Developing and Implementing Windows-based Applications with Microsoft Visual C# .NET and Microsoft Visual Studio .NET

70-316

Question 1.
You create a Windows Form named XYZForm. The form enables users to maintain database records in a table named XYZ.
You need to add several pairs of controls to XYZForm. You must fulfill the following requirements:
• Each pair of controls must represent one column in the XYZ table.
• Each pair must consist of a TextBox control and a Label control.
• The LostFocus event of each TextBox control must call a procedure named UpdateDatabase.
• Additional forms similar to XYZForm must be created for other tables in the database.
• Application performance must be optimized.
• The amount of necessary code must be minimized.
What should you do?

A. Create and select a TextBox control and a Label control.
Write the appropriate code in the LostFocus event of the TextBox control.
Repeatedly copy and paste the controls into XYZForm until every column in the XYZ table has a pair of controls.
Repeat this process for the other forms.
B. Add a TextBox control and a Label controls to XYZForm.
Write the appropriate code in the LostFocus event of the TextBox control.
Create a control array form the TextBox control and the Label control.
At run time, add additional pairs of controls to the control array until every column in the XYZ table has a pair of controls.
Repeat this process for the other forms.
C. Create a new user control that includes a TextBox control and a Label control.
Write the appropriate code in the LostFocus event of the TextBox control.
For each column in the XYZ table, add one instance of the user control to the XYZForm.
Repeat this process for the other forms.
D. Create a new ActiveX control that includes a TextBox control and a Label control.
For each column in the XYZ table, add one instance of the ActiveX control to XYZForm.
Repeat this process for the other forms.

Answer: C

Explanation:
We combine multiple Windows Form controls into a single control, called user control. This is the most efficient solution to reuse functionality in this scenario.
Sometimes, a single control does not contain all of the functionality you need. For instance, you might want a control that you can bind to a data source to display a first name, last name, and phone number, each in a separate TextBox. Although it is possible to implement this logic on the form itself, it might be more efficient to create a single control that contains multiple text boxes, especially if this configuration is needed in many different applications. Controls that contain multiple Windows Forms controls bound together as a single unit are called user controls.

Option A:
Only the controls, not the code of the control will be copied.

Option B:
This is not the best solution. With a user control we could avoid writing code that are executed at run time.

Option D:

ActiveX controls should be avoided in Visual Studio .NET. They are less efficient.

Question 2.
You are a developer for a XYZ Inc that provides free software over the Internet. You are developing en e-mail application that users all over the world can download.

The application displays text strings in the user interface. At run time, these text strings must appear in the language that is appropriate to the locale setting of the computer running the application.

You have resources to develop versions of the application for only four different cultures. You must ensure that your application will also be usable by people of other cultures.

How should you prepare the application for deployment?

A. Package a different assembly for each culture.
B. Package a different executable file for each culture.
C. Package a main assembly for source code and the default culture.
   Package satellite assemblies for the other cultures.
D. Package a main assembly for source code.
   Package satellite assemblies for each culture.

Answer: C

Explanation:
When you build a project, the resource files are compiled and then embedded in satellite assemblies, or assemblies which contain only the localized resources. The fallback resources are built into the main assembly, which also contains the application code.

Option A:
A main assembly is needed.

Option B:
Assemblies not executables are used.

Option D:
The main assembly contains the fallback resources (including default culture).

Question 3.
You use Visual Studio .NET to develop an application that contains 50 forms. You create a procedure named PerformCalculations, which writes the results of several internal calculations to the Debug window. These calculations take more than one minute to execute.

You want to be able to compile two versions of the application, one for debugging and the other for release. The debugging version should execute the calculations. The release version should not include or compile the calculations. You want to accomplish this goal by using the minimum amount of code.

Which two actions should you take? (Each correct answer presents part of the solution. Choose two)

A. Use the following code segment:
```
#if DEBUG
    // Insert code to perform calculations.
#endif
```
B. Use the following code segment:

```
if (DEBUG) {
    // Insert code to perform calculations.
}
```

C. Use the following code segment at the top of the module:
#define DEBUG

D. Add DEBUG = true to the Command Line Arguments box on the Debugging pane of the **Project Properties** dialog box.

E. Ensure that the **Conditional Compilation Constants** option in the Build pane of the **Project Properties** dialog box contains the value DEBUG.

F. Ensure that the **Conditional Compilation Constants** options in the Build pane of the **Project Properties** dialog box includes the value TRACE.

Answer: A & E

Explanation:
We should use the **#if DEBUG** conditionally statement wherever we want to use code that print debug information.

We enable debugging by entering DEBUG to the **Conditional Compilation Constants** option.

Option B:
Incorrect syntax.

Option C:
This would achieve the goal as well. But compared to E) it would not minimize code.

Option D:
This is not how it is done in C#. In Visual Basic .NET you could use **#CONST DEBUG = true.** In Visual C# however, you must use the DEBUG = true statement.

Option F:
Traces are used to trace program execution, not to print debug information.

Question 4.
You use Visual Studio .NET to create a Windows-based application that will track XYZ sales. The application's main object is named XYZ. The XYZ class is created by the following definition:

```
public class XYZ {.
}
```

You write code that sets properties for the XYZ class. This code must be executed as soon as an instance of the XYZ class is created.
Now you need to create a procedure in which you can place your code. Which code segment should you use?

A. public XYZ()
B. public void XYZ ()
C. public bool XYZ ()
D. public New()
E. public XYZ New()
F. public XYZ XYZ()

Answer: A

Explanation:
We must create a constructor for the class. We wrote a method whose name is the same as the name of the class, and we specify not return type, not even void.

Option B, C:
We cannot specify any return type, not even void, when we define a constructor for a class.

Option D:
The constructor must have the name of the class.

Option E; F:
Incorrect syntax. This is not the way to create a constructor.

Question 5.
You develop a Windows-based application by using Visual Studio .NET. The application includes a form named XYZForm and a class named Contact. XYZForm includes a button named cmdCreateContact. You must ensure that your application creates an instance of Contact when a user clicks this button. You want to write the most efficient code possible.
Which code segment should you use?

A. Contact contact = new Object();
B. Contact contact = new Contact;
C. Object contact = new Contact;
D. Contact contact = new Object;

Answer: B

Explanation:
We declare that contact should be of type Contact and we use the Contact constructor.
Contact contact = new Contact;

Option A, D:
The constructor of the class has the same name as the class, namely Contact.

Option C:
We must specify that the object should be an instance of the Class object, not any object.
Object contact = new Contact;

Question 6.
As a developer at XYZ inc. you develop a Windows-based application by using Visual Studio .NET. The application tracks information about customers, orders, and shipping. Ten users will use this application on the client computers running Windows 2000 Professional.

You deploy the application by copying the contents of the project's \bin folder to the client computers.

Nine users report that the application runs as expected. One user receives the following error message when the application is first executed:

"The dynamic link library mscoree.dll could not be found in the specified path C\Program Files\Orders App;.;C:\WINNT\System32;C:\WINNT\System;C:\WINNT\System32;C:\WINNT;C:\WINNT\System32\Wbem."
You need to correct this problem on the client computer. What should you do?

A. Install MDAC 2.7.
B. Install Internet Explorer 6.
C. Install the redistribute package for the .NET Framework.
D. Recopy the contents of the \bin folder.

Answer: C

Explanation:
If you attempt to run a console application or a Windows Form application from a computer on which the .NET runtime is not installed, you will receive the error "Unable To Locate DLL: The dynamic link library mscoree.dll could not be found in the specified path..." To solve this problem, install the .NET runtime on the computer and try running the application again.

Mscoree.dll contains the common language runtime.

Option A:
MDAC (Microsoft Data Access Components) later could be required if the application uses additional features such as ASP.NET, COM+ services, and SQL Server .NET Data Provider. MDAC 2.6 could be required on the client. MDAC 2.7 could be required on the server. Furthermore an older version of MDAC would not produce the error of this scenario.

Option B:
A lack of Internet Explorer 6.0 would not produce this error.

Option D:
This would not resolve the problem.

Question 7.
You develop a Windows-based application by using Visual Studio .NET. The application includes numerous method calls at startup. After optimizing your application code, you test the application on a variety of client computers. However, the startup time is too slow.

You must ensure that your application starts as quickly as possible the first time it runs. What should you do?

A. Precompile your application by using the Native Image Generator (Ngen.exe):
   Install the precompiled application on the client computers.
B. Install your application on the client computers.
   Precompile your application by using the Native Image Generator (Ngen.exe).
C. Precompile your application by using the JIT compiler.
   Install the precompiled application on the client computers.
D. Install your application on the client computers.
   Precompile your application by using the JIT compiler.

