

070-310

TEST KING



LEADING THE WAY IN IT
TESTING AND CERTIFICATION TOOLS!

Developing XML Web Services
and Server Components
with Microsoft Visual Basic .NET

MCSD/MCAD

Version 2.0

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QUESTION NO: 1

TestKing buys and sells used refrigerators. External vendors frequently send you XML documents that list one type of used appliances for sale. The documents that you receive contain either only washers or only refrigerators as in the following example.

```
<!-- A document with refrigerators -->
<saleList>
  <refrigerators>
    <refrigerator type="freezer on bottom" , price="210"/>
  </refrigerators>
</saleList>

<!-- A document with washers -->
<saleList>
  <washers>
    <washer type="front load" , price="145"/>
    <washer type="top load" , price="130"/>
  </washers>
</saleList>
```

All incoming XML documents are loaded into a MemorySystem object named usedList.

You need to automate a process that will discover XML documents contain refrigerator elements. As soon as you ascertain that a document contains refrigerators, you can stop processing the document.

You decide to use Visual studio .NET to develop an application that will contain a Boolean variable named hasRefrigerator. A value of True for this variable means that a document contains refrigerator elements. A value of false means that it does not. You want to ensure that the discovery process occurs as quickly as possible.

What should you do?

- A. Create an XmlDocument object and load it from usedList.
Use the SelectSingleNode method to search the XmlDocument object for the saleList/refrigerators node.
If this node is found, set hasRefrigerator to **True**.
Otherwise, set hasRefrigerator to **False**.
- B. Create an XPathDocument object and load it from usedList.
Use an XPathNavigator object to search the XPathDocument for the saleList/refrigerators node.

If this node is found, set hasRefrigerator to **True**.
Otherwise, set hasRefrigerator to **False**.

- C. Create an XmlTextReader object on usedList.
Loop through usedList by using the MoveToContent method of the XmlTextReader object and comparing for the saleList/refrigerators node.
If this node is found, set hasRefrigerator to **True**.
Otherwise, set hasRefrigerator to **False**.
- D. Create a DataSet object and use its ReadXml method to load usedList into the object.
If the Count property of the Rows collection of the “refrigerators” entry in the object is not equal to zero, set hasRefrigerator to **True**.
Otherwise, set hasRefrigerator to **False**.

Answer: A

Explanation: The SelectSingleNode method selects the first XmlNode that matches the XPath expression. If no nodes match the query, it returns Null. This suggested procedure would meet the requirements of this scenario. Furthermore, this would be the fastest solution.

Note: An XmlDocument object represents an XML document and enables the navigation and editing of this document.

Reference: .NET Framework Class Library, XmlNode.SelectSingleNode Method [Visual Basic]

Incorrect Answers

B: There is no such thing as a XmlXPathDocument.

C: XmlReader provides forward-only, read-only access to a stream of XML data. The MoveToContent method can be used on a XmlReader stream to provide a possible solution in this scenario. However, it would be fastest solution.

Note: The MoveToContent method checks whether the current node is a content (non-white space text, CDATA, Element, EndElement, EntityReference, or EndEntity) node. If the node is not a content node, the reader skips ahead to the next content node or end of file.

D: This proposed solution is not straightforward, and is therefore slow.

QUESTION NO: 2

You create an XML web service that retrieves data from Microsoft SQL Server database. You instantiate a SqlConnection object named TestKConnection and set the Max Pool Size property of the connectionString to 50.

All 50 connections are now in use. However, a request for connection number 51 is received.

What is the most likely result?

- A. An exception is immediately thrown.
- B. The current connection pool is expanded by 50 additional connections.
- C. A new connection pool is created that has the same maximum number of connections.
- D. The request is queued until a connection becomes available or until the timeout limit is reached.

Answer: D

Explanation: The **Max Pool Size** property denotes the maximum number of connections allowed in the pool. If the maximum pool size has been reached and no usable connection is available, the request is queued. The object pooler satisfies these requests by reallocating connections as they are released back into the pool. If the time-out period elapses before a connection object can be obtained, an error occurs.

Reference: .NET Framework Developer's Guide, Connection Pooling for the SQL Server .NET Data Provider

Incorrect Answers

- A:** An exception is only thrown after the request has been queued and after the timeout limit is reached.
- B:** The maximum number of concurrent connections has been reached. No further connections would be allowed at the moment.
- C:** No new connection pool is created.

QUESTION NO: 3

You have a strongly types DataSet object named TestKingDataSet. This object contains three DataTable objects named Customers, Orders and OrderDetails.

Customers and Orders have a data column named CustomerID. Orders and OrderDetails have a data column named OrderID.

Orders have a foreign key constraint between Customers and Orders on CustomerID. OrderDetails has a foreign key constraint between Orders and OrderDetails on OrderID.

You want to populate Customers, Orders and OrderDetails with data from Microsoft SQL Server database.

In which order should you fill the Data table objects?

- A. Customers
OrderDetails
Orders
- B. OrderDetails

Orders
Customers

- C. Customers
Orders
OrderDetails
- D. Orders
OrderDetails
Customers

Answer: C

Explanation: We must populate the tables that are references by the foreign-key constraints first, namely the Customers and the Orders table. We should populate the OrderDetails table last.

TestKing Illustrative Diagram



Incorrect Answers

- A B:** There would be no corresponding rows in the Orders table if we populate the OrderDetails table before the Orders table.
- D:** There would be no corresponding rows in the Customers table if we populate the OrderDetails table before the Customers table.

QUESTION NO: 4

Your Microsoft SQL Server 6.5 database contains a table named TestKingPurchases that consists of more than 1 million rows.

You are developing an application to populate a DataReader object with data from TestKingPurchases. You want to ensure that the application processes the data as quickly as possible.

You create a SQL SELECT statement in a local variable named tkSQLSelect. You need to initiate a SqlConnection object and a SqlCommand object you will use to populate the DataReader object.

Which code segment should you use?

- A. `Dim myConnection As New OleDbConnection _`

```
(myOleDbConnectionString)
Dim tkCommand As New OleDbCommand _
    (tkSQLSelect)
```

- B.

```
Dim myConnection As New OleDbConnection _
    (myOleDbConnectionString)
Dim tkCommand As New OleDbCommand _
    (tkSQLSelect, myConnection)
```
- C.

```
Dim myConnection As New SqlConnection _
    (mySqlConnectionString)
Dim tkCommand As New SqlCommand _
    tkSQLSelect)
```
- D.

```
Dim myConnection As New SqlConnection _
    (mySqlConnectionString)
Dim tkCommand As New SqlCommand _
    (tkSQLSelect, myConnection)
```

Answer: B

Explanation: For Microsoft SQL Server version 6.5 and earlier, you must use the OLE DB Provider for SQL Server. Furthermore, we specify both the CommandText and the OleDbConnection properties of the OleDbCommand.

Reference:

.NET Framework Developer's Guide, .NET Data Providers [Visual Basic]
.NET Framework Class Library, OleDbCommand Members

Incorrect Answers

A: We create the OleDbCommand we must specify the OleDbConnection, not just the CommandText.
C, D: Only SQL Server 7.0, SQL Server 2000 or later can use SqlConnection.

QUESTION NO: 5

Your Microsoft SQL Server database has a stored procedure named GetTestKingCustomer. getTestKingCustomer accepts one parameter named @CustomerID and returns the appropriate company name.

You initiate a SqlCommand object named myCommand. You need to initialize myCommand to return the company name for @CustomerID with a value of "ALFKI".

Which code segment should you use?

- A. `myCommand.CommandText = "TestKingCustomer, ALFKI"`
`myCommand.Parameters.Add ("@CustomerID")`
- B. `myCommand.CommandText = "TestKingCustomer"`
`myCommand.Parameters.Add ("TestKingCustomer", "ALFKI")`
- C. `myCommand.CommandText = "@CustomerID"`
`myCommand.Parameters.Add ("TestKingCustomer", "ALFKI")`
- D. `myCommand.CommandText = "TestKingCustomer"`
`myCommand.Parameters.Add ("@CustomerID", "ALFKI")`

Answer: D

Explanation: The `SqlCommand.CommandText` Property gets or sets the SQL statement or stored procedure to execute at the data source. Here we should set it to the name of the stored procedure: `TestKingCustomer`. The Parameter should contain `ParameterName` (here `@CustomerID`) and the Value (here the string `ALFKI`).

Note: A `SqlCommand` object represents a Transact-SQL statement or stored procedure to execute against a SQL Server database.

Reference:

.NET Framework Class Library, `SqlCommand.CommandText` Property [Visual Basic]
.NET Framework Class Library, `SqlParameter` Members

Incorrect Answers

- A, C:** The `CommandText` should be set to the name of the stored procedure. We should not specify any parameters in the `CommandText`.
- B:** The name of the parameter, not the name of the stored procedure, should be included in the parameter.

QUESTION NO: 6

You have a `DataSet` object named `myDataSet`. This object contains two `DataTable` objects named `Customers` and `Orders`. `Customers` has a column named `CustomerID`, which is unique to each customer. `Orders` also has a column named `CustomerID`. You want to use the `GetChildRows` method of the `DataRow` object to get all orders for the current customers.

What should you do?

- A. Add a foreign key constraint on `CustomerID` of `Orders` between `Customers` and `Orders`.
- B. Add a data relation to `myDataSet` on `OrderID` between `Customers` and `Orders`.
- C. Create a unique constraint on `CustomerID` of `Customers`.

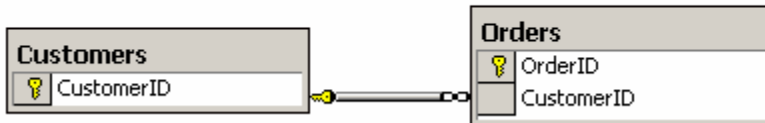
- D. Create a primary key on CustomerID of Customers.

Answer: B

Explanation: The GetChildRows Method use a DataRelation to retrieve the child rows of this DataRow using the specified DataRelation. In this scenario we would be required to add a data relation between the two tables.

Note: A Datarelation represents a parent/child relationship between two DataTable objects.

TestKing Illustrative Diagram



Reference:

.NET Framework Class Library, DataRow.GetChildRows Method (DataRelation) [Visual Basic]

.NET Framework Class Library, DataRelation Class [Visual Basic]

Visual Database Tools, Foreign Key Constraints

Incorrect Answers

- A:** A foreign key constraint works in conjunction with primary key or unique constraints to enforce referential integrity among specified tables. However, the GetChildRows method uses a DataRelation, not a foreign key constraint.
- C:** A unique constraint on CustomerID of Customers would only make sure that the CustomerID column will have unique values.
- D:** A primary key constraint would ensure that CustomerID column will have unique values.

QUESTION NO: 7

You are developing an application that queries a table named Products in a Microsoft SQL Server database. The query will be stored in a string variable named TKQuery. The query includes the following SQL code.

```
SELECT * FROM Products For XML AUTO
```

You must iterate the query results and populate an HTML table with product information.

You must ensure that your application processes the results as quickly as possible.

What should you do?

- A. Use a SqlDataAdapter object and set its SelectCommand property to TKQuery.
Use the Fill method of the SqlDataAdapter object to read the data into a DataSet object.

Loop through the associated rows to read the data.

- B. Use a SqlDataAdapter object and set its SelectCommand property to **TKQuery**.
Use the Fill method of the SqlDataAdapter object to read the data into a DataSet object.
Use the ReadXml method of the DataSet object to read the data.
- C. Set the SqlCommand object's Command Text to **TKQuery**.
Use the ExecuteReader method of the SqlCommand object to create a SqlDataReader object.
Use the Read method of the SqlDataReader object to read the data.
- D. Set the SqlCommand object's Command Text to **TKQuery**.
Use the ExecuteXmlReader method of the SqlCommand object to create a XmlReader object.
Use the XmlReader object to read the data.

Answer: D

Explanation: You can execute SQL queries against existing relational databases to return results as XML documents rather than as standard rowsets. To retrieve results directly, use the FOR XML clause of the SELECT statement like in this scenario.

XmlReader provides non-cached, forward-only, read-only access to an XML data source, such as the XML produces by the T-SQL statement of this scenario.

Reference:

SQL Server 2000 Books Online, Retrieving XML Documents Using FOR XML
.NET Framework Developer's Guide, Reading XML with the XmlReader

Incorrect Answers

- A:** We must take since the data is in XML format. Furthermore, a Dataset is not required.
- B:** DataSet.ReadXml method reads XML data into the DataSet. However, it is not necessary to use a dataset. Reading the data into a Datasets brings an unnecessary overhead.
- C:** The SqlDataReader provides a means of reading a forward-only stream of rows from a SQL Server database. However, it operates on relational data not on XML data.

