which the largest number of users are logged on to the application.

QUESTION 522

You work as the Enterprise application developer at Certkiller .com. The Certkiller .com network consists of a single Active Directory domain named Certkiller .com. All servers in the domain run Windows Server 2003 and all client computers run Microsoft Windows XP Professional. Your responsibilities at Certkiller .com include the deployment and support of Applications. Certkiller .com offers financial and accounting services to their customers.

Certkiller .com has a Microsoft Windows Forms application named QuickPick. This application will allow users to file their federal and state income taxes. QuickPick is used by approximately 75,000 customers and 10 % of these customers reported that they encountered bugs indicating that data is incorrectly transferred from their federal returns to the state returns. You need to address the problem; however you are unable to reproduce the problem at Certkiller .com. To this end you suspect that the reported bugs are associated with the way in which the customers are using the application.

You now need to determine how to mitigate the bugs in the next application update. What should you do?

- A. You should configure QuickPick to periodically submit summaries of customer activities to an Extensible Markup Language (XML) Web service.
- B. You should display a message informing customers that attempt to transfer data to contact the Certkiller .com Customer Care for a walk-through of the process.
- C. You should remove the feature that supports the automatic data transfers and require customers to manually reenter the data on their state returns.
- D. You should install a screen capturing application that records the customer's activities from the time QuickPick is launched to the time that they exit QuickPick.

Answer: A

Explanation: Configuring QuickPick to periodically submit summaries of customer

activities to an XML Web service will allow you the opportunity to figure out what a customer is doing wrong when transferring data from the federal return to the state income return.

Incorrect answers:

B: Displaying a message to all customers to contact the Certkiller .com Customer Care for a walk through when they attempt to transfer data will only introduce unnecessary operational overhead.

C: Removing this feature would be foolhardy since it is only 10% of the customers that experience the problem and not 90%. This obviously means that the 10 % must be doing something wrong.

D: Installing a screen capturing application that will record the customer's activities on the QuickPick application will violate the customer's right to privacy.

QUESTION 523

You work as the Enterprise application developer at Certkiller .com. The Certkiller .com network consists of a single Active Directory domain named Certkiller .com. All servers in the domain run Windows Server 2003 and all client computers run Microsoft Windows XP Professional. Your responsibilities at Certkiller .com include the deployment and support of Applications. Certkiller .com operates as a College of Education.

The Certkiller .com development team is currently developing a Microsoft Windows Form Student application. This application is intended to help the Certkiller .com administrations staff to allow students to register for the year of study, place them in their courses, place them with the respective lecturers teaching those courses, providing each student with a user name and password for the duration of their studies. This application will store student data in a Microsoft SQL Server 2005 database.

The Certkiller .com company policy states that user names and passwords cannot be stored in any installation program. When the application is installed, the database must be created. The installation program makes use of the Osql.exe utility to create the database.

You now need to specify installation requirement of the application so that it will comply with the company policy.

What should you do?

- A. Specify that the user must run the installation program in the database server.
- B. Specify that the user who runs the installation programs must have domain administrator rights.
- C. Specify that the user who executes the installation program must have administrative access to SQL Server.
- D. Specify that the application must be added to a code group that has full trust permissions.

Answer: C

Explanation: The user who executes the installation program must have administrative

access to SQL Server. Thus you need to specify this as a requirement for the application.

Incorrect answers:

A: There is no need to specify that the user must run the installation program in the database server because the Osql.exe utility allows one to specify parameters such as database server name.

B: There is no need to specify that the user that runs the installation program must have domain administrator rights because the user only requires administrative access to SQL Server to run the script to create the database successfully.

D: There is no need to specify that the application must be added to a code group that has full trust permissions. Code access security does not affect unmanaged applications and Osql.exe utility is unmanaged.

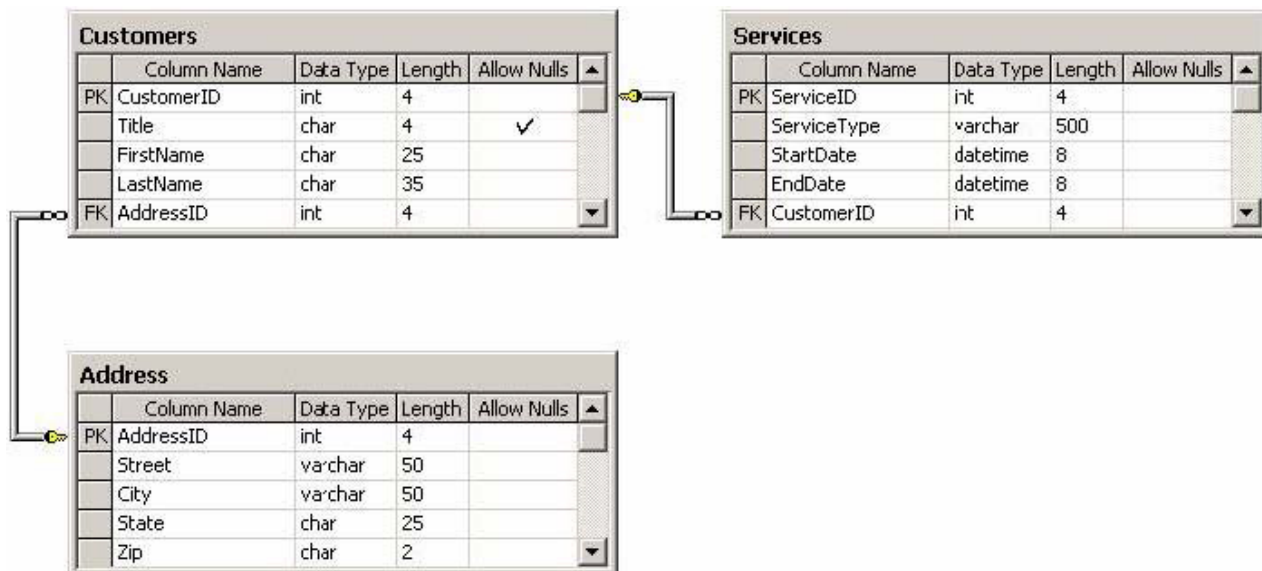
Topic 38, C#, Envisioning and Designing an Application (11 Questions)

QUESTION 524

You work as the Enterprise application developer at Certkiller .com. The Certkiller .com network consists of a single Active Directory domain named Certkiller .com. All servers in the domain run Windows Server 2003. The design of applications forms part of your responsibilities at Certkiller .com. Certkiller .com operates as a company that provides cable television, Digital Subscriber Line (DSL) as well as telephone services.

One factor that should be kept in mind is that only one customer per household may sign up for services from Certkiller .com. However, a customer is allowed to sign up for multiple services. The exhibit below illustrates the logical database design.

Exhibit



You need to make a decision as to whether the design offers the best performance possible.

What conclusion can you draw?

A. The design offers the best performance.

B. The design does not offer the best performance. You need to normalize the Services

and Address tables.

C. The design does not offer the best performance. You need to de-normalize the Customers and Address tables.

D. The design does not offer the best performance. You need to de-normalize the Customers and Services tables.

Answer: C

Explanation: It shows that the address can be associated with only one customer, thus you should place the address information as close as possible to the customer information as it will enhance the speed of data loads when both the customer and address information is required. This means that you should de-normalize the Customers and Address tables.

Incorrect answers:

A: This is incorrect since the performance can still be improved by de-normalizing the Customers and Address tables.

B: This is incorrect since these tables are already normalized and does not result in the best performance under the circumstances.

D: You should not de-normalize the Customers and Service tables. It is mentioned in the question that a customer may be associated with multiple services and this option suggests an excessive duplication of data to exist in either the Customers table or the Services table. Duplicate data results in a degrading of performance in the event of searches being performed.

QUESTION 525

You work as the developer at Certkiller .com. The Certkiller .com network consists of a single Active Directory domain named Certkiller .com. All servers in the domain run Windows Server 2003. The configuration and customization of Web Service applications forms part of your responsibilities at Certkiller .com. Certkiller .com operates as an information centre for the California Property Title Deeds Office. You are currently busy developing a Microsoft Windows Forms application. This application is intended to allow the California Property Title Deeds Office to perform property deed verifications and renewals for the state of California. The application will be installed at all the California Property Title Deeds Office locations all round California. The application must meet the following requirements:

1. It must negate the possibility of malicious tampering of Property Title deeds data.
2. Users of the application must be authenticated.

The logical design includes the following aspects:

1. Host driver data are to be located on a central server at the California Property Title Deeds Head Quarters.
2. Extensible Markup Language (XML) Web services will be used to access the Property Title data.
3. A Symmetric key will be used to encrypt and decrypt Property Title Deed data at the Web service.
4. A Custom role-based security mechanism will be used to grant access to the

application.

You now need to make a decision as to whether the design meets the security requirements.

What conclusion can you draw?

- A. The design meets the requirements.
- B. The design does not meet the requirements. You should grant access to the application using Active Directory.
- C. The design does not meet the requirements. You should encrypt and decrypt data at the application and the Web service.
- D. The design does not meet the requirements. You should encrypt and decrypt data at the Web service using asymmetric keys.