Answer: B

Explanation:
The Native Image Generator creates a native image from a managed assembly and installs it into the native image cache on the local computer. Running Ngen.exe on an assembly allows the assembly to load and execute faster, because it restores code and data structures from the native image cache rather than generating them dynamically.

The native image contains processor-specific machine code and in this scenario a variety of client computers are used. We must therefore use the Ngen.exe utility at the client computers after the installation, not at the Development computer..

Option A:
The Native Image produced by Ngen.exe is machine-specific and in this scenario a variety of client computers are used. We cannot use the a single Native Image from once computer on all the other computers..

Option C, D:
JIT (just-in-time) compilation occurs at run-time, and cannot be precompiled.

When you compile a .NET application, it is not compiled to binary machine code; rather, it is converted to IL, which is a low-level set of instructions understood by the common language run time.

When execution starts, the first bit of code that needs to be executed is loaded into memory and compiled into native binary code from IL by the common language run time's Just-In-Time (JIT) compiler.

Question 8.
You use Visual Studio .NET to create an accounting application. Within this application, you are debugging a function named XYZValidate. This function contains several dozen variables and objects. One of the variables is named bValidationStatus.

You create a breakpoint at the top of XYZValidate and run the application within the Visual Studio .NET IDE.

As you steep through the code in XYZValidate, you need to view the contents of the bValidationStatus variable. However, you want to avoid seeing the contents of the other variables and objects in the function. You also need to complete the debugging process as quickly as possible.

What should you do?

A. Open the Locals window.
B. From the Command window, print the contents of bValidationStatus by using ? bValidationStatus .
C. Open the **QuickWatch** dialog box for bValidationStatus.
D. Add a watch expression for bValidationStatus.

Answer: C

Explanation:
You can quickly evaluate a variable by using the QuickWatch dialog box. The QuickWatch dialog box shows you the Name, Value, and Type of a single variable, and gives you the option of adding the variable to the Watch window.

Option A:
The Locals Windows would display all variables of the code in the XYZValidate procedure.

Option B:
This would only display the current value. The requirements of the scenario is that we need to view the variable as we step through the code, not just at a single point of time.

Option D:
This proposed solution would require more effort.

Question 9.
You develop an application that invokes a procedure named ProcessRecords. You implement the Trace class to log any errors thrown by ProcessRecords. You direct the Trace output to a local log file named ErrorLog.txt by using the following code segment:

StreamWriter oWriter = new StreamWriter(

```
        File.Open(logfilePath, FileMode.Append));
TextWriterTraceListener oListener =
        new TextWriterTraceListener(oWriter);
Trace.Listeners.Add(oListener);
try {
        ProcessRecords();
}.
catch (Exception oEx) {
        Trace.WriteLine("Error: " + oEx.Message;
}
 finally {
}
```

Now you need to add code to your finally construct to write all output in the ErrorLog.txt file and then close the file. You want to write the minimum amount of code to achieve this goal.
Which code segment should you use?

A. oWriter.Close();
B. Trace.Flush(); oWriter.Close();
C. Trace.AutoFlush = true; oWriter.Close();
D. oWriter.AutoFlush = true; oWriter.Close();

Answer: B

Explanation:
When the code in the code above executes, all of the output from the *Trace* class will be written to *oWrite*r. In order for them to actually be written to the file, however, you must flush the *Trace* buffer by calling the *Flush* method: Trace.Flush();
Then we close the listener.

Option A:
The content of the listener must be flushed in order to be written to a file.

Option C:
The **Trace.Autoflush = true** option would cause the buffer to be flushed after every write. However, this statement should not be put in the **finally** block. It should be used before traces are written to *oWrite*r.

Option D:
The command is **Trace.Autoflush = tru**e, not **Listener.Autoflush = tru**e. Furthermore this statement should not be put in the **finally** code here..

Question 10.
You develop a Visual Studio .NET application that contains a function named XYZUpdate. For debugging purposes, you need to add an entry to a log file whenever XYZUpdate is executed.

The log file is named DebugLog.txt. For maximum readability, you must ensure that each entry in DebugLog.txt appears on a separate line.

Which code segment should you use?

A.
```
StreamWriter oWriter =.
new StreamWriter(File.Open(
@"C:\DebugLog.txt", FileMode.Append));
TextWriterTraceListener oListener =
new TextWriterTraceListener(oWriter);
```

Debug.Listeners.Add(oListener);
Debug.WriteLine("XYZUpdate " + DateTime.Now.ToString);

B. StreamWriter oWriter =
new StreamWriter(File.Open(
"C:\\DebugLog.txt", FileMode.Append));
TextWriterTraceListener oListener =
new TextWriterTraceListener(oWriter);
Debug.Listeners.Add(oListener);
Debug.Write("XYZUpdate " + DateTime.Now.ToString);

C. TextWriterTraceListener oListener =
new TextWriterTraceListener();
oListener.Name = "C:\\DebugLog.txt";

Debug.Listeners.Add(oListener);
Debug.WriteLine("XYZUpdate " + DateTime.Now.ToString);

D. TextWriterTraceListener oListener =
new TextWriterTraceListener();
oListener.Name = "C:\\DebugLog.txt";
Debug.Listeners.Add(oListener);
Debug.Write("XYZ" + DateTime.Now.ToString);

Answer: C

Explanation:
All debug and trace output are directed to the *Listeners* collections. The TextWriterTraceListener class receives the trace output and writes its output as text, either to a Stream object or to a TextWriter object.

Option A, B:
StreamWriter is designed for character output in a particular Encoding, not to write to log file.

Option D:
This proposed solution would not put each entry on a separate line. We must **Debug.WriteLine,** not **DebugWrite.**

Question 11.
You use Visual Studio .NET to create a component named Request. This component includes a method named AcceptEXRequest, which tries to process new user requests for services. AcceptEXRequest calls a private function named Validate.

You must ensure that any exceptions encountered by Validate are bubbled up to the parent form of Request. The parent form will then be responsible for handling the exceptions. You want to accomplish this goal by writing the minimum amount of code.

What should you do?

A. **Use the following code segment in AcceptEXRequest:**
this.Validate();

B. **Use the following code segment in AcceptEXRequest:**
try {
this.Validate();
}
catch(Exception ex) {
throw ex;
}

C. **Use the following code segment in AcceptEXRequest:**

```
try {
this.Validate();
 }
catch(Exception ex) {
throw new Exception("Exception in AcceptEXRequest", ex);
}
```

D. **Create a custom Exception class named RequestException by using the following code segment:**

```
public class RequestException:ApplicationException {
public RequestException():base() {
}
public RequestException
(string message):base(message) {
}
public RequestException(string message,
Exception inner):base(message, inner) {
 }
}
```

In addition, use the following code segment in AcceptEXRequest:

```
try {.
this.Validate();
}
catch(Exception ex) {
throw new RequestException("Exception in AcceptEXRequest", ex);
}
```

Answer: B

Explanation:
The **throw** keyword is used to rethrow exceptions. We should catch the exceptions with a **try…catch** construct. We then simply rethrow the exception with the **throw** keyword.

Option A:
We must use a **try…catch** construction to be able to catch the exception.

Option C:
There is no requirement to wrap the exception into a new exception with the **new Exception("Exception in AcceptRequest", ex)** code. At the contrary, the scenario has the requirement only to bubble up the exceptions.

Option D:
There is no need to create a custom exception.

Question 12.
You work as software developer at XYZ inc. You need to develop a Windows form that provides online help for users. You want the help functionality to be available when users press the F1 key.

Help text will be displayed in a pop-up window for the text box that has focus.

To implement this functionality, you need to call a method of the HelpProvider control and pass the text box and the help text.

What should you do?

A. SetShowHelp
B. SetHelpString
C. SetHelpKeyword
D. ToString

Answer: B

Explanation:
To associate a specific Help string with another control, use the SetHelpString method. The string that you associate with a control using this method is displayed in a pop-up window when the user presses the F1 key while the control has focus.

Question 13.
You develop a Windows-based application that enables to enter product sales. You add a subroutine named XYZ.

You discover that XYZ sometimes raises an IOException during execution. To address this problem you create two additional subroutines named LogError and CleanUp. These subroutines are governed by the following rules:

• LogError must be called only when XYZ raises an exception.
• CleanUp must be called whenever XYZ is complete.

You must ensure that your application adheres to these rules. Which code segment should you use?