QUESTION NO: 8

You use a function to maintain a table named Categories in a Microsoft SQL Server database. The function creates a DataTable object named Categories in a DataSet object named categoriesDataSet. These two objects capture all insertions, updates and deletions to the Categories table.

The function instantiates a SqlDataAdapter object named TKDataAdapter. This object is configured to select, insert, update and delete rows in the Categories DataTable object.

You need to update the database to include the changes in the Categories DataTable object and capture all data errors in a batch after all rows have been processed.

Which code segment should you use?

- A. Try
 TKDataAdapter.Update (CategoriesDataSet, "Categories")
 Catch mySqlException as SqlException
 Dim myDataRow () As DataRow = _
 CategoriesDataSet.Tables (0).GetErrors ()
 End Try
 ' Code to process errors goes here.
- B. TKDataAdapter.ContinueUpdateOnError = True
 Try
 TKDataAdapter.Update (CategoriesDataSet, "Categories")
 Catch mySqlException as SqlException
 Dim myDataRow () As DataRow = _
 CategoriesDataSet.Tables (0) .GetErrors ()
 End Try
 ' Code to process errors goes here.
- C. TKDataAdapter.Update (CategoriesDataSet, "Categories")
 If categoriesDataSet.Tables(0).HasErrors Then
 Dim myDataRow () As DataRow = _
 CategoriesDataSet.Tables(0).GetErrors ()
 ' Code to process errors goes here.
 End If
- D. TKDataAdapter.ContinueUpdateOnError = True
 TKDataAdapter.Update (CategoriesDataSet, "Categories")
 If categoriesDataSet.Tables (0).HasErrors Then
 Dim myDataRow () As DataRow = _
 CategoriesDataSet.Tables(0).GetErrors ()
 ' Code to process errors goes here.
 End If

Answer: D

Explanation:

Line 1: TKDataAdapter.ContinueUpdateOnError = True

The DataAdapter.ContinueUpdateOnError property gets or sets a value that specifies whether to generate an exception, or the row in error when an error is encountered during a row update. The value **true** is used to

continue the update without generating an exception.. The default is false. In this scenario the value of this property must be true. We don't want exceptions.

Line 2: `TKDataAdapter.Update (CategoriesDataSet, "Categories")`

We update the database. All updated rows in the Dataset are updated in the database as well.

Line 3: `If categoriesDataSet.Tables (0).HasErrors Then`

We check if there exist any errors in the dataset with the HasErrors method.

Line 4, 5, 6: We collect the rows with errors with the GetErrors method.

Reference: .NET Framework Class Library, DataAdapter.ContinueUpdateOnError Property [Visual Basic]

Incorrect Answers

A, B: We don't want the errors that occur while processing rows to not generate exceptions. Instead we want to collect the rows where errors occurred. The **Try....Catch** construct is useless here.

C: By default an error to update, insert or delete a row causes an exception. We must set the DataAdapter property ContinueUpdateOnError to **True**.

QUESTION NO: 9

Your company frequently receives product information from external vendors in the form of XML data. You receive XML document files, an .xdr schema file, and an .xsd schema file.

You need to write code that will create a typed DataSet object on the basis of product information. Your code will be used in several Visual studio .NET applications to speed up data processing.

You need to create this code as quickly as possible.

What should you do?

- A. Create the code manually.
- B. Use XmlSerializer.Serialize to generate the code.
- C. Use the XmlSerializer.Deserialize to generate the code.
- D. Use the Xml Schema Definition tool (Xsd.exe) to generate the code.

Answer: D

Explanation: The XML Schema Definition tool generates XML schema or common language runtime classes from XDR, XML, and XSD files, or from classes in a runtime assembly. The code would be produced quickly.

Reference: .NET Framework Tools, XML Schema Definition Tool (Xsd.exe)
.NET Framework Class Library, XmlSerializer Class [Visual Basic]

Incorrect Answers

A: Manually creating code would be tedious.

- B:** The XmlSerializer.Serialize is used to produce XML documents from objects. It is the wrong way around.
- C:** At run time XML documents can be deserialized into run time objects with the XmlSerializer.Deserialize method. However, we would have to manually produce this code.

QUESTION NO: 10

You create a DataSet object named TestKingProductsDataset that contains product information from a Microsoft SQL Server database. This object has a primary key on a column named ProductID.

You want to create a new DataSet object that has the same structure as TestKingProductsDataset, including the primary key. You want the new DataSet object to be empty of data.

Which code segment should you use?

- A. Dim NewDataSet As DataSet = TestKingProductsDataset.Clone
- B. Dim NewDataSet As DataSet = TestKingProductsDataset.Copy
- C. Dim NewDataSet as New DataSet ()
newDataSet.Tables.Add ("TestKingProductsDataset")
- D. Dim newDataSet as New Dataset ()
newDataSet.Tables.Add (TestKingProductsDataset.Tables (0))

Answer: A

Explanation: DataSet.Clone method copies the structure of the DataSet, including all DataTable schemas, relations, and constraints. It does not copy any data.

Reference: .NET Framework Class Library, DataSet.Clone Method [Visual Basic]

Incorrect Answers

B: DataSet.Copy method Copies both the structure and data for this DataSet.

C: A Dataset it cannot be added as a table.

D: We want the new dataset be same as the old. Here we just copy a single table.

QUESTION NO: 11

Your Microsoft SQL Server database contains a table named TestKingOrders. Due to recent increase in product sale. TestKingOrders now contains more than 500,000 rows.

You need to develop an application to produce a report of all orders in the table. You need to ensure that the application processes the data as quickly as possible.

Which code segment should you use?

- A. `Dim myOleDbConnection As New OleDbConnection _
 ("Data Source=(local);"
 & "Initial Catalog=TestKing;"
 & "Integrated Security=true")
 Dim myOleDbCommand As New OleDbCommand
 ("SELECT * FROM TestKingOrders" , myOleDbConnection)
 Dim ordersData Reader As OleDbDataReader
 MyOleDbconnection.Open()
 OrdersDataReader = myOleDbcommand.ExecuteReader`
- B. `Dim myOleDbConnection As New OleDbConnection _
 ("provider=sqloledb;Data Source=(local);"
 & "Initial Catalog=TestKing;"
 & "Integrated Security=true")
 Dim myOleDbCommand As New OleDbCommand
 ("SELECT * FROM TestKingOrders" , myOleDbConnection)
 Dim ordersData Reader As OleDbDataReader
 myOleDbconnection.Open()
 ordersDataReader = myOleDbCommand.ExecuteReader`
- C. `Dim myConnection As New SqlConnection _
 ("Data Source=(local);Initial Catalog=TestKing;"
 & "Integrated Security=true")
 Dim myCommand as new SqlCommand
 ("SELECT * FROM TestKingOrders" , myConnection)
 Dim ordersData Reader As SqlDataReader
 Myconnection.Open()
 OrdersDataReader = mycommand.ExecuteReader`
- D. `Dim myConnection As New SqlConnection _
 ("Data Source=(local); "Initial Catalog=TestKing;"
 & "Integrated Security=true")
 Dim myCommand as new SqlCommand("SELECT * FROM TestKingOrders")
 Dim ordersData Reader As SqlDataReader
 Myconnection.Open()
 ordersDataReader = myCommand.ExecuteReader`

Answer: C

Explanation: A SqlConnection gives better performance than an OleDbConnection when working with a SQL Server data source. Furthermore, the SqlCommand object should contain both a text query and a SqlConnection. The critical command:

```
Dim myCommand as new SqlCommand ("SELECT * FROM TestKingOrders" , MyConnection)
```

Reference: .NET Framework Class Library, SqlCommand Constructor [Visual Basic]

Incorrect Answers

A, B: If we assume that the SQL Server is Version 7.0 or later, a SqlConnection would be more effective than an OleDbConnection.

D: The SqlCommand should include the SqlConnection as well.

QUESTION NO: 12

You are debugging a visual studio .Net application named TestKingApp. The application produces an Xml documents object and then consumes the same object. This object moves data in the application. The object has no schema, but it contains a declaration line that you must inspect.

You decide to transform the XML code and its declaration into a string for easy inspection.

What should you do?

- A. Assign the ToString method of the Xml Document object to a string variable.
- B. Assign the OuterXml property of the Xml document object to a string variable
- C. Assign the OuterXml property of the Xml document element property of the Xml document object to a string variable.
- D. Use the WriteContentTo method of the XmlDocument object to write the document into a MemoryStream object. Use the GetXml method of the DataSet object to get a string version of the document.

Answer: B

Explanation: The XmlNode.OuterXml property gets the markup representing this node and all its children.

Reference: .NET Framework Class Library, XmlNode.OuterXml Property [Visual Basic]

Incorrect Answers

A: The ToString method returns a String that represents only the current Object.

C: There is no XmlDocument element property.

D: This proposed solution is complicated. Furthermore the GetXml method of the DataSet object cannot be used on a stream.

QUESTION NO: 13

You are developing a order-processing application that retrieves data from a Microsoft SQL Server database contains a table named TestKCustomers and a table named Orders.

Customer has a primary key of customerID. Each row in orders has a CustomerID that indicates which customer placed the order.

Your application uses a DataSet object named ordersDataSet to capture customer and order information before it applied to the database. The ordersDataSet object has two Data Table objects named Customers and Orders.

You want to ensure that a row cannot exist in the Orders Data Table object without a matching row existing in the customers Data Table object.

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

- A. Create a foreign key constraint named ConstraintOrders that has Orders.CustomerID as the parent column and Customers.CustomerID as the child column.
- B. Create a foreign key constraint named ConstraintCustomers that has Customers.CustomerID as the parent column and Orders.CustomerID as the child column.
- C. Create a unique constraint named UniqueCustomers by using the Customers.CustomerID
- D. Add ConstraintOrders to the Orders Data Table.
- E. Add ConstraintOrders to the Customer Data Table.
- F. Add ConstraintCustomers to the Orders Data Table.
- G. Add ConstraintCustomers to the Customers Data Table.
- H. Add UniqueCustomers to the Customers Data Table.

Answer: B, F

Explanation:

B: The parent column is located in the table on the “one-side”, while the child column is located on the “many-side”. Here the Customers table is the parent domain and Orders is the child domain: each Customer can have several orders, but for each specific order there must exists exactly one corresponding row in the Customers table. We should use the ConstraintsCustomers constraints.

F: The constraint must be added to the Orders table.

TestKing Illustrative Diagram



Incorrect Answers

A: This is incorrect. The parent column must be CustomerID in the Customers table.

B, D: The ConstraintCustomers constraint must be used, not ConstraintOrders.

C, F: A unique constraint only applies to one single table.
E: The constraint must be added to the Orders table.

QUESTION NO: 14

You have DataSet object named LoanCustomersDataSet that contains customers serviced by the loan department of TestKing. You receive a second DataSet that contains customers serviced by the asset management department of TestKing. Both objects have the same structure.

You want to merge assetCustomersDataSet into LoanCustomersDataSet and preserve the original values in loanCustomersDataSet.

Which code segment should you use?

- A. loanCustomersDataSet.Merge (assetCustomersDataSet)
- B. loanCustomersDataSet.Merge (assetCustomersDataSet, True)
- C. assetCustomersDataSet.Merge (loanCustomersDataSet)
- D. assetCustomersDataSet.Merge (loanCustomersDataSet, True)

Answer: B

Explanation: The DataSet.Merge method merges this DataSet with a specified DataSet. The data will be merged into the dataset on which the Merge method is applied. We want to merge into our Datasets, namely the loanCustomerDataSet. Furthermore, we want to preserve the original values in loanCustomerDataSet. The Boolean parameter is the preserveChanges. PreserveChanges indicates a value indicating whether changes made to the current DataSet should be maintained. It should be true, if changes should be maintained, like in this scenario. .

Reference: .NET Framework Class Library, DataSet.Merge Method (DataSet, Boolean) [Visual Basic]

Incorrect Answers

A The PreserveChanges parameter must be set to true.
C, D: We must merge into loanCustomerDataSet, not into the Dataset that we have received.

QUESTION NO: 15

You are creating an XML Web service that generates a SOAP message. Parameter information in the SOAP message must be encrypted.

You write the appropriate code to modify the SOAP message. You also write a method named Encrypt. This method takes a string an argument, encrypts the string, and returns a new string that contains the encrypted string.

Before encryption , the Body element of the SOAP message will be written in the following format.

```
<soap:Body>
  <returnToSender xmlns = http://TestKing.com/>
    <aString>some date</aString>
  </returnToSender>
</soap:Body>
```

After encryption, the Body element must be written in the following format.

```
<soap:Body>
<returnToSender xmlns = "http://TestKing.com/">
154 37 146 194 17 92 32 139 28 42 184 202 164 18
</returnToSender>
</soap:Body>
```

You write code to isolate the <returnToSender> XML node in an XmlNode object named theNode.