Answer: C

Explanation

: You should encrypt and decrypt the property title deed data at both the application and the Web service. If not you would not meet the requirement or negating the malicious tampering of data. The data needs to be transmitted in an unencrypted form when transmitted to and from the application (this provides a window for individuals to tamper with the data. You need to make use of Secure Sockets Layer (SSL) to provide confidentiality and data integrity. And this can be achieved by should encrypt and decrypt the property title deed data at both the application and the Web service. Thus the design does not meet the requirements.

Incorrect answers:

A: This is incorrect since you will still require encrypting and decrypting data at both the application and the Web Service.

B: There is no need to make use of Active Directory to grant access to the application. You can make use of whatever appropriate mechanism provided the credential store is secure.

D: The problem with this option is that the data is not encrypted or signed during transmission.

QUESTION 526

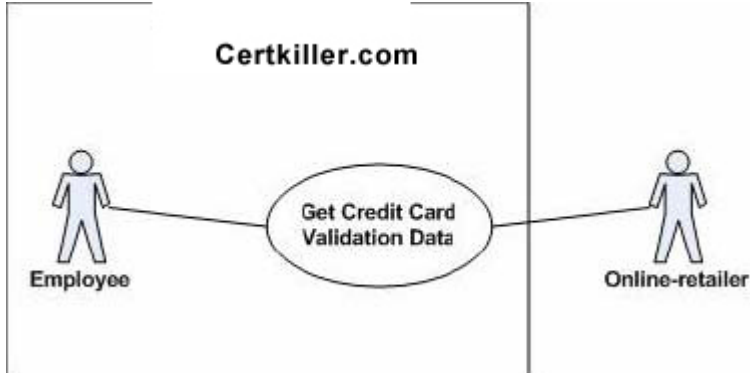
You work as the Enterprise application developer at Certkiller .com. The Certkiller .com network consists of a single Active Directory domain named Certkiller .com. All servers in the domain run Windows Server 2003. The design of applications forms part of your responsibilities at Certkiller .com. Certkiller .com operates as a company offering credit card validation services to online-retailers. You are currently developing a Microsoft Windows Forms application for Certkiller .com. When completed the application must meet the following requirements:

1. It must allow all Certkiller .com employees to access credit card validation data on behalf of the online-retailers.
2. It must allow the online-retailers to build applications that access credit card validation data on behalf of users.

The following exhibit illustrates the use case diagram that models the

above-mentioned requirements:

Exhibit:



The following aspects are included in the design document.

1. Create an Extensible Markup Language (XML) Web service to access the Credit Card Validation Data.
2. Create a Windows Forms application to be used by Certkiller .com employees.
3. Configure the Windows Forms application to access the Web service.
4. Deploy the Web service to a server at Certkiller .com.
5. Deploy the Windows Forms application to client computers at Certkiller .com.

You now need to make a decision as to whether the design will meet the requirements as represented by the use case.

What conclusion can you draw?

- A. The design meets the requirements.
- B. The design does not meet the requirements. You need to deploy the Windows Forms application to the online-retailers.
- C. The design does not meet the requirements. You need to configure the Web service to access the Windows Forms application.
- D. The design does not meet the requirements. You need to allow the online-retailers to host the Web service.

Answer: A

Explanation

: The use case diagram illustrates the roles and actions that can be taken. Both of the roles, Certkiller .com employee and online-retailer, have the ability to access the Credit Card validation data which represents the action. To allow the online-retailers the ability to build applications that access the credit card validation data, you should deploy a Web service with which the online-retailers can interact. This is in fact mentioned in the design.

Incorrect answers:

- B: You do not need to deploy Windows Forms application to the online-retailers. Though the online-retailers need to be able to build application that accesses the credit card validation data, they should not be restricted to using Windows Forms applications.
- C: The Web service should not be configured to access the Windows Forms application as it would tightly couple the Web service to a specific type of client application and the online-retailers should not be restricted to using Windows Forms applications.

D: You should not allow the online-retailers to host the Web service because the Web service will access the Credit Card validation data which should be hosted by Certkiller .com.

QUESTION 527

You work as the Enterprise application developer at Certkiller .com. The Certkiller .com network consists of a single Active Directory domain named Certkiller .com. All servers in the domain run Windows Server 2003. The design of applications forms part of your responsibilities at Certkiller .com. Certkiller .com operates as a financial institution.

You are planning to develop a Microsoft Windows Forms application for Certkiller .com. This application, when completed will access data in the Certkiller .com database which is a Microsoft SQL Server 2005 database. The logical design has the following aspects:

1. Every Sunday, at 12:00 A.M. a full database backup must occur.
2. Every 60 minutes on the half hour a transaction log (incremental) backup must occur.
3. Every six hours on the hour a differential database backup must occur.
4. No more than seven tapes will be used to store each backup.

Each backup is expected to require only a single tape, and in the event of a failure there should not be a loss of more than 60 minutes worth of transactions.

It is up to you to ensure that the design will provide complete data recovery in the event of a failure.

What conclusion can you draw?

- A. The design makes provision for complete data recovery.
- B. The design does not make provision for complete data recovery. You should rather use only full backups and transaction log backups.
- C. The design does not make provision for complete data recovery. You should rather use only full backups.
- D. The design does not make provision for complete data recovery. You should rather use only transaction log backups.

Answer: A

Explanation: This design does indeed make adequate provision for complete data recovery. A full backup consists of complete backups; and a transaction log backup consists of transactions that occurred since the last transaction log backup. A differential backup consists of only the changes that occurred since the last full backup. If a full backup is made at 12:00 A.M. every Sunday, you will require one backup tape. Then you will also require a backup tape for each transaction log backup until 6:00 A.M. when the differential backup occurs. Once the differential backup is performed; you can throw away the previous transaction log backups. This way you will not require more than seven tapes.

Incorrect answers:

B: Transaction log backups consist of only the transactions that occurred since the last

transaction log backup. And then you would require a new tape every sixty minutes for a whole week. And since you are limited to only seven tapes per day, you cannot make use of only the full backups and transaction log backups.

C: Using only full backups will not allow you to restore data if a failure occurs at any time other than every Sunday at 12:00 A.M. when a full backup is performed.

D: Making use of only transaction log backups will require an infinite supply of tapes and you are only allowed seven tapes.

QUESTION 528

You work as the Enterprise application developer at Certkiller .com. The Certkiller .com network consists of a single Active Directory domain named Certkiller .com. All servers in the domain run Windows Server 2003. The design of applications forms part of your responsibilities at Certkiller .com. Certkiller .com operates as a financial institution. As such they are obligated to comply with the legislation governing the financial institutions while protecting the assets of their customers.

One of these laws governing financial institutions and the rights of the customers involves the assurance that the risk of hackers tampering with information is negated. Another of these laws states that Certkiller .com must be able to submit data to the government in case of them auditing all transactions that involves amounts greater than \$10,000. You are currently developing an application for Certkiller .com. This application will allow Certkiller .com to submit relevant data to the government. This application must thus meet the following requirements:

1. It must prevent malicious users from interpreting the data.
2. It must prevent malicious users from tampering with the data.

Following are the aspects included in the design of the application:

1. Submit data to the government by accessing an Extensible Markup Language (XML) Web service.
2. Encrypt data before transmission by using the government's public key.

It is now up to you to make a decision as to whether the design will meet the data integrity requirement.

What conclusion can you draw?

- A. The design meets the data integrity requirement.
- B. The design does not meet the data integrity requirement. Use the Certkiller .com private key to sign the data.
- C. The design does not meet the data integrity requirement. Use the Certkiller .com public key to sign the data.
- D. The design does not meet the data integrity requirement. Use the government's public key to sign the data.

Answer: B

Explanation:

The design should make provision for the signing of the data to prevent malicious tampering. When you sign data, you in essence hash the data and encrypt the hash with a

private key that is only known to the signer. When the government receives the data, they will decrypt the hash by using the Certkiller .com public key, rehash the data, and comparing the hash with the decrypted hash. If the two hash values match, then you have proof that the data was not tampered with. Thus the data integrity requirement is not met in this scenario and you should make use of the Certkiller .com private key to sign the data.

Incorrect answers:

A: This design does not meet with the data integrity requirements.

C: You cannot use the Certkiller .com public key to sign the data. Encryption makes provision for confidentiality, not data integrity. Furthermore if you encrypt data using a public key, then only the corresponding private key can be used to decrypt the data. Because the Certkiller .com private key should only be available to Certkiller .com, the government will not be able to decrypt the data.

D: You cannot use the government public key to sign the data. Public keys are publicly available and will thus allow malicious users to tamper with the data and then resign it as if the data is still intact and not tampered with.

QUESTION 529

You work as the Enterprise application developer at Certkiller .com. The Certkiller .com network consists of a single Active Directory domain named Certkiller .com. All servers in the domain run Windows Server 2003. The design of applications forms part of your responsibilities at Certkiller .com. Certkiller .com offers financial and accounting services to their customers.

You are currently developing a Microsoft Windows Forms application for Certkiller .com. This application will allow users to file their federal and state income taxes. The application will make use of fifty assemblies that will provide the business logic for state income taxes. These assemblies are for the exclusive use of the application, and each assembly will be signed with a strong name.

There is currently an existing design that suggests a deployment of the fifty assemblies to the application runtime directory. The new design suggests a deployment of the fifty assemblies to the global assembly cache (GAC).

You are now required to make a decision as to whether the new design will offer better performance.

What conclusion can you draw?

