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Designing and Implementing Distributed Applications with Microsoft Visual Basic 6.0

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Q. 1

You are developing an *n*-tier application that has four layers. On the client computer, the application includes the user interface (UI) and business objects. On the server, the application includes data objects and the database. You want to use the GetData method to retrieve data directly from the database.

Where should the GetData method be located?

- A. UI forms
- B. client-side objects
- C. server-side objects
- D. in a stored procedure

Answer: C

Explanation: The GetData method belongs to the data services and the data services should be implemented as separate objects at the server.

Incorrect Answers:

- A:** In an *n*-tier design the User Interface is separated from the data services. A GetData method belongs to the data services and should not be integrated in the User Interface.
- B:** The data services, which the GetData method belongs to, is used at the server not at the client.
- D:** The GetData method should be used to retrieve information from the database, not to be included in the database. Stored procedures are stored inside the database.

Q. 2

You are developing a client/server application that must accommodate a Microsoft Windows-based interface and a Web interface. You want to ensure that the application supports security based on user roles.

In which two layers can you map permissions to roles to support this design? (Choose two)

- A. in the database
- B. in the client objects
- C. in the server objects
- D. in the user interface code

Answer: A, C

Explanation: Database servers like SQL Server support user authentication. Users can be assigned different rights and permissions to a database. Users can be grouped into SQL Server roles.

Windows NT/2000 server supports users. Windows users can be assigned different rights and permissions. Users can be moved into Windows 2000 groups. The groups can be used as roles.

Incorrect Answers:

- B:** The client object should handle permissions and rights.
- D:** The user interface code should not handle permissions and rights.

Q. 3
You are developing an n-tier application that has five layers. The layers are user interface (UI), database, object server, business object, and database manager. You want the UI layer to reflect the security that is being used in the other layers by locking and disabling controls as appropriate.

Which layer in the logical design provides security information to the UI?

- A. UI
- B. database
- C. object server
- D. business object
- E. database manager

Answer: D

Explanation: The business object should handle security of the User Interface.

The hierarchy would be:

User Interface<->Business object<->object server<->database manager<->database

Incorrect Answers:

- A:** The User Interface only administers the interactions with the user. It doesn't handle security.
- B:** The database stores the information that is used by the application. It doesn't handle security.
- C:** An object server, typically implemented by MTS (Microsoft Transaction Server), should not handle the security of the User Interface. It's a middle-tier between the business services and the data services.
- E:** Managing the database doesn't include security of the User Interface.

Q. 4
You are designing the properties, methods, and events for components in a new Visual Basic application. There is a requirement that a customer have an ID number.

How should you design the ID number?

- A. as an event
- B. as a method
- C. as a property
- D. as a component

Answer: C

Explanation: An ID number of a Customer is a piece of information and could be stored in a customer table or as a property to a Customer object.

Incorrect Answers:

- A:** You cannot store information as an event.
- B:** You cannot store information as a method.
- D:** You cannot store information as a component.

Q. 5

The address table in a database contains the following columns.

AddressID
StreetNumber
StreetName
City
Country
CreatedBy
CreateDate
Timestamp

Which three columns would most likely be properties of an address business object? (Choose three.)

- A. AddressID
- B. StreetName
- C. City
- D. CreatedBy
- E. CreateDate
- F. Timestamp

Answer: A, B, C

Explanation: An instance of an address object would most likely include the properties AddressID, StreetName, and City automatically. These properties contain information directly related to the address business object.

Incorrect Answers:

D: This is not vital information for an address object.

E: This is not vital information for an address object.

F: This is not vital information for an address object.

Q. 6

You are developing an n-tier application that has four layers. The layers are user interface (UI), business objects, data objects, and database. You want to pass data from the database to controls on a UI form.

What should you do?

- A. Bind the controls directly to the database.
- B. Populate the data objects with data from the database.
Populate the controls with values retrieved from the data objects.
- C. Populate the business objects with data from the database.
Populate the controls with values retrieved from the business objects.
- D. Populate the data objects with data from the database.
Populate the business objects with data from the data objects.
Populate the controls with values retried from the business objects.

Answer: D

Explanation: An n-tier application the data flows like this:

From user to database: User Interface (UI)->Business objects->Data objects->Database

From database to user (this is the correct answer): Database-> Data objects-> Business objects-> User Interface (UI)

Incorrect Answers:

- A:** This would a two-layer approach, not a four-layer approach, consisting only of the User Interface and the Database.
- B:** This would be a three-layered design, not a four-layered design. We must include the business objects as well.
- C:** This would be a three-layered design, not a four-layered design. We must include the data objects as well.

Q. 7

You are implementing a COM server that contains a component that will have a property named `statusid`. You want `statusid` to be read/write for code within the COM server, but read-only for code outside of the COM server. Which code fragment should you use to define the `statusID` property?

- A. `public property get statusID() as long`
- B. `friend property let statusID(byval lnewvalue as long)`
- C. `public property get statusID() as long`
- D. `private property let statusID(byval lnewvalue as long)`
- E. `friend property get statusid() as long`
- F. `private property let statusid(byval lnewvalue as long)`
- G. `friend property get statusid() as long`
- H. `public property let statusid(byval lnewvalue as long)`

Answer: A

Explanation: We must first declare the `statusID` property to be read-only in the public context. We do this by using the `PUBLIC` keyword and omitting the `LET` keyword in the definition of the property.

This is the line:

```
public property get statusID() as long
```

Then we declare it to be read/write within the project thus making it read/write in the resulting COM server. We use the `FRIEND` keyword to make `statusID` accessible throughout the project. Then we use the `LET` keyword to make it `READ/WRITE`. This is the second line:

```
friend property let statusID(byval lnewvalue as long)
```

Note: A Property procedure is a procedure that creates and manipulates properties for a class module. A Property procedure begins with a Property Let, Property Get, or Property Set statement and ends with an End Property statement.

Incorrect Answers:

- B:** The `private` keyword use in the second line, beginning with `private property`, specifies that no object can access the properties and methods of the class. The property would only be accessible from within the same component, but we want to accessible within the COM Server (= throughout the project). We cannot use the `private` keyword; instead we should use the `friend` keyword.
- C:** The first line, `friend property get statusid() as long`, declares the property as read-only within the project but we want it read/write.
The second line uses the `private` keyword making the read-write only within the same component.
- D:** The first line, `friend property get statusid() as long`, declares the property as read-only within the project but we want it read/write.

The second line, `public property let statusid(byval lnewvalue as long)`, declares the property as read/write publically, by omitting the `let` keyword, but we want it read-only.

Q. 8
You server-side component uses ADO to access a SQLserver database. You want to handle errors that occur in this component when the load methods access the data.

What should you do?

- A. Write code in the load method that displays a message box with the error information.
- B. Log the error to a text file configures the calling object to periodically check the file for new error.
- C. Fire an event to the object that called this component, write code to handle the error when the event is fired.
- D. Raise an error to the object that called this component, write code in the calling component that passes the error back to the user interface and handles the error.

Answer: D

Explanation: The server raises an error to calling object. Then add error-handling code to the business object so that the error caught and forwarded as a message to the user interface.

Incorrect Answers:

- A:** We should not issue messages to the user in the data services layer of the design. The User Interface should interact with the User.
- B:** Logging the error in Windows NT/2000 event log and then writing code that checks the event log is an awkward solution.
- C:** It would be awkward writing server side code that raises events on the client. The recommended solution is to raise a user-defined error.

Q. 9
You want to pass object data from a component that resides on a client computer to a component that resides on a server. You want to keep network traffic to a minimum.

Which three methods can you use to accomplish this? (Choose three)

- A. Pass the data in a variant array.
- B. Pass the data as a string buffer.
- C. Pass the data as a disconnected ADO recordset.
- D. Set each property of the server object to be equal to the equivalent property of the client object.

E. Write the data to the database. Then access the data from the server component.

Answer: A, B, C

Explanation: To minimize network traffic would pass the data as one separate object as a variant array (A) or as a string buffer (B). A disconnected recordset would cache the data locally at the client. Many updates could be collected in the cache and send simultaneously to the server, thus reducing network traffic (C).

Incorrect Answers:

D: This would generate more network traffic as each property would be transferred as a separate object.

E: Caching the data at the client and collect many changes before sending the data to the server would reduce network overhead traffic.

Note: A disconnected recordset is a recordset in a client cache that no longer has a live connection to the server. If something needs to be done with the original data source, such as updating data, the connection must be re-established.

Q. 10

You are developing a composite ActiveX control. The control consists of a calendar control named Cal1 and a TextBox control named txtDate. You want to map the Text property of the text box to the text property of the composite control. Which code fragment should you use?

- A.

```
Public Property Let Text (Byval strValue As String)
    TxtDate.text=strValue
End Property
Public Property Get Text() As String
    Text=txtdate.Text
End Property
```
- B.

```
Private Property Let Text (Byval strValue As String)
    TxtDate.text=strValue
End Property
Private Property Get Text() As String
    Text=txtdate.Text
End Property
```
- C.

```
Public Sub Text (Byval strValue As String)
    TxtDate.text=strValue
End sub
Public function Text() As String
```

```
Text=txtdate.Text  
End function
```

```
D. Private Sub Text (Byval strValue As String)  
    TxtDate.text=strValue  
End sub  
Private function Text() As String  
    Text=txtdate.Text  
End function
```

Answer: A

Explanation: We have a composite control and we want to map the text property the constituent control txtDate to the composite control. We must use the public keyword when we declare the property and the Let statement to set the value of the composite control.

Incorrect Answers:

- B:** The Private keyword should not be used. That what make the property available only within the control
- C:** We must declare a property not a procedure.
- D:** We must declare a property not a function.

Q. 11

You implement a COM component in an ActiveX DLL project. You want to use this component in a multithreaded client application. You also want to allow any thread in a client application to be able to create an instance of this component on the client's thread.

What must you do?

- A. Set the Instancing property to SingleUse.
- B. Set the Instancing property to MultiUse.
- C. Set the threading model to Apartment Threaded
- D. Set the thread pool size to be greater than 1.

Answer: C

Explanation: Since we want to allow any thread to create an instance of the component we set the threading model to Apartment Threaded.

Incorrect Answers:

- A:** Only .exe components, not .dll components, can use SingleUse.

- B:** Since we want to allow any thread to create an instance of the component we cannot use MultiUse. Instead we set the threading model to Apartment Threaded.
- D:** Only .exe components, not .dll components, can use thread pooling.

Q. 12

You want to implement a Name property for a creatable object. You want this property to be publicly read-only, but privately Read/write at run time.

Which code fragment should you place in your class module?

- A. Private sName
Public Property Get Name()
Name = sName
End Property
Private Property Let Name (Arg1 As String)
sName = Arg1
End Property
- B. Private sName
Public Property Get Name()
Name = sName
End Property
Public Property Let Name (Arg1 As String)
sName = Arg1
End Property
- C. Private sName
Friend Property Get Name()
Name = sName
End Property
Private Property Let Name (Arg1 As String)
sName = Arg1
End Property
- D. Private sName
Public Property Get Name()
Set Name = sName
End Property
Public Property Let Name (Arg1 As String)
sName = Arg1

End Property

Answer: A

Explanation: We want the public property to be read-only. So we omit the LET keyword when declaring the property public:

```
Public Property Get Name()
Name = sName
End Property
```

The property must be read-write used privately. We use the LET keyword when declaring the property private:

```
Private Property Let Name (Arg1 As String)
sName = Arg1
End Property
```

Incorrect Answers:

- B:** This is the wrong way around. The private declaration omits the LET keyword, making the property read-only in private. The public declaration includes the LET statement, making the property read-write in public.
- C:** We have two private declarations. We need one public and one private.
- D:** This is the wrong way around. The private declaration omits the LET keyword, making the property read-only in private. The public declaration includes the LET statement, making the property read-write in public.

Q. 13

You develop an ActiveX Document DLL project. Your UserDocument is designed to run inside Microsoft Internet Explorer. You want to retrieve a reference to the instance of Internet Explorer that is hosting your UserDocument.

Which code fragment should you use?

- A. Dim MyObj As WebBrowser
Set MyObj = Me
- B. Dim MyObj As WebBrowser
Set MyObj = UserDocument.hWnd
- C. Dim MyObj As WebBrowser
Set MyObj = UserDocument.Parent
- D. Dim MyObj As WebBrowser

Set MyObj = UserDocument.ActiveControl

Answer: C

Explanation: The parent property of a UserDocument is the instance of Internet Explorer in which the UserDocument resides.

Note: The base object of an ActiveX document, the UserDocument object resembles a standard Visual Basic Form object with some exceptions.

Incorrect Answers:

- A:** This would be an incorrect statement. MyObj is a WebBrowser but Me would reference the active UserDocument.
- B:** The hWnd Property indicates the window handle to the control. The Web browser object is not a Window.
- D:** The ActiveControl Property references the active control on an object. We want to reference Internet Explorer not a control in the document.

Q. 14

You implement a COM component named Bank. If a client application uses a Bank component in a transaction. You want all of the methods of the Bank component to be invoked within the transaction. If the Bank component is not used in a transaction, you want none of the methods to be invoked within the transaction. Which MTSTransactionMode property must you set for Bank?

- A. NoTransactions
- B. UsesTransaction
- C. NoAnMTSObject
- D. RequiresTransaction

Answer: B

Explanation: The UsesTransaction property indicates that the component's objects must execute within the scope of a transaction. When a new object is created, its object context inherits the transaction from the context of the client. If the client does not have a transaction, the new context is also created without one

Note: The MTSTransactionMode Property specifies the transactional behavior of a class. This property is only used by components running in the Microsoft Transaction Server.

Incorrect Answers:

- A:** The **NoTransactions** property does not support transactions.

- C:** The problem with the **RequiresTransaction** property is IF the client does not have a transaction, MTS automatically creates a new transaction for the object. But we don't want new transactions to be created.
- D:** The **RequiresNewTransaction** property makes MTS to automatically create a new transaction for the object.

Q. 15

You use the Visual Component Manager to publish a COM component. Other developers on your team have access Microsoft Repository database on which the component.

What can other developers do with the published component?