A.
```
try {
XYZ();
LogError();
}
catch (Exception e) {
CleanUp(e);
}
```
B.
```
try {
XYZ();
}
catch (Exception e) {
LogError(e);
CleanUp();
 }
```
C.
```
try {
XYZ();
}
catch (Exception e) {
LogError(e);
}
finally {
CleanUp();
}
```
D.
```
try {
XYZ();
} catch (Exception e) {
CleanUp(e);
}
finally {
LogError();
```

}

Answer: C.

Explanation:
We must use a **try…catch…finally** construct. First we run the XYZ() code in the **try** block. Then we use the LogError() subroutine in the **catch** statement since all exceptions are handled here.

Lastly we put the CleanUp() subroutine in the **finally** statement since this code will be executed regardless of whether an exception is thrown or not.

Option A:
LogError should not run each time, only when an exception occurs. It should be placed in the **catch** block, not in the **try** block.

Option B:
CleanUp should not run only when an exception occurs. It should run when no exception occurs as well.

It should be put in the **finally** block not in the **catch** block.

Option D:
CleanUp must be put in the finally block, and LogError in the catch block. Not the opposite way around.

Question 14.
You use Visual Studio .NET to create a Windows-based application. The application includes a form named XYZForm, which displays statistical date in graph format. You use a custom graphing control that does not support resizing.

You must ensure that users cannot resize, minimize, or maximize XYZForm. Which three actions should you take? (Each answer presents part of the solution. Choose three)

A. Set XYZForm.MinimizeBox to **False.**
B. Set XYZForm.MaximizeBox to **False**.
C. Set XYZForm.ControlBox to **False**.
D. Set XYZForm.ImeMode to **Disabled**.
E. Set XYZForm.WindowState to **Maximized**.
F. Set XYZForm.FormBorderStyle to one of the Fixed Styles.
G. Set XYZForm.GridSize to the appropriate size.

Answer: A, B & F

Explanation:
We disable the Minimize and Maximize buttons with the XYZForm.Minimizebox and the XYZForm.Maximizebox properties. Furthermore we should use a fixed FormBorderStyle to prevent the users from manually resizing the form.

Question 15.
You develop an application that includes a Contact Class. The contact class is defined by the following code:

```
public class Contact{
private string name;
public event EventHandler ContactSaved;
```

```
public string Name {
get {return name;}
set {name = value;}
}

public void Save () {
        // Insert Save code.
        // Now raise the event.
OnSave();
}

public virtual void OnSave() {
        // Raise the event:
        if (ContactSaved != null) {
ContactSaved(this, null);
        }
    }
 }
```

You create a form named XYZForm. This form must include code to handle the ContactSaved event raised by the Contact object. The Contact object will be initialized by a procedure named CreateContact.

Which code segment should you use?

A.
```
private void HandleContactSaved() {
// Insert event handling code.
}

private void CreateContact() {
Contact oContact = new Contact();
oContact.ContactSaved +=
new EventHandler(HandleContactSaved);
oContact.Name = "XYZ";
oContact.Save();
}
```
B.
```
private void HandleContactSaved(
object sender, EventArgs e) {
// Insert event handling code.
}.

private void CreateContact() {
Contact oContact = new Contact();
oContact.Name = "XYZ";
oContact.Save(); }
```
C.
```
private void HandleContactSaved(
object sender, EventArgs e) {
// Insert event handling code.
}
private void CreateContact() {
Contact oContact = new Contact();
oContact.ContactSaved +=
new EventHandler (HandleContactSaved);
oContact.Name = "XYZ";
oContact.Save(); }
```
D.
```
private void HandleContactSaved(Object sender, EventArgs e) {
```

```
 // Insert event-handling code.
}

private void CreateContact() {
Contact oContact = new Contact();
new EventHandler(HandleContactSaved);
oContact.Name = “XYZ”;
oContact.Save(); }
```

Answer: C

Explanation:
The delegate is correctly declared with appropriate parameters:
private void HandleContactSaved(object sender, EventArgs e) The association between the delegate and the event is correctly created with the += operator:
oContact.ContactSaved += new EventHandler (HandleContactSaved)

An event handler is a method that is called through a delegate when an event is raised, and you must create associations between events and event handlers to achieve your desired results. In C# the += operator is used to associate a delegate with an event..

Option A:
The declaration of the delegate do not contain any parameters.
private void HandleContactSaved()

Option B:
There is no association made between the delegate and the event..

Option D:
The association between the delegate and the event is incorrect. The += operator must be used:
new EventHandler(HandleContactSaved)

Question 16.
You use Visual Studio .NET to develop a Windows-based application that interacts with a Microsoft SQL Server database. Your application contains a form named CustomerForm. You add the following design-time components to the form:

• SqlConnection object named XYZConnection.
• SqlDataAdapter object named XYZDataAdapter.
• DataSet object named XYZDataSet.
• Five TextBox controls to hold the values exposed by XYZDataSet.

At design time, you set the DataBindings properties of each TextBox control to the appropriate column in the DataTable object of XYZDataSet. When you test the application, you can successfully connect to the database. However, no data is displayed in any text boxes.

You need to modify your application code to ensure that data is displayed appropriately. Which behavior should occur while the CustomerForm.Load event handler is running?

A. Execute the Add method of the TextBoxes DataBindings collection and pass in XYZDataSet.
B. Execute the BeginInit method of XYZDataSet.
C. Execute the Open method of XYZConnection.
D. Execute the FillSchema method of XYZDataAdapter and pass in XYZDataSet.
E. Execute the Fill method of XYZDataAdapter and pass in XYZDataSet.

Answer: E

Explanation:
Dataset is a container; therefore, you need to fill it with data. You can populate a dataset by calling the Fill method of a data adapter.

Question 17.
You use Visual Studio .NET to create a Windows-based application. The application includes a form named XYZForm.

XYZForm contains 15 controls that enable users to set basic configuration options for the application.

You design these controls to dynamically adjust when users resize XYZForm. The controls automatically update their size and position on the form as the form is resized. The initial size of the form should be 659 x 700 pixels..

If ConfigurationForm is resized to be smaller than 500 x 600 pixels, the controls will not be displayed correctly. You must ensure that users cannot resize ConfigurationForm to be smaller than 500 x 600 pixels.

Which two actions should you take to configure XYZForm? (Each correct answer presents part of the solution. Choose two)

A. Set the MinimumSize property to **"500,600**".
B. Set the MinimumSize property to **"650,700**".
C. Set the MinimizeBox property to **True.**
D. Set the MaximumSize property to **"500,600**".
E. Set the MaximumSize property to **"650,700**".
F. Set the MaximumBox property to **True.**
G. Set the Size property to **"500,600**".
H. Set the Size property to **"650,700**".

Answer: A & H

Explanation:
The Form.MinimumSize Property gets or sets the minimum size the form can be resized to. It should be set to "500, 600".

We use the size property to set the initial size of the form. The initial size should be set to "650, 700".

Option B:
The initial size is 650 x 750. The minimal size should be set to "500,600".

Option C:
The minimize button will be displayed, but it will not affect the size of the form.

Option D, E:
There is no requirement to define a maximum size of the form.

Option F:
The maximize button will be displayed, but it will not affect the size of the form.

Option G:
The initial size should be 650 x 700, not 500 x 600.

Question 18.
You responsible for maintaining an application that was written by a former colleague at XYZ. The application reads from and writes to log files located on the local network. The original author included the following debugging code to facilitate maintenance:

```
try {
        Debug.WriteLine("Inside Try");
throw(new IOException());}
catch (IOException e) {
        Debug.WriteLine ("IOException Caught");}
catch (Exception e) {
        Debug.WriteLine("Exception Caught");}.
finally {
        Debug.WriteLine ("Inside Finally");}
Debug.WriteLine ("After End Try");
```

Which output is produced by thus code?

A. Inside Try
   Exception Caught
   IOException Caught
   Inside Finally
   After End Try
B. Inside Try
   Exception Caught
   Inside Finally
   After End Try
C. Inside Try
   IOException Caught
   Inside Finally
   After End Try
D. Inside Try
   IOException Caught
   Inside Finally

Answer: D

Explanation:
First the **try** code runs. Then one single exception occurs, not two. Then the **finally** code is run, and not the code after **finall**y.

Option A:
An exception can only be caught once, not twice.

Option B:
The code after finally will not be run if an exception occurs.

Option C:
The code after finally will not be run if an exception occurs.

Question 19.
You use Visual Studio .NET to create a Windows-based application for online gaming. Each user will run the client version of the application on his or her local computer. In the game, each user controls two groups of soldiers, Group1 and Group2.

You create a top-level menu item whose caption is Groups. Under this menu, you create two submenus. One is named group1Submenu, and its caption is Group 1. The other is named group2Submenu, and its caption is Group 2. When the user select the Groups menu, the two submenus will be displayed. The user can select only one group of soldiers at a time.