A. The new design does offer better performance.

B. The new design does not offer better performance. Only shared assemblies should be installed in the GAC.

C. The new design does not offer better performance. The state income tax business logic should be exposed via Extensible Markup Language (XML) Web services.

D. The new design does not offer better performance. Each assembly should be loaded into the application domain of a Microsoft .NET Remoting host application.

Answer: A

Explanation: When one installs strong-named assemblies in a GAC, then one eliminates

the performance overhead required to verify strong-name signatures. Thus this option is correct.

Incorrect answers:

B: Even though the GAC is used mainly as a repository for shared assemblies, you are allowed to install non-shared assemblies that are signed with strong names into the GAC to improve performance.

C: The business logic should not be exposed via XML Web services. This will seriously degrade performance because then there would be a need to serialize and deserialize objects every time a Web service method is invoked.

D: There is no need to load each assembly into the application domain of a .NET Remoting host application as this would degrade performance as then there will be a requirement for marshalling between application domains.

QUESTION 530

You work as the Enterprise application developer at Certkiller .com. The Certkiller .com network consists of a single Active Directory domain named Certkiller .com. All servers in the domain run Windows Server 2003. The design of applications forms part of your responsibilities at Certkiller .com. Certkiller .com operates as a financial institution.

You are planning to develop the following three Microsoft Windows Forms applications for Certkiller .com:

1. CashManager
2. CreditManager
3. CustomerCarePro

Each of these applications will be designed to use business logic components, business entity components as well as data access components. Each component will further be specific to an application and each application will be maintained by a different development group. All three applications will be hosted in the same Microsoft Visual Safe database.

This design suggests make use of the following Microsoft Visual Studio 2005 projects:

1. Mex.BusinessLogic
2. Mex.BusinessEntity
3. Mex.DataAccess
4. Mex.CashManager
5. Mex.CreditManager
6. Mex.CustomerCarePro

You now need to make a decision as to whether these applications will be maintainable.

What conclusion can you draw?

- A. The three applications will be maintainable.
- B. The three applications will not be maintainable. The Mex.CashManager, Mex.CreditManager and Mex.CustomerCarePro projects should be consolidated into a single project.
- C. The three applications will not be maintainable. The Business logic, Business entities

and data access logic should be separated into multiple projects.

D. The three applications will not be maintainable. The Mex.BusinessLogic, Mec.BusinessEntity and Mex.DataAccess projects should be consolidated into a single project.

Answer: C

Explanation: The three applications do not lend itself to maintainability. The problem is due to the components that are applicable to one application are part of the same projects as components that are applicable to the other two application. This will require the three teams to work with the same projects which make maintenance difficult.

Incorrect answers:

A: This is incorrect since the maintainability requirement will need you to separate the Business logic, Business entities and data access logic into multiple projects

B: The Mex.CashManager, Mex.CreditManager and Mex.CustomerCarePro projects should not be consolidated into a single project. This will require that the three teams will need to work with the same project.

D: The Mex.BusinessLogic, Mec.BusinessEntity and Mex.DataAccess projects should not be consolidated into a single project as this will require that the three teams need to work with the same project.

QUESTION 531

You work as the Enterprise application developer at Certkiller .com. The Certkiller .com network consists of a single Active Directory domain named Certkiller .com. All servers in the domain run Windows Server 2003. The design of applications forms part of your responsibilities at Certkiller .com. Certkiller .com offers financial and accounting services to their customers.

You are planning on developing a Microsoft Windows Forms application for Certkiller .com. This application will allow users to file their federal and state income tax returns. The application must make provision for frequent updates to be made easily since the government revises the laws governing tax frequently and often security vulnerabilities are discovered that has to be addressed. Certkiller .com estimates that approximately 150 million users will make use of the application after it has run for three consecutive years. Currently the design suggests the use of ClickOnce technology that will provide automatic updates from a Web server. You need to make a decision as to whether the design is scalable.

What conclusion can you draw?

A. The design is scalable.

B. The design is not scalable. Make use of Windows Installer technology instead.

C. The design is not scalable. Create a Web application instead.

D. The design is not scalable. Implement a Web service to provide the updates.

Answer: A

Explanation: The design does lend itself to scalability. The ClickOnce type of

application allows you to implement horizontal scaling by deploying a Web farm which will also reduce the load on a single Web server.

Incorrect answers:

B: There is no need to make use of Windows Installer technology since the ClickOnce application is scalable. Besides applications using Windows Installer deployment is not able to take full advantage of automatic updates without custom implementation.

C: There is no requirement to create a Web application since the ClickOnce application is deployable to a Web farm, much the same as Web applications.

D: You should not implement a Web service to provide automatic updates because the ClickOnce application does provide scalable automatic updates.

QUESTION 532

You work as the Enterprise application developer at Certkiller .com. The Certkiller .com network consists of a single Active Directory domain named Certkiller .com. All servers in the domain run Windows Server 2003. The design of applications forms part of your responsibilities at Certkiller .com. Certkiller .com operates as a department of the Federal Bureau of Investigation.

You are planning on developing a Microsoft Windows Forms application for Certkiller .com. This application will allow for the sharing of information for the FBI and will be deployed to 60 FBI offices nation-wide. The following aspects are included in the design of the application:

1. Making use of Microsoft .NET Remoting to facilitate inter-office communication.
2. Making use of asymmetric encryption to secure transmission messages.
3. Storing the public key in an ASCII text file in the application's runtime directory.
4. Storing the private key in an ASCII text file in the application's runtime directory.
5. Allowing only users of the application to access files that are used by the application.

You now need to change the design to enhance the security of the application. What should you do?

- A. Make use of Distributed Component Object Model (DCOM) and not .NET Remoting for inter-office communication.
- B. Store the private key in a binary file that is encrypted with a symmetric key.
- C. Store the private key in a key container of a cryptographic storage provider (CSP).
- D. Make use of Extensible Markup Language (XML) Web services and not .NET Remoting for inter-office communication.

Answer: C

Explanation: The private key should be protected and you can do this by storing the key in a key container of a CSP. The key container can be configured to allow only the application to access the private key. If the private key is not protected, then any application running under the same identity as the information sharing application will be able to access the private key in the text file.

Incorrect answers:

A: You should not make use of DCOM to improve security since the problem is related to the physical location of the private key in this case.

B: The private key should not be stored in a binary file that is encrypted with a symmetric key because then any application that runs under the same identity as the information sharing application will be able to access the private key in the text file.

D: You should not make use of Extensible Markup Language (XML) Web services to improve security since the problem is related to the physical location of the private key in this case.

QUESTION 533

You work as the Enterprise application developer at Certkiller .com. The Certkiller .com network consists of a single Active Directory domain named Certkiller .com. All servers in the domain run Windows Server 2003. The design of applications forms part of your responsibilities at Certkiller .com.

You are currently evaluating the physical design of a Microsoft Windows Forms application for Certkiller .com. This application was designed to access data from a Microsoft SQL Server 2005 database via an Extensible Markup Language (XML) Web service. The application also makes use of Microsoft .Net Remoting to access a digital image device. The physical design is as follows:

1. Host the application on a Terminal server computer named Certkiller -TS01.
2. Host the database on a server computer named Certkiller -DB01.
3. Host the Web service on a Web server computer named Certkiller -SR01.
4. Host the remote components on an application server named Certkiller -APP01.

You then decide to implement a redundant array of independent disks to provide recoverability in case of failure. To this end you need to make a decision as to where you should implement the RAID solution.

What should you do?

- A. Use the Certkiller -APP01 server to implement RAID.
- B. Use the Certkiller -SR01 server to implement RAID.
- C. Use the Certkiller -DB01 server to implement RAID.
- D. Use the Certkiller -TS01 server to implement RAID.

Answer: C

Explanation: Raid is implemented when multiple disks are used to provide fault tolerance. Thus, if one disk fails, the data can be accessed on other disks. Thus the RAIDS solution should be implemented on Certkiller -DB01.

Incorrect answers:

A: The RAID solution should not be implemented on Certkiller -APP01 because it does not store data; it only hosts the remote components that are used to access the digital image device.

B: The RAID solution should not be implemented on Certkiller -SR01 that is hosting the Web service, since there is no data stored on that server.

D: The Raid solution should not be implemented on Certkiller -TS01 since it does not store data; it only hosts the Windows Forms application.

QUESTION 534

You work as the Enterprise application developer at Certkiller .com. The Certkiller .com network consists of a single Active Directory domain named Certkiller .com. All servers in the domain run Windows Server 2003. The design of applications forms part of your responsibilities at Certkiller .com. Certkiller .com operates as a College of Education.

You are planning to develop a Microsoft Windows Forms application for Certkiller .com. This application will allow the Certkiller .com educational centers to manage transcripts. The plan is to make use of Microsoft SQL Server 2005 to store the transcripts for the application. The logical design of the application indicates a many-to-many relationship between candidates and examinations. The physical design suggests making use of three tables that are named Candidate, Examination, and CandidateExamination, respectively. These three tables are to be stored in the same database.

Following is a list of the requirements that should be met by the design:

1. Referential integrity between the candidates and the examinations must be maintained by SQL Server.
2. There should be no excessive duplication of data in existence.

You need to make a decision as to whether the design meets these requirements. What conclusion can you draw?

- A. The design does meet the requirements.
- B. The design does not meet the requirements. The data of the three tables should be consolidated into one table named Transcript in the same database.
- C. The design does not meet the requirements. The three tables should be placed in different databases on the same server.
- D. The design does not meet the requirements. The data of the three tables should be consolidated into two tables named Candidate and Examination in the same database.