- A. Replace the component.
- B. View the component only.
- C. Find and reuse the component.
- D. Nothing. Other developers are not able to access the component.

Answer: C

Explanation: The Microsoft repository database is a tool with which to organize, find, and insert components into a Visual Studio project.

The Microsoft repository database maintains past versions of your instance data. These past versions are accessible through Microsoft Repository version management and workspace management interfaces. You can publish either the compiled component or its source code in Visual Component Manager. Templates used in the Project can also be stored in the Repository.

Incorrect Answers:

- A:** Than can use the component but they cannot replace it.
- B:** The can use it, not only view it.
- D:** The can view and use it.

Q. 16

You want to deploy a COM component by using Microsoft Transaction Server(MTS). Which two steps can you take to install this component in MTS? (Choose two)

- A. Use MTS Explorer to create an empty package. Then add the component to the Package.
- B. Use MTS Explorer to install a prebuilt package that contains the component.
- C. Add the component to the root of the Packages Installed folder in MTS Explorer.

D. Drag the package file that contains the component from Microsoft Windows NT explorer to the right pane of MTS Explorer

Answer: A, B

Explanation: We have a COM component that we want to deploy using MTS. MTS uses packages to deploy components within a process to the clients. MTS cannot directly deploy the COM component. We have two ways of solving this:

A: We first create a new package and then add the COM component to this package.

B: If we have a prebuilt package for the COM component we can add that package directly.

We are then able to deploy the package which includes the COM component, to the clients.

Reference: HOWTO: Create an Empty MTS Package to Add Components for ASP (Q223406)

Incorrect Answers:

C: A COM component cannot be added to a package by adding it to the root of the Packages Installed folder.

D: The component could be included in a package if was dragged into a package in MTS explorer. But just dragging to the right pane of MTS explorer wouldn't automatically add it to a package.

Q. 17

Your active document needs to persist its context when the UserDocument is closed. During which UserDocument event should you save this data?

A. Hide

B. Terminate

C. OLESetData

D. WriteProperties

Answer: D

Explanation:

The WriteProperties event occurs when an instance of an object is to be saved. This event signals to the object that the state of the object needs to be saved, so that the state can be restored later.

Note: Dont' be confused with write properties method.

Incorrect Answers:

A: The hide event could occur without data being saved.

- B:** The terminate event would occur occurs when all references are removed from memory. It would be too late to save data during this event.
- C:** The OLESetDATA event is a data method and doesn't occur when the document is closed.

Q. 18

You start a transaction uses Microsoft Transaction Server (MTS). One of the steps fails. What should you do?

- A. SetObjectContext = Nothing.
- B. Use the RollbackTrans method.
- C. Call the SetAbort method of the ObjectContext.
- D. Exit the current procedure without calling the SetComplete method

Answer: C

Explanation: We must ensure that the transaction is rolled back. We use the SetAbort method on the ObjectContext to roll back the transaction.

Note: The RollbackTrans method declares that the object has completed its work and can be deactivated on returning from the currently executing method, but that its transactional updates are in an inconsistent state or that an unrecoverable error occurred. This means that the transaction in which the object was executing must be aborted. If any object executing within a transaction returns to its client after calling SetAbort, the entire transaction is doomed to abort.

Incorrect Answers:

- A:** We must ensure that that transaction is rolled back.
- B:** The RollbackTrans method is an ADO method. We want to use method on a transaction context, not a method on an ADO object.
- D:** We must make sure the transaction is rolled back. We cannot just exit.

Q. 19

You want multiple applications to use the same instance component. Which project template should you use?

- A. ActiveX DLL
- B. ActiveX EXE
- C. Standard EXE
- D. ActiveX control

Answer: B

Explanation: We need a component that can act as a Component server. Component servers serve multiple applications.

If you need a component that can serve multiple applications you must use an ActiveX Exe component.

Incorrect Answers:

- A:** An ActiveX DLL wouldn't support multiple application using the same instance of the component.
- C:** A Standard EXE component cannot be used as a Component server.
- D:** An ActiveX control cannot be used as a Component server.

Q. 20

You are developing a three-tier Visual Basic application that uses Microsoft Transaction Sever(MTS). You want to implement a business Object named BanIcAccount that uses instances of other middle-tier components. BanIcAccount must enlist these middle-tier components. The current transaction when it instantiates them. Which code fragment should you use to instantiate these?

- A. `Dim objMyobject As New Bank.Account`
- B. `Dim objMyobject As Object`
`Set objMyobject=Createobject ("Bank.Account")`
- C. `Dim ctxObject AsObjectContext`
`Dim objAccount As Bank.Account`
`Set ctxObject=GetObjectContext ()`
`Set objAccount=ctxObject.CreateInstance ("Bank.Account")`
- D. `Dim objTxCtx As TransactionContext`
`Dim objAccount As Bank.Account`
`Set ObjTxCtx = CreateObject("TxCtx.TransactionContext")`
`Set objAccount = objTxCtx.CreateInstance("Bank.Account")`

Answer: C

Explanation: First we declare an MTS context object (`Dim ctxObject AsObjectContext`).

Then we declare an object variable (`Dim objAccount As Bank.Account`).

We set the MTS object variable to the current MTS object (`Set ctxObject=GetObjectContext ()`).

Then we use the CreateInstance method on the MTS object to instantiate the object variable (Set ctxObject=GetObjectContext ()).

Note: The ObjectContext Object provides access to the current object's context.

The GetObjectContext Function obtains a reference to the ObjectContext that's associated with the current MTS object.

The CreateInstance method of the ObjectContext object instantiates another MTS object.

Incorrect Answers:

A: We must instantiate the object.

B: We must use the CreateInstance method not the CreateObject method.

D: We should use an ObjectContext object, not a TransactionContext object.

The TransactionContext object is used by a client to compose the work of one or more MTS objects into a transaction.

Q. 21

You are using the role-based security of Microsoft Transaction Server (MTS) to limit access of an MTS package to specific Users. The MTS administrator assigned a Microsoft Windows NT Server domain group named Payroll Manger to the Manager role for this server Package.

You want to ensure that only users in the Payroll Manger group have access to your component. Which code fragment should you use?

- A. If objContext.IsSecurityEnabled Then
 'Allowaccess
 End
 'Do not allow access
 End If
- B. If objContext.IsCallerInRole("Manager") Then
 'Allowaccess
 Else
 'Do not allow access
 End If
- C. If objContext.IsSecurityEnabled Then
 If objContext.IsCallerInRole("Manager") Then
 'Allow access
 Else

```
'Do not allow access  
End If  
Else  
'Do not allow access  
End If
```

D. If objContext.IsCallerInRole("Payroll Manager") Then
if objContext.IsSecurityEnabled Then
'Allow access
Else
'Do not allow access
End If
Else
'Do not allow access
End if

Answer: C

Explanation: First we check if security is enabled on the contextObject. If it is enabled then we check if contextObject is a member of the Manager role.

Note: The IsSecurityEnabled Method indicates whether or not security is enabled for the current object. Syntax: objectcontext.IsSecurityEnabled

The IsCallerInRole determines whether the object's direct caller is a member of the specified role.

The ObjectContext Object provides access to the current object's context.

Incorrect Answers:

A: We must check the membership of the role as well.

B: First we must check if the security is enabled on the contextobject.

D: First we must check if the security is enabled on the contextobject, not if object is a member of a role.

Q. 22

You are developing a Visual Basic application that DLL project named MyComponent. You want MyComponent Registered on your system.

Which two steps can you take to accomplish this? (Choose two)

A. Compile the Mycomponent project.

- B. Add Mycomponent.dll to the System directory.
- C. Exectue MyComponent.dll/Regserver from the command line.
- D. Exectue Regsvr32.exe MyComponent.dll from the command line.
- E. Exectue Regsvr32.exe/n Mycomponent.exe from the command line.

Answer: A, D

Explanation: First we produce the .dll file by compiling the project. Then we can use the regsvr32.exe utility to register the dll component in the registry.

Note: Ordinarily the components get registered when they are installed. The regsvr32 utility can be used to manually register dll components in the registry.

Reference: Explanation of Regsvr32 Usage and Error Messages (Q249873)

Incorrect Answers:

- B:** We must produce the .dll file first.
Copying the .dll file to the system directory wouldn't install it.
- C:** This is an incorrect syntax for registering dll files. Only .exe files can be registered with the syntax: MyComponnet /Regserver.
- E:** The /n switch should not be used. The /n switch is used do not call DllRegisterServer and this option must be in conjunction with /i switch.

Q. 23

You are developing a Visual Basic application that uses a COM component named MyExternalObject. You want to ensure that early binding is used when calling the methods of MyExternalObject.

Which two code fragments can you use? (Choose two)

- A. Dim MyObj As MyExternalobject
Set MyObj = New MyExternalobject
- B. Dim Myobj As MyExternalobject
Set Myobj = GetObject(“”, “Myproj .MyExternalobject”)
- C. Dim Myobj As Object
Set Myobj = Getobject(“Myproj.MyExternalobject”)
- D. Dim Myobj As Variant
Set MyObj = New MyExternalobject

Answer: A, B

Explanation:

First we declare the object variable to the proper object type MyExternalobject.

A: Then we can use the **New** keyword to create a new instance of the object.

B: Or we can use the GetObject function with an empty pathname string.

Note: The GetObject Function returns a reference to an object provided by an ActiveX component. Syntax:

GetObject([pathname] [, class])

If pathname is a zero-length string (""), GetObject returns a new object instance of the specified type. If the pathname argument is omitted, GetObject returns a currently active object of the specified type. If no object of the specified type exists, an error occurs.

Incorrect Answers:

C: If you use the GetObject function without providing the pathname GetObject returns a currently active object of the specified type. But we want a fresh instance that binds early not a currently active object.

D: We cannot define the object as Variant. We must declare it as MyExternalobject.

Q. 24

You are given the conceptual design of a Visual Basic application for a real-estate company. The design includes a list of valid home Types, such as rambler, two-story, and split-level. The list will change over time. Home types are used only for describing the homes.

Where should you store the list of valid home types?

A. In a database table.

B. In a business object.

C. In a data services object.

D. In a list of user-defined types.

Answer: A

Explanation: The base information of the application should be stored in database tables.

Incorrect Answers:

B: Business objects handles the business rules the application supports. Business objects are not used save information.

- C: Data services objects handles the data manipulation tasks. They provide data, but they don't store data in themselves.
- D: User-defined types are not used to store basic information that is used in the application.

Q. 25

Three objects identified in the logical model of your Visual Basic Application contain Save, Retrieve, Update, and Delete Methods. Each of these methods is coded uniquely, depending on the class the method is in.

You want to design the physical classes so that the duplication of code is minimized. What should you do?

- A. Create the common methods in one of the classes. Then copy and paste these methods to the other classes.
- B. Fire events from each class that can be intercepted at the user interface to call methods that are stored in a common module.
- C. Declare the common methods in one of the classes by using Friend keyword. Then call these methods from the other classes.
- D. Construct a template class that contains the common method. Use the Implements keyword in the other classes to cause them to contain these Methods.

Answer: D

Explanation: The Implements statement can be used to make a set of declarations available to multiple classes.

Note: The Implements Statement specifies an interface or class that will be implemented in the class module in which it appears.

Incorrect Answers:

- A: Manually copying code would not minimize the duplication code.
- B: This is a very complicated approach and would require non-trivial program code to catch the events.
- C: Declaring a procedure with the Friend keyword would make it available to other classes. However, it would not be coded to handle data from other classes.

Note: The friend Keyword Modifies the definition of a procedure in a form module or class module to make the procedure callable from modules that are outside the class, but part of the project within which the class is defined.

Q. 26

You want to use the package and deployment wizard to create customized scripts for your current project. Which two tasks can you accomplish by using the scripts? (Choose two)

- A. Generate a project template for similar applications
- B. Package and deploy your application in silent mode
- C. Dynamically generate the HTML equivalents of the forms in your application for deployment on a web server
- D. Retain selections so that you can apply them to future sessions in the package and deployment wizard for the same project

Answer: B, D

Explanation:

- B:** Using scripts, you may package and deploy your project files in silent mode. In silent mode, the wizard runs without your having to attend it to make choices and move through screens. The wizard packages and deploys your project using the settings contained in a script.
- D:** The script contains the selections that was made and can later be reused and be applied to future sessions for the same project.

Incorrect Answers:

- A:** The package and deployment wizard cannot be used to generate a project template.
- C:** The package and deployment wizard isn't used to generate HTML documents from your forms.

Q. 27

You want to allow a user access to a COM server. The name of the user account is johnT. JonnT is logged on to a client computer. You run the DCOMCNFG utility on the computer where the COM server is registered.

Which two steps must you take to configure the permission for the COM server on the computer where the COM server is installed? (Choose two)

- A. grant the read permission to the system account
- B. grant the allow access permission to the system account
- C. grant the allow launch permission to the system account
- D. grant the allow access permission to the johnT domain user account
- E. grant the allow launch permission to the johnT domain user account

Answer: D, E

Explanation: We to allow the user account johnT access to a COM server. We use the DCOMCNFG utility to configure access permission and launch permission to the domain

Note: DCOMCNFG.EXE (DCOM Config) is a utility that can be used to secure distributed COM (DCOM) objects that have been created.

There are three individual application permissions that can be set: Access Permissions, launch Permissions, and Configuration Permissions.

Reference:

INFO: Using DCOM Config (DCOMCNFG.EXE) on Windows NT (Q176799).

HOWTO: Use DCOM Config (DCOMCNFG.EXE) with Windows 95 (Q182248)

Incorrect Answers:

- A: You don't configure read permission to permit access to a COM server.
We should configure permission for a user account and not the system account.
- B: We should configure permission for a user account and not the system account.
- C: We should configure permission for a user account and not the system account.

Q. 28

You develop an ActiveX EXE project named sales. Sales will be a DCOM server application. You want to register sales on the server computer.

What should you do?