You now need to write code to encrypt the parameter information.

Which code segment should you use?

- A. Dim encrypted as String = Encrypt(theNode.InnerText)
 theNode.OuterXml = encrypted
- B. Dim encrypted as String = Encrypt(theNode.InnerXml)
 theNode.OuterXml = encrypted
- C. Dim encrypted as String = Encrypt(theNode.InnerXml)
 theNode.InnerXml = encrypted
- D. Dim encrypted as String = Encrypt(theNode.OuterXml)
 theNode.OuterXml = encrypted
- E. Dim encrypted as String = Encrypt(theNode.InnerText)
 theNode.InnerText = encrypted

Answer: C

Explanation: First we retrieve the markup representing the child of the node with the InnerXml property. Then we encrypt this string. Finally we set the InnerXml property to this encrypted string.

Note: The **XmlAttribute.InnerText** property gets or sets the concatenated values of the node and all its children. For attribute nodes, this property has the same functionality as the Value property: it gets or sets the value of the node.

The **XmlDocument.InnerXml** property gets or sets the markup representing the children of the current node. Setting this property replaces the children of the node with the parsed contents of the given string.

The **XmlNode.OuterXml** property gets the markup representing this node and all its children.

Reference:

.NET Framework Class Library, XmlDocument.InnerXml Property [Visual Basic]

.NET Framework Class Library, XmlAttribute.InnerText Property [Visual Basic]

.NET Framework Class Library, XmlNode.OuterXml Property [Visual Basic]

Incorrect Answers

A, B: The XmlNode.OuterXml property is read only and cannot be used in the statement:

```
theNode.OuterXml = encrypted
```

C: theNode.InnerXML would produce the markup “<aString>some date</aString>”, however we only want to encrypt the string “some date”.

D: theNode.OuterXml would produce the whole node, however we only want to encrypt the string “some date”.

E: Just encrypting the InnerText property would result in a body element where the <astring> markup still would be present:

```
<soap:Body>
<returnToSender xmlns = “http://TestKing.org/”>
<aString>154 37 146 194 17 92 32 139 28 42 184 202 164 18</aString>
</returnToSender>
</soap:Body>
```

QUESTION NO: 16

You create an XML Web Service project that consists of three services, named BronzeService, SilverService, and GoldService. All three services are located in the same virtual directory on a production computer. When customers subscribed to your service, they select only one of the three available services.

A new customer subscribes to SilverService. You need to create a discovery document that enables this customer to use only SilverService.

Which discovery document should you create?

A.

```
<disco:discovery
  xmlns:disco=http://schemas.testking.org/disco/
  xmlns:scl=http://schemas.testking.org/disco/scl/>
  <scl:contractRef ref=“SilverService.asmx?wsdl”/>
</disco:discovery>
```

- B. `<disco:discovery
xmlns:disco=http://schemas.testking.org/disco/
xmlns:scl=http://schemas.testking.org/disco/scl/">
<scl:contractRef ref="SilverService.asmx"/>
</disco:discovery>`
- C. `<dynamicDiscovery xmlns="urn:schemas-dynamicdiscovery:disco.2000-03-17">
<exclude path="_vti_cnf"/>
<exclude path="_vti_pvt"/>
<exclude path="_vti_log"/>
<exclude path="_vti_script"/>
<exclude path="_vti_txt"/>
<exclude path="Web References"/>
</dynamicDiscovery>`
- D. `<dynamicdiscovery xmlns="urn:schemas-dynamicdiscovery:disco.2000-03-17">
<exclude path="_vti_cnf"/>
<exclude path="_vti_pvt"/>
<exclude path="_vti_log"/>
<exclude path="_vti_script"/>
<exclude path="_vti_txt"/>
<exclude path="Web References"/>
<exclude path="BronzeService.asmx"/>
<exclude path="GoldService.asmx"/>
</dynamicDiscovery>`

Answer: A

Explanation: We should create a static discovery file. We use a **<discovery>** element. Service description references are specified in a discovery document by adding a **<contractRef>** element. We should use the SilverService.asmx?wsdl query string, since the web page may and the web service may not be located in the same directory.

Note: XML Web service discovery is the process of locating and interrogating XML Web service descriptions, which is a preliminary step for accessing an XML Web service. Programmatic discovery can be enabled when an XML Web service publishes a .disco file, which is an XML document that can contains links to other discovery documents.

Note Dynamic Discovery: Dynamic discovery is a process by which ASP.NET can perform an iterative search through a hierarchy of folders on a development Web server to locate available XML Web services. A dynamic discovery (.vsdisco) file is an XML-based file with a root node called **<dynamicDiscovery>**. To maintain

positive control over which XML Web services clients can discover, you should only use dynamic discovery on development Web servers. When deploying an XML Web service to a production Web server, you should instead create a static discovery file (.disco) for those XML Web services you want to enable clients to discover.

Reference: .NET Framework Developer's Guide, Enabling Discovery for an XML Web Service
Visual Basic and Visual C# Concepts, Deploying XML Web Services in Managed Code

Incorrect Answers

B: A file path to a Web Service must include the ?WSDL query string. The short form of the URL (SilverService.asmx) is sufficient, provided that the Web service is located in the same folder as the Web page using the WebService behavior.

C, D: We should create a static discovery file, not a dynamic discovery file.

QUESTION NO: 17

You create version 1.0.0.0 of an assembly named TestKAssembly. You register the assembly cache.

MyAssembly consist of two .NET Remoting objects named TK1 and TK2. These objects are configured in the App.config file of MyAssembly as shown in the following code segment:

```
<system.runtime.remoting>
  <application>
    <service>
      <activated type="TestKAssembly.TK1,
        MyAssembly, Version=1.0.0.0, Culture=neutral,
        PublicKeyToken=28dckd83491duj"/>
      <wellknown mode="SingleCall"
        objectUri="TK2.rem"
        type="TestKAssembly.TK2.rem"
        Version=1.0.0.0, Culture=neutral,
        PublicKeyToken=28dckd83491duj"/>
    <channels>
      <channel ref="http"/>
    </channels>
    </service>
  </application>
</system.runtime.remoting>
```

You create an application named MyApp that resides on a different computer than TestKAssembly. MyApp references version 1.0.0.0 of TestKAssembly. MyApp contains code that activates instances of TK1 and TK2 to use their services.

Due to change in business needs, you must update TestKAssembly. You create version 2.0.0.0 of My Assembly. Which is backward compatible, but you do not update any information in the App.config file of TestKAssembly. You register version 2.0.0.0 of TestKAssembly in the global assembly cache. You then rebuild MyApp.

Which version of the remote objects will MyApp activate?

- A. version 1.0.0.0 of TK1; version 1.0.0.0 of TK2
- B. version 1.0.0.0 of TK1; version 2.0.0.0 of TK2
- C. version 2.0.0.0 of TK1; version 1.0.0.0 of TK2
- D. version 2.0.0.0 of TK1; version 2.0.0.0 of TK2

Answer: B

Explanation:

Version 1.0.0.0 of TK1 is used since the following client-activated configuration is used:

```
<activated type="TestKAssembly.TK1, Version=1.0.0.0...
```

The <wellknown> element Contains information about server-activated objects the application exposes to clients. TK2 is therefore server-activated. The server controls what version is activated when a client connects to a server-activated object. Therefore Version 2.0.0.0 will be used for TK2.

Note 1:

When a client activates a client-activated (that is, an <activated>) object, a network call is immediately sent to the server where the requested object is activated and an object reference to the object is returned to the client. Because the client directs the activation of the object, the client also chooses the version of the object to be activated.

Note 2: For Web applications, the source controlled configuration file is called Web.config. For non-Web applications, the source controlled file is called app.config.

Reference: .NET Framework Developer's Guide, Versioning

Incorrect Answers

A: TK2 is server-activated (or <wellknown>) so the latest available version (2.0.0.0) will be used.

C, D: Client-Side activation is used (see note 1). The version specified (1.0.0.0) is used.

QUESTION NO: 18

You creating Windows-based application named TestKWinApp. To the application, you add a Windows Form named MyForm and a reference to a SingleCall .Net Remoting object named TheirObject.

You need to ensure that MyForm creates an instance of TheirObject to make the necessary remote object calls.

Which code segment should you use?

- A.

```
RemotingConfiguration.RegisterActivatedClientType( _
    GetType(TheirObject) ,
    http://TestKingServer/TheirAppPath/TheirObject.rem)
Dim theirObject As New TheirObject()
```
- B.

```
RemotingConfiguration.RegisterWellKnownClientType( _
    GetType(TheirObject) ,
    http://TestKingServer/TheirAppPath/TheirObject.rem")
Dim theirObject As New TheirObject()
```
- C.

```
RemotingConfiguration.RegisterActivatedServiceType( _
    GetType(TheirObject) ,
    Dim theirObject As New TheirObject())
```
- D.

```
RemotingConfiguration.RegisterWellKnownServiceType( _
    GetType(TheirObject) ,
    http://TestKingServer/TheirAppPath/TheirObject.rem", _
    WellKnownObjectMode.Singleton)
Dim theirObject As New TheirObject()
```

Answer: B

Explanation: The RemotingConfiguration Class provides various static methods for configuring the remoting infrastructure. The **RegisterWellKnownClientType** method registers an object Type on the client end as a well-known type (single call or singleton).

Reference: .NET Framework Class Library, RemotingConfiguration Members

Incorrect Answers

- A:** The **RegisterActivatedClientType** method registers an object Type on the client end as a type that can be activated on the server.
- C:** The **RegisterActivatedServiceType** method registers an object Type on the service end as one that can be activated on request from a client.
- D:** The **RegisterWellKnownServiceType** method registers an object type on the service end as a well-known type (single call or singleton).

QUESTION NO: 19

You are preparing to deploy an XML Web service named TestKingInventoryService. This service queries a Microsoft SQL Server database and return information to the caller.

You are Visual Studio .Net to create a setup project. You need to install TestKingInventorySystem. You also need to run a script to create the necessary SQL Server database and tables to store the data. To accomplish this, you need to configure the project to have administrator rights to the SQL Server database.

You add a custom dialog box to the project that prompts the user for the administrator user name and password that are used to connect to the SQL Server database. You need to make the user name and password available to a custom Installer class that will execute the script.

What should you do?

- A. Add a launch condition that passes the user name and password to the Install subroutine.
- B. Add a merge module to the project that captures the user name and password. Use the merge module to access these values in the Install subroutine.
- C. Retrieve the user name and password from the savedState object in the install subroutine.
- D. Create a custom install action. Set the CustomActionData property to the entered user name and password. Then access these values in the Install subroutine.

Answer: D

Explanation: The CustomActionData Property specifies additional data that can be evaluated by a custom action during installation. Custom actions are run at the end of an installation and cannot access information about the installation; the CustomActionData property allows you to store information about the installation that can be read by the custom action.

Reference: Visual Studio, CustomActionData Property

Incorrect Answers

A: It is not possible to achieve the goal with a launch condition.

B: Merge modules would be of no use here.

Note: A merge module is like a snapshot of a particular version of a component. A new merge module should be created for each successive version of a component in order to avoid version conflicts.

C: The savedStateGets property gets an IDictionary that represents the current state of the installation.

QUESTION NO: 20

You have an ASP.NET application named TestKWebApp. This application uses a private assembly named Employee to store and retrieve employee data. Employee is located in the bin directory of TestKWebApp.

You develop a new ASP .NET application named TestKWebApp2 that also needs to use employee. You assign Employee a strong name, set its version to 1.0.0.0, and install it in the global assembly cache. You then create a publisher policy assembly for version 1.0.0.0 and install it in the global assembly cache.

You complete TestKWebApp2 against version 1.0.0.0. You do not recompile TestKWebApp. You then run MyWebApp.

What is the most likely result?

- A. A VersionNotFoundException is Thrown.
- B. Employee is loaded from the bin directory.
- C. Version 1.0.0.0 of Employee is loaded from the global assembly cache.
- D. Version 1.0.0.0 of Employee is loaded by the publisher policy assembly.

Answer: D

Explanation: Vendors of assemblies can state that applications should use a newer version of an assembly by including a publisher policy file with the upgraded assembly.

Reference:

.NET Framework Developer's Guide. Creating a Publisher Policy File
 .NET Framework Developer's Guide, Versioning

Incorrect Answers

- A:** A VersionNotFoundException represents the exception that is thrown when attempting to return a version of a DataRow that has been deleted.
- B, C:** The Publisher Policy Assembly will be used.