You must ensure that a group can be selected either by clicking the appropriate submenu item or by holding down the ALT key and pressing 1 or 2. You must also ensure that the group currently select will be indicated by a dot next to the corresponding submenu item. You do not want to change the caption text of any of your menu items.

Which four actions should you take? (Each correct answer presents part of the solution. Choose four)

A. Set group1Submenu.Text to **"Group &1**".
   Set group2Submenu.Text to **"Group &2**".
B. Set Group1.ShortCut to **"ALT1**".
   Set Group2.ShortCut to **"ALT2**".
C. **In the group1Submenu.Click event, place the following code segment:**
   group1Submenu.DefaultItem = true;
   In the group2Submenu.Click event, place the following code segment:
   group2Submenu.DefaultItem = true;
D. **In the group1Submenu.Click event, place the following code segment:**
   group2Submenu.DefaultItem = false;
   In the group2Submenu.Click event, place the following code segment:
   group1Submenu.DefaultItem = false;
E. **In the group1Submenu.Click event, place the following code segment:**
   group1Submenu.Checked = true;
   In the group2Submenu.Click event, place the following code segment:
   group2Submenu.Checked = true;
F. **In the group1Submenu.Click event, place the following code segment:**
   group2Submenu.Checked = false;
   In the group2Submenu.Click event, place the following code segment:
   group1Submenu.Checked = false;
G. Set group1Submenu.RadioCheck to **True.**
   Set group2Submenu.RadioCheck to **True**.
H. Set group1Submenu.RadioCheck to **False**.
   Set group2Submenu.RadioCheck to **False**.

Answer: A, E, F & G

Explanation:
The & sign is used to define the required Access key.

The menu item's Checked property is either true or false, and indicates whether the menu item is selected. We should set the clicked Submenu Checked property to True, and the other Submenu Checked property to False.

The menu item's RadioCheck property customizes the appearance of the selected item: if RadioCheck is set to true, a radio button appears next to the item;

Option B:
This is not the way to define Access keys. The & sign must be used..

Option C, D:
We are not interested in defining default items. We want to mark items as checked.

Option H:
The RadioCheck property must be set to True for both menu items.

Question 20.
You use Visual Studio .NET to create a control that will be used on several forms in your application.

It is a custom label control that retrieves and displays your company's current stock price.

The control will be displayed on many forms that have different backgrounds. You want the control to show as much of the underlying form as possible. You want to ensure that only the stock price is visible. The rectangular control itself should not be visible.

You need to add code to the Load event of the control to fulfill these requirements. Which two code segments should you use? (Each correct answer presents part of the solution. Choose two)

A. this.BackColor = Color.Transparent;
B. this.ForeColor = Color.Transparent;
C. this.BackImage = null;
D. this.SetStyle(ControlStyles.UserPaint, false);
E. this.SetStyle(ControlStyles.SupportsTransparentBackColor, true);

Answer: A & E

Explanation:
To give your control a transparent backcolor:
1. Call the **SetStyle** method of your form in the constructor.

   this.setStyle(ControlStyles.SupportsTransparentBackColor, true);

   This will enable your control to support a transparent backcolor.

2. Beneath the line of code you added in step 1, add the following line. This will set your control's **BackColor** to **Transparent**. :

   this.BackColor = Color.Transparent;

Question 21.
Your XYZ project team uses Visual Studio .NET to create an accounting application. Each team member uses the Write method of both the Debug class and the Trace class to record information about application execution in the Windows 2000 event log..

You are performing integration testing for the application. You need to ensure that only one entry is added to the event log each time a call is made to the Write method of either the Debug class or the Trace class.

What are two possible code segments for you to use? (Each correct answer presents a complete solution. Choose two)

A. EventLogTraceListener myTraceListener =
   new EventLogTraceListener("myEventLogSource");
B. EventLogTraceListener myDebugListener =
   new EventLogTraceListener("myEventLogSource");
   Debug.Listeners.Add(myDebugListener);
C. EventLogTraceListener myTraceListener =
   new EventLogTraceListener("myEventLogSource");

Debug.Listeners.Add(myTraceListener);
Trace.Listeners.Add(myTraceListener);

D. EventLogTraceListener myDebugListener =
new EventLogTraceListener(“myEventLogSource”);
EventLogTraceListener myTraceListener =
new EventLogTraceListener(“myEventLogSource”);
Debug.Listeners.Add(myDebugListener);
Trace.Listeners.Add(myTraceListener);

Answer: A & B

Explanation:
An EventLogTraceListener redirects output to an event log. Debug and trace share the same Listeners collection, so if you add a listener object to a Debug.Listeners collection in your application, it gets added to the Trace.Listeners collection as well, and vice versa.

Option C:
Add a listener to both the Debug.Listeners collection and the Trace.Listeners collection the listener would receive duplicate messages.

Option D:
If we create a separate listener for trace messages and debug messages we would get duplicate messages

Question 22.
You use Visual Studio .NET to create a Windows-based application. The application includes a form named XYZProcedures (EXP). EXP allows users to enter very lengthy text into a database. When users click the Print button located on EXP, this text must be printed by the default printer.

You implement the printing functionality by using the native .NET System Class Libraries with all default settings.

Users report that only the first page of the text is being printed.
How should you correct this problem?.

A. In the BeginPrint event, set the HasMorePages property of the PrintEventArgs object to **True**.
B. In the EndPrint event, set the HasMorePages property of the PrintEventArgs object to **True**.
C. In the PrintPage event, set the HasMorePages property of the PrintPageEventArgs object to **True.**
D. In the QueryPageSettings event, set the HasMorePages property of the QueryPageSettingEventArgs object to **True**.

Answer: C

Explanation:
PrintDocument.PrintPage Event occurs when the output to print for the current page is needed. This event has the HasMorePages property which gets or sets a value indicating whether an additional page should be printed.

Question 23
You use Visual Studio .NET to create an application that tracks support incidents for your technical support department. You implement the Trace class to write information about run-time errors in a local log file. You also implement a TraceSwitch object named MySwitch, which can turn Trace lagging on and off as needed. To maximize application performance, you ensure that MySwitch is disabled by default.

You set your Configuration Manager to Release. You compile the application and deploy it to a shared folder on your company intranet. Fifty users access the application from a shortcut on their desktops.

One user receives error messages while running the application. You decide to enable verbose trace logging within the application for that user. You must ensure that you do not affect application performance for the other users.

Which action or actions should you take? (Choose all that apply)

A. Set your Configuration Manager to **Debug.**
   Compile your application and deploy it locally on the user's computers.
   Create a new shortcut on the user's desktop to access the local copy of the application.
B. Copy the deployed version of the application from the shared folder.
   Deploy it locally on the user's computer.
   Create a new desktop shortcut on the user's desktop to access the local copy of the application.
C. Edit the .config file for the application on the user's computer to enable MySwitch with a value of 4.
D. Edit the .config file for the application on the shared folder to enable MySwitch with a value of 4.
E. Start the application with the /d:TRACE=TRUE command line option.
F. Start the application with the /TRACE MySwitch 4 command line option..

Answer: B & C

Explanation:
Trace switches can be turned on and off after your application has been compiled and distributed.

Trace switches are configured by manipulating the application .config file. The .config file must be located in the same folder as the executable. We must therefore make a local copy of the deployed folder (B).

For TraceSwitch objects, the values 0, 1, 2, 3, and 4 correspond to TraceLevel.Off, TraceLevel.Error, TraceLevel.Warning, TraceLevel.Info, and TraceLevel.Verbose, respectively. We must configure a local copy of the .config file and enable MySwitch with a value of 4.. (C)

Option A:
There is no need to recompile the application. We just need a local copy of the deployment directory.

Option D:
We cannot use the .config file the shared folder. It would affect all users.

Option E:
The **/d:TRACE=True** flag is used as a the compiler command line, not to start the application. Furthermore, this flag applies to Visual Basic .NET, not to Visual C# .Net.

Option F:
There is no command line option **/TRACE**

Question 24.
You company XYZ assigns you to modify a Visual Studio .NET application that was created by a former colleague. However, when you try to build the application, you discover several syntax errors.

You need to correct the syntax errors and compile a debug version of the code so the application can be tested.

Before compiling, you want to locate each syntax error as quickly as possible.

What should you do?

A. Select each error listed in the Task List window.
B. Open the Application event log from the Visual Studio .NET Server Explorer window. Select each error listed.
C. Run the application in Debug mode. Each time an error is encountered, correct it and continue debugging the application.
D. Select **Build Solution** from the **Build** menu. When the build fails, correct each error listed in the Output window.
E. Select **Build Comment Web Pages** from the **Tools** menu. Select each function listed in the report that is generated.