- A. execute sales.exe /regserver
- B. execute regedit sales.exe
- C. execute regsvr32 sales.exe
- D. execute regsvr32 /n sales.exe

Answer: A

Explanation: exe components can be registered with the syntax: MyComponent /Regserver or with the syntax: execute MyComponent /Regserver

Note: Ordinarily the components get registered when they are installed. They can be manually registered as well as in this scenario.

Incorrect Answers:

- B:** The regedit utility is used to search, view and edit the registry. Regedit is not used to register program components.
- C:** Regsrv32 is used to register .dll and .com components. It cannot be used to register .exe components.
- D:** Regsrv32 is used to register .dll and .com components. It cannot be used to register .exe components. The /n switch is used incorrectly.

Q. 29

You are planning a network-based deployment of a distributed application. You want the application to meet the following requirements:

- **Prevent users from viewing the code**
- **Run on any browser over the internet**
- **Concentrate processing on the server**
- **Allow the developers to use Visual Basic debugging tools**
- **Take advantage of the developer's knowledge of Visual Basic while still producing a web-based application.**

You take the following action:

- **You implement a DHTML application by using the DHTML template.**

Which result or results does this action produce? (Choose all apply)

- A. Prevents user from viewing the code
- B. Runs on any browser over the internet
- C. Concentrates processing on the server
- D. Allow the developers to use VB debugging tools
- E. Take advantage of the developer's knowledge of VB while still producing a web-based application

Answer: A, D, E

Explanation:

- A:** The Visual Basic code is compiled into a DHTML application. The source code isn't viewable when running the DHTML application in the web browsers.
- D:** The developers can use all the debugging facilities available in the Visual Basic Development Environment.
- E:** The developers will use Visual Basic to develop the DHTML application.

Incorrect Answers:

- B:** DHTML application cannot be run on any web browser.

C: DHTML applications are run at the client not at the server.

Q. 30

You want to create a setup program that installs a distributed application, registers the COM components, and allows users to uninstall the application. You also want to allow users to be able to install the application from a web page.

Which tool should you load first to create the setup program?

- A. Application wizard
- B. Wizard manager add-in
- C. Visual component manager
- D. Package and deployment wizard

Answer: D

Explanation: The Package and Deployment Wizard is a tool that helps you create installation packages for your Visual Basic applications and install them to your end-users' computers. The packages can be made so that they are installed from a web page.

Incorrect Answers:

- A:** The Application Wizard helps us creating a new project. It isn't used to create installation packages for applications.
- B:** The Wizard Manager add-in is used to create Wizards, not to create installation packages.
- C:** The Visual Component Manager can publish components to a repository-based catalog, where they can easily be located, inspected, retrieved, and reused.

Q. 31

You are developing a Visual Basic application. You want to use a third-party control. What must you do to add the control to your toolbox?

- A. Register the control by using regsvr32.dll
- B. Use the references dialog box from the project menu
- C. Use the components dialog box from the project menu
- D. Use the add user control dialog box from the project menu

Answer: C

Explanation: In order to add a third-party control to toolbox you must select the use the **Components** command on the **Project** menu. In the components dialog box you choose **Browse** and browse to the third-party component.

Incorrect Answers:

- A:** Regsrv32.exe can be used to register controls, for example .dll and .com components, in Windows. There is no utility called regsv32.dll.
- B:** The references dialog box allows you to select another application's objects that you want available in your code by setting a reference to that application's object library. However, in this scenario we want to sue a third-party control not a component from another application.
- D:** The add user control dialog would enable you to add the third-party component to the application; it would not appear in the toolbox though.

Q. 32

You develop an ActiveX Document DLL project that contains two UserDocuments. You want to allow the user to navigate between these UserDocuments.

What should you do?

- A. Use the Move method of the Hyperlink object.
- B. Use the Navigate method of the Browser object.
- C. Use the GoForward method of the Browser object.
- D. Use the NavigateTo method of the Hyperlink object.

Answer: D

Explanation: The NavigateTo Method executes a hyperlink jump to the specified target. The NavigateTo Method can be used to allow users two navigate between two UserDocuments.

Incorrect Answers:

- A:** The Hyperlink object has the methods GoBack, GoForward, and Navigate. It has not the method Move though.
- B:** The Hyperlink object has a NavigateTo method but no Navigate method.
- C:** The GoForward Method executes a hyperlink jump forward in the history list. It would not allow users to navigate between two UserDocuments.

Q. 33

Your Visual Basic application has more than one webclass. You want to write code that will find out the correct URL to navigate to at run time.

Which method should you use?

- A. URLFor
- B. Location.
- C. Hyperlink
- D. URLEncode.

Answer: A

Explanation: The URLFor Method is used to specify the uniform resource locator (URL) that the system needs to reference a webclass's HTML template or WebItem in the browser.

Incorrect Answers:

- B:** There is no location method that can use for URLs.
- C:** Hyperlink is property, not a method. Hyperlink Property returns a reference to the Hyperlink object.
- D:** THE URLEncode method cannot be used to navigate to URLs. The URLEncode method applies URL encoding rules, including escape characters, to a specified string. It is used to transforms text string so it follows the correct standard for URLs.

Q. 34

You develop an ActiveX document DLL project that contains a UserDocument named orders. You want to give users the ability to view this document in a browser. You do this by providing a hyperlink from another HTML page to allow the user to navigate to the document.

To which file should your link refer?

- A. orders.dll
- B. orders.dob
- C. orders.dox
- D. orders.vbd

Answer: D

Explanation: Active X Documents have the extension .VBD.

Incorrect Answers:

- A: DLL files are Dynamic Link Library files.
- B: User Document form files have the .dob file extension.
- C: User Document binary form files have the .dox file extension.

Q. 35

You create a custom pop-up menu named mnupopup. Which line of code can you use to display the pop-up menu?

- A. mnupopup.show
- B. Popupmenu (mnupopup)
- C. Me.Popupmenu mnupopup
- D. Me. Popupmenu (mnupopup)

Answer: C

Explanation: The PopupMenu Method displays a pop-up menu on Form
Simple syntax: object.PopupMenu *menuname*.

In this scenario we use the Me object, the current form, with the code Me.Popupmenu mnupopup to display the pop-up menu.

Incorrect Answers:

- A: Pop-up menus don't have the show method.
- B: We must make a reference to the form.
Incorrect syntax. () shouldn't be use around the *menuname*.
- D: Incorrect syntax. () shouldn't be use around the *menuname*.

Q. 36

You want to use data environment designer to place controls and labels on a form. The controls and labels will be bound to the result set of a stored procedure that already exists in the database.

Which two steps must you take to accomplish this (choose two)

- A. Add a connection to the data environment
- B. Add a command to the data environment that references the stored procedure. Then drag the command from the data environment to the form
- C. Create a new stored procedure by using the database designer. Then drag the stored procedure from the data environment to the form

D. Map each field of the result set to a specific type of control by using the field mapping tab of the options dialog box for the command.

Answer: A, B

Explanation:

The Data Environment provides a graphical way to connect to a data source.

To use a Data Environment the following steps can be used:

1. Add a Data Environment object to your project.
2. Configure the Data Environment to a data source.
3. Create a connection object. (A=1, 2, 3)
4. Create command object that retrieves the data. (B=4, 5)
5. Configure the command object to retrieve data.

Incorrect Answers:

C: We can use the existing stored procedure. There is no need to create a new one.

D: We can simply use the drag and drop technique to drag a command from the Data Environment to the form.

Q. 37

You are developing a client/server application. You want to minimize the development time necessary to connect data-bound controls to a SQLSERVER database.

Which data-access method should you use?

- A. ADO connected directly to SQL SERVER
- B. RDO connected directly to SQL SERVER
- C. DAO connected to SQL SERVER via the jet engine
- D. ADO connected to SQL SERVER via data-aware classes

Answer: A

Explanation: By simply use ADO and connect directly to SQL Server development time would be minimized.

Incorrect Answers:

B: RDO should only be used for programs that require backward compatibility.

C: DAO should only be used for programs that require backward compatibility.

D: Creating a data-aware class would not minimize development time.

Q. 38

You are developing a client application uses a COM named CEmployee. You want to store a reference to the component in a variable named CurEmployee. You want to ensure that early binding is used when calling the methods of CEmployee.

Which two code fragments can you use? (Choose two)

- A. Dim CurEmployee As New CEmployee
- B. Dim CurEmployee As CEmployee
Set CurEmployee = New CEmployee
- C. Dim CurEmployee As Object
Set CurEmployee = New CEmployee
- D. Dim CurEmployee As Object
Dim MycurEmployee As New CEmployee
Set CurEmployee = MycurEmployee

Answer: A, B

Explanation: First we declare the object variable to the proper class CEmployee. We then are then able to use the NEW keyword either directly in the DIM statement (A) or in a SET statement. The object variable will immediately be bound an instance of the object class, that is we have an early binding.

Note: We could also have used the GetObject function:

```
Dim CurEmployee As CEmployee
Set CurEmployee = GetObject("",CEmployee).
```

Incorrect Answers:

- C:** We must declare the object variable to be in the CEmployee class, not in the Object class.
- D:** We must declare the object variable to be in the CEmployee class, not in the Object class.

Q. 39

You want to use the callback procedure of the Enumwindows function to enumerate all of the open windows. Where should you place the code for the callback function?

- A. in a form module

- B. in a class module
- C. in a standard module
- D. in a separate DLL

Answer: C

Explanation: We want to use the callback procedure of the **Enumwindows** function. Any code you write to use a callback procedure from Visual Basic must be placed in a standard .BAS module. You can't put the code in a class module, attach it to a form, or put it in a separate DLL.

Note 1: The EnumWindows function enumerates all top-level windows on the screen.

The Enumwindows function belongs to the Win32 API. The API (Application Programmers Interface) is a set of predefined Windows functions used to control the appearance and behaviour of every Windows element.

Note 2: A callback function allows your program to build its own routines to handle events generated by the API functions themselves. When using EnumWindows to enumerate all windows currently open, the API function obtains a handle to each window it finds. EnumWindows itself will call the program-defined callback function you specify and give it the handles, one at a time, that it finds.

Reference: HOWTO: Enumerate Windows Using the WIN32 API (Q183009)

Incorrect Answers:

- A:** Code in a form module would not be able use a callback procedure. A standard module must be used.
- B:** Code in a class module would not be able use a callback procedure. A standard module must be used.
- D:** Code in a separate DLL would not be able use a callback procedure. A standard module must be used.

Q. 40

You are implementing an online help file in a distributed application. You create customized help messages. You now want to reuse these same messages to provide assistance when a user makes an error. Which two err object attributes must you use to do this with the fewest lines of code? (Choose two)

- A. Err.number
- B. err.source
- C. err.helpfile
- D. err.description
- E. err.helpcontext

Answer: C, E

Explanation: When a Microsoft Windows Help file is specified in HelpFile, the HelpContext property is used to automatically display the Help topic it identifies.

Note:The HelpContext Property of the Err Object returns or sets a context ID for a topic in a Microsoft Windows Help file.

Syntax: err.HelpContext [= ContextID]

The HelpContextID Property returns or sets an associated context number for an object. HelpContextID is used to provide context-sensitive Help for your application.

Incorrect Answers:

- A:** The number of the error is not needed to use a help file.
- B:** The reason, or the source, of the error is not needed to use a help file.
- D:** The description of the error is not needed to use a help file.

Q. 41

You are developing a Visual Basic application that will show developers the order in which third-party control events are fired. You want the application to support all type of third-party controls. Which line of code should you use to declare the control reference?

- A. private withevents testcontrol as OLE
- B. private withevents testcontrol as UserControl
- C. private withevents testcontrol as UserDocument
- D. private withevents testcontrol as VBcontrolExtender

Answer: D

Explanation: We must use the generic control type of VBcontrolExtender to allow all type of third-party controls.

Note: The VBcontrolExtender object is primarily used when dynamically adding a control to the **Controls** collection using the **Add** method. The VBcontrolExtender object is particularly useful for this purpose because it provides a generic set of properties, events, and methods to the developer.

Incorrect Answers:

- A:** We should not restrict the control type to only OLE.
- B:** The UserControl object is the base object used to create an ActiveX control. But we should not restrict the control type to only ActiveX.
- C:** We should not restrict the control type to only UserDocuments.

Q. 42

You are configuring your Microsoft Transaction Server (MTS) computer. You want to prevent component configurations from being modified on one of your packages.

What should you do?

- A. Set the Disable Changes option for the package.
- B. Set the file settings for the components to read-only.
- C. Set the programmable entry in the registry for the components
- D. Set the component to use default access permissions by using the DCOMCNFG utility

Answer: A

Explanation: A MTS package can be locked. A locked package cannot be modified. To lock a package open the package properties and select the **Disable Changes** option.

Incorrect Answers:

- B:** File permissions are not used to prevent component modification in a package.
- C:** You don't use the registry to secure a package. Simply select the **Disable Changes** option in package properties.
- D:** The DCOMCNFG.EXE (DCOM Config) is a utility that can be used to secure distributed COM (DCOM) objects that have been created. It cannot, however be used to secure MTS packages.

Q. 43

You develop a Microsoft Transaction Server (MTS) component install the component with an MTS package. You want to use component in your Visual Basic project. You also want to early binding to be used when calling the methods of the component.

What should you do to use the component?

- A. Add a project reference to MTS.
- B. Add a project reference to ADO.
- C. Add a project reference to MTS component.
- D. Add the project of the component to your Visual Basic group.

Answer: C

Explanation: We must add a project reference to the MTS component, or to be more specific we must add project reference to the Microsoft Transaction Server Type Library.

Reference:

HOWTO: Create a 3-Tier Application Using VB, MTS, and SQL Server (Q186342)

Technet: Compiling Components in Visual Basic for ASP

Incorrect Answers:

- A:** A project reference should be added to the MTS component not to the MTS itself.
- B:** ADO is used to manage and use connections to data sources. MTS is a middle-tier layer, not a data source.
- D:** We must add a Project Reference, not the Project itself – that would not be possible, to your visual basic project.

Q. 44

You are planning a new distributed application. The customer requires a thin-client application. The application must be able to run on multiple platforms.

You want to ensure that the application requires as little client installation as possible and requires little or no reinstallation when the application is upgraded.

Which server component must you install?