QUESTION NO: 21

You create an XML Web service named TestKService. You must ensure that this service meets the following URL authorization requirements.

- Anonymous access must be disabled for TestKService.
- An authenticated user named User1 cannot access TestKService.
- All other authenticated users can access TestKService.

You configure Internet Information Services (IIS) to meet these requirements. You now need to configure the authorization section in the Web.config file to properly authorize the users.

Which code segment should you use?

- A. `<allow users="*" />`
`<deny users="User1" />`
- B. `<allow users="?" />`
`<deny users="User1" />`
- C. `<deny users="*" />`
`<deny users="User1" />`
`<allow users="?" />`
- D. `<deny users="?" />`
`<deny users="User1" />`
`<allow users="*" />`

Answer: D

Explanation: The elements are applied in order one by one. The first matching element decides whether the user should be granted access or not.

Step 1: We deny access permissions to anonymous users with `<deny users="?" />`

Step 2: We deny access to User1 with `<deny users="User1" />`

Step 3: We allow access for all other users with `<allow users="*" />`

Note:

Identity	Description
*	Refers to all identities
?	Refers to the anonymous identity

Reference: .NET Framework Developer's Guide, ASP.NET Authorization

Incorrect Answers

A: All users are allowed access. We must deny before we allow.

B: All anonymous users are allowed access.

C: All users are denied access.

QUESTION NO: 22

You are creating a serviced component named UserManager. UserManager adds user accounts to multiple transactional data sources.

The UserManager class includes the following code segment.

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```

<Transaction (TransactionOption.Required) , _
    SecurityRole ("Admin") > _
Public Class UserManager
    Inherits ServicedComponent
    Public Sub AddUser (ByVal name As String, _
        ByVal password As String)
        ' Code to add the user to data sources goes here.
    End Sub
End Class

```

You must ensure that the AddUser method reliably saves the new user to either all data sources or no data sources. What should you do?

- A. To AddUser, add the following attribute:
<AutoComplete () >
- B. To UserManager, add the following attribute:
<JustInTimeActivation (False) >
- C. To the end of AddUser, add the following line of code:
ContextUtil.EnableCommit ()
- D. To the end of AddUser, add the following line of code:
ContextUtil.MyTransactionVote = True

Answer: C

Explanation: The `TransactionOption.Required` shares a transaction, if one exists, and creates a new transaction, if necessary. We should commit this transaction at the end of AddUser with `ContextUtil.EnableCommit ( )` statement.

Reference: .NET Framework Class Library, ContextUtil Methods

Incorrect Answers

- A:** Autocomplete is out of context here.
- B:** Just-in-time (JIT) activation is a COM+ service that enables you to create an object as a nonactive, context-only object. JIT does not apply here.
- D:** Not useful.

QUESTION NO: 23

You develop a Windows-based application named MyWinApp that contain a Windows Form named TestKing1. To MyWinApp, you add a Web reference to an XML Web Service named Service1.

Service1 exposes two Web methods named Authentication and RetrieveData. Both methods have sessions enabled. Authenticate authenticates a caller. If the caller is authenticated, Authenticate creates a unique key, stores that key by using the Session object, and returns that key.

RetrieveData expects a valid key that has been generated by Authenticate as input before it will return data. If the key matches the key in the current session, retrieveData will return data to the customer.

You write the following code segment in the Page_load event of TestKing1. (Line numbers are included for reference only)

```
01 Dim service1 As New localhost.Service1 ( )
02 Dim key As String
03 Dim userData As DataSet
04     ' Insert new code.
05 key = service1.Authenticate (myUser, myPassword)
06 userData = service1.RetrieveData (key)
07 DataGrid1.DataSource = userData
```

You run the application. When line 06 executes, the Web service returns an exception, which indicates that the key is invalid. To ensure that the application runs without exceptions, you must insert additional code on line 04.

Which code segment should you use?

- A. service1.PreAuthenticate = True
- B. service1.InitializeLifetimeService()
- C. service1.CookieContainer = New _
System.Net.CookieContainer()
- D. Dim cookie As New System.Net.Cookie("Key" , key)

Answer: A

Explanation: The PreAuthenticate property indicates whether to send authentication information with the initial request.

Reference:

.NET Framework Class Library, AuthenticationManager.PreAuthenticate Method
.NET Framework Developer's Guide, Initializing Leases [Visual Basic]

Incorrect Answers

- B:** InitializeLifetimeService method obtains a lifetime service object to control the lifetime policy for this instance.
- C, D:** Cookies would not help in making the initial authentication.

QUESTION NO: 24

You are creating an XML Web service named ShoppingCartService. All requests made to web methods of ShoopingCartservice require that callers present a valid key input. This key indicates that the user has been authenticated to make ShoppingCartService requests.

To obtain a valid key, the callers must first call GetKey.

You write the following code segment. (Line numbers are include for reference only)

```

01 <WebMethod ( ) > _
02 Public Function GetKey (ByVal caller As String) As String
03 Dim Key As String
04 If Not Context.Session ("key") Is Nothing
05     key = Context.Session ("key")
06     Return key
07 Else
08     Dim isAuthenticated As Boolean
09     ' Code to validate the caller goes here.
10     If isAuthenticated Then
11         ' Code to generate "key" goes here.
12         Context.Session ("Key") = key
13         Return key
14     Else
15         Throw New Exception ("User not authenticated")
16     End If
17 End If
18 End Function

```

You run the code and an exception is thrown on line 04. You want this code to run without exceptions.

What should you do?

- A. Delete lines 04 through 07 and delete line 17.
- B. Delete "Context." From lines 04, 05, and 12.
- C. On line 01, set the EnableSession property of the WebMethod Attribute to **true**.
- D. On line 01, set the CacheDuration property of the WebMethod attribute to a value greater than zero.

Answer: C

Explanation: The EnableSession property of the WebMethod attribute enables session state for an XML Web service method. Once enabled, the XML Web service can access the session state collection directly from HttpContext.Current.Session or with the WebService.Session property if it inherits from the WebService base class. The default value is false.

Reference: Visual Basic and Visual C# Concepts, Using the WebMethod Attribute

Incorrect Answers

- A:** We should keep the key for the session. Furthermore, the `Context.Session ("Key") = key` statement on line 12 would fail.
- B:** We should keep the key for the session. Furthermore, there would be an **End If** statement with no matching **If** statement.
- D:** Changing caching configuration would not help with the session data.

QUESTION NO: 25

You are creating an XML Web service that tracks employee information. The service contains a Web method named RetrieveTestKingEmployees. The service also contains a base class named Employee and two classes named Manager and Engineer, which are derived from Employee.

RetrieveTestKingEmployees takes a roleID as input that specifies the type of employee to retrieve, either Manager or Engineer. RetrieveTestKingEmployees returns an array type Employee that contains all employees that are in the specified role.

You want to ensure that Manager and Engineer object types can be returned from RetrieveTestKingEmployees.

What should you do?

- A. Set the TypeName property of the XmlType attribute to **Employee** for both Manager and Engineer.
- B. Apply two XmlInclude attributes to RetrieveTestKingEmployees, one of type Manager and one of type Engineer.
- C. Apply an XmlRoot attribute to the Employee class
Apply an XmlAttribute attribute to the Manager and Engineer classes.
- D. Apply an XmlRoot attribute to the Employee class
Apply an XmlElement attribute to the Manager and Engineer classes.

Answer: B

Explanation: The XmlInclude attribute allows the XmlSerializer to recognize a type when it serializes or deserializes an object. We specify the two types as XmlInclude attributes to our serializer RetrieveTestKingEmployees.

Reference:

.NET Framework Class Library, XmlIncludeAttribute Class

.NET Framework Class Library, XmlRootAttribute Class

Incorrect Answers

A: The XmlAttributes.XmlType property gets or sets an object that specifies how the XmlSerializer serializes a class to which the XmlTypeAttribute has been applied.

C: The XmlRoot attribute is not useful here.

Note: The XmlRootAttribute identifies a class, structure, enumeration, or interface as the root (or top-level) element of an XML-document instance.*

The XmlAttributes.XmlAttribute property gets or sets an object that specifies how the XmlSerializer serializes a public field or public read/write property as an XML attribute.

D: The XmlRoot attribute is not useful here.

Note: The XmlAttribute Indicates that a public field or property represents an XML element when the XmlSerializer serializes or deserializes the containing object.

QUESTION NO: 26

Your Microsoft SQL Server database contains a table named TestKingOrders. TestKingOrders is used to store new purchase orders as they are entered into an order-entry application. To keep up with customer demand, the order fulfillment department wants to know at 15-minute intervals when new orders are entered.

You need to develop an application that reads TestKingOrders every 15 minutes and sends all new orders to the order fulfillment department. The application will run on computer that is used by several users who continuously log on and log off from the network to perform miscellaneous tasks.

Which type of .NET application should you use?

- A. Windows Form
- B. Windows service
- C. XML Web service
- D. .NET Remoting object

Answer: B

Explanation: A Windows service would still be running even though users logs on and off.

Incorrect Answers

A: A Windows Form would be closed when a user logs off.

C: An XML Web service is not guaranteed to keep running if a user logs off.

D: You can use .NET Remoting to enable different applications to communicate with one another. However, a remoting object would be destroyed when a user logs off the system.

QUESTION NO: 27

You are creating an XML Web service named AccountInformation for a community bank. AccountInformation exposes a Web method named GetAccountBalance that returns the account balance as a string. You must limit access to GetAccountBalance to users who have credentials stored in your Microsoft SQL Server database.

You need to design GetAccountBalance to receive encrypted user credentials by using two custom fields named Username and password in the SOAP header. To accomplish this goal, you must write the code for GetAccountBalance.

Which code segment should you use?

```
A.    Public Class AuthenticateUser Inherits SoapHeader
        Public username As String
        Public Password As String
End Class
    ' In the accountInformation class add this code:
Public authenticateUserHeader As AuthenticateUser
<WebMethod(), SoapHeader("authenticateUserHeader")> _
Public Function GetAccountBalance() As String
    If (authenticateUserHeader Is "") Then
        Return "Please supply Credentials."
    Else
        ' Code to authenticate the user and return
        ' the account balance goes here.
    End If
End Function
B.    Public Class AuthenticateUser
        Public username As String
        Public Password As String
End Class
    ' In the accountInformation class add this code:
Public authenticateUserHeader As AuthenticateUser
<WebMethod(), SoapHeader("authenticateUserHeader")> _
Public Function GetAccountBalnce() as String
    If (authenticateUserHeader Is "") Then
        Return "Please supply Credentials."
    Else
        ' Code to authenticate the user and return
```