Answer: A

Explanation: Since it is mentioned that there is a many-to-many relationship between two entities, there is a need for a junction table which only exists to hold data that is unique to the relationship. Because the three tables are located in the same database, you can allow SQL Server to enforce referential integrity between the tables.

Incorrect answers:

B: The three tables should not be consolidated into a single table named Transcript in the same database. This will not prevent the excessive duplication of data.

C: The three tables should not be placed in different databases on the same server. This way SQL Server cannot enforce referential integrity between data in different databases.

D: Though this consolidation of the three tables into two tables named Candidate and Examination in the same database will allow SQL Server to enforce referential integrity, it does not prevent excessive duplication of data because either Examination data would need to be duplicated for each candidate who takes a particular examination, or

Candidate data would need to be duplicated for each examination that the candidate takes.

Topic 39, C#, Designing and Developing a User Interface(7 Questions)

QUESTION 535

You work as the Enterprise application developer at Certkiller .com. The Certkiller .com network consists of a single Active Directory domain named Certkiller .com. All servers in the domain run Windows Server 2003. Your responsibilities at Certkiller .com include the design and development of applications. All applications should be in a Microsoft Windows Forms environment. Certkiller .com operates as the Administration department for a College of Education.

You are currently designing the user interface for a form in a student management application. The logical design indicates that the content is divided into sections. The number of sections depends on the identity of the logged-on user. However, this number ranges from one to ten. The main purpose of the form is to allow users to manage the following aspects of student applications.

1. Lecturer assignments
2. Educational history
3. Personal information
4. Religious and philosophical information
5. Courses
6. Bursaries

Now you need to implement the form by using the best mechanism to achieve fulfillment of the purpose of the form.

What should you do?

- A. Add a TabControl control to the form.
Dynamically add TabPage controls based on a user's identity.
Map each TabPage control to a section in the logical design.
- B. Add 10 GroupBox controls to the form.
Show or hide a GroupBox control based on a user's identity.
Map each GroupBox control to a section in the logical design.
- C. Add a FlowLayoutPanel control to the form.
Add input controls to the FlowLayoutPanel control based on the user's identity.
Map a set of input controls to a section in the logical design.
- D. Add 10 PropertyGrid controls to the form.
Show or hide a PropertyGrid control based on the user's identity.
Map each PropertyGrid control to a section in the logical design.

Answer: A

Explanation: A TabControl visually resembles dividers in a notebook when one makes use of TabPage controls. The contents of only one TabPage can be visible at any one time. This makes the TabControl the ideal mechanism to display lots of information that

can be grouped together.

Incorrect answers:

B: You should not be adding 10 GroupBox controls to the form. This will result in a situation that when a user is granted access to multiple sections, one would need to display multiple GroupBox controls on the form. This is an adverse effect on the usability of the application and its purpose.

C: When making use of a FlowLayoutPanel and a user is granted access to all section, one would then require displaying all input controls on a single form at the same time. This renders the application unusable.

D: You should not add 10 PropertyGrid controls to the form because this will result in a situation where a user when granted access to multiple sections, one would be compelled to display multiple PropertyGrid controls on the form. This affects the usability of the application negatively.

QUESTION 536

You work as the Enterprise application developer at Certkiller .com. The Certkiller .com network consists of a single Active Directory domain named Certkiller .com. All servers in the domain run Windows Server 2003. Your responsibilities at Certkiller .com include the design and development of applications. All applications should be in a Microsoft Windows Forms environment.

You are instructed to develop a consistent appearance for all the Windows Forms applications that were developed by Certkiller .com. Every form in an application must display a TreeView control and a WebBrowser control. The nodes in the TreeView control open Web pages in the WebBrowser control. But, due to each department within Certkiller .com performing different business activities, the TreeView control must be populated with nodes that are specific and applicable to a particular department.

You need to develop a solution to meet these requirements.

What should you do?

A. You should create a company-wide base form.

Then allow each department to create a specific base form that suits their type of job description.

Then ensure that each department-specific base form references the corporate base form.

B. You should create a department-specific base form for each Certkiller .com department.

Then have each department place on their respective form a TreeView control and a WebBrowser control.

C. You should create a base class that derives from TreeView.

Then create a base class that derives from WebBrowser.

Then allow each Certkiller .com department to create a base form and have each department place on each form the derived controls.

D. You should create a base class that derives from TreeView.

Then create a base class that derives from WebBrowser.

Then allow each Certkiller .com department to assign the derived control classes to each form.

Answer: A

Explanation: By creating a company-wide base form you afford yourself the opportunity to define a consistent layout that can be used across the company. This will include the display of a TreeView control and a WebBrowser control. You can implement the base form with class members that each Certkiller .com department can use to populate the TreeView control and display the appropriate Web pages in the WebBrowser control.

Incorrect answers:

B: This option will allow each Certkiller .com department to have a different base form. This is not compelling the departments to adhere to a consistent appearance across all applications.

C: You cannot allow each Certkiller .com department to add derived TreeView and WebBrowser controls to applications. This option will not result in a consistent appearance across all applications.

D: You cannot allow each Certkiller .com department to add derived TreeView and WebBrowser controls to applications. This option will not result in a consistent appearance across all applications.

QUESTION 537

You work as the Enterprise application developer at Certkiller .com. The Certkiller .com network consists of a single Active Directory domain named Certkiller .com. All servers in the domain run Windows Server 2003. Your responsibilities at Certkiller .com include the design and development of applications. All applications should be in a Microsoft Windows Forms environment. You are currently developing a Microsoft Windows Forms application. This application will be used in inventory management and will, upon completion, consist of in excess of seventy different forms. What's more, these forms are not all related or required.

You need to make provision for users to navigate the application without being forced to learn how to make use of the user interface. Instructions clearly stated that you need to ensure that your solution does not adversely affect the usability of the application.

What should you do?

A. Add LinkLabel controls to each form in the application.
Then configure each LinkLabel control with a link to a form.

B. Add a TreeView control to each form in the application.
Then configure each tree node with a link to a form.

C. Configure a main menu for the application.
Then configure each main menu item with a link to a form.

D. Associate a context menu with each form in the application.
Then configure each context menu with a link to a form.

Answer: A

Explanation: By adding a LinkLabel control to each form in the application and each form in turn should contain links to other related or required forms, will allow users the ability to navigate easily through the application without having to learn the user interface.

Incorrect answers:

B: You should not configure TreeView controls as this would require that the users will have to navigate a TreeView control to determine which form to open.

C: A main menu to provide links to the forms will require that the users knows which menu items pertains to specific forms.

D: A context menu item will require that the users manually invoke the context menu.

QUESTION 538

You work as the Enterprise application developer at Certkiller .com. The Certkiller .com network consists of a single Active Directory domain named Certkiller .com. All servers in the domain run Windows Server 2003. Your responsibilities at Certkiller .com include the design and development of applications. All applications should be in a Microsoft Windows Forms environment. Certkiller .com offers financial and accounting services to their customers. You are currently developing a Microsoft Windows Forms application for Certkiller .com. This application will allow users to file their federal and state income tax returns. The application must fulfill one requirement: it must provide users with questions that will assist them in making a choice in the types of tax forms that they need to file.

You need to develop a solution that will meet this requirement.

What should you do?

A. You should implement a multiple document interface (MDI) application. Display the appropriate forms based on selections from a context menu.

B. You should implement an application that resembles a tax forms booklet. Display a question at the top of each form.

C. You should implement a Wizard-like application. Use the Back and Next buttons to allow users to navigate to the appropriate forms based on user input.

D. You should implement a single document interface (SDI) application. Display the appropriate forms based on selections from a main menu.

Answer: C

Explanation: With a Wizard-type application you can choose the forms to display based on user input or selections on a previous form. This will eliminate the need to have the user to figure out which tax forms to file.

Incorrect answers:

A: You should not display the appropriate forms in a context menu. This will result in the user being required to invoke the menu and make a menu selection. You cannot effectively pose questions in menu items and this solution would thus affect the usability of the application in a negative way.

B: Implementing an application that resembles a booklet of tax forms and displaying a

question at the top of each form will require that the user must visit every form to decide and determine whether he/she is filing the correct tax forms and whether that particular tax form is indeed a requirement.

D: You should not display the appropriate forms in a main menu. This will result in the user being required to invoke the menu and make a menu selection. You cannot effectively ask questions in menu items and this solution would thus affect the usability of the application in a negative way.

QUESTION 539

You work as the Enterprise application developer at Certkiller .com. Your responsibilities at Certkiller .com include the design and development of applications. All applications should be in a Microsoft Windows Forms environment. You are planning on developing a Microsoft Windows Forms application that, upon completion, must meet the following requirements:

1. It must have the ability to display different types of legal documents.
2. It must make allowance for users to toggle easily between legal documents and other applications' documents.
3. It must run on Microsoft Windows XP Professional computers.

The following aspects are included in the design:

1. Create a single document interface (SDI) application.
2. Allow users to toggle between documents by means of using the Alt + Tab keys.
3. Allow users to toggle between documents by means of using the Windows Task Bar.

You now need to make a decision as to whether the design meets the requirements. What conclusion can you draw?