- A. Microsoft SNA Server.
- B. Microsoft SQL Server.
- C. Microsoft Transaction Server.
- D. Microsoft Message Queue Server.
- E. Microsoft Internet Information Server.

Answer: E

Explanation: The Microsoft Internet Information Server (IIS) can host a web site where the application is distributed. Client could connect to the site through their web browsers independent of the platform of their computer. Updates can applied centrally at the web site and no reinstallations would be required at the clients.

Incorrect Answers:

- A:** Microsoft SNA server is used to get interoperability between Windows computers and IBM mainframes computers.

B: Front ends for Microsoft SQL Server could for example a Visual Basic stand alone application, a Visual Basic DHTML application, or Microsoft Access. These don't meet the requirements of this scenario however:

- A Visual Basic stand alone application would require reinstallation every time the application was upgraded. It would not be platform independent since it requires the Windows platform.
- A Visual Basic DHTML application is platform independent since it runs within a browser environment, but the application would require reinstallation every time it is upgraded.
- A Microsoft Access database requires the Windows platform, and the database would have to be replaced with every application upgrade.

C: A MTS is used a middle-tier in a layer application solution. It cannot by itself implement the application.

D: The Microsoft Message Queue Server is a Message Oriented Middleware that was designed with just one purpose in mind fast, reliable asynchronous electronic communication. It cannot be used to implement an application.

Q. 45

You are establishing the environment for source-code version control of a new Visual Basic application. You are using Microsoft Visual SourceSafe 6.0. You want to store only code that can be compiled. What should the developers do to ensure that code in the source tree is valid?

- A. Share the code before check in.
- B. Branch the code before check in.
- C. Label the code as compiled before check in.
- D. Manually compile the code before check in.

Answer: D

Explanation: If we want store only code that can be compiled we must manually compile the code, and only after a successful compilation check-in the code.

Incorrect Answers:

- A:** Sharing the code wouldn't ensure that it would be able to compile it.
- B:** Branching the code wouldn't ensure that it would be able to compile it.
- C:** Labeling the code wouldn't ensure that it would be able to compile it.

Q. 46

You are installing Microsoft Transaction Server(MTS) .The server will be used for supporting database transactions across multiple servers.

Which component must you install accomplish this?

- A. ODBC
- B. OLEDB
- C. Microsoft Internet Information Server
- D. Microsoft Distributed Transaction Coordinator

Answer: D

Explanation: The Microsoft Distributed Transaction Coordinator is a system service that coordinates transactions that span multiple resource managers.

Incorrect Answers:

- A:** ODBC is a database driver. It doesn't handle transactions.
- B:** OLEDB is a database driver. It doesn't handle transactions.
- C:** Microsoft Internet Information Server can be used for setting up a Web server or a FTP server, but it wouldn't be able to handle transactions.

Q. 47

You want to configure your Microsoft Windows 95 client computer to run a Visual Basic application that accesses a Microsoft Transaction Server (MTS) component on a remote server. Which two steps must you complete to configure your client computers? (choose two)

- A. Install MTS.
- B. Install the application's executable file.
- C. Install DCOM support for Windows 95.
- D. Install Remote Registry service for Windows 95
- E. Install Microsoft Distributed Transaction Coordinator.

Answer: B, C

Explanation: The application must be installed, and in order to access remote services from within the application DCOM must be installed.

Note: DCOM (distributed Component Object Model) extends COM to support communication among objects on different computers-on a LAN, a WAN, or over the Internet.

Incorrect Answers:

- A:** MTS only needs to be installed at the server not at the clients.
- D:** The Remote Registry service for Windows 95 let you administer file and print sharing and edit the registry remotely. It isn't used for MTS.
Reference: How to Install Remote Administration Services (Q141460)
- E:** The Distributed Transaction Coordinator (DTC) service is used by the MTS for transaction coordination. Clients don't need DTC to access MTS.

Q. 48

You are releasing an update of your Visual Basic application Plan to build a new package by using the Package and Deployment Wizard. You want to ensure that your application is updated when the setup program is executed.

What should you do?

- A. Increment the version number by using the Package and Deployment Wizard.
- B. Increment the version number of the project before rebuilding your application.
- C. Enable the Upgrade ActiveX Controls option for the project before rebuilding.
- D. Set the Command Line Arguments box for the project to Update before Rebuilding your application.

Answer: B

Explanation: The version number of the Visual Basic project must incremented in order to enforce that deployed package to replace the old versions of files when it is installed.

Note: You choose the **Project Properties** command from the **Project** menu, select the **Make** tab, and then change the Version number.

Incorrect Answers:

- A:** The version number should be incremented in the project, not in the Package and Deployment Wizard.
- C:** Active X controls upgrading would not solve this problem.
- D:** You cannot use command line arguments to set the version of the project.

Q. 49

Your group implements a server-side COM component. The Component returns invoice information to components written by other groups within your company.

Other groups report that sometimes their components “freeze” when attempting to retrieve an invoice. You find that when this happens, a message box appears on the server that states “Invoice does not exists.” This message box is coming from an error handler in your invoice class.

The Invoice class contains the following code fragment.

```
Select Case Err.Number
Case conNoRecord 'Record does not exist
MsgBox “Invoice does not exist”, vbOKOnly, _
“Invoice Error”
Resume ExitHere
```

Which code fragment should you use to replace this code fragment to avoid freezing the client components?

- A. Select Case Err.Number
 Case conNoRecord 'Record does not exist
 Err.Raise conErrNoRecord, conServerName, _
 “Invoice does not exist”
- B. Select Case Err.Number
 Case conNoRecord 'Record does not exist
 LogEvent “Invoice does not exist”_
 vbLogEventTypeError
 Resume ExitHere
- C. Select Case Err.Number
 Case conNoRecord 'Record does not exist
 Resume
- D. Select Case Err.Number
 Case conNoRecord 'Record does not exist
 Set Me = Nothing
 Resume ExitHere

Answer: A

Explanation: Currently the COM Server use a simply message box statement handles the error, which is a very primitive solution. Instead an error should be raised. The client’s error handler would be able to catch and handle the error in a more appropriate way.

Incorrect Answers:

- B:** Logging the event is a good idea, but an error should also be raised.
- C:** Simply ignoring the error is not a good idea.
- D:** Resetting the object could be a good step, but the user should be noticed about the error in some way.

Q. 50

You deploy a COM EXE server that executes in unattended mode. You want to track any errors that occur while the server is Executing.

What should you do?

- A. Use the MsgBox statement to report errors to the user.
- B. Use a modal form to display the status of errors to the user.
- C. Use the Print method of the Debug object to report errors to the Immediate window.
- D. Provide appropriate values for the LogPath property and LogMode property of the App object.

Answer: D

Explanation: By configuring the LogPath and LogMode properties the COM EXE serve will be able to log messages in the Windows NT/2000 event log.

Note: The LogPath Property returns the path and filename of the file used to capture output from the LogEvent method. This property is read-only and can only used at run time. The LogMode property determines how logging will be carried out. If no LogPath is set, the LogEvent method writes to the NT LogEvent file.

The LogMode property returns a value which determines how logging (through the LogEvent method) will be carried out.

The App object is a global object accessed with the App keyword. It determines or specifies information about the application.

Incorrect Answers:

- A:** When the DCOM server is set to run in the unattended mode the MsgBox() API has no effect.
- B:** A DCOM EXE server in unattended would not be able to output any information in any form.
- C:** We would not be able to receive messages from the COM EXE server in the immediate window. When the DCOM server is set to run in the unattended mode the MsgBox() API has no effect.

Q. 51

You attempt to fix a bug in an ActiveX control. You notice that your fix causes the new version of the control to be incompatible with the previous version.

How should you prevent existing applications from using the new version?

- A. Set the **Version Compatibility** option to No Compatibility
- B. Set the **Version Compatibility** option to **Binary Compatibility**
- C. Set the **Version Compatibility** option to **Project Compatibility**
- D. Set the **RunAs** subkey in the registry for the previous version of the control to Point to the class ID of the new version.

Answer: A

Explanation: We must create a new interface, new Interface IDs and Class IDs, every time we build or recompile the project. This is accomplished by using the No Compatibility option which forces the generating of a new. This will prevent the old application to use the interface of the new application.

Reference: HOWTO: Use Project and Binary Compatibility (Q161137)

Incorrect Answers:

- B:** The **Binary Compatibility** option preserves the class and interface IDs from the previous versions. This enables the new version of the application to use the old interface and vice versa. We want the opposite. **Binary Compatibility** is used when you want to maintain compatibility with older, released versions of components.
- C:** The Project Compatibility is for maintaining compatibility during testing. But we don't compatibility.
- D:** You shouldn't use the registry to configure compability of projects.

Q. 52

You deploy a distributed application that requires dynamic load Balancing. Dynamic load balancing at connection time is not sufficient since client applications do not typically disconnect for Long periods of time. You want load balancing to occur on a method-by-method Call basis.

What should you do?

- A. Use the DCQMCNFG utility to configure DCOM to use dynamic load balancing with data-dependent routing.
- B. Develop both the client applications and the server component as entirely stateless entities.
- C. Develop custom interfaces for the client application and the server component so that the underlying RPC binding handle can be rebound to a different endpoint without loss of any state information.
- D. Develop a set of intermediate COM component for the client applications to connect to. When a client requests is received, the implementations of these components will use an appropriate load-balancing algorithm to redirect the request to a different server.

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Answer: D

Explanation: There are basically two types of load balancing schemes available using DCOM: static load balancing and dynamic load balancing. Static load balancing is to permanently assign certain users to certain servers running the same application. These assignments do not change with conditions on the network or other factors. Static load balancing requires manual administration from an administrator.

Dynamical load balancing is automatic and the choice where to run processes are taking dynamically at run time. One way of implementing dynamic load balancing in DCOM would be the procedure described in D.

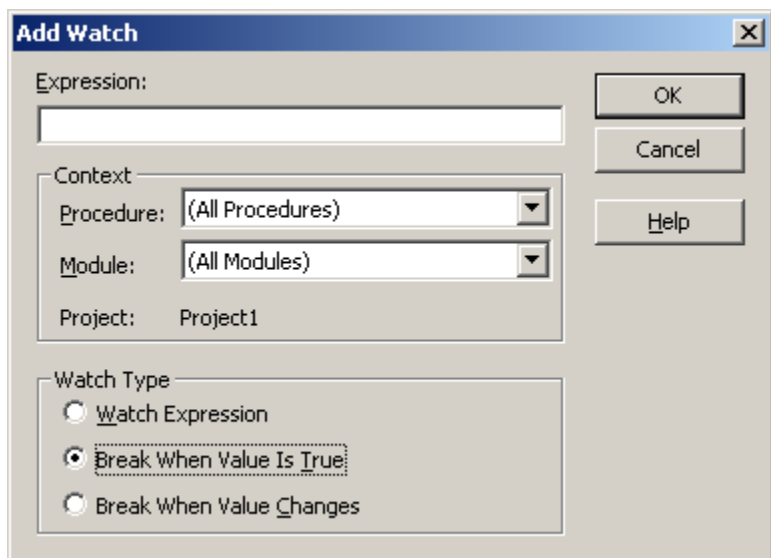
Reference: Technet: DCOM Technical overview

Incorrect Answers:

- A:** DCOMCNFG.EXE (DCOM Config) is a utility that can be used to secure distributed COM (DCOM) objects that have been created. It cannot be used for load balancing however.
- B:** An implementation of Load Balancing would, most certainly, require more than stateless entities which are simplistic in nature.
- C:** Implementing load balancing would require more than changing the client and server interfaces.

Q. 53

You are debugging application. You want to enter break on the next line of code when the user types Stop in a textbox Named Text1. The Add Watch dialog box is shown in the exhibit. (Click the Exhibit button)



Which value should you enter in the Expression box do this?

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- A. Form1.Text1.Text is "Stop"
- B. Form1.Text1.Text = "Stop"
- C. Text1.Text is "Stop"
- D. Text1.Text = "Stop"

Answer: B

Explanation: By examining the exhibit we see that Context is set to All Modules. Therefore we should specify on which form the textbox is located.

Incorrect Answers:

- A:** The expression is syntactically incorrect. The keyword **is** should be replaced with =.
- C:** The expression is syntactically incorrect. The keyword **is** should be replaced with =.
A reference to the form is needed.
- D:** A reference to the form is needed.

Q. 54

You are debugging a Visual Basic application. You add a variable to the watch window. When Visual Basic enters break mode, the Value of the expression variable is "<Out of context>".

What is the most likely cause of the problem?

- A. The variable is not currently in scope.
- B. The variable has been defined as public.
- C. The variable has been defined as private.
- D. The variable has not been defined in this project.

Answer: A

Explanation: That a variable is out of context is another way of saying that it is out of scope.

Incorrect Answers:

- B:** Public variables can be used in a break expression.
- C:** Private variables can be used in a break expression.
- D:** This error message would not be shown if the variable was undeclared in the project.

Q. 55

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Your VB application uses the following code statement:

```
#If Win32 Then
```

```
Declare function xfunc lib "XLib"(byval ord as long) as long
```

```
(ByVal ordAlien As Long) As Long
```

```
#Else
```

```
Declare function xfun lib "YLib"(byval ord as integer) as integer
```

```
(ByVal ordAlien As Integer) As Integer
```

```
#End If
```

You compile the code on a computer running Microsoft Windows 95. What is the most likely result?

- A. Function XFunc will compile from XLib.
- B. Function XFunc will compile from YLib.
- C. Function XFunc will return an integer value.
- D. Function XFunc will accept an **Integer** argument.

Answer: A

Explanation: As all Windows version from Windows 95 and later are 32-bit the **Win32** statement would evaluate to true so the first Declare statement would be run and XFunc would be compiled from XLib.

Incorrect Answers:

- B:** The expression WIN32 would be true since we most likely run a 32-bit Windows version.
- C:** The #If statement is run and a function is declared. No value will be returned.
- D:** XFunc would accept only long values.

Q. 56

You develop an Active DLL project. Your project has a global variable named UserName. During a debugging session, you want to know precisely when UserName is changed to contain the value "Linda". What should you do?