```

        \ the account balance goes here.
    End If
End Function
C.    Public Class AuthenticateUser Inherits SoapHeader
        Public Username As String
        Public Password As String
End Class
    ' In the accountInformation class add this code:
Public authenticateUserHeader As AuthenticateUser
<WebMethod()>
Public Function GetAccountBalance() As String
    If (authenticateUserHeader Is "") Then
        Return "Please supply credentials."
    Else
        \ Code to authenticate the user and return
        \ the account balance goes here.
    End If
End Function
D.    Public Class AuthenticateUser
        Public username As String
        Public Password As String
End Class
    ' In the accountInformation class add this code:
Public authenticateUserHeader As AuthenticateUser
<WebMethod() > _
Public Function GetAccountBalnce() As String
    If (authenticateUserHeader Is "") Then
        Return "Please supply Credentials."
    Else
        \ Code to authenticate the user and return
        \ the account balance goes here.
    End If
End Function

```

Answer: A

Explanation:

Step 1: Defining a SOAP header is accomplished by defining a class representing the data in a particular SOAP header and deriving it from the SoapHeader class.

Step 2: Apply a SoapHeader attribute to each XML Web service method that intends to process the SOAP header. Set the MemberName property of the SoapHeader attribute to the name of the member variable created in the first step.

In this scenario:

<WebMethod(), SoapHeader("authenticateUserHeader")>

Reference: .NET Framework Developer's Guide, Using SOAP Headers [Visual Basic]

Incorrect Answers

B, D: The class must inherit from the SoapHeader class.

C: We must add a SoapHeader attribute to the XLM Web service method. We can't use just `<WebMethod()>`.

QUESTION NO: 28

You create a serviced component named SessionDispenser. This computer is in the TestKing.Utilities assembly and is registered in a COM+ server application. SessionDispenser has multiple callers.

You discover that there are logic problems in the Create New Session method. You want to debug any calls to this method.

What should you do?

- A. Open the SessionDispenser solution.
Set a breakpoint on the CreateNewSession method.
Start the debugger.
- B. Attach the debugger to the client process.
Set a breakpoint on the SessionDispenser.CreateNewSession method.
- C. Attach the debugger to the TestKing.Utilites.exe process.
Set a breakpoint on the CreateNewSession method.
- D. Attach the debugger to a Dllhost.exe process.
Set a breakpoint on the CreateNewSession method.

Answer: C

Explanation: We should attach the debugger to the COM+ server application, the TestKing.Utilities.exe process.

Note: The Visual Studio debugger has the ability to attach to a program that is running in a process outside of Visual Studio. Once you have attached to a program, you can use debugger execution commands, inspect the program state, settings breakpoints, etc.

Reference: Visual Studio, Attaching to a Running Program or Multiple Programs

Incorrect Answers

A: The debugger must be attached to the program that should be debugged.

B: The debugger should be attached to SessionDispenser component, not to the client process.

D: Dllhost.exe can be useful when debugging a Web server.

QUESTION NO: 29

You create an XML Web service named TestKingCode. Your project source includes a code-behind file and a file named TestKingCode.asmx.

During implementation, you use the Debug class to record debugging log messages, to verify values, and to report debugging failures.

You want to deploy TestKingCode to a production computer. You do not want any of the debugging code to execute on the production computer.

What should you do?

- A. Set the project's active configuration to **Release** and rebuild the DLL.
- B. Modify the trace element of the Web.config file by setting the enabled attribute to **"false"**.
- C. Modify the compilation element of the Web.config file by setting the debug attribute to **"false"**.
- D. Add code to the constructor of the TestKingCode class to set the AutoFlash property of the Debug class to **false**.
- E. Add code to the constructor of the TestKingCode class to call the Clear method of the Debug.Listeners property.

Answer: C

Explanation: To set debug mode for an ASP.NET application, you must edit the application's Web.config configuration file.

Reference: Visual Studio, Debug Mode in ASP.NET Applications

QUESTION NO: 30

You create an XML Web service named TimeService. Each time TimeService is started, it checks for the existence of an event log named TimeServiceLog. If TimeServiceLog does not exist, TimeService creates it.

You discover that when TimeService creates TimeServiceLog, it throws a System.Security.SecurityException. The exception includes the following message: "Requested registry access is not allowed". You need to resolve this problem.

What should you do?

- A. Configure Inetinfo.exe to run as the local administrator user account.
- B. Create an installer for TimeService, and create the new event log in the installer code.

- C. Modify the Web.config file by adding an identity element to impersonate the LOGON user specified by Internet Information Services (IIS).
- D. Modify the permissions of the HKEY_LOCAL_MACHINE\SYSTEM\CurrentControlSet\Services\Eventlog registry key to give full control to the IUSR_*computername* user account.

Answer: A

Explanation: ASP.NET applications run under inetinfo.exe (the IIS process) or the ASP worker process aspnet_wp.exe, depending on security settings. Running as the local administrator account the IIS process would be able to create TimeServiceLog.

Reference: Visual Studio, Error: Unable to Start Debugging on the Web Server

Incorrect Answers

B: This would not allow registry access.

C: This does not work.

D: For anonymous access the IUSR_*computername* user account is used.

QUESTION NO: 31

You create a serviced component named Scheduler. Scheduler is registered in a library application. The Scheduler methods parse String objects into Date Time objects.

You write a console application named TKCoverage.exe to test each method in Scheduler. You want Coverage.exe to test Scheduler for multiple cultures to verify its globalization support.

What should you do?

- A. Create a CultureInfo object for each culture locale before calling the Scheduler methods.
- B. Create a RegionInfo object for each culture locale before calling the Scheduler methods.
- C. Set the current thread's CurrentCulture property to each culture locale before calling the Scheduler methods.
- D. Create a TKCoverage.exe.config file and add a <location> element to the configuration file for each culture locale.

Answer: C

Explanation: We set the CurrentCulture property to a local culture, then we call the Scheduler method. We repeat this step for each local culture.

Reference: Visual Studio, Globalization Testing

Incorrect Answers

- A:** CultureInfo objects would not by themselves be tested.
- B:** RegionInfo objects would not by themselves be tested.
- D:** This is not how to set up this.

QUESTION NO: 31

You are creating an XML Web service named InventoryService for a national automobile dealership. Each branch of the dealership will build its own client application to consume InventoryService. Each branch connects to the main office of the dealership by using a virtual private network (VPN). All computers in the dealership run on Microsoft Windows operating systems.

You need to ensure that callers of InventoryService are authenticated based on their Windows logon name and password. You configure Internet Information Services (IIS) according to your security needs. You need to configure the authentication type in the Web.config file.

Which code segment should you use?

- A. `<authentication mode="Basic" />`
- B. `<authentication mode="Forms" />`
- C. `<authentication mode="Integrated" />`
- D. `<authentication mode="Windows" />`

Answer: D

Explanation: Integrated Windows authentication can delegate security credentials among computers running Windows 2000 and later that are trusted and configured for delegation.

Note: ASP .NET supports Forms Authentication, Passport Authentication, Windows Authentication, and None. In the Web.config file these are denoted Cookie, Passport, Windows and None.

Reference: Building Distributed Applications, Authentication in ASP .NET: .NET Security Guidance

Incorrect Answers

- A:** Basic authentication does not use the Windows logon name and password.
- B:** Integrated is not a valid authentication mode in the Web.config file. Furthermore Cookie authentication mode does not use Windows login and Windows password.
- C:** Integrated is not a valid authentication mode in the Web.config file.

QUESTION NO: 32

You create a Windows service that processes XML messages placed in a MSMQ queue. You discover that the service is not functioning properly.

You need to debug the service to correct the program.

What should you do?

- A. Start the Windows service.
Then attach a debugger to the process.
- B. Attach a debugger to the Windows service.
Then start the Windows service.
- C. Start the Windows service.
Then run the .NET Services Installation tool (Regsvcs.exe).
- D. Place a breakpoint in the Main method of the Windows service.
Then run the application within the Visual Studio .NET integrated development environment (IDE).

Answer: A

Explanation: First we start the service, and then we attach the debugger to it. We must attach to available running processes.

Note: Microsoft Message Queuing Services (MSMQ) enables applications running at different times to communicate across heterogeneous networks and systems that may be temporarily offline.

Reference: Visual Studio, Attaching to a Running Program

Incorrect Answers

B: We must attach the debugger to a running service.

C: The NET Services Installation Tool (Regsvcs.exe) cannot help in debugging the service processing the MSMQ queue.

Note: Regsvsc.exe loads and registers an assembly, generates, registers, and installs a type library into a specified COM+ 1.0 application, and configures services that you have added programmatically to your class.

QUESTION NO: 33

You are creating an XML Web service that processes highly confidential messages. The service exposed a Web method named RetrieveMessage that takes as input a code name and returns an encrypted message.

You create a SOAP extension and override the extension's ProcessMessage method so that you can encrypt the message before it is sent back to the caller.

You need to encrypt only the data within the RetrieveMessageResult node of the SOAP response. You create a function named EncryptMessage that encrypts the RetrieveMessageResult node. You need to ensure that this method gets called before sending the message back to the caller.

During which SoapMessageStage should you call EncryptMessage?

- A. BeforeSerialize
- B. AfterSerialize
- C. BeforeDeserialize
- D. AfterDeserialize

Answer: B

Explanation: An encryption SOAP extension might encrypt the XML portion of the SOAP message, after ASP.NET serializes the client's arguments, and then decrypt the SOAP message on the Web server before ASP.NET deserializes the SOAP message. The SOAP extension is encrypting in the AfterSerialize stage and decrypting in the BeforeDeserialize stage.

Note: The AfterSerialize stage occurs just after a SoapMessage is serialized, but before the SOAP message is sent over the wire.

Reference:

.NET Framework Developer's Guide, Altering the SOAP Message Using SOAP Extensions
.NET Framework Class Library, SoapMessageStage Enumeration

Incorrect Answers

- A:** The BeforeSerialize stage occurs just prior to a SoapMessage being serialized.
- C:** The BeforeDeserialize stage occurs just before a SoapMessage is deserialized from the SOAP message sent across the network into an object.
- D:** The AfterDeserialize stage occurs just after a SoapMessage is deserialized from a SOAP message into an object.

QUESTION NO: 34

You are developing an application named TestKingApp by using Visual C# .NET and Visual Basic .NET. The application will use functions from a DLL written in unmanaged code.

One function requires the calling application to allocate unmanaged memory, fill it with data, and pass the address of the memory to the function. On returning from the function, the calling application must deallocate the unmanaged memory.

You need to decide how your application will handle unmanaged memory.

What should you do?

- A. Use a byte array.
- B. Use the methods of the Marshal class.
- C. Use the methods of the MemoryStream class.
- D. Derive a new class from the Stream class, and override the allocation methods.

Answer: B

Explanation: The Marshal class provides a collection of methods pertaining to allocating unmanaged memory, copying unmanaged memory blocks, and converting managed to unmanaged types.

Reference: .NET Framework Class Library, Marshal Class [Visual Basic]

Incorrect Answers

- A, D:** Bytes and streams can not be used for allocating and deallocating memory.
C: The MemoryStream class creates a stream whose backing store is memory.

QUESTION NO: 35

You are creating an ASP.NET application named TKWebApp. To TKWebApp, you add a Web reference to an XML Web service named UserService.

UserService consists of a Web method named RetrieveUserInfo. This Web method takes a userID as input and returns a DataSet object containing user information. If the userID is not between the values 1 and 1000, a System ArgumentException is thrown.

In TKWebApp, you write a try/catch block to capture any exceptions that are thrown by UserService. You invoke RetrieveUserInfo and pass 1001 as the user ID.

Which type of exception will be caught?

- A. System.ApplicationException
- B. System.ArgumentException
- C. System.Web.Service.Protocols.SoapException
- D. System.Web.Service.Protocols.SoapHeaderException

Answer: C

Explanation: The SoapException is thrown when an XML Web service method is called over SOAP and an exception occurs.

Note: Simple Object Access Protocol (SOAP) codifies the practice of using XML and HTTP to invoke methods across networks and computer platforms. SOAP is a XML-based protocol that lets you activate applications or objects within an application across the Internet.

Reference: .NET Framework Class Library, SoapException Class

Incorrect Answers

- A:** The ApplicationException is thrown when a non-fatal application error occurs. ApplicationException is thrown by a user program, not by the common language runtime.
- B:** The ArgumentException exception is thrown when one of the arguments provided to a method is not valid.
- D:** The SoapHeaderException is thrown when an XML Web service method is called over SOAP and an exception occurs during processing of the SOAP header.

QUESTION NO: 36

You create three Windows services named TKService1, TKService2, and TKService3. You want to install all three services on a computer named TestKingA by using the Installer tool (Installutil.exe).

**On the command line of TestKingA, you enter and run the following command:
Installutil TKService1 TKService2 TKService3**

During the installation process, TKService3 throws an installation error. The installation process completes.

How many of the three services are now installed on Computer1?

- A. None
- B. One
- C. Two
- D. Three

Answer: A

Explanation: Installutil.exe performs installation in a transactional manner; if one of the assemblies fails to install, it rolls back the installations of all other assemblies.

Reference: .NET Framework Tools, Installer Tool (Installutil.exe)

Incorrect Answers

- B, C; D:** The installation of TKService3 fails and the installation of TKService2 and TKService1 is rolled back.

QUESTION NO: 37

You create two serviced components named OrderPipeline and OrderAdmin. Each component is registered in a separate COM+ server application.

Both components use pricing data. OrderPipeline reads the pricing data for placing user orders. OrderAdmin modifies the pricing data.

You want to ensure that OrderPipeline accesses the pricing data as quickly as possible, while still being able to immediately retrieve any pricing changes made by OrderAdmin.

What should you do?

- A. Store the pricing data in the Shared Property Manager.
- B. Store the pricing data in Microsoft SQL Server database.
- C. Store the pricing data in a Hashtable object within OrderAdmin.
Expose the Hashtable object through a property on OrderAdmin.
- D. Store the pricing data in an XmlDocument object within OrderAdmin.
Expose the XmlDocument object through a property on OrderAdmin.

Answer: C

Explanation: A Hashtable can safely support one writer and multiple readers concurrently. This is the most efficient solution

Reference:

.NET Framework Class Library, Hashtable.IsSynchronized Property
Platform SDK: COM+ (Component Services), The Shared Property Manager

Incorrect Answers

A: A Shared Property Manager would be a possible solution. However it is not required and is not the most efficient solution.

Note: In COM+, shared transient state for objects is managed by using the Shared Property Manager (SPM). The SPM is a resource dispenser that you can use to share state among multiple objects within a server process.

B: SQL Server could provide a solution. However, it would not be the most efficient solution.

D: A hast table would be more efficient.

QUESTION NO: 38

You have a .NET Remoting object named TestKingUtils. The TestKingUtils class is a client-activated .NET Remoting object.

You want to write a client application that creates and uses a TestKingUtils object. You want the client application to hold onto a reference to a TestKingUtils object for the duration of its execution.

What should you do?

- A. Construct the TestKingUtils object, and hold the object in a member variable.
- B. Construct the TestKingUtils object, and set the LifeTimeService.LeaseTime to 0.
- C. In the client application, create an Implementation of the ISponsor interface. Implement the Renewal method to extend the lease.
- D. In the client application, create an Implementation of the ILease interface. Implement the CurrentLeaseTime property to return Int32.MaxValue.

Answer: C

Explanation: We must create a sponsor, on the ISponsor interface, that implements the renewal method to extend the lease. This will ensure that the object lease will be renewed as long the client application is running.

Note: Each Marshal-by-reference object (MBR) has a lifetime that is controlled by a combination of leases, a lease manager, and some number of sponsors. A sponsor is an object that can request a new a lease for a particular object by registering itself with the lease manager. The lease manager periodically examines all leases for expired lease times. If a lease has expired, the lease manager walks its list of sponsors for that object and requests whether any of them want to renew the lease. If no sponsor renews the lease, the lease manager removes the lease and the object is deleted and its memory reclaimed by garbage collection. The CurrentLeaseTime can be changed, either from an ILease.Renew call or when the lease manager calls ISponsor.Renewal on a sponsor.

Reference: .NET Framework Developer's Guide, Lifetime Leases

.NET Framework Class Library, ILease.CurrentLeaseTime Property [Visual Basic]

Incorrect Answers

A: This would not renew the release of the object. The default lease time is 5 minutes.

B: A lease time of zero sets the lease to an infinite lifetime.

D: The ILease.CurrentLeaseTime is a read-only property of the ILease interface. We cannot configure this property.

QUESTION NO: 39

You create a serviced component named Tracker that uses attributes to dynamically register itself for COM+ services. Tracker is in an assembly file named TestKing.dll. Tracker uses transactions and role-based security. The roles and the application identity for Tracker are configured on the development computer.

You are preparing to hand off Tracker to an administrator for deployment to production computers. You want all the COM+ configuration information for Tracker to be installed on the production computers.

What should you do?

- A. Use the Component Services tool to export Tracker to an .msi file.
Provide to the administrator the .msi file with instructions to run the installer.
- B. Provide to the administrator the TestKing.dll file.
Instruct the administrator to copy TestKing.dll to all production computers and to install it in the global assembly cache.
- C. Provide to the administrator the TestKing.dll file.
Instruct the administrator to use the .NET Services Installation tool (Regsvcs.exe) to install Tracker.
- D. Add a new merge module to your solution.
Add TestKing.dll to the merge module.
Provide to the administrator the .msm file with installation instructions.

Answer: A

Explanation: We use the Components services tool to create an installation package. The installation package will include COM+ configuration information. The installation package can be installed on a separate system.

Procedure to create the .msi package:

Step 1: Open the **Component Services** Console: Start->Program->Administrative Tools->Component Services

Step 2: Right click the appropriate COM+ service and select export.

Step 3: Finish the Welcome to COM+ Application Export Wizard.

Note: The Component Services administrative tool enables you to configure and administer COM components and COM+ applications. With Component Services, administrators can deploy and administer Component Services applications through a graphical user interface or automate administrative tasks by using a scripting or programming language. Software developers can use Component Services to visually configure routine component and application behavior, such as security and participation in transactions, and to integrate components into Component Services applications.

Reference: Windows XP Help.

Incorrect Answers

B: The dll file does not include COM+ configuration information.

C: Regsvcs.exe cannot be used to transfer the COM+ dll from one computer to another.

Note: The .NET Services Installation tool performs the following actions:

- * Loads and registers an assembly.
- * Generates, registers, and installs a type library into a specified COM+ 1.0 application.
- * Configures services that you have added programmatically to your class.

D: To install a merge module, it must first be merged by using a merge tool into a .msi file. **Note:** A merge module is like a snapshot of a particular version of a component. A new merge module should be created for each successive version of a component in order to avoid version conflicts.

QUESTION NO: 40

You are creating an XML Web service that provides a daily quotation from literary works to its customers. This quotation is requested in many different languages, thousands of times every day, and by thousands of Web sites operating many different platform.

A Web method named GetTKQuotes takes a languageID as input. GetTKQuotes uses this language ID to retrieve a translated version of the daily quotation from a Microsoft SQL Server database and to return that quotation to the customer.

You want to minimize the time it takes to return the translated version.

What should you do?

- A. Store each translated quotation by using the Cache object.
- B. Store each translated quotation by using the Session object.
- C. Set the BufferResponse property of the WebMethod attribute to **false**.
- D. Set the CacheDuration property of the WebMethod attribute to an interval greater than zero.