- A. The design meets the requirements.
- B. The design does not meet the requirements. You must implement a multiple document interface (MDI) application.
- C. The design does not meet the requirements. Users should be allowed to toggle between documents with the Ctrl + Esc keys.
- D. The design does not meet the requirements. Users should be allowed to toggle between documents with the Ctrl + Tab keys.

Answer: A

Explanation: This design adequately meets the requirements. An SDI application contains a Task Bar icon for each instance of the application that is running. This is a common design choice for Windows XP Professional applications. Users can navigate between different open documents using the Alt + Tab keys or the Windows Task Bar.

Incorrect answers:

B: A MDI application does not make for easy navigation of users between documents of different types of applications. The Windows Task Bar does not display documents in an MDO application as separate Task Bar buttons.

C: The Ctrl + Esc key combination is usually used to invoke the Windows Start menu and will thus not allow for easy navigation between documents.

D: The Ctrl + Tab key combination is typically used to toggle between documents in an MDO application. Not in this scenario.

QUESTION 540

You work as the Enterprise application developer at Certkiller .com. The Certkiller .com network consists of a single Active Directory domain named Certkiller .com. All servers in the domain run Windows Server 2003. Your responsibilities at Certkiller .com include the design and development of applications. All applications should be in a Microsoft Windows Forms environment. Certkiller .com operates as a toy and specialty store. Currently Certkiller .com stock, sells, and deals with toys in excess of 100,000 of more than 30 brands. You are currently developing an inventory management application for Certkiller .com. Following are the requirements that the application must meet:

1. It must allow sales personnel to search for toys by type.
2. It must allow sales personnel to search for toys by brand.
3. It must allow sales personnel to quickly find a toy by recognizing a toy's picture.
4. It must allow all toys of a particular brand to be displayed in a grid-like representation.
5. It must allow sales personnel to change how lists of toys are displayed.
6. It must display toy descriptions and specifications in multiple columns.

You now need to determine the most appropriate control to use to display the toy data.

What should you do?

- A. Use the ListBox control.
- B. Use the ComboBox control.
- C. Use the ListView control.
- D. Use the DataGridView control.

Answer: C

Explanation: The ListView control will allow one to choose between different views for displaying information. In addition it also inherently supports sorting, searching, and multiple column display.

Incorrect answers:

- A: The ListBox control supports only a single-column, single-view display.
- B: The ComboBox control supports only a single-column, single-view display.
- D: The DataGridView control supports sorting, searching, as multiple column display, but it does not allow you to choose between different views for displaying information.

QUESTION 541

You work as the Enterprise application developer at Certkiller .com. The Certkiller .com network consists of a single Active Directory domain named Certkiller .com. All servers in the domain run Windows Server 2003. Your responsibilities at Certkiller .com include the design and development of applications.

All applications should be in a Microsoft Windows Forms environment. Certkiller .com offers financial and accounting services to their customers. You are currently developing a Microsoft Windows-based application for Certkiller .com. This application will allow the Certkiller .com employees to manage the customer accounts. The following exhibit illustrates the event handler which is called when a Certkiller .com employee attempts to withdraw funds from an account. Exhibit:

```
01 private void Button_Click(object sender, EventArgs e)
02 {
03 try
04 {
05 Account FinanceAccount = new Account(_accountTextBox.text);
06 financeAccount.Withdraw(Double.Parse(_amountTextBox.Text));
07 }
08 catch(AccountOverdraftException ex)
09 {
10
11 }
12 }
```

You need to notify the Certkiller .com employee if an account overdraft would occur. The Certkiller .com employee would then inform the customer and change the amount of the withdrawal if necessary. To this end you need to add code at line 10 to accomplish this goal.

What should you do?

- A. Use the
throw new ApplicationException("An account overdraft would occur.", ex);
code segment.
- B. Use the
throw new Exception("An account overdraft would occur.");
code segment.
- C. Use the
MessageBox.Show("An account overdraft would occur.");
code segment.
- D. Use the
MessageBox.Show(ex.ToString() + "An account overdraft would occur.");
code segment.

Answer: C

Explanation:

When you call the Show method of the MessageBox class to display a user-friendly message you will allow the Certkiller .com employee to change the amount of the withdrawal without causing the application to fail.

Incorrect answers:

A: When you throw an exception it will not allow the Certkiller .com employee to change

the amount of the withdrawal and the application will fail.

B: When you throw an exception it will not allow the Certkiller .com employee to change the amount of the withdrawal and the application will fail since the exception will be considered unhandled.

D: You should not pass the value returned from the ToString method of the AccountOverdraftException instance to the Show method of the MessageBox class. This would display a lot of technical information and is in no way user friendly for the CertK ign.com employee to know that an error has occurred.

Topic 40, C#, Designing and Developing a Component (4 Questions)

QUESTION 542

You work as the Enterprise application developer at Certkiller .com. The Certkiller .com network consists of a single Active Directory domain named Certkiller .com. All servers in the domain run Windows Server 2003. Your responsibilities at Certkiller .com include the design and development of applications. Certkiller .com operates as a College of Education.

You are currently designing a three-tier Microsoft Windows Form Student application for Certkiller .com. This application is intended to help the Certkiller .com administrations staff to allow students to register for the year of study, place them in their courses, and to place them with the respective lecturers teaching those courses.

You need to design a mechanism that will allow the administration staff to pass student data between the presentation, business, as well as data access layers in the application.

What should you do?

- A. You should implement a service agent by using Enterprise Services.
- B. You should implement a business entity component using the DataSet class.
- C. You should implement a service interface by creating a Web Service.
- D. You should implement a data access component using Microsoft .NET Remoting.

Answer: B

Explanation: In this scenario you can consider the student as a business object. By implementing a business entity for students, you can pass student data between the presentation, business, as well as data access layers of the application. DataSet instances are serializable and thus you will be able the pass business entities represented as DataSet instances easily between the layers in the application.

Incorrect answers:

A: Service agents hide the complexity of calling multiple services to access external functionality and will thus not be suitable to implement in this case.

C: Service interfaces expose an application's business logic to external systems. This is not what is required.

D: Data access components provide access to data stores. They help to isolate data access functionality from the application code which makes for improved maintenance.

However, this will not allow you to pass the business entities between the layers in the application.

QUESTION 543

You work as the Enterprise application developer at Certkiller .com. The Certkiller .com network consists of a single Active Directory domain named Certkiller .com. All servers in the domain run Windows Server 2003. Your responsibilities at Certkiller .com include the design and development of applications. Certkiller .com operates as a utilities company.

You are currently designing a Microsoft Windows Forms customer relationship management (CRM) application for Certkiller .com. Upon completion, this application must be able to support the following databases:

1. Microsoft SQL Server 2005
2. Microsoft SQL Server 2000
3. Microsoft Access 2000
4. Oracle 10g

The choice of database will depend on the type of customer. To this end you take a decision to create one or more data access components to facilitate the access to data in the databases. Now you need to determine how many data access components should be created. Do bear in mind that the solution must be maintainable.

What should you do?

- A. Create one data access component.
- B. Create two data access components.
- C. Create three data access components.
- D. Create four data access components.

Answer: C

Explanation: Three data access components will be sufficient in this scenario. One for each type of database:

One data access component that will facilitate access to SQL Server 2005 and SQL Server 2000 - benefits to be derived from the Microsoft .NET Framework Data Provider for SQL Server.

One data access component to access the Oracle database - benefits to be derived from .NET Framework Data Provider for Oracle.

One data access component to access the Access database - benefits to be derived from the OLE DB .NET Framework Data Provider.

Incorrect answers:

A, B, D: One, and Two data access components will be too few and four would be over compensating.

QUESTION 544

You work as the Enterprise application developer at Certkiller .com. The Certkiller .com network consists of a single Active Directory domain named Certkiller .com. All servers in the domain run Windows Server 2003. Your

responsibilities at Certkiller .com include the design and development of applications. Certkiller .com operates as a Geographic Positioning System service provider. You are currently developing a Microsoft Windows Forms application. The Exhibit below illustrates the type definition that exists:

Exhibit:

```
public struct Waypoint
{
    public double Latitude;
    public double Longitude;
    public Waypoint[] GetNearbyPlaces()
    {
        throw new NotImplementedException();
    }
}
```

You now need to allow the application to instantiate the Waypoint type and set the Latitude and Longitude properties by providing a street address. What should you do?

- A. A default static constructor should be added to the type.
- B. A default instance constructor should be added to the type.
- C. A non-default static constructor should be added to the type.
- D. A non-default instance constructor should be added to the type.

Answer: D

Explanation: When you add a non-default instance constructor to the type it will allow the calling code to initialize the Latitude and Longitude fields of the Waypoint type when the type is instantiated.

Incorrect answers:

- A: Static constructors are called only the first time a class is instantiated. This is not the solution, albeit a default static constructor.
- B: You should not add a default instance constructor type to the type because only classes support default constructors and not struct types.
- C: You should not add a non-default static constructor to the type because static constructors only get called the first time a class is instantiated.

QUESTION 545

You work as the Enterprise application developer at Certkiller .com. The Certkiller .com network consists of a single Active Directory domain named Certkiller .com. All servers in the domain run Windows Server 2003. Your responsibilities at Certkiller .com include the design and development of applications. Certkiller .com has a Microsoft Windows Forms application that makes use of a printing component. This component is configured to accept XmlDocument instances that may contain graphics information. It makes use of data in these instances and GDI+ to print the graphics. You have been instructed to analyze profiling results on this application and make a decision after you have run tests on

the application. To this end you then profiled the component and obtained the following information regarding performance after running it on a test computer:

1. When the method is called one, 16 MB of memory is used.
2. When the method is called twice, 32 MB of memory is used.
3. When the method is called ten times, 160 MB of memory is used.