- A. Enter UserName as the watch expression.
Then select **Break When Value Is True** as the watch type.
- B. Enter UserName as the watch expression.
Then select **Break When Value Changes** as the watch type.
- C. Enter UserName="Linda" as the watch expression.
Then select **Break When Value Is True** as the watch type.

- D. Enter `UserName="Linda"` as the watch expression.
Then select **Break When Value Changes** as the watch type.

Answer: C

Explanation: We want to know when the variable `UserName` is changed to contain value of "Linda", so we must watch the expression `UserName = "Linda"` and break when the value is true.

Incorrect Answers:

- A:** This would break the value of `UserName` variable is True.
C: This would break every time the variable `Username` changes, but we only want to know when it changes to "Linda".
D: This would break when the value of `UserName` no longer equals "Linda".

Q. 57

You are developing an ActiveX control. You want to be able to step through the control's code one line at a time.

What should you do?

- A. Compile the control as a Standard EXE project.
B. Compile the control as an .ocx file.
Start a new Standard EXE project and install the control.
C. Add a form to your control project.
Place an instance of the control on the form.
D. Add a Standard EXE project to your project group.
Place an instance of the control on a form in this new project.

Answer: D

Explanation: We want to have the possibility to debug an ActiveX control by stepping through the control's code. We must use a Standard EXE project add the control to a form in the project.

Incorrect Answers:

- A:** We wouldn't be able to debug a compiled Standard EXE project line by line.
B: In an ActiveX project we wouldn't be able to debug the code line by line.
C: We need a Standard EXE project to be able to debug the control step by step. In an ActiveX project we wouldn't be able to debug the code line by line.

Q. 58

You develop an Activex DLL project. You add a class module Named Account to this project. The class has a method named Savings.

You add a Standard EXE project to allow you to test the Savings method. You want Visual Basic to enter break mode while the Savings method is being executed.

What should you do?

- A. Set a breakpoint in the Savings method.
- B. Set a breakpoint where the Account object is created.
- C. Enter **Account.Savings** in the Immediate window.
- D. Enter **Account.Savings** as an expression in the Watch window

Answer: A

Explanation: We should put the breakpoint in the Savings method since we want Visual Basic to enter break mode while the Savings method is running.

Note: Break mode halts the operation of an application and gives you a snapshot of its condition at any moment.

Incorrect Answers:

- B:** We cannot put the breakpoint anywhere in the class module; we must put in the method.
- C:** We must set breakpoints to be able to enter break mode.
- D:** We must set breakpoints to be able to enter break mode.

Q. 59

Under which two circumstances can you select Unattended Execution on the General tab of the Project Properties dialog Box? (Choose two).

- A. When you are creating a control.
- B. When you are creating a DLL with a form.
- C. When you are creating an EXE with a form.
- D. When you are creating a DLL without a form.
- E. When you are creating an EXE without a form.

Answer: D, E

Explanation: The **Unattended Execution** property can only be set in DLL and EXE projects that contain no forms.

Note: The **Unattended Execution** property can be set for code components that have no user interaction. You set the **Unattended Execution** property by selecting **Project properties** in the **Project** menu and then selecting the **Unattended Execution** option.

Incorrect Answers:

A: Unattended execution cannot be used for controls since they interact with the user.

B: You cannot set the **Unattended Execution** property in projects that contain forms.

C: You cannot set the **Unattended Execution** property in projects that contain forms.

Q. 60

You are debugging a Visual Basic application. Visual Basic Break mode. You want to view the properties for all of on the current form. The current form is named Form1. Which two steps can you take to accomplish this? (Choose two)

- A. View the Call Stack dialog box.
- B. View Form1 in the Project Explorer window.
- C. View the Me expression in the Locals window.
- D. Add Form1 to the watch window.
- E. Enter ?Form1 in the Immediate window.

Answer: C, D

Explanation: There are two possibilities to watch expression during Visual Basic Break Mode.

C: The locals window shows current values of selected class member variable. We can add Me to be viewed. Me refers to the currently active form, which in this situation would be Form1.

D: We can add a watch expression that contains Form1. In effect we add Form1 to the watch window.

Incorrect Answers:

A: The Call Stack dialog box shows a list of all active procedure calls. Active procedure calls are the procedures in the application that were started but not completed.

B: The Project Explorer cannot be used to view properties of the Form.

E: We cannot use the print command on a Form1 in the Immediate window.

Q. 61

You are using RDO to issue SQL statements against a database you do not want the database to create temporary stored procedures for these statements.

Which option should you use?

- A. rdUseODBC
- B. rdExecDirect
- C. rdAsyncEnable
- D. SQLExecDirect

Answer: B

Explanation: The rdExecDirect option forces RDO to use the ODBC API SQLExecDirect function when executing the procedure. This bypasses the ODBC API SQLPrepare step, which is used to create a temporary procedure to execute the query.

Incorrect Answers:

A, C, D: The rdExecDirect option must be used.

Q. 62

You are archiving data. You want to execute a query to delete 2000 rows from the Customer table, and insert those rows into the Customer_Archive table.

You are using ADO transaction processing. You want to ensure that a transaction Exists for as brief a period as possible. Cn is an ADO Connection object. Cmd is a valid ADO command object whose active connection is CN.

Which code fragment should you use?

- A. cn.Begintrans
 cn.open
 Cmd.Execute
- B. cn.open
 cn.Begintrans
 Cmd.Execute
- C. cn.open
 Cmd.Execute

cn.Begintrans

- D. cn.Begintrans
Cmd.Execute
cn.open

Answer: B

Explanation: First we open the connection, then we begin the transaction, and finally we execute the query.

Incorrect Answers:

- A:** We must open the connection first.
- C:** We should begin the transaction before we execute the query so that the query could be rolled back if necessary.
- D:** We must open the connection first.

Q. 63

You develop a client/server application that uses client-side cursors. Which type of cursor must the client cursor engine support?

- A. Static
- B. Keyset
- C. Dynamic
- D. Forward-only

Answer: A

Explanation: Client cursors can support all four listed cursor types. However, the client must support static cursors since this is the most basic type of cursor.

Note: Client-side cursors use resources that are located on the client machine. With a server-side cursor, the server manages the result set using resources provided by the server machine. The server-side cursor returns only the requested data over the network. This type of cursor can sometimes provide better performance than the client-side cursor, especially in situations where excessive network traffic is a problem.

Incorrect Answers:

- B:** The client doesn't have to support keyset cursors.
- C:** The client doesn't have to support dynamic cursors.
- D:** Forward-only cursors don't have to be supported by the client.

Q. 64

You use the Execute method to send a query to database .You have specified the rdAsyncEnable option. How should you find out whether the operation is complete?

- A. Attempt to access the result set
- B. Check the StillExecuting property
- C. Use the AsynccheckInterval property
- D. Wait for the QueryTimeout event to fire

Answer: B

Explanation: The rdAsyncEnable option specifies that the query should run asynchronously.

The StillExecuting property is used to determine if a query is ready to return the first result set. Until the StillExecuting property is False, the associated object cannot be accessed. Once the StillExecuting property returns False, the first or next result set is ready for processing.

Incorrect Answers:

- A:** The query wouldn't answer until it is ready.
- C:** There is no such property called AsynccheckInterval.
- D:** The QueryTimeout Property returns or sets a value that specifies the number of seconds the ODBC driver manager waits before a timeout error occurs when a query is executed.

Q. 65

You use ADO to execute a stored procedure on a Microsoft SQL Server database. The execution times out. You want to retry. You also want of check the ADO errors collection to see if a timeout Error occurred.

Which property code should you check first?

- A. cnn.Errors(0).Source
- B. cnn.Errors(1).source
- C. cnn.Errors(0).number
- D. cnn.Errors(1).number

Answer: C

Explanation: We must access the first member of the errors collection which is Errors(0) since collections are numbered starting from 0. We should use the number property since we want check which type of error has occurred.

Note: The ADO Error Object Number Property is the number that uniquely identifies an error. The ADO Error Object Source Property is the name of the object or application that originally generated the error.

Incorrect Answers:

A: We are not interested in what type of object generated the error.

B: We are not interested in what type of object generated the error. We should use Errors(0) not Errors(1).

D: We should use Errors(0) not Errors(1).

Q. 66

You use ADO to instantiate a recordset on a Visual Basic You want to display the recordset data in a Hierarchical Flexgrid control named MSHFlexGrid1. MSHFlexGrid1 is already placed on the form.

The source of data for MSHFlexGrid1 is not known until run time. You know only that the data is in a Microsoft SQL serve database. You develop the following subroutine to populate MSHFlexGrid1 (line numbers are for reference only):

```
Private sub PopulateFlexGrid(ByVal strConnectionString As _
String, ByVal strSQL As String)
```

1. Dim Cn As New Connection
 2. Dime Rs As New Recordset
 - 3.
 4. Cn.ConnectionString = strConnectionString
 5. Cn.CursorLocation = adUseClient
 6. Cn.Open
 - 7.
 8. Rs.Source = strSQL
 - 9.
 10. Rs.Open
 - 11.
- End Sub

Which missing line of code should you use to dynamically bind the ADO data Source to MSHFlexGrid1?

A. 3 MSHFlexGrid1.DataMember=Cn.Rs

- B. 7 MSHFlexGrid1.DataBindings(0) =Rs
- C. 9 set MSHFlexGrid1.Datasource=Rs.Fields
- D. 11 set MSHFlexGrid1.DataSource=Rs

Answer: D

Explanation: After opening the connection we should bind the ADO data source to our control MSHFlexGrid1 with the set statement.

Incorrect Answers:

- A:** We must use the set statement. Incorrect syntax. The connection must be opened before we can bind the data source to the control.
- B:** Incorrect syntax. The connection must be opened before we can bind the data source to the control.
- C:** The connection must be opened before we can bind the data source to the control.

Q. 67

You use lock optimistic as the locking strategy for data Visual Basic application. At what time do the records become Locked?

- A. Immediately when accessed
- B. When the recordset is closed
- C. When calling the Update method
- D. When calling the Refresh method

Answer: C

Explanation: Optimistic locking doesn't lock the records until they are about to change.

Incorrect Answers:

- A:** A pessimistic locking strategy would lock the records immediately when the records are accessed.
- B:** It would be too late to lock records when the recordset are about to be closed. Locks are removed when the recordset is closed.
- D:** The optimistic locking strategy locks the records when they call the update method, not the refresh method

Q. 68

Your Visual Basic application communicates with a Microsoft SQL Sever database. The application is used to track donation Information for a nonprofit organization.

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The database has a Donor table and a Donation table. The fields are shown in the following table:

Table	Field
Donor	DonorID, FirstName, LastName, Phone, Address, City, State, Zip
Donation	DonationID, DononID , Donationdate , Amount

DononID is a primary Key in the Donor table and a foreign key in the Donation Table. You want to write SQL code that will display records for donors who have No given donations. Which SQL statement should you use?

- A. SELECT FROM Donor Left Outer Join Donation on Donor.DonorID= Donation.DonorID where Donation.DonorID is Null
- B. SELECT FROM Donor Inner Join Donation on Donor.DonorID= Donation.DonorID where Not Exists Donation.DonorID
- C. SELECT FROM Donor Union Donation on Donor.DonorID= Donation. DononID where Donation. DonorID=""
- D. SELECT FROM Donor, Donation Where Donor.DonorID Not In Donation. DonationID

Answer: A

Explanation: We must join the both tables and since we want to find donors who has no given donation we must use an Outer Join, more specifically we must use a left outer join, since we want to find records in the Donation table where the DonorID column is NULL.

Incorrect Answers:

- B:** We cannot use an inner join since inner joins never produces records that has a NULL value in the joining field.
- C:** A union of two tables is the records from the first table and the records of the second table. We want to join the tables instead.
- D:** Incorrect syntax. The Not In statement cannot be used in this way.

Q. 69

You want to retrieve an ADO recordset that will be used to populate a Combobox control. Once the control is populated, the recordset will be discarded. You want to minimize the use of system resources. Which type of cursor should you use?

- A. Static
- B. Keyset

- C. Dynamic
- D. Forward-only

Answer: D

Explanation: The forward-only cursor is fast and very efficient in its use of system resources.

Incorrect Answers:

- A:** A static recordset could require huge amounts of RAM on the client since the records would have to be kept at the client.
- B:** It would be unnecessary, and more demanding on the client, to use a Keyset cursor.
- C:** A dynamic cursor is not needed since after the control is populated the recordset would be discarded.

Q. 70

You execute a stored procedure that returns two recordsets. You now want to process these recordsets. Which code fragment should you use?