Answer: A

Explanation: We should store each translated quotation in the Cache, more specifically we use the translation quotation to construct a Cache object.

Reference:

.NET Framework Developer's Guide, Adding Items to the Cache [Visual Basic]
.NET Framework Class Library, WebMethodAttribute.BufferResponse Property
.NET Framework Class Library, WebMethodAttribute.CacheDuration Property [Visual Basic]

Incorrect Answers

- B:** The Session object is used to store information needed for a particular user-session. The objects would have to be recreated for every single session.
- C:** The BufferResponse property gets or sets whether the response for this request is buffered. If set to false, no buffering would be used. This is the opposite to the requirements.
Note: Setting BufferResponse to true, serializes the response of the XML Web service method into a memory buffer until either the response is completely serialized or the buffer is full. The default value is **True**.
- D:** WebMethodAttribute.CacheDuration property gets or sets the number of seconds the response should be held in the cache.

QUESTION NO: 41

You are creating a .NET Remoting object named PropertyCache. PropertyCache will hold a Hashtable object or name/value pairs.

A variety of remote client applications will communicate with PropertyCache to set and get property values. You need to ensure that properties set by one client application are also accessible to other client applications.

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

- A. Configure PropertyCache to be a client-activated object.
- B. Configure PropertyCache to be a server-activated Singleton object.
- C. Configure PropertyCache to be a server-activated SingleCall object.
- D. Derive the PropertyCache class from MarshalByRefObject and override InitializeLifetimeService() to return null.
- E. Mark the PropertyCache class with the Serializable attribute.
Implement the ISponsor interface in the PropertyCache class.
- F. Implement the ISerializable and ILease interfaces in the PropertyCache class.
Implement ILease.CurrentLeaseTime to return Int32.MaxValue.

Answer: B, E

Explanation:

B: Singleton types never have more than one instance at any one time. If an instance exists, all client requests are serviced by that instance. If one does not exist, the server creates an instance and all subsequent client requests will be serviced by that instance.

E: The ISponsor interface can be used to renew the lease of the object.

Reference:

- .NET Framework Developer's Guide, Server Activation [Visual Basic]
- .NET Framework Developer's Guide, Initializing Leases [Visual Basic]
- .NET Framework Developer's Guide, Client Activation [Visual Basic]

Incorrect Answers

- A:** Client-activated objects are objects whose lifetimes are controlled by the calling application domain, just as they would be if the object were local to the client.
- C:** SingleCall types always have one instance per client request.
- D:** No lease is created if the lease time is 0 (zero) or a null lease is returned from InitializeLifetimeService().
- F:** The ILease.CurrentLeaseTime is a read-only property of the ILease interface. We cannot configure this property.

QUESTION NO: 42

You create a .NET Remoting object named TKPatientinfo that exposes medical patient information. Because of the confidential nature of the information, you must ensure that the data remains secure.

You want client applications to connect to TKPatientinfo over a secure communication channel. You want to accomplish this task by writing the minimum amount of code.

What should you do?

- A. Create your own host application and use a TcpChannel and BinaryFormatter.
- B. Create your own host application and use an HttpChannel and a SoapFormatter.
- C. Install TKPatientinfo in an Internet Information Services (IIS) virtual directory.
Configure TKPatientinfo to use a TcpChannel and a BinaryFormatter.
Configure IIS to use SSL.
- D. Install TKPatientinfo in an Internet Information Services (IIS) virtual directory.
Configure TKPatientinfo to use an HttpChannel and a SoapFormatter.
Configure IIS to use SSL.

Answer: D

Explanation: To minimize the coding we use IIS to deploy the .NET Remoting Object. We then use SSL to encrypt the HTTP traffic.

Reference: SSL in WinHTTP

Incorrect Answers

- A, B:** Creating your own host application would require more coding.
C: SSL encrypts HTTP traffic, not TCP traffic.

QUESTION NO: 43

You have a DataSet object named loanCustomersDataSet that contains customers serviced by the loan department of TestKing Ltd. You receive a second DataSet object named assetCustomersDataSet that contains customers serviced by the asset management department of TestKing. Both objects have the same structure.

You want to merge assetCustomersDataSet into loanCustomersDataSet and preserve the original values in loanCustomersDataSet.

Which code segment should you use?

- A. `loanCustomersDataSet.Merge(assetCustomersDataSet)`

- B. `loanCustomersDataSet.Merge(assetCustomersDataSet, true)`
- C. `assetCustomersDataSet.Merge(loanCustomersDataSet)`
- D. `assetCustomersDataSet.Merge(loanCustomersDataSet, true)`

Answer: B

Explanation: The `DataSet.Merge` method merges this `DataSet` with a specified `DataSet`. The data will be merged into the dataset on which the Merge method is applied. We want to merge into our Dataset, namely the `loanCustomerDataSet`. Furthermore, we want to preserve the original values in `loanCustomerDataSet`. The Boolean parameter is the `preserveChanges`. `PreserveChanges` indicates a value indicating whether changes made to the current `DataSet` should be maintained. It should be true, if changes should be maintained, like in this scenario. .

Reference: .NET Framework Class Library, `DataSet.Merge` Method (`DataSet`, Boolean) [Visual Basic]

Incorrect Answers

A The `PreserveChanges` parameter must be set to true.

C, D: We must merge into `loanCustomerDataSet`, not into the Dataset that we have received.

QUESTION NO: 44

You have a `DataSet` object that contains a single `DataTable` object named `TestKingEmployees`. `TestKingEmployees` has a column named `EmployeeID`. `EmployeeID` contains no duplicate data.

You are creating a function that accepts a parameter of `EmployeeID` and searches `Employees` to return the `DataRow` object for the specified `EmployeeID`.

You want to use the `Find` method of the rows collection in `TestKingEmployees` to return the requested `DataRow` object from the function. You need to ensure that you can use the `Find` method to accomplish this goal.

What should you do?

- A. Ensure that `EmployeeID` is the first column in `TestKingEmployees`.
- B. Ensure that `EmployeeID` is unique for each row in `TestKingEmployees`.
- C. Ensure that `TestKingEmployees` has a primary key on `EmployeeID`.
- D. Ensure that `TestKingEmployees` is sorted in ascending order on `EmployeeID`.

Answer: C

Explanation: To use the `Find` method, the `DataTable` object to which the `DataRowCollection` object belongs to must have at least one column designated as a primary key column.

Incorrect Answers

- A:** The first column has no particular significance.
- B:** The unique constraint is not enough. Employees must have a primary key column.
- D:** Sorting will not help.

QUESTION NO: 45

You are developing an application to monitor store inventory. When inventory falls below a specified level, the application automatically generates a purchase request. Suppliers have requested that you transmit purchase requests to them in an XML document. Suppliers will accept the XML document in any valid form, except they do not want the data set definition to be included in the XML file.

You create a method named `GeneratePurchaseRequest`. You write the code to populate a `DataSet` object named `myDataSet` with the purchase request data. You define a variable named `fileName` that contains the name and path of the output file.

You need to create an XML file from the data in `myDataSet` by adding code to `GeneratePurchaseRequest`. You want to accomplish this task by writing the minimum amount of code.

Which code segment should you use?

- A. `myDataSet.WriteXML(fileName, XmlWriteMode.IgnoreSchema)`
- B. `myDataSet.WriteXML(fileName, XmlWriteMode.WriteSchema)`
- C. `myDataSet.WriteXMLSchema(filename)`
- D. `TextWriter myWriter = new StreamWriter(fileName)`
`myDataSet.WriteXMLSchema(myWriter)`

Answer: A

Explanation: The `DataSet.WriteXml` method (String, XmlWriteMode) method writes data and optionally the schema to the specified file. The `IgnoreSchema` `XmlWriteMode` writes the current contents of the `DataSet` as XML data, without an XSD schema as was required by the suppliers.

Reference:

- .NET Framework Class Library, `DataSet.WriteXml` Method (String, XmlWriteMode) [Visual Basic]
- .NET Framework Class Library, `XmlWriteMode` Enumeration [Visual Basic]

Incorrect Answers

- B:** `XmlWriteMode.WriteSchema` writes the current contents of the `DataSet` as XML data with the relational structure as inline XSD schema. However, the suppliers do not want the data set definitions.
- C:** The `DataSet.WriteXmlSchema` (String) method writes the `DataSet` structure as an XML schema to a file. The schema includes table, relation, and constraint definitions, but not the actual data.

D: The DataSet.WriteXmlSchema (Stream) method writes the DataSet structure as an XML schema to the specified System.IO.Stream object.

QUESTION NO: 46

You are planning to create a DataSet object named TKDataSet to be used in a bond-trading application. Several developers will need to write code to manipulate TKDataSet, and you want to ensure that myDataSet is easy for them to use. You decide to create TKDataSet as a strongly typed data set.

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

- A. Create an XSD schema that defines TKDataSet.
- B. Create an XDR schema that defines TKDataSet.
- C. Create a class for TKDataSet that is based on the schema and that inherits from the DataSet class.
- D. Create a class for TKDataSet that is based on the schema and that inherits from the XmlSchema class.
- E. Create a key pair for TKDataSet by using the Strong Name tool (Sn.exe).

Answer: A, C

Explanation:

A: The XML Schema definition language (XSD) enables you to define the structure and data types for XML documents. Given an XML Schema that complies with the XML Schema definition language (XSD) standard, you can generate a strongly typed DataSet,

C: The class should inherit from the DataSet class.

Reference:

.NET Framework Developer's Guide, Generating a Strongly Typed DataSet [Visual Basic]

.NET Framework General Reference, XML Schema Reference (XSD)

Incorrect Answers

B: XML-Data Reduced (XDR) schemas are used to validate XML documents.

D: The class should inherit from the DataSet class.

E: The Strong Name tool (Sn.exe) helps sign assemblies with strong names. However, we are creating a DataSet not an assembly.

QUESTION NO: 47

TestKing Inc. provides a credit card processing application for its customers. The current application supports only computers that run on a Microsoft Windows operating system.

You are asked to rewrite the current application as a .NET application. This .NET application does not need to be backward compatible with the current application.

You must ensure that this new application meets the following requirements:

- **Must support asynchronous processing.**
- **Must be able to pass data through firewalls.**
- **Must pass only SOAP-Compliant formatted data validated by using an XSD schema.**
- **Must not be limited to client computers running on a Microsoft operating system.**

You want to accomplish this task by using the minimum amount of development effort.

Which type of .NET application should you use?

- A. Windows service
- B. XML Web service
- C. Serviced component
- D. .NET Remoting object

Answer: B

Explanation: An XML Web service would:

- * support asynchronous processing.
- * XML traffic would be allowed to passed through firewalls
- * can use SOAP-compliant formatted data validated by an XSD schema.
- * could be implemented on heterogeneous systems.

Reference: Designing Distributed Applications with Visual Studio .NET, Programming the Web with XML Web Services

Incorrect Answers

A: A Windows service can only run on a Windows computer.

C: Serviced components cannot be run on heterogenous systems.

Note: A serviced component is a class that is authored in a CLS-compliant language and that derives directly or indirectly from the System.EnterpriseServices.ServicedComponent class. Classes configured in this way can be hosted by a COM+ application and can use COM+ services.

D: .NET Remoting objects can be run on different operating systems. However, a XML Web service meets the requirement in a better way.

QUESTION NO: 48

You are creating a .NET Remoting object named TestKingPayroll. The TestKingPayroll class allows remote client applications to access payroll data for your company. Client applications are developed by using Windows Forms and Web Forms.

You must ensure that remote client applications are securely authenticated prior to gaining access to Payroll object. You want to accomplish this task by writing the minimum amount of code.

What should you do?

- A. Use a TcpChannel and a BinaryFormatter for the TestKingPayroll class.
- B. Use an HttpChannel and a SoapFormatter for the TestKingPayroll class.
- C. Host the TestKingPayroll class in Internet Information Services (IIS) and implement Basic authentication.
- D. Host the TestKingPayroll class in Internet Information Services (IIS) and implement Integrated Windows authentication.

Answer: D

Explanation: Hosting the application on an IIS server configured for Windows authentication would:

- client applications are securely authentication prior to gaining access to the Class.
- minimal coding would be required

Incorrect Answers

A: This proposed solution does not address the secure authentication requirement.

Note: A TcpChannel provides an implementation for a sender-receiver channel that uses the TCP protocol to transmit messages.

The BinaryFormatter Class serializes and deserializes an object, or an entire graph of connected objects, in binary format.

B: This proposed solution does not address the secure authentication requirement.

Note: A Http channel provides an implementation for a sender-receiver channel that uses the HTTP protocol to transmit messages.

The SoapFormatter serializes and deserializes an object, or an entire graph of connected objects, in SOAP format.

C: Basic authentication is not secure.

QUESTION NO: 49

You are creating an XML Web service named ListBoxService. This service provides content, such as states, countries, and geographical regions, for use in drop-down list boxes.

ListBoxService contains a Web method named RetrieveRegionsListBox. This method runs a DataSet object that contains every geographical region in the world.

RetrieveRegionsListBox calls a Microsoft SQL Server database named TestKingRegions to load the DataSet object with region data. You want to minimize the amount of time the method takes to return to the caller.

What should you do?

- A. Use a stored procedure to return the data.
- B. Store each DataSet object by using the Session object.
- C. Set the BufferResponse property of the WebMethod attribute to **false**.
- D. Set the CacheDuration property of the WebMethod attribute to an interval greater than zero.

Answer: B(?)

Explanation: Storing each DataSet object by using session object would increase the overhead, but it would improve the performance of the ListBoxService.

Reference:

.NET Framework Class Library, WebMethodAttribute.CacheDuration Property [Visual Basic]

.NET Framework Class Library, WebMethodAttribute.BufferResponse Property [Visual Basic]

Incorrect Answers

- A:** A stored procedure is located at the SQL Server computer. It improves performance, especially if the code is run repeatedly. However, this is not the case in this scenario.
- C:** The WebMethodAttribute.BufferResponse property gets or sets whether the response for this request is buffered. Setting the value to false would not buffer the request.
- D:** The BufferResponse property denotes the number of seconds the response should be held in the cache. The default is 0, which means the response is not cached. Caching the response could improve performance. However, it is not the best choice.

QUESTION NO: 50

You are creating an XML Web service that will be accessed by callers who cannot use SSL encryption because of firewall restrictions. To protect sensitive data, you want to encrypt a portion of the data returned from the service by using objects in the Cryptography namespace.

The service will use a standard encryption routine to encrypt the data before it is sent to the caller. The caller will decrypt the data by using instructions provided by you.

You need to write code to encrypt the sensitive data that is in a local variable named TestKData. First, you create an instance of a Cryptography Service Provider.

What should you do next?

- A. Create an Encryptor object that passes in a key and an initialization vector (IV) as parameters. Call the GetHashCode method of the Encryptor object to generate a new hash code. Convert the generated hash code to a stream and use the CryptoStream object to write the value of the hash code to an encrypted stream. Convert the output stream to a string.

- B. Create a UnicodeEncoding object and use it to encode the value of TestKData into a byte array.
Use the ComputeHash method of the Cryptography Service Provider to create a hash from the encoded byte array.
Convert the output of ComputeHash from a byte array to a string.
- C. Create a UnicodeEncoding object and use it to encode the value of TestKData into a byte array.
Use the GetHashCode method of the Cryptography Service Provider to create a hash from the encoded byte array.
Convert the output of GetHashCode from a byte array to a string.
- D. Create an Encryptor object that passes in a key and an initialization vector (IV) as parameters.
Create a CryptoStream object that passes in an output stream and the Encryptor object as parameters.
Convert TestKData to a stream and use the CryptoStream object to write the value of TestKData to an encrypted stream.
Convert the output stream to a string.

Answer: D

Explanation: The common language runtime uses a stream-oriented design for cryptography. The core of this design is CryptoStream.

The SymmetricAlgorithm.CreateEncryptor Method creates a symmetric encryptor object with the current Key and initialization vector (IV). We then use this encryptor object and pass it to stream. The stream will then be encrypted. The value of myDate can be written to the encrypted stream by the send, and the receiver can retrieve it and decrypt it to a string.

Reference:

- .NET Framework Developer's Guide, Encrypting Data [Visual Basic]
- .NET Framework Class Library, CryptoStream Class [Visual Basic]
- .NET Framework Class Library, SymmetricAlgorithm.CreateEncryptor Method [Visual Basic]

Incorrect Answers

- A:** The Encryptor object will be required when setting up the CryptoStream. We cannot use a hash code of the Encryptor object.
- B, C:** UniEncoding is used to convert characters between the Unicode and ASCII standards. UniEncoding is not used for encryption.

QUESTION NO: 51

You have a .NET Remoting object named ProductLoaderTK. The ProductLoaderTK class is a server-activated Singleton object.

The ProductLoaderTK class loads product data into a Microsoft SQL Server database. The Load method of the ProductLoaderTK class is a time-consuming method to call.

You are developing a client application that uses the ProductLoaderTK class. You want to ensure that the client application can continue to respond to user input while the Load method of the ProductLoaderTK class is called.

What should you do?

- A. Use an AsyncDelegate instance to call the Load method.
- B. Modify the ProductLoaderTK class to be derived from IAsyncResult.
- C. Configure the ProductLoaderTK class to be a client-activated .NET Remoting object.
- D. Configure the client application to have its own remoting channel that matches the server's channel and formatter.

Answer: A

Explanation: Asynchronous execution will enable the caller to continue to execute. One of the innovations provided by the asynchronous pattern is that the caller decides whether a particular call should be asynchronous. It is not necessary for a called object to do additional programming for supporting asynchronous behavior by its clients; asynchronous delegates provide for this in the pattern.

Reference: .NET Framework Developer's Guide, Asynchronous Design Pattern Overview

Incorrect Answers

- B:** Incomplete solution.
- C:** Remoting objects do not meet the requirements of this scenario.
- D:** Channels are just a way to communicate.

QUESTION NO: 52

You are creating a .NET Remoting object named BankOps. BankOps exposes methods for creating, finding, and modifying objects in a class named BankCustomer. BankCustomer has a large number of read/write properties.

You expect a large number of remote client applications to frequently connect to BankOps. You expect these remote client applications to use many of the BankCustomer properties. You want to ensure that network traffic is minimized.

What should you do?

- A. Add the Serializable attribute to the BankCustomer class.
- B. Implement the IDisposable interface in the BankCustomer class.
- C. Derive the BankCustomer class from ContextBoundObject.
- D. Derive the BankCustomer class from MarshalByRefObject.
Override the inherited InitializeLifetimeService method to return null.

Answer: A

Explanation: Making the Class Serializable would make the properties available.

The easiest way to make a class serializable is to mark it with the Serializable attribute.

Note: The basic idea of serialization is that an object should be able to write its current state, usually indicated by the value of its member variables, to persistent storage. Later, the object can be re-created by reading, or deserializing, the object's state from the storage.

Reference:

.NET Framework Class Library, MarshalByRefObject Class

Incorrect Answers

B: The IDisposable interface defines a method to release allocated unmanaged resources.

C: A context is a set of properties or usage rules that define an environment where a collection of objects resides. The rules are enforced when the objects are entering or leaving a context. Objects that reside in a context and are bound to the context rules are called context-bound objects.

D: A MarshalByRefObject enables access to objects across application domain boundaries in applications that support remoting.

The InitializeLifetimeService method obtains a lifetime service object to control the lifetime policy for this instance.

QUESTION NO: 53

You are developing an ASP.NET application that consumes an XML Web service named AccountInformation. AccountInformation exposes a Web method named GetAccountBalance that expects encrypted user credentials to be passed in the SOAP header.

AccountInformation also exposes a public class named AuthenticateUser. AuthenticateUser has two properties named Username and Password that are both defined as string.

In the application, you create two local variable named encryptedUsername and encryptedPassword that you will use to pass user credentials to GetAccountBalance. You need to write code that will execute the GetAccountBalance Web method.

Which code segment should you use?