You now need to make a decision as to what the next step of action should be. What should you do?

- A. Keep on profiling the component.
- B. The component should be redesigned.
- C. More memory should be added to the computer.
- D. A larger page file should be specified on the computer.

Answer: B

Explanation: The result clearly indicates that there is a memory leak. It is likely that the component does not dispose GDI+ objects that it creates which results in the memory leaks. The solution and logical next step would be to redesign the component.

Incorrect answers:

- A: There is no need to keep on profiling the component as it is already evident that a memory leak exists.
- C: Adding more memory to the computer will only alleviate the problem of the memory leak, but will not solve it.
- D: There is a memory leak that exists and specifying a larger page file size will not completely solve the problem.

Topic 41, C#, Designing and Developing an Application Framework(4 Questions)

QUESTION 546

You work as the Enterprise application developer at Certkiller .com. The Certkiller .com network consists of a single Active Directory domain named Certkiller .com. All servers in the domain run Windows Server 2003. Your responsibilities at Certkiller .com include the design and development of Application Frameworks.

You are currently developing a Microsoft Windows Forms application. You are required to make use of a stock control in the application. To this end you examine a third party component that implements stock control. This specific component was implemented by using the Microsoft .NET Framework 1.1. You disassemble the code and discovered the following code:

```
internal abstract class Stock : Control
{
    public Stock()
    {
    }
}
protected override void OnPaint(PaintEventArgs e)
{
}
```

```
// Paint the control  
base.OnPaint(e);  
}  
}
```

You must change the way the Stock control paints itself. Thus you need to take a decision as to whether you can reuse the component to meet this requirement.

What conclusion can you draw?

- A. The component is reusable.
- B. The component is not reusable. The OnPaint method must specify the abstract inheritance modifier.
- C. The component is not reusable. The OnPaint method must specify the virtual inheritance modifier.
- D. The component is not reusable. The Stock class must specify the public access modifier.

Answer: D

Explanation: The component is not reusable as the Stock class is declared with the internal access modifier; it cannot be accessed from outside the assembly in which it exists. It needs to specify the public access modifier. The .NET Framework 2.0 does have the InternalsVisibleTo attribute, but not the .NET Framework 1.1 version with which this component was created.

Incorrect answers:

- A: The component is not reusable since you will require the Stock class to specify the public access modifier.
- B: The abstract modifier indicates that a class member must be implemented by a derived class. In this case you cannot override the Stock class because it is declared with the internal access modifier.
- C: The virtual inheritance modifier allows derived classes to override a class member, but the override inheritance modifier also allows derived classes to override a class member if the sealed inheritance modifier is not applied to the member. Thus you cannot conclude that the OnPaint method must specify the virtual inheritance modifier.

QUESTION 547

You work as the Enterprise application developer at Certkiller .com. The Certkiller .com network consists of a single Active Directory domain named Certkiller .com. All servers in the domain run Windows Server 2003. Your responsibilities at Certkiller .com include the design and development of Application Frameworks.

You are developing Microsoft Windows Forms applications. You are required to display an opaque stock on a form in a Windows application. To this end you examine a third-party component that implements solid Stock control. This control has all of the functionality that you require, except for the fact that it does not display as an opaque stock. The following exhibit illustrates the class definition:
Exhibit:

```
public class Stock : Control
{
protected override void OnPaint(PaintEventArgs e)
{
//Paint a solid stock
//Do not call the base OnPaint method
}
}
```

You need to reuse the Stock control. You must ensure that your solution allows for changes made to the Stock control to be reflected automatically in the application. What should you do? (Choose the appropriate code segment.)

A. public class SolidStock : Stock

```
{
private Stock _stock = new Stock();
protected override void OnPaint(PaintEventArgs e)
{
// Paint a solid stock
_stock.Paint += delegate(object sender, PaintEventArgs pe)
{
OnPaint(pe);
};
}
}
```

B. public class SolidStock

```
{
private Stock _stock = new Stock();
protected void OnPaint(PaintEventArgs e)
{
// Paint a solid stock
_stock.Paint += delegate(object sender, PaintEventArgs pe)
{
OnPaint(pe);
};
}
}
```

C. public class SolidStock : Control

```
{
protected override void OnPaint (PaintEventArgs e)
{
// Paint a solid stock
}
}
```

D. public class SolidStock : Stock

```
{
protected override void OnPaint(PaintEventArgs e)
```

```
{  
// Paint a solid stock  
}  
}
```

Answer: D

Explanation:

The SolidStock class must be derived from the Stock class and override the OnPaint method. This will allow you to inherit all the functionality of the Stock control except for painting functionality. In the overridden OnPaint method, you should implement the painting logic for displaying a solid stock.

Incorrect answers:

A: You should not declare the SolidStock class without specifying a Control-derived base class. Only classes that derive directly or indirectly from Control can be visually displayed on forms.

B: There is no need to attach an event handler to the Paint event of the Stock class. The OnPaint method of the Stock class does not call the OnPaint method of the Control class; however, the OnPaint method of the control class is responsible for raising the Paint event. And in this scenario the Paint event never gets raised.

C: You should not derive the SolidStock class from control as it will not allow you to reuse the functionality that is exposed by the Stock control.

QUESTION 548

You work as the Enterprise application developer at Certkiller .com. The Certkiller .com network consists of a single Active Directory domain named Certkiller .com. All servers in the domain run Windows Server 2003. Your responsibilities at Certkiller .com include the design and development of Application Frameworks.

You are currently developing Microsoft Windows Forms applications for Certkiller .com The following exhibit illustrates the code in an application:

Exhibit:

```
private PictureBox _pictureBox = new PictureBox();  
private void ShowImage()  
{  
try  
{  
_pictureBox.Image = Image.FromFile("WeatherMap.bmp");  
}  
catch(OutOfMemoryException)  
{  
MessageBox.Show("The image format is not supported.");  
}  
}  
}
```

You need to make an evaluation regarding the exception handling mechanism for Microsoft best practices.

What conclusion can you draw?

- A. The mechanism is a good practice.
- B. The mechanism is not a good practice. The application should not catch exceptions.
- C. The mechanism is not a good practice. The application should catch only instances of Exception.
- D. The mechanism is not a good practice. The application should catch only instances of ApplicationException.

Answer: A

Explanation: It is illustrated that this code only catches an exception that it knows how to handle. This is a good practice. In this case the exception is a type of OutOfMemoryException. And the exception is raised when you attempt to load an image that is not supported by GDI+ and the application then responds by displaying a message box to the user when this happens.

Incorrect answers:

- B: This is incorrect since best practice would mean that the application should catch exceptions that it knows how to handle.
- C: If you catch instances of any exception that you know how to handle you would be performing good practice and in general you should not catch instances of Exception unless you need to log the exception. In this scenario, you should still re-throw the exception. Thus this option is incorrect to suggest that only instances of exception are caught.
- D: You should not catch only instances of ApplicationException. You should be catching instances of any exception that the application knows how to handle.

QUESTION 549

You work as the Enterprise application developer at Certkiller .com. The Certkiller .com network consists of a single Active Directory domain named Certkiller .com. All servers in the domain run Windows Server 2003. Your responsibilities at Certkiller .com include the design and development of Application Frameworks. Certkiller .com operates as an international retail company.

The Certkiller .com management follows an incentive scheme in the enumeration of their personnel. This incentive scheme is as follows:

1. If a staff member ships goods to the value of \$5,000 they receive \$500
2. If a staff member ships goods of a value greater than \$5,000 and up to \$10,000 they receive \$1,200
3. If a staff member ships goods of a value greater than \$10,000 and up to \$15,000 they receive \$2,500
4. If a staff member ships goods of a value greater than \$15,000 they receive 25% of the value.

You are developing a Microsoft Windows Forms shipping management application for Certkiller .com. You thus need to take into account how the Certkiller .com staff is enumerated. To this end you create two Double variables named shipped and enumeration to represent the shipped goods and enumeration, respectively. The

shipped variable is always greater than zero. You now need to select an appropriate decision flow structure to implement the business rules.

What should you do? (Choose the appropriate code segment.)

A. `if (shipping <= 5000)`

```
{  
    enumeration = 500;  
    if (Shipping <= 10000)  
    {  
        enumeration = 1200;  
        if (Shipping <= 15000)  
        {  
            enumeration = 2500;  
        }  
    }  
    else  
    {  
        enumeration = shipping * 0.25;  
    }  
}
```

B. `switch ((int)Shipping)`

```
{  
    case 5000:  
    {  
        enumeration = 500;  
        break;  
    }  
    case 10000:  
    {  
        enumeration = 1200;  
        break;  
    }  
    case 15000:  
    {  
        enumeration = 2500;  
        break;  
    }  
    default:  
    {  
        enumeration = shipping * 0.25;  
        break;  
    }  
}
```

C. `if (shipping <= 5000)`

```
{  
    enumeration = 500;  
}
```

```
}  
if (shipping <= 10000)  
{  
    enumeration = 1200;  
}  
if (shipping <= 15000)  
{  
    enumeration = 2500;  
}  
if (shipping > 15000)  
{  
    enumeration = shipping * 0.25;  
}  
D. if (shipping <= 5000)  
{  
    enumeration = 500;  
}  
else if (shipping <= 10000)  
{  
    enumeration = 1200;  
}  
else if (shipping <= 15000)  
{  
    enumeration = 2500;  
}  
else  
{  
    enumeration = shipping * 0.25;  
}
```

Answer: D

Explanation: You need to make use of if-else statements because these statements control execution based on a single expression. In this scenario, if a staff member ships goods of value less than or equal to \$5,000, the enumeration variable is 500 and execution leaves the entire if-else block. If not the code will determine if the amount shipped is less than or equal to \$10,000, if so then the enumeration variable is set to 1200 and execution leaves the entire if-else block, etc.