- A.

```
Set rs=cmd.execute
'process first recordset
set rs= rs.nextrecordset ()
'process second recordset
rs.close
```
- B.

```
Set rs=cmd.execute
'process first recordset
rs close
set rs= rs.nextrecordset ()
'process second recordset
rs.close
```
- C.

```
Set rs=cmd.execute
'process first recordset
set rs= Cmd.Execute
'process second recordset
rs.close
```
- D.

```
Set rs=cmd.execute
'process first recordset
rs.Close
set rs= Cmd.Execute
```

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```
'process second recordset  
rs.close
```

Answer: A

Explanation: First we open the connection (Set rs=cmd.execute).

After we have processed the first recordset we open the next recordset (set rs= rs.nextrecordset ()).

After we have processed the second recordset we close the connection (rs.close).

Incorrect Answers:

B: We shouldn't close the connection until the second recordset has been processed.

C: We shouldn't open the connection a second time, instead we should access the second recordset.

D: We shouldn't close the connection until the second recordset has been processed.

Q. 71

You are developing a client/sever application. The application calls a stored procedure that returns multiple large result sets. You want your application to process all of the result sets that are returned. Which properties of the ADO recordset should you set?

A. CursorLocation=adUseClient and any cursor type

B. CursorLocation=adUseSever and any cursor type

C. CursorLocation=adUseServer and CursorType = adOpenDynamic

D. Any cursor location and CursorType = adOpenkeyset

Answer: A

Explanation: A client side cursor is needed to process multiple recordsets.

Note: A potential drawback of server cursors is that they currently do not support all Transact-SQL statements. Server cursors do not support Transact-SQL statements that generate multiple result sets.

Reference: SQL Server 7.0 Books online

Incorrect Answers:

B: We must use a client side cursor.

C: We must use a client side cursor.

D: We must use a client side cursor.

Q. 72

You deploy a Visual Basic application that uses a Microsoft access database for managing application data. The filename and path of the database are coded into the application as

C:\Data\AppData.mdb.

You notice that many users have placed this database file in locations other than the specified path. Because of this, the application is failing. You want to resolve the problem.

What should you do?

- A. Use Microsoft Windows explorer to make AppData.mdb read-only
- B. Use the ADO Data control instead of code to access the database
- C. Replace all of the hard-coded path names with App.Path
- D. Create an ODBC Data Source Name (DSN) for your database and refer to the DSN in code

Answer: D

Explanation: We set up a data source name (DSN) and refer to it, instead to a database file, when we access it in our Visual Basic application.

Note: A DSN (data source name) is the name that applications use to request a connection to an ODBC data source.

Incorrect Answers:

- A:** Changing the attribute of file will not help. We must solve the problem with the search path.
- B:** The ADO Date control would also have to specify the filename and path to be able to access the database.
- C:** It would not help to use the App.Path to refer to the folder the database is stored, since users still could move the database.

Q. 73

You develop and deploy a distributed application by using Microsoft Transaction server. You supply a COM component that decides on which server an MTS-hosted COM component will be activated.

You want the decision to be based on specific load-balancing algorithms. You want MTA to use your component when Just-in-Time (JIT)-activated components are activated.

How can you enable dynamic load balancing?

- A. Create an MTS package named LoadBalancer. Install the component in the LoadBalancer package. Ensure that all COM components that will be load balanced call SetComplete at the end of every transaction.
- B. Implement the entry point **DLLCanUnload** in your COM component. MTS can call the method of the component DLL to determine whether the client application can be disconnected from this component
- C. You cannot enable dynamic load balancing for MTS
- D. Do nothing. DCOM automatically provides dynamic load balancing via SCM-to-SCM pinging

Answer: C

Explanation: Microsoft Transaction Server (MTS) 2.0 does not support dynamic load balancing.

Reference: INFO: How Microsoft Transaction Server 2.0 Handles Load Balancing (Q230330)

Incorrect Answers:

A, B, D: This would not enable load balancing.

Q. 74

You add error-logging capability to your Visual Basic application. Users are able to enable and disable error logging.

You create a Tools menu that has a Log Errors command. You assign the command the name mnuToolsLogErrors. You want to display or hide a check mark next to the Log Errors command when a user clicks it.

Which line of code should you use in the Click event of Log errors?

- A. Me.Enabled<>Me.Enabled
- B. Me.Checked<>Me.Checked
- C. MnuToolsLogErrors.Checked=Not mnuToolsLogErrors.Checked
- D. MnuToolsLogErrors.Enabled=Not mnuToolsLogErrors.Enabled

Answer: C

Explanation:

Incorrect Answers:

A: <> is used to compare values. It is not used to set or change values.
The enabled property should be changed, not the checked property.

B: <> is used to compare values. It is not used to set or change values.

D: We doesn't want to disable and enable the command, we want to display or hide a checkmark on it.

Q. 75

Your Visual Basic application uses the forms shown in the following table.

Form	Description
MDIForm1	MDI parent
MDIForm1	MDI child
MDIForm2	MDI child
Form1	Normal form
Form2	Normal form

Your application also includes the following code:

```
Public Sub Main()
Dim NewForm as new Form1
    MDIParent.Show
    MDIChild1.Show
    MDIChild2.Show
    Form1.Show
    Form2.Show
    Form2.Hide
    NewForm.Show
End Sub
```

You run the Sub Main() procedure. What is the value of Forms.Count?

- A. 3
- B. 4
- C. 5
- D. 6
- E. 7

Answer: D

Explanation: Six forms are loaded through the show method. One is hidden but still loaded.

Incorrect Answers:

A, B, C, E: Six forms are loaded, not more and not less.

Q. 76

You are developing an IIS Application project. You want to write code that responds to an HTTP Request passed by using the Post method.

Which ASP Request collection will contain the data that was passed?

- A. Form
- B. Cookies
- C. QueryString
- D. ServerVariables

Answer: A

Explanation: The Form collection retrieves the values of form elements posted to the HTTP request body by a form using the POST method.

Incorrect Answers:

- B:** The Cookies collection enables you to retrieve the values of the cookies sent in an HTTP request.
- C:** The QueryString collection retrieves the values of the variables in the HTTP query string. The HTTP query string is specified by the values following the question mark (?).
- D:** The ServerVariables collection retrieves the values of predetermined environment variables.

Q. 77

You create an event for your control. The event will expose the OnBeforeDelete method to the container, giving the container the option to cancel the deletion. If the container does not handle the event, the deletion should continue. The event declaration is shown in the following line of code:

Event onBeforeDelete (bContinue As Boolean)

Which code fragment should you use to fire the event?

- A.