Answer: A

Explanation:
The task list window contains information which helps you to organize and manage the work of building your application. Among other things it will include each syntax error of the application.

Option B:
Event logs would not contain information on syntactical errors.

Option C:
Syntax errors are corrected in Debug mode.

Option D:
The errors are listed in the Task List windows. The text in the Output windows is more extensive, and the syntax errors are harder to spot.

Option E:
Build Comment Web Pages would not list the syntax errors. It allows you to create a series of .htm pages that display the code structure within projects and solutions, objects and interfaces defined in a project, and members. The .htm pages also display information you have included in your code using the code comment syntax.

Question 25.
You development team used Visual Studio .NET to create an accounting application, which contains a class named XYZAccounts. This class instantiates several classes from a COM component that was created by using Visual Basic 6.0. Each COM component class includes a custom method named ShutDownObject that must be called before terminating references to the class.

Software testers report that the COM component appears to remain in memory after the application terminates. You must ensure that the ShutDownObject method of each COM component class is called before XYZAccounts is terminated.

What should you do?

A. Add code to the Terminate event of XYZAccounts to call the ShutDownObject method of each COM component class.
B. Find each location in your code where a reference to XYZAccounts is set to null or goes out of scope.

Add code after each instance to manually invoke the Visual Studio .NET garbage collector.

C. Add a destructor to XYZAccounts.
   Add code to the destructor to call the ShutDownObject method of each COM component class.
D. Add the procedure private void Finally() to XYZAccounts.
   Add code to the procedure to call the ShutDownObject method of each COM component class.

Answer: C

Explanation:
Be creating a destructor for XYZAccounts class we can ensure that appropriate actions are performed before XYZAccounts is terminated.

Question 26.
You develop a Windows-based application by using Visual Studio .NET. You use XYZ's intranet to deploy the application to client computers. You use the security configuration of the .NET Framework to configure security for you application at the enterprise policy level..

Virus attacks cause the IT manager at XYZ to tighten security at the machine level. Users report that they can no longer execute your application.

How should you correct this problem?

A. Include the LevelFinal attribute in the intranet code group policy at the enterprise level by using the Permission View tool (Permview.exe).
B. Include the Exclusive attribute in the intranet code group policy at the enterprise level by using the Permission View tool (Permview.exe).
C. Include the LevelFinal attribute in the intranet code group policy at the enterprise level by using the Code Access Security Policy tool (Caspol.exe).
D. Include the Exclusive attributes in the intranet code group policy at the enterprise level by using the Code Access Security Policy tool (Caspol.exe).

Answer: C

Explanation:
The Code Access Security Policy tool (Caspol.exe) enables users and administrators to modify security policy for the machine policy level, the user policy level, and the enterprise policy level. If we apply the **LevelFinal** attribute at the enterprise level, any code group at the machine level will not be evaluated even if a machine level administrator has made changes..

When **LevelFinal is** set to on, indicates that no policy level below the level in which the added or modified code group occurs is considered. This option is typically used at the machine policy level. For example, if you set this flag for a code group at the machine level and some code matches this code group's membership condition, Caspol.exe does not calculate or apply the user level policy for this code.

Option A, B:
The Permissions View tool is used to view, not to configure, the minimal, optional, and refused permission sets requested by an assembly.

Option D:
When **exclusive** is set to on, it indicates that only the permission set associated with the code group you are adding or modifying is considered when some code fits the membership condition of the code group.

Question 27.
You use Visual Studio .NET to develop a Windows-Bases application named PatTrac. It uses the security class libraries of the .NET Framework to implement security. PatTrac will run within the context of a Windows 2000 domain named MedicalOffice. Calls to a remote Windows 2000 domain named XYZ will occur during the execution of PatTrac.

You want PatTrac to log on to the XYZ domain by using a generic user account.
What should you do?.

A. Create a new instance of the WindowsImpersonationContext class by calling the Impersonate method of the Genericidentity object and passing the token of the user whom you want to impersonate.
B. Create a new instance of the WindowsImpersonationContext class by calling the Impersonate method of the WindowsIdentify object and passing the token of the user whom you want to impersonate.
C. Create a new instance of the ZoneIdentifyPermission class by calling the Impersonate method of the GenericPrincipal object and passing the token of the user whom you want to impersonate.
D. Create a new instance of the ZoneIdentifyPermission class by calling the Impersonate method of the WindowsPrincipal object and passing the token of the user whom you want to impersonate.

Answer: B

Explanation:
We must impersonate another user. The WindowsImpersonationContext Class, not ZoneIdentifyPermission class, should be used. Furthermore the Impersonate method must be used on a Windowsidentity object, not on a Genericidentity object.

Question 28.
You use Visual .NET to develop a Windows-based application whose project name is XYZMgmt. You create an application configuration file that will be installed on the client computer along with XYZMgmt.
You must ensure that the settings in the application configuration file are applied when XYZMgmt is executed.
What should you do?

A. Name the configuration file XYZMgmt.exe.confing and copy it to the Windows\System32 folder.
B. Name the configuration file XYZMgmt.config and copy it to the Windows\System32 folder.
C. Name the configuration file XYZMgmt.exe.config and copy it to the application folder.
D. Name the configuration file XYZMgmt.config and copy it to the application folder.
E. Name the configuration file XYZMgmt.exe.config and copy it to the global assembly cache.

Answer: C

Explanation:
The configuration file for an application hosted by the executable host is in the same directory as the application. The name of the configuration file is the name of the application with a .config extension.
In this scenario the configuration file should named XYZMgmt.exe.config and be placed in the application folder.

Question 29.

You use Visual Studio .NET to develop a Windows-based application. The application will implement a role-based authorization scheme that is based on a Microsoft SQL Server database of user names.

Users will enter their user names in a text box named userName and logon screen.

You must ensure that all users are assigned the Supervisor rule and the EX role by default.

Which code segment should you use?

A.
```
WindowsIdentity identity =
new WindowsIdentity.GetCurrent();
string[] RoleArray =
{“Supervisor”, “EX”};
GenericPrincipal principal =
new GenericPrincipal(identity, RoleArray);
```
B.
```
GenericIdentity identity =
new GenericIdentity(userName.Text);
string[] RoleArray =
{“Supervisor”, “EX”};
WindowsPrincipal principal =
new WindowsPrincipal(identity);
```
C.
```
GenericIdentity identity =
new GenericIdentity(userName.Text);
string[] RoleArray =
{“Supervisor”, “EX”};
GenericPrincipal principal =
new GenericPrincipal(identity, RoleArray);
```
D.
```
WindowsIdentity identity =
new WindowsIdentity.GetAnonymous();
string[] RoleArray =
{“Supervisor”, “EX”};
WindowsPrincipal principal =
new GenericPrincipal(identity, RoleArray);
```

Answer: C

Explanation:
The GenericPrincipal Class represents a generic principal. This class represents the roles of the current user.

GenericPrincipal objects represent any user authorization scheme independent of Windows domains, and as a result can be extended to work with user databases, even to interoperate with other platforms.

Option A:
We should not use the current identity, instead we should use the identity entered in the UserName textbox..

Option B:
The WindowsPrincipal class allows code to check the Windows group membership of a Windows user.
It cannot be assign roles to a user.

Option D:

We should not use the anonymous identify, instead we should use the identity entered in the UserName textbox.

Question 30.
You create an assembly by using Visual Studio .NET. The assembly is responsible for writing and reading order entry information to and from an XML data file. The assembly also writes and reads values to and from the Windows registry while it is being consumed.

The assembly will be distributed to client computers by using your company, XYZ, intranet. All client computers are configured to implement the default .NET security policy.
You need to implement security in the assembly. What should you do?

A. Implement declarative security and execute the permission demand to allow access to the file system and Windows registry.
B. Implement declarative security and execute the minimum permission request to allow access to the file system and Windows registry.
C. Implement imperative security and execute the permission demand to allow access to the file system and Windows registry.
D. Implement imperative security and execute the minimum permission request to allow access to the file system and Windows registry.

Answer: B

Explanation:
You can use declarative code access security to request permissions for the entire assembly. SecurityAction flags that can be specified in an assembly-wide directive. When SecurityAction.RequestMinimum is specified, it makes a request to the common language runtime to be granted the requested permission. If the requested permission is not granted by the security policy, the assembly will not execute. A SecurityAction.RequestOptional is similar, but the assembly will still run even if the requested permission is not granted. Specifying SecurityAction.RequestRefuse requests that the assembly be denied the specified permission. You must use the *Assembly (assembly)* directive when specifying these actions as follows:

Option A:
There are only three Security actionAttributes targets for an assembly:
RequestMinimumAssembly,
RequestOptionalAssembly, and RequestRefuseAssembly.