Incorrect answers:

A: You should not make use of nested statements as it will result in shipping of a value of less than \$500 to generate enumeration of \$2,500.

B: You should not make use of Switch-case statements as each case statement can be used to test a single value and this will result in shipping of the value less than \$500 to generate enumeration of 25% of the shipped amount.

C: You should not make use of if statements as it will result in shipping to the value of less than \$500 to generate enumeration of \$2,500.

Topic 42, C#, Testing and Stabilizing an Application(5 Questions)

QUESTION 550

You work as the Enterprise application developer at Certkiller .com. The Certkiller .com network consists of a single Active Directory domain named Certkiller .com. All servers in the domain run Windows Server 2003. Your responsibilities at Certkiller .com include the testing and stabilization of Applications. Certkiller .com operates as a company rendering financial and accounting services to its customers.

Certkiller .com developed a Microsoft Windows Forms application that allows users to file their federal and state income taxes. There are fifty assemblies in the application that provides the business logic for state income taxes. Each of these fifty assemblies contains the business logic for a particular state. It just so happened that California, Florida, and Arkansas changed their tax regulations. These three states are now allowing their taxpayers to deduct all the capital profits that they made on the sales of all properties other than first properties on their state income tax returns. A Certkiller .com developer named Amy Wilson was then instructed to modify three components to accommodate this change. These modifications included method and property additions and changes. Amy Wilson then created the following unit testing strategy:

1. Test all new and changed methods and properties in the California component.
2. If the test passes, conclude that the Florida and Arkansas components also pass testing.

You now need to make a decision as to whether the unit testing strategy is adequate. What conclusion can you draw?

- A. The unit testing strategy is adequate.
- B. The unit testing strategy is adequate. Amy Wilson should test only the new methods and properties in the California component.
- C. The unit testing strategy is adequate. Amy Wilson should test all methods and properties in the California component.
- D. The unit testing strategy is adequate. Amy Wilson should test the methods and properties in the Florida and Arkansas components.

Answer: D

Explanation: The unit testing strategy is inadequate. Unit testing should always be performed whenever you add, remove, or modify exposed members of a component. If you use a driver stub approach in unit testing to verify each functional unit in a component, you ensure that the component work successfully before it is integrated into the overall solution. In this case the methods and properties were added and changed in three of the fifty components. Thus Amy Wilson should test each new and changed method in all three components.

Incorrect answers:

A: This is an inadequate unit testing strategy since Amy Wilson should be testing all

three components that changed and have new methods.

B: If only the California component is tested, it cannot be an adequate unit testing strategy.

C: If only the methods and properties of the California component are tested it is an inadequate unit testing strategy since three of the components have been modified.

QUESTION 551

You work as the Enterprise application developer at Certkiller .com. The Certkiller .com network consists of a single Active Directory domain named Certkiller .com. All servers in the domain run Windows Server 2003. Your responsibilities at Certkiller .com include the testing and stabilization of Applications. Certkiller .com offers financial and accounting services to their customers.

A Certkiller .com team is developing a Microsoft Windows Forms application. This application will allow users to file their federal and state income tax returns. The application access business logic exposed by an internally-developed Extensible Markup Language (XML) Web service. The team is considering performing an integration test by making calls to the Web service from the application.

You now need to make a decision as to whether the testing strategy is correct. What conclusion can you draw?

A. The testing strategy is correct.

B. The testing strategy is incorrect. The team should perform integration testing by calling the Web methods from a test application.

C. The testing strategy is incorrect. The team should perform integration testing by calling to a dummy Web service from the application.

D. The testing strategy is incorrect. The team should not perform integration testing on internally developed Web services.

Answer: A

Explanation: When performing integration testing, you should test the interactions of all the components in an application. Because the Web service exposes business logic, you need to ensure that the Windows Forms application calls Web methods of the Web service with expected input values and receives expected output values. Thus this testing strategy is correct.

Incorrect answers:

B: The team should not perform integration testing making use of calls from a test application. The point of integration testing is to use the real application to ensure that it interacts as expected with the Web service.

C: The team should not make calls to dummy Web services. The whole point of integration testing is to ensure that the application interacts with all components correctly and a dummy Web service will yield dummy results.

D: This would be inadequate since integration testing involves all components.

QUESTION 552

You work as the Enterprise application developer at Certkiller .com. The Certkiller .com network consists of a single Active Directory domain named Certkiller .com. All servers in the domain run Windows Server 2003. Your responsibilities at Certkiller .com include the testing and stabilization of Applications. Certkiller .com operates as a medical technological company that manufactures electronic scanning equipment for medical use. You are currently developing a Microsoft Windows Forms application. This application is destined to allow doctors to perform computed Axial Tomography (CAT) scans on patients. When a CAT scan is carried out, it takes over 1,000 two-dimensional scans that are combined to create a three-dimensional image. There is the matter of performance requirements that the application need to comply with. This performance requirement states that the application must scan 10 images per second.

To this end the testing team deployed a debug build of the application to a staging environment to carry out performance testing. The result of the performance testing was that the application scans nine images per second. You now need to determine whether the performance testing strategy is feasible.

What conclusion can you draw?

- A. The strategy is feasible.
- B. The strategy is not feasible. The team has to test a debug build of the application in a production environment.
- C. The strategy is not feasible. The team has to test a release build of the application in a production environment.
- D. The strategy is not feasible. The team has to test a release build of the application in a staging environment.

Answer: D

Explanation: the debug build of the application scans nine out of ten images. You may attempt to guess that a release build of the application would meet the performance requirements. But it could be just an assumption and thus you should rather attempt to get accurate results and test a release build of the application.

Incorrect answers:

- A: The test yielded nine out of ten images and this means that it is not feasible.
- B: This is incorrect as the tests with the debug build yielded only nine out of ten images.
- C: You should not make use of the production environment to test the application. A staging environment is better suited since you can exercise the proper control, and you can better isolate and analyze performance issues that are associated with the application.

QUESTION 553

You work as the Enterprise application developer at Certkiller .com. The Certkiller .com network consists of a single Active Directory domain named Certkiller .com. All servers in the domain run Windows Server 2003 and all client computers run Microsoft Windows XP Professional. Your responsibilities at

Certkiller .com include the testing and stabilization of Applications.

One of the Certkiller .com Windows Forms applications contains the following production environment specifications:

1. The application is deployed to production desktop computers.
2. A Web service that is used by the application is deployed to a production Web server.
3. The production desktop computers run Microsoft Windows XP Professional.

Following is the test environment specification for performance testing that the development team created:

1. The application is deployed to production desktop computers.
2. The Web service is deployed to a staging Web server.
3. The staging Web server's hardware configuration is identical to the production Web server.
4. The Web servers have 1 gigabyte (GB) of memory.

You need to make a decision as to whether the test environment specification is appropriate.

What conclusion can you draw?

- A. The test environment is appropriate.
- B. The test environment is inappropriate. The Web service should be deployed to the production Web server.
- C. The test environment is inappropriate. The staging Web server's hardware configuration should be changed.
- D. The test environment is inappropriate. The application should be deployed to test desktop computers.

Answer: D

Explanation: When testing an application for performance, one should perform testing in an isolated environment that is similar to the production environment and not to the production desktop computers as suggested in the question. The test environment is thus inappropriate. You should also be making use of test desktop computers.

Incorrect answers:

- A: This is incorrect since you should not make use of production desktop computers when doing performance testing.
- B: You should not be deploying the Web service to the production server; it should be deployed to a staging server so as to facilitate the isolation aspect of performance testing.
- C: There is no need to change the hardware configuration of the staging server because the test environment should mimic the production environment which also includes hardware configuration.

QUESTION 554

You work as the Enterprise application developer at Certkiller .com. The Certkiller .com network consists of a single Active Directory domain named Certkiller .com. All servers in the domain run Windows Server 2003 and all client computers run Microsoft Windows XP Professional. Your responsibilities at

Certkiller .com include the testing and stabilization of Applications.

You are currently evaluating an existing performance testing strategy for one of the Microsoft Windows Forms applications for Certkiller .com. This application was developed to allow the Certkiller .com customers to scan checks and submit the images to financial institutions electronically. The performance testing strategy that is under scrutiny now specifies that the actual rate at which checks are imaged and stored into a database will be compared against a preferred rate.

You need to make a decision as to whether the performance strategy is appropriate. What conclusion can you draw?