```
A. Dim TKAccountInformation As New AccountInformation()
   Dim TKAuthenticateUser As New AuthenticateUser()
   TKAuthenticateUser.Username = encryptedUsername
   TKAuthenticateUser.Password = encryptedPassword
   TKAccountInformation.AuthenticateUserValue = _myAuthenticateUser
   Dim accountBalance As String accountBalance = myAccountInformation.
   GetAccountBalance()
```

- B. `Dim TKAccountInformation As New AccountInformation()
Dim TKAuthenticateUser As New AuthenticateUser()
TKAuthenticateUser.Username = encryptedUsername
TKAuthenticateUser.Password = encryptedPassword
Dim accountBalance As String accountBalance =
TKAccountInformation.GetAccountBalance()`
- C. `Dim TKAccountInformation As New AccountInformation()
Dim TKAuthenticateUser As New AuthenticateUser()
Dim Username As New SoapHeaderAttribute("Username")
Username.MemberName = encryptedUserPassword
Dim accountBalance As String accountBalance =
TKAccountInformation.GetAccountBalance()`
- D. `Dim TKAccountInformation As New AccountInformation()
Dim TKAuthenticateUser As New AuthenticateUser()
TKAuthenticateUser.Username = encryptedUsername
TKAuthenticateUser.Password = encryptedPassword
Dim TKSoapHeaderCollection As New SoapHeaderCollection()
TKSoapHeaderCollection.Add(myAuthenticateUser)
Dim accountBalance As String accountBalance =
TKAccountInformation.GetAccountBalance()`

Answer: A

QUESTION NO: 54

You are creating an XML Web service named TestKService. This service has a function named WriteMessage that writes messages to a flat file in the C:\TKServiceLog directory.

You want to implement security for WriteMessage so that WriteMessage and all the code it calls can write messages only to the TKServiceLog directory.

Which code segment should you use?

- A. `Dim filePermission As New
FileIOPermission_(FileIOPermissionAccess.Write, "C:\TKServiceLog")
filePermission.Demand()`
- B. `Dim filePermission As New
FileIOPermission_(FileIOPermissionAccess.Write, "C:\TKServiceLog")
filePermission.Deny()`
- C. `Dim filePermission As New
FileIOPermission_(FileIOPermissionAccess.Write, "C:\TKServiceLog")
filePermission.PermitOnly()`