Option C, D:
Imperative security does not work well to configure security for an entire assembly. In imperative security, permission to execute is demanded at run time.

Question 31.
You use Visual Studio .NET to create an application that uses an assembly. The assembly will reside on the client computer when the application is installed. You must ensure that any future applications installed on the same computer can access the assembly.

Which two actions should you take? (Each correct answer presents part of the solution. Choose two)

A. Use XCOPY to install the assembly in the global assembly cache.
B. Use XCOPY to install the assembly in the Windows\Assembly folder.
C. Create a strong name for the assembly.
D. Recompile the assembly by using the Native Image Generator (Ngen.exe).
E. Modify the application configuration file to include the assembly.
F. Use a deployment project to install the assembly in the global assembly cache.

G. Use a deployment project to install the assembly in the Windows\System32 folder.

Answer: C & F

Explanation:
The global assembly cache stores assemblies specifically designated to be shared by several applications on the computer.

An assembly must have a strong name to be installed in the global assembly cache.

There are two ways to install an assembly into the global assembly cache:

• Using Microsoft Windows Installer 2.0. This could be achieved by a deployment project.
• Using the Global Assembly Cache tool (Gacutil.exe). This is not an option here.

Question 32.
You use Visual Studio .NET to create an application named XYZClient. Another developer in your company creates a component named XYZComponent. Your application uses namespaces exposed by XYZComponent.

You must deploy both XYZClient and XYZComponent to several computers in your company's accounting department. You must also ensure that XYZComponent can be used by future client applications.

What are three possible ways to achieve your goal? (Each correct answer presents a complete solution. Choose three)

A. Deploy XYZClient and XYZComponent to a single folder on each client computer.
Each time a new client application is developed, place the new application in its own folder and copy XYZComponent to the new folder.
B. Deploy XYZClient and XYZComponent to a single folder on each client computer.
Each time a new client application is developed, place the new application in its own folder.
Edit XYZClient.exe.config and add a privatePath tag that points to the folder where XYZComponent is located..
C. Deploy XYZClient and XYZComponent to separate folders on each client computer.
In each client application that will use XYZComponent, add the following code segment:
using XYZComponent;
D. Deploy XYZClient and XYZComponent to separate folders on each client computer.
Each time a new client application is developed, select **Add Reference** from the **Tools** menu and add a reference to XYZComponent.
E. Deploy XYZClient and Tes EXingComponent to separate folders on each client computer.
Register XYZComponent on each client computer by using the RegSvr32 utility.
F. Deploy XYZClient and XYZComponent to separate folders on each client computer.
Add XYZComponent to the global assembly cache.

Answer: A, D & F

Explanation:
XCOPY deployment of the XYZComponent, we simply copy the component to the deployment folder of every application that requires the use of the components, enables the deployed application to use the component.

You can access any .NET or COM library on your system. The generalized scheme for accessing .NET or COM components is to create a reference to the type library. You can obtain a list of available type libraries in the **Add Reference dialog box** which is accessible on the **Tools** menu.

If you intend to share an assembly among several applications, you can install it into the global assembly cache.

Option A:
Just copying the component to the folder of the deployed application will not make the component accessible to the application.

Option B:
This would not give the future client applications access to XYZComponent.

Option C:
The using keyword has two major uses:
using Directive Creates an alias for a namespace.
using Statement Defines a scope at the end of which an object will be disposed.
However, this would not make the component accessible.

Option E:
RegSrv32 was used in before the introduction of Visual Studio .NET to register .dll file. It is no longer required..**:**

Question 33.
You use Visual Studio .NET to develop a Windows-based application called XYZApp. Your application will display customer order information from a Microsoft SQL Server database. The orders will be displayed on a Windows Form in a data grid named DataGrid1. DataGrid1 is bound to a DataView object.

The Windows Form includes a button control named displayBackOrder. When users click this button, DataGrid1 must display only customer orders whose BackOrder value is set to True..

How should you implement this functionality?

A. Set the RowFilter property of the DataView object to **"BackOrder = True**".
B. Set the RowStateFilter property of the DataView object to **"BackOrder = True**".
C. Set the Sort property of the DataView object to **"BackOrder = True**".
D. Set the ApplyDefaultSort property of the DataView object to **True**.

Answer: A

Explanation:
Using the RowFilter property of a data view, you can filter records in a data table to make available only records you want to work with.

Option B:
To filter based on a version or state of a record, set the RowStateFilter property. It does not apply here.

Option C, D:
We want to filter, not sort the data view.

Question 34.
You use Visual Studio .NET to create a Windows-based application called XYZApp, that will be distributed to your customers. You add a setup project to your solution to create a distribution package.

You deploy the distribution package on a test computer. However, you discover that the distribution package does not create a shortcut to your application on the Programs menu of the test computer.

You need to modify your setup project to ensure that this shortcut will be available on your customers Programs menus.

What should you do?

A. Navigate to the User's Programs Menu folder in the **File System on Target Machine** hierarchy.
   Add the primary output from your application.
B. Navigate to the Application Folder folder in the **File System on Target Machine** hierarchy.
   Create a shortcut to your application and move the shortcut to the User's Programs Menu folder in the same hierarchy.
C. Navigate to the Install folder in the **Customer Actions** hierarchy.
   Create a custom action that adds the primary output from your application to the User's Programs Menu folder.
D. Navigate to the Install folder in the **Custom Actions** hierarchy.
   Create a custom action that adds a shortcut to your application's executable file to the User's Programs Menu folder.

Answer: B

Explanation:
We use the File System Editor to create a shortcut to the Application in the Programs Menu folder in the File System on Target Machine **hierarchy..**

The File System Editor is used to add project outputs and other files to a deployment project, to specify the locations where files will be installed on a target computer, and to create shortcuts on a target computer.

Option A:
We want to make a Shortcut, not to move the .exe file into the Start Menu..

Option C, D:
The Custom Actions Editor is used to specify custom actions to be run during installation on a target computer. It is not used to create shortcuts for the Application.

Question 35.
As a programmer at XYZ inc, you use Visual Studio .NET to create several applications that will be deployed commercially over the Internet. You must ensure that customers can verify the authenticity of your software.

Which action or actions should you take? (Choose all that apply.)

A. Sign your portable executables by using Signcode.exe.
B. Generate an X.509 certificate by using Makecert.exe.
C. Purchase an X.509 certificate from a certificate authority.
D. Purchase a Software Publisher Certificate from a certificate authority.
E. Convert your certificate to a Software Publisher Certificate by using Cert2spc.exe.

Answer: A & D

Explanation:
We must use a Software Publisher Certificate from a certificate authority.

We then use this certificate to sign the portable executables with the Signcode.exe utility.

Option B:
The Certificate Creation tool generates X.509 certificates for testing purposes only.

Option C:
We should use a Software Publisher Certificate, not a X.509 certificate.

Option E:
The Software Publisher Certificate Test tool creates a Software Publisher's Certificate (SPC) from one or more X.509 certificates. Cert2spc.exe is for test purposes only.

Question 36.
You create a Visual Studio .NET setup project to distribute an application. You add a SQL script named XYZDB.SQL. You must ensure that the SQL script is executed during the installation process.

What should you do?

A. Add a custom action to your setup project.
   Select XYZDB.SQL as the source path.
B. Add a batch file to your setup project to execute XYZDB.SQL.
   Add a launch condition to the setup project.
   Set the Condition property to the batch file.
C. Create a new Visual Studio .NET project that executes XYZDB.SQL.
   Include the new project with your setup project.
   Add a custom action that launches the new project during installation.
D. Add a launch condition to your setup project.
   Set the Condition property to XYZDB.SQL.

Answer: A

Explanation:
By adding the SQL script as a custom action to the setup project we ensures that it will be executed during the installation process.

Although standard actions are sufficient to execute an installation in most cases, custom actions enable the author of an installation package to extend the capabilities of standard actions by including executables, dynamic-link libraries, and script.

Option B, D:
The execution of a batch file cannot be used as a launch condition.

Option C:
This is a very awkward solution. We don't need to create a second project.

Question 37.
You develop an application XYZApp that will be sold commercially. You create a Visual Studio .NET setup project to distribute the application. You must ensure that each user accepts your license agreement before installation occurs.

What should you do?

A. Add a launch condition to your setup project.
   Add your license agreement to the Message property of the launch condition.