```
Public Sub CheckDelete()  
Dim bContinue as Boolean  
bContinue=True  
RaiseEvent OnBeforeDelete (bContinue)  
If bContinue Then ExecuteDelete  
End Sub
```

- B. Public sub CheckDelete()
 Dim bContinue As Boolean
 bContinue=True
 RaiseEvent onBeforeDelete(True)
 If bContinue Then ExecuteDelete
 End Sub
- C. Public sub CheckDelete()
 Dim bContinue As Boolean
 bContinue=False
 RaiseEvent onBeforeDelete(True)
 If bContinue Then ExecuteDelete
 End Sub
- D. Public sub CheckDelete()
 Dim bContinue As Boolean
 bContinue=Flase
 Err.raise bContinue,, "onBeforeDelete"
 If bContinue Then ExecuteDelete
 End Sub

Answer: A

Explanation: We should use a variable, in these proposed solutions bContinue, and send it by reference to the OnBeforeDelete event. The OnBeforeDelete event must be raised.

Incorrect Answers:

- B:** The bContinue variable should be used on the RaiseEvent line instead of True.
C: The bContinue variable should be used on the RaiseEvent line instead of True.
D: We should raise the event OnBeforeDelete, not the error OnBeforeDelete.

Q. 78

Your Visual Basic project uses one control named MyControl. MyControl is not a Visual Basic default control.

You open the project in the Visual Basic environment on another computer. You receive an error message. You are not able to see MyControl in the toolbox.

What is most likely cause of the problem?

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- A. You have not added MyControl to the project.
- B. You have not installed MyControl on this computer.
- C. You have not disabled the read-only attribute for the .vbp file.
- D. You have not installed the correct version of MyControl on this computer.

Answer: B

Explanation: Only Intrinsic Controls exists in a Project by default. More visual Basic Default controls have to be added by the programmer through the **Components** command on the **Project** menu. User defined controls must first be installed on the computer before they are added to the project.

Incorrect Answers:

- A:** User defined controls must first be installed on the computer before they are added to the project.
- C:** Any attribute is not the cause of this problem.
- D:** The error message is generated since the project needs the control.

Q. 79

You want to use a COM component that fires events. The component is named MyCompany.Grid. You want the client application to handle events fired by this component.

What should you do?

- A. Declare a variable of type MyCompany.Grid
Use the **Raise** keyword in the declaration
- B. Declare a variable of type MyCompany.Crid
Use the **WithEvents** keyword in the declaration
- C. Set the **Causesvalidation** Property of the component to **true**
- D. Implement a **Timer** control in the client application.
In the Timer event handler.poll the component for any events the COM has fired.

Answer: B

Explanation: The WithEvents keyword is used in declaration in order for it to trap event generated by other components.

Incorrect Answers:

- A:** The Raise keyword cannot be used in this way. It is a method that is used to raise user defined errors, not to trap events.
- C:** There is no such thing as a **Causesvalidation** property.

D: The timer is used to generate event at specific intervals or times. The timer is not used to catch any events.

Q. 80

You want to bind a TextBox control named txtMyText to the name column of the Customer table in a database. The data source name (DSN) of the database is Pubs. You want to perform this binding by using an ADO Data control named adoData.

Which four steps must you take to accomplish this? (Choose four)

- A. Set the **DataField** of txtMyText to “name”
- B. Set the **DataField** of txtMyText to AdoData
- C. Set the **DataSource** of txtMyText to AdoData
- D. Set the **RecordSource** of adoData to “Pubs”
- E. Set the **ConnectionString** of adoData to “Pubs”
- F. Set the **RecordSource** of adoData to “Select name from Customer”

Answer: A, C, E, F

Explanation:

A:
The DataField Property returns or sets the name of a field that a data consumer will be bound to.
Syntax: object.DataField [= string]
Here we use name as the field name.

C:
The DataSource property returns or sets a data source through which a data consumer is bound to a database.
Syntax: object.DataSource [=datasource]
The *datasource* part is an object reference that qualifies as a data source.
The Set statement is used to set the DataSource property of a control.
Here we set the txtMyText control as the data source.

E:
The ConnectionString Property contains the information used to establish a connection to a data source. The ConnectionString property specifies a data source by passing a detailed connection string containing a series of argument = value statements separated by semicolons.
Here we only use the name of the provider, the database pubs.

F:

The RecordSource property is used to specify the source of the data for a form or report. The RecordSource property setting can be a table name, a query name, or an SQL statement.

Here we assume that there is a table or a view for example, with the name "Select name from Customer" in the database Pubs.

Incorrect Answers:

- B:** The constant AdoData constant represents the data source. The datafield property should not be set to AdoData.
- D:** The **RecordSource** property should refer to the data source such as a table name, a query name, or an SQL statement. It should refer to a database.

Q. 81

You are developing a Visual Basic application that has 15 forms. You want to implement an online Help file that has one Help topic for each form. You want the appropriate Help topic to be displayed when the F1 key is passed while anywhere on the form.

Which two steps must you accomplish this? (Choose two.)

- A. Set the **App.HelpFile** property.
- B. Set the **HelpContextID** Property of the form.
- C. Set the **HelpContextID** Property of each control on the form.
- D. Set the **WhatThisHelp** Property of the form to **True**.
- E. Set the **WhatsThisButton** Property of the form to **True**.

Answer: A, B

Explanation: We use one helpfile for the whole application (A). Then we specify one **HelpContext** for each form.

Note: The HelpFile Property specifies the path and filename of a Help file used by your application to display Help or online documentation.

The HelpContext Property of the Err Object returns or sets a context ID for a topic in a Microsoft Windows Help file.

Syntax: err.HelpContext [= ContextID]

The HelpContextID Property returns or sets an associated context number for an object. HelpContextID is used to provide context-sensitive Help for your application.

Incorrect Answers:

- C:** We want one help topic for each form, not for each control.
- D:** **WhatThisHelp** is not used to provide help topics. It is used to provide small context-sensitive text notes to the user.
- Reference:**
HOWTO: Implement "What's This?" Help in ActiveX Control (Q192744)
HOWTO: Implement "What's This?" Help in Visual Basic (Q142249)
- E:** The **WhatsThisButton** Property is used to display a short text describing buttons in the toolbar.

Q. 82

You are developing a Microsoft Transaction Server (MTS) package named Orders. Components in Orders are being designed to use components in an existing MTS package named Shipping. You want the Orders component to be able to retrieve information from the Shipping components.

How should you configure the security to allow this?

- A. Add the Orders components to list of Users participating in shipping roles.
- B. Add the Microsoft Windows NT domain account information of the Users who will be using the Orders components to the appropriate shipping roles.
- C. Configure the Orders package to have identified of a certain User. Add that user to the appropriate roles of the Shipping package.
- D. Create a duplicate component that will be imported to the shipping package .Use the Implements keyword to support empty function subs from the Orders com.

Answer: C

Explanation: We configure the Order package to run as a certain User. We then add that user to the appropriate roles in the Shipping package.

Note: A role is a collection of users that is defined at the package level as a set of potential users of the components that will be placed inside the package. After creating a role, Windows NT users and groups can be associated with the role.

Incorrect Answers:

- A:** We cannot add a MTS package to the list of Users.
- B:** We want the Orders component, not NT domain users, to be able to use the shipping component.
- D:** The implements keyword cannot be used to configure security of MTS packages.

Q. 83

You are implementing two COM components in the same project. The components are named CBank and CAccount.

You want application to be able to use instances of both components. However, you want only CBank to create instances of CAccount.

Which value should assign to the Instancing property for CAccount?

- A. Private
- B. Multiuse
- C. Singleuse
- D. PublicNotCreatable

Answer: D

Explanation: CAccount must be allowed to use instances of objects created from the CBank class, but CAccount must not be allowed to create instances of the CBank class. By selecting the Instancing Property of **PublicNotCreatable** to the CBank class we achieve this.

Note: Instancing Property sets a value that specifies whether you can create instances of a public class outside a project, and if so, how it will behave.

The **PublicNotCreatable** instancing property: Other applications can use objects of this class only if your component creates the objects first. Other applications cannot use the CreateObject function or the New operator to create objects from the class.

Reference: MSDN, Instancing Property

Incorrect Answers:

- A:** The Private Instancing Property would not allow CAccount to objects from the CBank class.
- B:** The MultiUse Instancing Property would allow CAccount create objects from the CBanks class.
- C:** The SingleUse Instancing Property would allow CAccount create objects from the CBanks class.

Q. 84

You implement a COM EXE server. You want each component hosted by this server to execute in its own thread.

Which threading Model option must you use?

- A. Thread Pool

- B. Single threaded
- C. Threaded Per Object
- D. Apartment threaded

Answer: C

Explanation: The requirement is that each component must execute in its own thread so we must choose a threaded per object model which specifies that each new object is created on a new thread.

Incorrect Answers:

- A:** A thread pool would not guarantee that each component executed in its own thread.
- B:** A COM EXE server cannot use the single threaded model. Only ActiveX DLL and ActiveX Control projects can use the single threaded model.
- D:** A COM EXE server cannot use the Apartment threading model. Only ActiveX DLL and ActiveX Control projects can use the Apartment threading model.

Q. 85

You are developing a business object. The object has properties named Signed and Score, and a method named Save.

When the object has a Signed property of True, the object should not allow an update of the Score property.

How should your property routines handle a disallowed attempt by the container to update a given property?

- A. Return **false** during the **Save** method
- B. Raise an Error during **Save** method
- C. Raise an Error during **Let** Property for **Score**
- D. Display a message box indicating that an error occurred.
- E. Ignore the attempt to update the property.

Answer: C

Explanation: When someone tries to update the **Score** property when the **Signed** property is true we use a **Let** Property for **Score** to raise an error. This error could then be trapped by the User Interface and an appropriate error message could be presented to the user.

Incorrect Answers:

- A:** We want handle the event when it happens, not when the object is saved.

- B:** We want handle the event when it happens, not when the object is saved.
- D:** The business object should not directly communicate with the user. Instead an error should be raised. This error could be captured by the user interface which could provide the proper action including a message to the user.
- E:** It would be better to let the user know about the failed attempt.

Q. 86

You implement a class module that has multiple properties. You want to make one of the properties the default property for the object.

What should you do?

- A. Add an Underscore (_) Prefix to the property name
- B. In the **Procedure Attributes** dialog box, set the **Procedure ID** to **(Default)** for the property
- C. In the **Procedure Attributes** dialog box, set the **User interface Default** to **True** for the property
- D. Rename the property to **default**.

Answer: B

Explanation: In steps:

1. View the code of the Class module.
2. Select the property you want as default from the **Name** listbox.
3. From the **Tools** menu select the **Procedure Attributes** command.
4. Click the **Advanced** button.
5. Change the **Procedure ID** setting from **(None)** to **(Default)**

Incorrect Answers:

- A:** Adding an underscore prefix the property name would not make the default property.
- C:** There is no **User interface Default** setting in the **Procedure Attributes** dialog box.
- D:** Renaming the property to **default** would not make it the default property, only giving it the name default.

Q. 87

You want to initiate a Microsoft Transaction Server (MTS) transaction from a component. What must you do?

- A. Declare an instance of MTS
- B. Instancing an instance of the **ObjectContext** Object by using the **GetObjectContext** method

- C. Pass the current **ObjectContext** Object as an argument to a Private method that will begin the transaction.
- D. Pass a reference to a private member variable in the **ObjectContext** object from the method initiating the transaction.

Answer: B

Explanation: An ObjectContext object can manage transactions. We make an instance of this object by using the GetObjectContext method which gives a reference to the current MTS object.

Note: The ObjectContext Object provides access to the current object's context.

The GetObjectContext Function obtains a reference to the ObjectContext that's associated with the current MTS object.

Incorrect Answers:

- A:** We don't have to declare an instance of MTS.
- C:** We must use the **GetObjectContext** function (or method).
- D:** We must use the **GetObjectContext** function (or method).

Q. 88

You develop, debug, and compile a reusable component. You want to ensure that information relevant to the component will be readily available to other developers who reuse your component.

Which items can you store in the Microsoft repository database? (Choose three)

- A. The Component itself.
- B. Backup files related to the component.
- C. Documentation related to the component.
- D. Project templates related to the component.
- E. All the Source-Code versions of the component.

Answer: A, D, E

Explanation: The Microsoft repository database is a tool with which to organize, find, and insert components into a Visual Studio project. It maintains past versions of your instance data. These past versions are accessible through Microsoft Repository version management and workspace management interfaces. You can publish either the compiled component or its source code in Visual Component Manager. Templates used in the Project can also be stored in the Repository.

Incorrect Answers:

- B:** Earlier version of the files, not backup files, may be stored in the Repository.

C: Documentation is not stored in the Repository.

Q. 89

You want to create a COM component for the use in Microsoft Transaction Server (MTS). Which project type must you use to ensure that the component can be used in MTS?

- A. ActiveX DLL
- B. ActiveX EXE
- C. Standard EXE
- D. ActiveX control

Answer: A

Explanation: Only ActiveX DLLs and ActiveX EXEs can be used with MTS. To create a COM component that works with MTS we must use an ActiveX DLL.

Incorrect Answers:

- B:** Only ActiveX DLL can be used as COM components with MTS.
- C:** StandardEXE projects cannot be used with MTS.
- D:** ActiveX controls cannot be used with MTS.

Q. 90

You complete the development of your ActiveX EXE project. You now want to remove your system's references to the application.

What should you do?

- A. Use the Registry Editor to modify the registry
- B. Delete the .exe file and restart Microsoft Windows.
- C. Execute **MyComponent.exe /unregserver** from the command line
- D. Execute **Regsvr32.exe/u My component.exe** from the command line.

Answer: C

Explanation: exe components can be unregistered with the syntax: MyComponent /unregserver or with the syntax: execute MyComponent /unregserver

Note: Ordinarily the components get unregistered when they are uninstalled. They can be manually unregistered as well as in this scenario

Incorrect Answers:

- A:** Manually modifying the registry would be a tedious task which could result in serious errors if mistakes are made.
- B:** Just deleting the .exe file would leave settings in the Registry.
- D:** The command Regsrv32svr32 /u removes an .dll from the system. Regsrv32 cannot be used to remove ActiveX EXE components though.

Q. 91

You develop a Visual Basic application. You then develop a COM EXE to be used by the application.

You want to set up your debugging environment to test the application and component simultaneously. What should you do?

- A. Run one instance of Visual Basic. Load the application project and the component project into the development environment as a project group. Run all the projects in the group together.
- B. Run one instance of Visual Basic. Load the application code and the component code into a single project. Specify a form from the application as the **Startup** object. Run the project.
- C. Run one instance of Visual Basic. Load the application code and the component code into a single project. Specify a form from the component as the **startup** object. Run the project.
- D. Create two instances of Visual Basic. Load the Application project into one instance of Visual Basic. Load the component project into the second instance of Visual Basic.

Answer: D

Explanation: We want to debug two projects simultaneously. We cannot add both to the same project. This would only be possible if one of the projects was a .dll project. Instead we must start two instances of Visual Basic.

Incorrect Answers:

- A:** We need two instances of Visual Basic to debug two non .dll projects.
- B:** We need two instances of Visual Basic to debug two non .dll projects.
- C:** We need two instances of Visual Basic to debug two non .dll projects.

Q. 92

You implement a UserDocument that will be used in a variety of Active document containers. Your UserDocument must determine the name of the default COM interface for the container.

Which code fragment must you use to retrieve the name?

- A. strName=TypeName (Me)
- B. strName=Userdocument.Parent
- C. strName=TypeName (UserDocument.Parent)
- D. If TypeOf Me Is WebBrower Then
strName="Internet Explorer"
End If

Answer: C

Explanation: To determine which container an ActiveX document application is running in, use the **TypeName** function, which returns information about the variable passed as its argument. If the variable is a reference to the ActiveX document's parent, obtained as **UserDocument.Parent**, then the function returns a string identifying the container.

Incorrect Answers:

- A:** Me would be the active document, but we are interested in the container (or parent) that holds the user document.
- B:** We must use the **TypeName** function which returns a string containing information about the variable.
- D:** We are interested in the container object, not the userdocument. ME refers to the currently active user document in this scenario.

Q. 93

You are implementing a COM server that contains components. Each component must execute within a separate Microsoft Transaction Server (MTS) transaction.

Which transaction attribute value must you use for these components?

- A. Requires a transaction
- B. Requires a new transaction
- C. Supports Transactions
- D. Does not support transactions

Answer: B

Explanation: If we choose the **Requires a new transaction** attribute would be created for the component.

Incorrect Answers:

- A:** If we choose the **Requires a transaction** attribute the object is created within the context of the creator's transaction. A new object would only be created if no transaction context existed.
- C:** If we choose the **Supports Transactions** attribute the transaction attribute would depend on the context of creator. There would be no new transaction..
- D:** If we choose the **Does not support transactions** attribute there would be no new transaction.

Q. 94

Your client computer runs Microsoft Windows NT Server 4.0. You want to configure your client computer to use a Microsoft Transaction server (MTS).

Which additional software must you install?

- A. MTS 1.0 or later
- B. Windows NT 4.0 Option Pack
- C. Windows NT Service Pack 3.0 or later
- D. Microsoft SQL server 6.5 or later

Answer: C

Explanation: MTS applications require no libraries or run-time environment on client machines beyond that provided by COM and Distributed COM (DCOM). However, on a Windows NT 4.0 Service Pack 3.0 or later, DCOM would be required in Windows 95 and Windows 98 MTS client computers.

Reference: BUG: Client Installation EXE can Corrupt the Registry (Q184398)

INFO: Microsoft Transaction Server (MTS) Knowledge Base Article Index (Q259382)

Incorrect Answers:

- A:** We are going to use the Windows NT Server as a MTS client, not as a MTS server. We don't have to install MTS on the computer.
- B:** We are going to use the Windows NT Server as a MTS client, not as a MTS server, so we don't require Windows NT Option Pack.

Note: The Windows NT 4.0 Option Pack is a set of Web and application services that enables developers to create distributed network applications for Windows NT Server 4.0 and also take advantage of the Windows 2000 operating system.

The Windows NT Option Pack provides the following services for Windows NT Server:

- Internet Information Server 4.0
- Microsoft Transaction Server 2.0
- Microsoft Message Queue Server 1.0