- A. The performance testing strategy is appropriate.
- B. The performance testing strategy is inappropriate. The number of checks that are imaged correctly should be identified.
- C. The performance testing strategy is inappropriate. The number of checks that are imaged incorrectly should be identified.
- D. The performance testing strategy is inappropriate. The number of checks that cannot be imaged due to physical defects should be identified.

Answer: A

Explanation: The test identifies the rate at which the checks are imaged and stored in a database. This will allow you to determine whether the check imaging process is performing as expected. Thus this strategy is an appropriate one.

Incorrect answers:

B: When one test application performance one does not identify the number of checks that are imaged correctly; one test the application according to predefined thresholds.

C: When one test application performance one does not identify the number of checks that are imaged incorrectly; one test the application according to predefined thresholds.

D: You should not be identifying the number of checks that cannot be imaged due to physical defects when testing application performance. This will not allow you to control the validity of the checks with the application.

Topic 43, C#, Deploying and Supporting an Application (5 Questions)

QUESTION 555

You work as the Enterprise application developer at Certkiller .com. The Certkiller .com network consists of a single Active Directory domain named Certkiller .com. All servers in the domain run Windows Server 2003 and all client computers run Microsoft Windows XP Professional. Your responsibilities at Certkiller .com include the deployment and support of Applications.

You are currently evaluating one of the Microsoft Windows Forms applications for Certkiller .com. This application was developed to allow the Certkiller .com customers to scan checks and submit the images to financial institutions electronically for processing purposes. The application is deployed to dual processor computers. You scan five checks with check number that ranges from 901 to 905 and obtained the following performance results illustrated in the table below:

Check Number	CPU Usage	Memory Usage	Elapsed Time
901	54%	4,672K	0.801 ms
902	33%	4,676 K	0.749 ms
903	54%	4,680 K	0.800 ms
904	61%	4,684 K	0.852 ms
905	60%	4,688 K	0.834 ms

You now need to analyze the results.
What conclusion can you draw?

- A. Too much processor time is used.
- B. There is a synchronization problem.
- C. There is a memory leak.
- D. Too much memory is used.

Answer: C

Explanation: The table shows clearly that the memory usage increases with 4 K each time a check is scanned. As the number of check increases, memory usage increases. If this persists then there will not be enough memory available on the computer that runs the application. Thus there is a definite memory leak.

Incorrect answers:

A: The average CPU usage is only 52%. This is due to the fact that the application is deployed to dual-processor computers. This means that it is not a case of too much processor time being used.

B: Synchronization issues cannot be deduced from the results in the table. Thus you cannot assume that it is a synchronization problem.

D: Only 4,672 K of memory is being used initially. Apart from the memory leak, the memory consumption itself is not problematic.

QUESTION 556

You work as the Enterprise application developer at Certkiller .com. The Certkiller .com network consists of a single Active Directory domain named Certkiller .com. All servers in the domain run Windows Server 2003 and all client computers run Microsoft Windows XP Professional. Your responsibilities at Certkiller .com include the deployment and support of Applications. Certkiller .com operates as a financial institution.

You need to evaluate a Microsoft Windows Forms application for Certkiller .com. This application allows Certkiller .com employees to access accounts on behalf of their customers. You thus created a Performance Session in Microsoft Visual Studio 2005 for the application. Following is an illustration of the result that you obtained for a method named Validate when running the application:

1. Call the Validate method once - execution time is 0,401 ms
2. Call the Validate method twice - total execution time is 0,802 ms
3. Call the Validate method ten times - total execution time is 4,010 ms

You now need to analyze these performance trends.

What conclusion can you draw?

- A. There is a memory leak.
- B. The execution time is constant.
- C. The memory consumption increases linearly.
- D. The execution time increases exponentially.

Answer: B

Explanation: Note that the results mention that the total execution time of calling the Validation method twice and ten times yields the increase in time. This it means that the execution time PER call of the Validation method is constant at 0,401 ms.

Incorrect answers:

- A: Execution times do not indicate memory leaks.
- C: You cannot use execution time to measure memory consumption.
- D: The execution time does not increase exponentially.

QUESTION 557

You work as the Enterprise application developer at Certkiller .com. The Certkiller .com network consists of a single Active Directory domain named Certkiller .com. All servers in the domain run Windows Server 2003 and all client computers run Microsoft Windows XP Professional. Your responsibilities at Certkiller .com include the deployment and support of Applications. Certkiller .com operates as a financial institution.

You need to evaluate a Microsoft Windows Forms application for Certkiller .com. This application allows Certkiller .com employees to access accounts on behalf of their customers. The application accesses an Extensible Markup Language (XML) Web service to authenticate users and retrieve account data. At present there are approximately 20,000 users that make use of this application.

You need to evaluate the application's performance while it is in production.

What should you do? (Each correct answer presents part of the solution. Choose two.)

- A. Establish the total number of users that log on to the application on a given day.
- B. Establish the longest elapsed time that a single user is logged on to the application.
- C. Establish the time of day at which the largest number of users are logged on to the application.
- D. Establish the largest number of times that a single user logs on to the application on a given day.
- E. Evaluate the performance of the application for the single user.
- F. Evaluate the performance of the application at that time.

Answer: C, F

Explanation: You should establish the time of day at which the largest number of users are logged on to the application. Then you should evaluate the application's performance

at that time. You will be able to establish the time by tracking the user logon times.

Incorrect answers:

A: You should not establish the total number of users that log on to the application on a given day; you need to know when users are logged on to the application at the same time.

B: You should not establish the longest elapsed time that a single user is logged on to the application because multiple users will access the application, you need to establish the time at which the largest number of users are logged on to the application at the same time.

D: You should not establish the largest number of times that a single user logs on to the application on a given day because multiple users will access the application. Instead you need to establish the time at which the largest number of users are logged on to the application.

E: You should be evaluating the application's performance for the largest number of users simultaneously logged on; and not the performance of the application for a single user.

QUESTION 558

You work as the Enterprise application developer at Certkiller .com. The Certkiller .com network consists of a single Active Directory domain named Certkiller .com. All servers in the domain run Windows Server 2003 and all client computers run Microsoft Windows XP Professional. Your responsibilities at Certkiller .com include the deployment and support of Applications. Certkiller .com offers financial and accounting services to their customers.

Certkiller .com has a Microsoft Windows Forms application named QuickPick. This application will allow users to file their federal and state income taxes. QuickPick is used by approximately 75,000 customers and 10 % of these customers reported that they encountered bugs indicating that data is incorrectly transferred from their federal returns to the state returns. You need to address the problem; however you are unable to reproduce the problem at Certkiller .com. To this end you suspect that the reported bugs are associated with the way in which the customers are using the application.

You now need to determine how to mitigate the bugs in the next application update. What should you do?

A. You should configure QuickPick to periodically submit summaries of customer activities to an Extensible Markup Language (XML) Web service.

B. You should display a message informing customers that attempt to transfer data to contact the Certkiller .com Customer Care for a walk-through of the process.

C. You should remove the feature that supports the automatic data transfers and require customers to manually reenter the data on their state returns.

D. You should install a screen capturing application that records the customer's activities from the time QuickPick is launched to the time that they exit QuickPick.

Answer: A

Explanation: Configuring QuickPick to periodically submit summaries of customer activities to an XML Web service will allow you the opportunity to figure out what a customer is doing wrong when transferring data from the federal return to the state income return.

Incorrect answers:

B: Displaying a message to all customers to contact the Certkiller .com Customer Care for a walk through when they attempt to transfer data will only introduce unnecessary operational overhead.

C: Removing this feature would be foolhardy since it is only 10% of the customers that experience the problem and not 90%. This obviously means that the 10 % must be doing something wrong.

D: Installing a screen capturing application that will record the customer's activities on the QuickPick application will violate the customer's right to privacy.

QUESTION 559

You work as the Enterprise application developer at Certkiller .com. The Certkiller .com network consists of a single Active Directory domain named Certkiller .com. All servers in the domain run Windows Server 2003 and all client computers run Microsoft Windows XP Professional. Your responsibilities at Certkiller .com include the deployment and support of Applications. Certkiller .com operates as a College of Education.

The Certkiller .com development team is currently developing a Microsoft Windows Form Student application. This application is intended to help the Certkiller .com administrations staff to allow students to register for the year of study, place them in their courses, place them with the respective lecturers teaching those courses, providing each student with a user name and password for the duration of their studies. This application will store student data in a Microsoft SQL Server 2005 database.

The Certkiller .com company policy states that user names and passwords cannot be stored in any installation program. When the application is installed, the database must be created. The installation program makes use of the Osql.exe utility to create the database.

You now need to specify installation requirement of the application so that it will comply with the company policy.

What should you do?

- A. Specify that the user must run the installation program in the database server.
- B. Specify that the user who runs the installation programs must have domain administrator rights.
- C. Specify that the user who executes the installation program must have administrative access to SQL Server.
- D. Specify that the application must be added to a code group that has full trust permissions.

Answer: C

Explanation: The user who executes the installation program must have administrative access to SQL Server. Thus you need to specify this as a requirement for the application.

Incorrect answers:

A: There is no need to specify that the user must run the installation program in the database server because the Osql.exe utility allows one to specify parameters such as database server name.

B: There is no need to specify that the user that runs the installation program must have domain administrator rights because the user only requires administrative access to SQL Server to run the script to create the database successfully.

D: There is no need to specify that the application must be added to a code group that has full trust permissions. Code access security does not affect unmanaged applications and Osql.exe utility is unmanaged.