B. Open the user interface designer for your setup project.
Select the **Welcome** dialog box from the Start object and add your license agreement to the CopyrightWarning property.
C. Save you license agreement in the Rich Text Format and add the file to your setup project..
Open the property pages for the setup project and set the Certificate to the name of your Rich Text file.
D. Save your license agreement in Rich Text Format and add the file to your setup project.
Open the user interface designer for the setup object.
From the Start object, select the **License Agreement** dialog box and set the LicenseFile property to the name of your Rich Text file.

Answer: D

Explanation:
First we save the License agreement text in a RFT file and add it to the project. Then we use the User Interface Editor/Designer to configure the License Agreement dialog box.

Visual Studio .NET provides a number of predefined user interface dialog boxes that can be displayed during installation to present or gather information. The dialog boxes to be displayed are specified in the User Interface Editor.

Option A:
Deployment dialog boxes are not configured with launch conditions.

Option B:
The **Welcome** dialog box is not used for license agreements. Furthermore, we must create a RFT file containing the licensing agreement text.

Option C:
The User Interface Editor must be used. We cannot configure the dialog box with the property pages of the project.

Question 38.
You use Visual Studio .NET to create an assembly, called XYZAssembly, that will be used by other applications, including a standard COM client application.

You must deploy your assembly on the COM application to a client computer. You must ensure that the COM application can instantiate components within the assembly as COM components.

What should you do?

A. Create a strong name of the assembly by using the Strong Name tool (Sn.exe).
B. Generate a registry file for the assembly by using the Assembly Registration tool (Regasm.exe)
Register the file on the client computer.
C. Generate a type library for the assembly by using the Type Library Importer (Tlbimp.exe).
Register the file on the client computer.
D. Deploy the assembly to the global assembly cache on the client computer.
Add a reference to the assembly in the COM client application.

Answer: B

Explanation:
The Assembly Registration tool reads the metadata within an assembly and adds the necessary entries to the registry, which allows COM clients to create .NET Framework classes transparently. Once a class is registered, any COM client can use it as though the class were a COM class..

Option A:
The Strong Name tool helps sign assemblies with strong names.

Option C:
The Type Library Importer, tlbimp.exe, converts the type definitions found within a COM type library into equivalent definitions in a common language runtime assembly. It would not be useful in this scenario however.

Option D:
This would not allow the COM application to use the class.

Question 39.
Another developer in your company uses Visual Studio .NET to create a component named XYZiComponent. You deploy XYZiComponent to a server. When you execute XYZiComponent, you receive the following error message:

"System.Security.Policy.PolicyException: Failed to acquire required permissions."
As quickly as possible, you need to discover which permissions are required by XYZiComponent.
What should you do?

A. Request the source code from the developer who created My Component.
   Examine the source code to find the required permissions.
B. Run the Microsoft CLR Debugger (DbgCLR.exe) on the server to view the permissions requested by the application at run time.
C. Run the Runtime Debugger (Cordbg.exe) on the server to view the permissions requested by the application at run time.
D. Run the Permissions View tool (Permview.exe) on the server to view the permissions required by XYZiComponent.
E. Run the MSIL Disassembler (Ildasm.exe) on the server to view permissions requested by XYZiComponent that were denied.

Answer: D

Explanation:
Developers can use Permview.exe to verify that they have applied permission requests correctly to their code. Additionally, users can run Permview.exe to determine the permissions an assembly requires to execute.

Question 40.
You develop an enterprise application, called XYZApplication that includes a Windows Form presentation layer, middle-tier components for business logic and data access, and a Microsoft SQL Server database.

You are in the process of creating a middle-tier component that will execute the data access routines in your application. When data is passed to this component, the component will call several SQL Server stored procedures to perform database updates. All of these procedure calls run under the control of a single transaction.
The code for the middle-tier component will implement the following objects:
SqlConnection cn = new SqlConnection();
SqlTransaction tr;
If two users try to update the same data concurrently, inconsistencies such as phantom reads will occur. You must now add code to your component to specify the highest possible level of protection against such inconsistencies.
Which code segment should you use?

A. tr = cn.BeginTransaction("ReadCommitted");
B. tr = cn.BeginTransaction(IsolationLevel.ReadCommitted);
C. tr = cn.BeginTransaction(IsolationLevel.Serializable);
D. tr = cn.BeginTransaction("Serializable");

Answer: C

Explanation:
Serializable is the highest isolation transaction level. It provide the highest possible level of protection against concurrent data errors. The correct syntax to begin a transaction with this transaction isolation level is: cn.BeginTransaction(IsolationLevel.Serializable)

Option A:
Incorrect syntax.

Option B:
The ReadCommitted transaction isolation level can result in non-repeatable reads or phantom data. It does not give the highest possible protection from parallel updates.

Option D:
Incorrect syntax.

Question 41.
You develop a Windows-based application, called XYZSoftware that uses a Microsoft SQL Server database to store and retrieve data. You decide to create a central error-handling procedure that processes all data errors that occur in XYZSoftware. You must ensure that your application displays all error information that is received from the database.
How should you write the error-handling procedure?

A.
```
public void DisplaySqlErrors(SqlException myEx) {
    MessageBox.Show("Error: " + myEx.ToString());
}
```
B.
```
public void DisplaySqlErrors(SqlException myEx) {
    MessageBox.Show("Error: " + myEx.Message);
}
```
C.
```
public void DisplaySqlErrors(SqlException myEx) {
    foreach(SqlError x in myEx.Errors) {
        MessageBox.Show("Error: " + x.ToString());
    }
}
```
D.
```
public void DisplaySqlErrors(SqlException myEx) {
    foreach(Exception x in myEx.Errors) {
            MessageBox.Show("Error: " + x.ToString());
    }
}
```

Answer: C

Explanation:
The SQLException class represents the exception that is thrown when SQL Server returns a warning or error. We must the **Errors** member of SQLException class to retrieve a collection of one or more **SqlError** objects that give detailed information about exceptions generated by the SQL Server .NET Data Provider.

Option A:

We must the **Errors** member of SQLException class. We cannot simply apply the ToString method.

Option B:
The **Message** member of the SQLException class gets the text describing the error. We want to display all error information so the **Message** member is inadequate for this scenario.

Option D:
The **Errors** of the SQLException class gets a collection of **SQLError** objects, not **Exception** objects.

Question 42.
As a developer at XYZ you develop a new sales analysis application that reuses existing data access components. One of these components returns a DataSet object that contains the data for all customer orders for the previous year.

You want your application to display orders for individual product numbers. Users will specify the appropriate product numbers at run time..

What should you do?

A. Use the DataSet.Reset method.
B. Set the RowFilter property of the DataSet object by using a filter expression.
C. Create a DataView object and set the RowFilter property by using a filter expression.
D. Create a DataView object and set the RowStateFilter property by using a filter expression.

Answer: C

Explanation:
You filter data by setting the RowFilter property. The RowFilter property takes a String that can evaluate to an expression to be used for selecting records. RowFilter is a property of the DataView object.

Option A:
The DataSet-Reset method resets the DataSet to its original state.

Option B:
RowFilter is not a property of the DataSet object.

Option D:
The RowStateFilter property is used to filter based on a version or state of a record. Filter expressions cannot be used on RowStateFilters. The RowStates are Added, CurrentRows, Deleted, ModifiedCurrent, ModifiedOriginal, None, OriginalRows, and Unchanged.

Question 43.
You develop a Windows-based application to manage business contacts. The application retrieves a list of contacts from a central database called XYZDB. The list of contacts is managed locally in a DataSet object named contactDataSet.

To set the criteria for retrieval, your user interface must enable users to type a city name into a TextBox control.

The list of contacts that match this name must then be displayed in a DataGrid control.

Which code segment should you use?

A. DataView contactDataSet = new DataView();
dv.Table = contactDataSet.Tables[0];
dv.RowFilter = TextBox1.Text;
DataGrid1.DataSource = dv;
B. DataView dv = new DataView();
dv.Table = contactDataSet.Tables[0];
dv.RowFilter =
String.Format("City = '{0}'", TextBox1.Text);
DataGrid1.DataSource = dv;
C. DataView contactDataSet = new DataView();
dv.Table = contactDataSet.Tables[0];
dv.Sort = TextBox1.Text;
DataGrid1.DataSource = dv;.
D. DataView dv = new DataView();
dv.Table = contactDataSet.Tables[0];
dv.Sort =
String.Format("City = '{0}'", TextBox1.Text);
DataGrid1.DataSource = dv;

Answer: B

Explanation:
To form a RowFilter value, specify the name of a column followed by an operator and a value to filter on. The value must be in quotes. Here we use construct the rowfilter with the = operator, string concatenation (&) and the TextBox1.Text property.

Option A:
We must use the = operator and construct an expression. We cannot just use a value.