- Internet Connection Services for Microsoft Remote Access Service (RAS)

In order to install Windows NT 4.0 Option pack service pack 3.0 or later is required.

There exists a Windows NT 4.0 Option Pack for Windows 95 which includes Peer Web Services (PWS)

D: SQL Server is not required to run as MTS client.

Q. 95

You want to install Microsoft Transaction server on a server computer that currently runs Microsoft Windows 95. Which must you do before installing MTS on this server?

- A. Install DCOM support for Windows 95
- B. Install the Remote Registry service for Windows 95
- C. Install Microsoft Distributed Transaction Coordinator
- D. Replace Windows 95 with Microsoft Windows NT

Answer: A

Explanation: MTS requires DCOM to be installed on Windows 95 and Windows 98 computers.

Microsoft Transaction Server can be installed a Windows 95 computer through the Windows NT 4.0 Option Pack for Windows 95 which includes Peer Web Services (PWS).

Note: The Windows NT 4.0 Option Pack is a set of Web and application services that enables developers to create distributed network applications for Windows NT Server 4.0 and also take advantage of the Windows 2000 operating system.

The Windows NT Option Pack provides the following services for Windows NT Server:

- Internet Information Server 4.0
- Microsoft Transaction Server 2.0
- Microsoft Message Queue Server 1.0
- Internet Connection Services for Microsoft Remote Access Service (RAS)

In order to install Windows NT 4.0 Option pack s on Windows NT 4.0 computer service pack 3.0 or later is required.

Incorrect Answers:

- B:** The Remote Registry service for Windows 95 let you administer file and print sharing and edit the registry remotely. It isn't used for MTS.
Reference: How to Install Remote Administration Services (Q141460)
- C:** The Distributed Transaction Coordinator (DTC) service is used by the MTS for transaction coordination. Clients don't need DTC to access MTS.
- D:** Windows 95 with Windows NT 4.0 Option Pack for Windows 95 can run the MTS server.

Q. 96

What re two advantages of compiling a Visual Basic application to p-code rather than to native code? (Choose Two)

- A. Allows faster execution
- B. Allows faster compilation
- C. Allows a smaller executable file
- D. Allows a DLL to run out of process
- E. Allows debugging of compiled code

Answer: B, C

Explanation:

- B:** It is quicker to compile to P-code (pseudo-code) than to native code.
C: Compiling to p-code optimizes for the smallest size.

Incorrect Answers:

- A:** Native code can be up to 20 times faster.
D: P-code cannot be used to run out of process DLLs.
E: P-code doesn't allow debugging of compiled code.

Q. 97

You develop a COM server that uses DCOM in a distributed environment. You want to change the name of the computer on which the server will execute.

What should you do?

- A. Use the DCOMCNFG utility
- B. Use Network in control panel
- C. Use the OLE/COM object viewer utility
- D. Use and ASCII editor to modify the system.ini file

Answer: A

Explanation: DCOMCNFG.EXE (DCOM Config) is a utility that can be used to secure distributed COM (DCOM) objects that have been created. In particular DCOMCNFG.EXE can be used to change the name of a remote computer.

Reference: HOWTO: Use DCOM Config (DCOMCNFG.EXE) with Windows 95/98/Me (Q182248)

Incorrect Answers:

- B:** The Network applet in Control Panel cannot be used to change the name of the remote computer.
- C:** The OLE/COM object viewer utility cannot be used to change the name of a remote computer.
- D:** Changing the system.ini file will not change the name of a computer on modern versions of Windows.

Q. 98

You write a COM component. The applications that access the component will use DCOM. You want to configure the client computers to allow the use of this component.

What should you do?

- A. Use Regsvr32 to register the component to the client computer.
- B. Use the Package and Deployment Wizard to create a setup program for the client computers.
- C. Use the Registry Editor to modify **CLSID** subkeys and the interface keys for the component in **HKEY_CLASSES_ROOT** registry key
- D. Install the component on the client computers. Then use Regsvr32 to create a RemoteServerName entry under the **HKEY_CLASSES_ROOT\CLSID\class ID** registry key

Answer: B

Explanation: We should simply use the Package and Deployment Wizard to create a setup program which will be used to set up the application on the client computers.

Incorrect Answers:

- A:** Regsvr32 is used to register .dll files. It cannot register COM components.
- C:** It is not necessary to edit the registry.
- D:** It is not necessary to edit the registry.

Q. 99

You want to process all items returned from an ADO cursor. What cursor should you use?

- A. Forward-Only
- B. Dynamic with adLockBatchOptimistic
- C. Dynamic with AdUseServer
- D. Static

Answer: A

Explanation: The forward-only cursor, the default cursor, is fast and very efficient in its use of system resources.

Incorrect Answers:

- B:** adLockBatchOptimistic is used only with disconnected recordsets and with Static cursors.
- C:** Use of the Dynamic with AdUseServer cursor would put the cursor on the server. But since all items will be returned to the client anyway, this unnecessarily puts extra pressure on the server and on server and on the network.
- D:** A static recordset could require huge amounts of RAM on the client since the records would have to be kept at the client.

Q. 100

You develop and test a distributed application. You want users to be able to install the application from a Web site.

What should you do?

- A. Use the Package and Deploy Wizard to publish your application to the appropriate Web site.
- B. Use Active Document Migration Wizard to convert your forms into .dob files. Then copy the .cab files to appropriate Web site.
- C. Use the Class Builder utility to identify all dependent files, to package your application, and to publish files to the appropriate Web site.
- D. Save all forms as HTML pages. Then publish the HTML pages on the appropriate Web site.

Answer: A

Explanation: The Package and Deployment Wizard is a tool that helps you create installation packages for your Visual Basic applications and install them to your end-users' computers. The packages can be made so that they are installed from a web site.

Incorrect Answers:

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- B:** It would be possible to use the Active Document Migration Wizard to convert forms into files that can be opened in a Web browser. Converting each form would a tedious task. It would be better to use the Package and Deployment Wizard.
- C:** The Class Builder utility keeps track of the hierarchy of your classes and collections and generates the framework code necessary to implement the classes and collections. It cannot be used to deploy an application.
- D:** There is more to an application than HTML files. Publishing just HTML files at the Web site wouldn't publish the application.

Q. 101

A client application uses Remote Data Services (RDS) to retrieve a disconnected Recordset object from a web server. The recordset was created by using ADO. The recordset is named rsData. You want the client application to persist the changes made to the recordset without reconnecting to the web server

- A. Dim fname as Variant
fname="C:Mywork.txt"
rsData.save fname
- B. Dim fname as Variant
fname="C:Mywork.txt"
RsData. UpdateBatch fname
- C. Open"C:Mywork.txt" for output as #1
Put #1, rsData.Fields
- D. Open"C:Mywork.txt" for output as #1
Write #1, rsData.Fields

Answer: A

Explanation: We are required to save the disconnected recordset locally, to persist the recordset. We do this by saving the recordset into a textfile. We use the Save method on the recordset object to accomplish this.

Please note that you want to persist the changes without connecting to the web server. So, you cannot use the UpdateBatch method.

Incorrect Answers:

- B:** The updatebatch only works when we connect to the original data source, the web site.
- C:** We want to save the recordset in a textfile. We cannot use the Fields property of the recordset to this.
- D:** We want to save the recordset in a textfile. We cannot use the Fields property of the recordset to this.

Q. 102

A stored procedure named `GetCustomer` exists on a Microsoft SQL Server database. The procedure takes the input parameter `@CustomerId`, which is a SQL Server integer. The procedure returns a result set that contains the customer data.

The variable `iVBCustomerId` contains the value of `@CustomerId`. The name of the command object is `Cmd`. The command Text property of the `Cmd` object is set to `GetCustomer`.

Which code fragment should you use to execute the stored procedure?

- A. `Cmd.parameter.Refresh`
`cmd.Execute`
- B. `Cmd.parameter(0) =iVBcustomerID`
`cmd.Execute`
- C. `set prm=cmd.Createparameter(IcustomerID_`
`as Integer, adPararmentInput, iVBcustomerID)`
`cmd.parameterAppend prm`
`cmd.Execute`
- D. `Cmd.Parameters (1).Name = "CustomerId"`
`Cmd.Parameters (1).Type = adInteger`
`Cmd.Parameters (1).Direction = adParamInputOutput`
`Cmd.Parameters (1).Value = iVBCustomerId`
`Cmd.Execute`

Answer: D

Explanation: We can use the `cmd` command object to set up the parameters and then execute it.

Reference: HOWTO: Call SQL Server Stored Procedures from ASP (Q164485)

Incorrect Answers:

A: We must supply the parameters to the stored procedure.

B: We must specify the Name, Type, and Direction parameters as well.

C: There are errors in this construction. We should use `CustomerId` not `IcustomerID`.

Q. 103

You need to update rows in three tables based on the data in each row of a fourth table named Account. If any of the updates fail, all updates should be canceled.

What should you do to ensure that entire update is canceled if any part of it fails?

- A. Create one stored procedure. Inside the Procedure, use one transaction for each table
- B. Create one stored procedure. Raise an error from the procedure if the update fails. In the Visual Basic code, execute this procedure within an ADO transaction
- C. Create four stored procedures that contain the code to process each of the four tables. In the Visual Basic code, execute each of these four procedures within an ADO transaction
- D. Create two stored procedures. One of the procedures processes the data. The other procedure backs out the processing.
- E. If the execution of the first procedure fails, then call the second stored procedure to restore the data to its previous state.

Answer: B

Explanation: We must use one transaction for the whole update process so that if the update fails in one table the whole update process is rolled back.

Incorrect Answers:

- A:** We must use one transaction for the whole update process. If we use three transactions then one or two of the transactions could be committed while another is rolled back, making the updating of the three tables incomplete.
- C:** We only need one stored procedure.
- D:** This is a complicated solution. Use a transaction instead.
- E:** This is a complicated solution. Use a transaction instead.

Q. 104

You are developing a client/server application. The client application will access only some of the data in the result set .You want to minimize the amount of network traffic.

Which type of database cursor should you use in the application?

- A. Dynamic server-side cursor
- B. Dynamic keyset client-side with pessimistic locking
- C. Static client-side cursor with optimistic locking
- D. Non-keyset client-side cursor.

Answer: A

Explanation: We want to reduce the network traffic so we should use a server-side cursor and only send some of the records to the client.

Note: Client cache cursors loads and caches the whole result set. This would result in unnecessary network traffic since only some of the data in the result set will be used by the client application.

Incorrect Answers:

- B:** There is no cursor called dynamic keyset.
A server-side cursor would minimize the network traffic.
- C:** A server-side cursor would minimize the network traffic.
- D:** A server-side cursor would minimize the network traffic.

Q. 105

Your Visual Basic application allows the user to edit data records. You want to ensure that only one user at a time can have a record open.

Which type of locking strategy should you use?

- A. Read-only
- B. Lock Optimistic
- C. Lock Pessimistic
- D. Batch Optimistic

Answer: C

Explanation: Pessimistic locks immediately lock records when they are opened. This ensures that a record can only be opened by one user at a time.

Incorrect Answers:

- A:** Read-only would not lock the records.
- B:** Optimistic locking doesn't lock a record until it is going to be updated.
- D:** Optimistic locking doesn't lock a record until it is going to be updated.

Q. 106

You want to retrieve an ADO recordset that allows users to have unrestricted data manipulation and browsing functionality. You do not need the local recordset to detect records added to the database by other user. However, you need the recordset to detect any changes made to its own records.

Which type of cursor should you use?

- A. Static
- B. Keyset
- C. Dynamic
- D. Forward-only

Answer: B

Explanation: A keyset-driven cursor lies between a static and a dynamic cursor in its ability to detect changes.

Incorrect Answers:

- A:** A static cursor doesn't detect possible changes to the records made by other processes.
- C:** A dynamic cursor is able to add, change, or delete rows from an underlying database table or tables. A dynamic cursor would not be able to detect changes made to the records made by other processes.
- D:** Forward only cursors only allow you to move to the next record, not the previous, and would not allow unrestricted browsing.

Q. 107

Kate has are designing a 3-tier application in which her application will call a DBClass component on a remote server via DCOM. Her DBClass will insert values such as CustomerID, Name, Phone and approximately 30 other values to the Customers table via the InsertCustomer method. How should Kate get these values to her component maintaining the best possible performance and compatibility?

- A. Place the customer data into a string buffer and pass the string
sCustomerString= CustomerID & "," & sName & "," & sPhone & "," ...
Call DBClass.InsertCustomer(sCustomerString)
- B. Pass each value in the call to InsertCustomer
Call DBClass.InsertCustomer(CustomerID, sName, sPhone ...)
- C. Place the customer data into a variant array and pass the array
vCustomerArray(0) = CustomerID
vCustomerArray(1) = sName

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...

Call DBClass.InsertCustomer(vCustomerArray)

- D. Create properties for each value in the DBClass component, set those properties from the main application, and call the DBInsert routine with no arguments.

Answer: C

Explanation: Passing the properties as a variant array would minimize network traffic and maximize performance. It would also be the most compatible solution since properties can be changed without any need to recompile DBClass.

Incorrect Answers:

- A:** Using a string to collect all the values and then pass the string would minimize network traffic, but it is a specific solution that is not compatible with standard solutions.
- B:** The Call DBClass.InsertCustomer(CustomerID, sName, sPhone ...) statement passes the values while minimizing network traffic. It is not the best compatibility solution since the DBClass would have to be recompiled if any property would change.
- D:** Setting the properties individually would require more network traffic.

Q. 108

You are using the DataBindings collection to bind fields on your ActiveX control to a datasource. If you do not set the _____ property, your changes will never be written back to the datasource.

- A. UpdateProperties
- B. DataChanged
- C. PropertyChanged
- D. WriteProperties

Answer: B

Explanation:

The DataChanged Property returns or sets a value indicating that the data in the bound control has been changed. If the DataChanged property is set to false there will be no changes in the database from the bound control.

Incorrect Answers:

- A:** UpdateProperties is a method not a property.
- B:** There is no property called PropertyChanged.
- D:** WriteProperties is a method not a property.

Q. 109

Your application uses an `ObjectContext` variable to maintain the connection to objects created using MTS component package. The name of the `ObjectContext` variable is `objMyContext`. One of the operations that were to be performed by the transaction fail. You want to deactivate the object context because you do not need to maintain state information. However you wish to retain the reference to the object so that you can use it again without reconnecting. Which command should you use to roll back all actions that are part of the transactions?

- A. `objMyContext.SetAbort`
- B. `objMyContext.SetComplete`
- C. `objMyContext.DisableCommit`
- D. `set objMyContext=Nothing`

Answer: A

Explanation: The `SetAbort` method of an `ObjectContext` object will cause a pending transaction to be rolled back in its entirety.

Incorrect Answers:

- B:** The `SetComplete` method of an `ObjectContext` object will cause a pending transaction to be committed in its entirety.
- C:** The `EnableCommit` and `DisableCommit` methods instead of `SetAbort` and `SetComplete` methods when the state of the object has to be maintained.
- D:** Setting an object context variable to `Nothing` will cause it to be terminated and will disconnect you from it. But we need to rollback the transaction and we want to keep the object for future use.

Q. 110

You want to take advantage of Just-in-Time (JIT) Activation services provided by Microsoft Transaction Server (MTS). Which two methods can you use to maintain an MTS object reference after the object is deactivated?

- A. `SetComplete` and `SetAbort`
- B. `EnableCommit` and `DisableCommit`
- C. `BeginTrans` and `CommitTrans`
- D. `Commit Transaction` and `Rollback Transaction`

Answer: A

Explanation: The SetComplete method of anObjectContext object will cause a pending transaction to be committed in its entirety. The SetAbort method of anObjectContext object will cause a pending transaction to be rolled back in its entirety. Both these methods keep a reference to the object.

Note: JIT Activation is a feature of Microsoft Transaction Server (MTS) that enables objects to be deactivated, even when client applications are holding references to them. To benefit from the JIT feature of MTS, you must use the SetComplete or SetAbort methods to deactivate the MTS object that you are using

Incorrect Answers:

B: The EnableCommit and DisableCommit methods would not deactivate the object.

C: The BeginTrans and CommitTrans methods apply the ADO connection objects, not on MTS objects.

D: Commit Transaction and Rollback Transaction are SQL statement. SQL statement cannot be used on MTS objects.

Q. 111

You have previously used Package and Deployment Wizard to create a setup program to Install Version 1 of your Distributed Application from a web page. You now want to install Version 2 of the Application.

You use Package and Deployment Wizard with all of the saved scripts to deploy the Updated Application. You do not receive any errors. However a Tester Reports that none of the hits to install web page are upgrading your application to Newer Version.

What is the likely cause of Problem?

A. Version 2 has been deployed with an Unlicensed Control

B. Version 2 has been deployed to an Invalid or Unavailable website.

C. The Version Number on the MAKE tab of the Project Properties dialog box has not been set to 2

D. The Conditional Compilation Arguments on the MAKE tab of the Project Properties dialog box has not been set to VersionNumber = 2

Answer: C

Explanation: The version number of the Visual Basic project must incremented in order to enforce that deployed package to replace the old versions of files when it is installed. You choose the **Project Properties** command from the **Project** menu, select the **Make** tab, and then change the Version number.

Incorrect Answers:

A: Use of unlicensed control would result in an error message. This is not the cause of the problem.

- B:** This is not the most likely problem. Version 1 was installed correctly and there is no reason version 2 should have any problems with the Web site.
- D:** Conditional Compilation is not used to set the version number of the project.

Q. 112

Jon is building a setup program for his client/server AccountFinder project. The client is going to access a component on a network server. What file must be created so that the Package and Deployment wizard will recognize that Jon's application has a remote component?

- A. .REG file
- B. .VBL file
- C. .RVB file
- D. .VBR file

Answer: D

Explanation: VBR is an acronym for Visual Basic Remote. A .VBR and TLB files are generated when a project is configured with the **Remote server files** option.

Note: The **Remote server files** checkbox can be found by selecting the **Project** menu, then use **Project Properties**, and clicking the **Component** tab

Incorrect Answers:

- A:** REG files are registry files not Visual Basic files.
- B:** There is no .VBL file in any Visual Basic project.
- C:** There is no such thing as a .RVB file.

Q. 113

Your Web-based application contains ASP that creates MTS components. The component is written in Visual Basic. On which computer must you install the MTS package file?

- A. The computer on which you want MTS to create and run the components.
- B. Only computer that is running Microsoft IIS.
- C. Each User computer only.
- D. Both the computer that is running Microsoft IIS and each user's computer.

Answer: B

Explanation: The ASP component, here worded MTS package file, must be installed on the Web Server computer; the IIS computer.

Incorrect Answers:

- A:** The package must be installed on the Web server.
- C:** The package should not be installed on the client computers. Only the web server should run the ASP package.
The package must be installed on the Web server.
- D:** The package should not be installed on the client computers. Only the web server should run the ASP package.