Option C, D:
We want to filter the Dataset, not to sort it.

Question 44.
You develop a Windows-based application XYZ. XYZ uses a DataSet object that contains two DataTable objects. XYZ will display data from two data tables. One table contains customer information, which must be displayed in a data-bound ListBox control. The other table contains order information, which must be displayed in a DataGrid control.

You need to modify XYZ to enable the list box functionality.

What should you do?

A. Use the DataSet.Merge method.
B. Define primary keys for the Data Table objects.
C. Create a foreign key constraint on the DataSet object.
D. Add a DataRelation object to the Relations collection of the DataSet object.

Answer: D

Explanation:
You can use a DataRelation to retrieve parent and child rows. Related rows are retrieved by calling the GetChildRows or GetParentRow methods of a DataRow.

A DataRelation object represents a relationship between two columns of data in different tables.

The DataRelation objects of a particular DataSet are contained in the Relations property of the DataSet. A DataRelation is created by specifying the name of the DataRelation, the parent column, and the child column.

Option A:
The Merge method is used to merge two DataSet objects that have largely similar schemas. A merge does not meet the requirements of the scenario however..

Option B:
Primary keys would not help relating the DateTable objects.

Option C:
Foreign key constraints put restrictions on the data in two different tables. However, it would not help in retrieving related records.

Question 45.
You develop an application that enables users to enter and edit purchase order details. The application includes a Windows Form named DisplayXYZForm. The application uses a client-side DataSet object to manage data.

The DataSet object contains a Data Table object named XYZDetails. This object includes one column named Quantity and another named UnitPrice. For each item on a purchase order, your application must display a line item total in a DataGrid control on DisplayXYZForm. The line item is the product of Quantity times UnitPrice. Your database design does not allow you to store calculated values in the database.

You need to add code to your Form_Load procedure to calculate and display the line item total.

Which code segment should you use?

A.
```
DataColumn totalColumn =
        new DataColumn("Total",Type.GetType("System.Decimal"));
XYZDetails.Columns.Add(totalColumn;
totalColumn.Expression = "Quantity * UnitPrice";
```
B.
```
DataColumn totalColumn =
        NewDataColumn("Total", Type.GetType("System.Decimal"));
XYZDetails.Columns.Add(totalColumn;
TotalColumn.Equals("Quantity * UnitPrice");
```
C. `XYZDetails.DisplayExpression("Quantity * UnitPrice";`
D. `XYZDetails.DisplayExpression("quantityColumn * unitPriceColumn");`

Answer: A

Explanation:
We use the Expression property of the DataColumn object calculate the values in the column.

Option B:
The Equals method cannot be used in this way. The equals method is used to test if different objects are equal.

Option C, D:
The DisplayedExpression would be set to a string value, not a calculated value..

Question 46.

You develop an inventory management application called XYZManagement that will call a Microsoft SQL Server stored procedure named sp_GetDailyXYZSales. The stored procedure will run a query that returns your daily sales total as an output parameter.

This total will be displayed to users in a message box.

Your application uses a SqlCommand object to run sp_GetDailyXYZSales. You write the following code to call sp_GetDailyXYZSales:

```
SqlConnection cnn = new SqlConnection(myConnString);
SqlCommand cmd = new SqlCommand("sp_GetDaily XYZ Sales", cnn);
cmd.CommandType = CommandType.StoredProcedure;
SqlParameter prm = cmd.Parameters.Add("@ItemTotal",
        SqlDbType.Int);
prm.Direction = ParameterDirection.Output;
cnn.Open();
cmd.ExecuteNonQuery();
```

Now you must write additional code to access the output parameter. Which code segment should you use?

A. MessageBox.Show("Total is: " +
   cmd.Parameters["@Output"].Value.ToString());
B. MessageBox.Show(Total is: " +
   cmd.Parameters["@Output"].ToString());
C. MessageBox.Show("Total is: " +
   cmd.Parameters["@ItemTotal"].Value.ToString());
D. MessageBox.Show("Total is: " +
   cmd.Parameters["@ItemTotal"].ToString());

Answer: C

Explanation:
The @ItemTotal parameter is declared as an output parameter with SQL Server data type INT. We use the Value property of the SQLParameter class to retrieve the value of this parameter. We must also convert the INT value to a string value with the ToString method. We then supply this string to the MessageBox.Show method.

Option A, B:
The @ItemTotal parameter is the output parameter. Using @Output this way is incorrect. Output is a keyword and no variable named @Output has been declared.

Option D:
We must use the Value method to retrieve the value of the parameter..

Question 47.
You plan to use Visual Studio. NET to create a class named XYZBusinessRules, which will be used by all applications in your company. XYZBusinessRules defines business rules and performs calculations based on those rules. Other developers in your company must not be able to override the functions and subroutines defined in XYZBusinessRules with their own definitions.

Which two actions should you take to create BusinessRules? (Each correct answer presents part of the solution. Choose two)

A. Create a Windows control library project.
B. Create a class library project.

C. Create a Windows Service project.
D. Use the following code segment to define BusinessRules:
protected class XYZBusinessRules
E. Use the following code segment to define BusinessRules:
public new class XYZBusinessRules
F. Use the following code segment to define BusinessRules:
public sealed class XYZBusinessRules
G. Use the following code segment to define BusinessRules:
public abstract class XYZBusinessRules

Answer: B & F

Explanation:
You can use the Class Library template to quickly create reusable classes and components that can be shared with other projects.

A sealed class cannot be inherited. It is an error to use a sealed class as a base class. Use the sealed modifier in a class declaration to prevent accidental inheritance of the class.

Option A:
The Windows Control Library project template is used to create custom controls to use on Windows Forms.

Option C:
When you create a service, you can use a Visual Studio .NET project template called Windows Service.

However, we want to implement Business rules, not network services.

Option D:
A protected class will hide properties from external classes and thus keep this functionality encapsulated within the class. However, the class could still be overridden.

Option E:
This would let the other developers inherit this class and override it.

Option G:
The abstract modifier is used to indicate that a class is incomplete and that it is intended to be used only as a base class..

Question 48.
You plan to develop a customer information application CustomEX that uses a Microsoft SQL Server database. CustomEX will be used frequently by a large number of users. Your application code must obtain the fastest possible performance when accessing the database and retrieving large amounts of data. You must accomplish this goal with the minimum amount of code.

How should you design CustomEX?

A. Use classes in the System.Data.OleDb namespace.
B. Use classes in the System.Data.SqlClient namespace.
C. Use remoting to connect to the SQL Server computer.
D. Use interoperability to include legacy COM-based data access components.

Answer: B

Explanation:

The System.Data.SqlClient namespace is the SQL Server .NET Data Provider. It gives the best performance for accessing the Microsoft SQL Server database.

Option A:
The System.Data.OleDb namespace is the OLE DB .NET Data Provider.

Option C:
Microsoft .NET Remoting technology provides a framework for distributing objects across different process boundaries and machine boundaries. It would not the fastest solution.

Option D:
Legacy COM-based data access components would not be optimal for performance.

Question 49.
You develop a Windows-based application that connects to a Microsoft SQL Server database. Errors sometimes occur when users execute stored procedures in the database. You need to add error-handling code to your application to capture detailed information about any stored procedure that causes an error.

Which code segment should you use?

A.
```
try {
XYZConnection.Open();
}
catch (Exception e) {
      // Insert error-handling code.
}
```
B.
```
try {
XYZConnection.Open();
}
catch (SqlException e) {.
      // Insert error-handling code.
}
```
C.
```
try {
XYZConnection.Open();
}
catch (DataException e) {
       // Insert error-handling code.
}
```
D.
```
try {
XYZConnection.Open();
}
catch (DBConcurrencyException e) {
      // Insert error-handling code.
}
```

Answer: B

Explanation:
SqlException Class implements the exception that is thrown when SQL Server returns a warning or error.

Question 50.
You execute a query on your external Oracle database named XYZSalesDate by using an OleDbCommand object. The query uses the Average function to return a single value that

represents the average price of products in the inventory table. You want to optimize performance when you execute this query.
To execute this query from your ADO.NET code, you need to use a method of the OleDbCommand object. Which method should you use?

A. ExecuteNonQuery
B. ExecuteScalar
C. ToString
D. ExecuteReader

Answer: B

Explanation:
The ExecuteScalar method returns the first column of the first row of data returned by the command, no matter how many rows the command actually selects.

Option A:
.The ExecuteNonQuery method executes the data command, but returns no value..

Option C:
The command object has no ToString method.

Option D:
The ExecuteReader method returns a DataReader object that can iterate through a result set in a forward-only, read-only manner without involving a DataAdapter.