```
D. Dim filePermission As New
    FileIOPermission_(FileIOPermissionAccess.Write, "C:\TKServiceLog")
    filePermission.Assert()
```

Answer: C

Explanation: The CodeAccessPermission.PermitsOnly method prevents callers higher in the call stack from using the code that calls this method to access all resources except for the resource specified by the current instance.

Reference:

.NET Framework Developer's Guide, PermitsOnly
 .NET Framework Class Library, CodeAccessPermission.Demand Method
 .NET Framework Class Library, CodeAccessPermission.Assert Method

Incorrect Answers

- A:** We want to grant permission, not check the permission.
Note: The CodeAccessPermission.Demand method forces a SecurityException at run time if all callers higher in the call stack have not been granted the permission specified by the current instance.
- B:** We must allow permission, not deny it.
- D:** The CodeAccessPermission.Assert method asserts that calling code can access the resource identified by the current permission through the code that calls this method, even if callers higher in the stack have not been granted permission to access the resource.

QUESTION NO: 55

You develop an application named TKApp. This application needs to run on the same computer as a Windows service named TKService.

You want to ensure that TKService starts from TKApp if TKService is not already running.

Which code segment should you use?

```
A. Dim myServiceController As New _
    ServiceController("TKService")
If myServiceController.Status = _
    ServiceControllerStatus.Stopped
Then myServiceController.Start()
End If

B. Dim myServiceController As New _
    ServiceController("TKService")myServiceController.Start()

C. Dim myServiceController As New _
    ServiceController() Dim myArgs(1)As String my Args(0)="TKService"
If myServiceController.Status = ServiceControllerStatus.Stopped
Then myServiceController.Start(myArgs)
End If
```

```
D. Dim myServiceController As New _
    ServiceController() Dim myArgs(1) As String my Args(0)= "TKService"
myServiceController.Start(myArgs)
```

Answer: A

Explanation: First we create a new instance of MyService. Then we check the current state of it with the **Status** property. Finally we use the ServiceController **start** method to start it if it was stopped..

Note: A Service Controller object represents a Windows service and allows you to connect to a running or stopped service, manipulate it, or get information about it.

Reference:

.NET Framework Class Library, ServiceController Class
 .NET Framework Class Library, ServiceController Members
 .NET Framework Class Library, ServiceControllerStatus Enumeration [Visual Basic]
 .NET Framework Class Library, ServiceController Constructor [Visual Basic]
 Visual Basic and Visual C# Concepts, Creating ServiceController Component Instances

Incorrect Answers

B: The constructor is incorrect.

C, D: Here the ServiceController constructor is used with two parameters. The first parameter correctly references the existing server TKService. The second parameter, 'my', specifies the computer that the service runs on. My has no special significance (we don't know the name of the computer). Furthermore, we do not have to specify the computer name if the service runs on the local computer.

QUESTION NO: 56

You are creating an XML Web service named LegalTestKingService. This service exposes two Web methods named SendMessage and ReceiveMessage.

SendMessage is used to send highly confidential messages to its customers. ReceiveMessage is used to receive highly confidential messages from its customers and to process these messages for future use.

You need to ensure that these messages cannot be intercepted and viewed by anyone other than LegalTestKingService and the customers who access LegalTestKingService.

Which security mechanism should you use?

- A. SSL
- B. Authorization
- C. Authentication
- D. Impersonation

Answer: A

Explanation: Secure Sockets Layer (SSL) meets the requirements of this scenario. SSL encrypts data, which protects the data from being viewed from outside parties.

Incorrect Answers

B: Authorization is used to assign permissions and rights to users. It is not used to secure transmitted data.

C: Authentication is used to identify users. It is not enough to secure the data transmitted.

D: Impersonation is the ability of a to execute in a security context other than from that of the original user-It would not help protecting the transmitted data however.

QUESTION NO: 57

You are creating an XML Web service named TestKingSalesInformation. This service provided sales information to regional managers and directors by using a virtual private network (VPN).

TestKingSalesInformation exposes a Web method named GetSalesInfo that returns sales information to the caller. You must use role-based security to restrict access to GetSalesInfo to only members of the two Windows groups named Manager and Director. You configure TestKingSalesInformation to use Integrated Windows authentication.

You write the following code to create permissions in GetSalesInfo:

```
Dim myPermission1 As New PrincipalPermission(Nothing, "Manager")
Dim myPermission2 As New PrincipalPermission(Nothing, "Director")
```

You need to write the remaining code in GetSalesInfo to ensure that only users in the Manager group and the Director group can access SalesInformation.

Which code segment should you use?

- A. `myPermission1.Intersect(myPermission2).Demand()`
- B. `myPermission1.Union(myPermission2).Demand()`
- C. `myPermission1.Demand() myPermission2.Demand()`
- D. `myPermission2 = myPermission1.Copy() myPermission2.Demand()`

Answer: B

Explanation: The Union method creates a permission that is the union of the current permission and the specified permission. We want a union of the Manager and the Director group.

Reference:

.NET Framework Class Library, SecurityPermission.Union Method [Visual Basic]

.NET Framework Class Library, PrincipalPermission.Demand Method [Visual Basic]

Incorrect Answers

A: An intersect would only give permissions of to users that are members of both the Manager and the Director groups.

- C:** This code first test the membership of the Managers groups and the tests the membership of the Director group. Unless both these conditions match an exception will be thrown.
- D:** The copy method creates and returns an identical copy of the current permission. The code would only test the membership of the Manager group.

QUESTION NO: 58

You develop an ASP.NET application that consumes a third-party XML Web service named CreditService. CreditService contains a Web method named ChargeCard. ChargeCard takes as input a credit card number, a billing address, and a monetary amount and returns a Boolean variable that indicated whether or not the card was charged.

Calls to ChargeCard take one minute to complete. You do not want users to have to wait while ChargeCard executes. You wan users to be taken automatically to the next Web page of application. Which code segment should you use to call CreditService?

- A. `CreditService.ChargeCard(ccNumb, _
billAddress, amount)
Server.Transfer("process.aspx")`
- B. `CreditService.ChargeCard(ccNumb, _
billAddress, amount)
Response.Redirect("process.aspx")`
- C. `CreditService.BeginChargeCard(ccNumb, billAddress, _
amount, New AsyncCallback(AddressOf _
CCResponse), Nothing)
Server.Transfer("process.aspx")
Private Sub CCResponse(aRes As IAsyncResult)
CreditService.EndChargeCard(aRes)
End Sub`
- D. `Dim AsyncResult As IAsyncResult
AsyncResult = CreditService.BeginChargeCard(ccNumb, _
billAddress, amount, Nothing, Nothing)
AsyncResult.AsyncWaitHandle.WaitOne()
CreditService.EndChargeCard(AsyncResult)
Server.Transfer("process.aspx")`

Answer: C

Explanation: AsyncCallback provides a way for client applications to complete an asynchronous operation. This callback delegate is supplied to the client when the asynchronous operation is initiated. The event handler referenced by AsyncCallback contains program logic to finish processing the asynchronous task for the client.

Reference:

.NET Framework General Reference, Asynchronous Programming Design Pattern [Visual Basic]
.NET Framework Class Library, AsyncCallback Delegate [Visual Basic]

Incorrect Answers

A, B: Asynchronous operation is not set up.

D: We must use the AsyncCallback delegate.

QUESTION NO: 59

You are creating an XML Web service named TKWebService. Callers must be authenticated by using credentials passed in the SOAP header of each Web service call.

You want to use role-based security to secure each method on TKWebService. The roles that users are assigned are stored in a custom database table. You need to write code that will allow you to dynamically change which roles can execute specific methods at run time.

What should you do?

- A. Create a WindowsIdentity object and a WindowsPrincipal object.
Then implement declarative role-based security.
- B. Create a WindowsIdentity object and a WindowsPrincipal object.
Then implement imperative role-based security.
- C. Create a GenericIdentity object and a GenericPrincipal object.
Then implement declarative role-based security.
- D. Create a GenericIdentity object and a GenericPrincipal object.
Then implement imperative role-based security.

Answer: D

Explanation: The GenericIdentity class in conjunction with the GenericPrincipal class to create an authorization scheme that exists independent of a Windows NT or Windows 2000 domain. Furthermore, we should use imperative role-based security to allow dynamic permissions that are decide at runtime.

Reference: .NET Framework Developer's Guide, Creating GenericPrincipal and GenericIdentity Objects [Visual Basic]

Incorrect Answers

A, B: WindowsPrincipal allows code to check the Windows group membership of a Windows user. However, in this scenario we are creating a customized security scheme and have no use of WindowsPrincipal objects.

C: Declarative role-based security would not allow dynamic permissions that are decide at runtime.

QUESTION NO: 60

You are developing a Windows-based application that requires the use of a calculation function named **CalculateValue**. This function includes the following signature:
Calculate Value(x As Integer) As Integer

CalculateValue is located in an unmanaged DLL named **TestKingFunctions.dll**, and is not part of a COM interface. You need to be able to use **CalculateValue** in your application.
 Which action or actions should you take? (Choose all that apply)

- A. Use Regsvr32.exe to register TestKingFunctions.dll.
- B. Use Visual Studio .NET to add a reference to TestKingFunctions.dll.
- C. To your application, add the following code segment:
`Imports TestKingFunctions`
- D. To your application, add the following code segment:
`Declare Function CalculateValue_Lib "TestKingFunctions.dll" (x As Integer)`

Answer: B, D

Explanation:

B: We must add a reference to the dll.

D: We must identify the function we want to use in the unmanaged dll.

Reference: .NET Framework Developer's Guide, Consuming Unmanaged DLL Functions
 .NET Framework Developer's Guide, A Closer Look at Platform Invoke

Incorrect Answers

- A:** Regsrv32 is not required in Visual Studio .NET. Regsrv32 was used in Visual Basic 6.0, Visual C++ 6.0
- C:** We are not using the NameSpace of the unmanaged dll.

QUESTION NO: 61

You are creating an XML Web service named **myWebService**. This service will be used to exchange highly confidential information over the Internet with your company's business partner named **TestKing, Inc.**

You want only callers from **TestKing, Inc.**, to be able to access **myWebService**. You do not want to have to accept a user name and password from callers.

Once callers are authenticated, you want to use Windows user accounts to authorize access to the Web methods exposed by the Web service. You set up two Windows user accounts named **TestKingAssociate** and **TestKingManager**. You need to configure **myWebService** to meet these security requirements.

Which type of authentication should you use?

- A. Basic
- B. Digest

- C. Anonymous
- D. Client Certificate

Answer: D

Explanation: Client certificate authentication meets the requirements of this scenario:

- would only allow specific users to gain access
- no username or password would be required.

Incorrect Answers

A, B: Basic authentication and Digest Authentication would require a user name and a password from the callers.

C: Anonymous access would allow public access.

QUESTION NO: 62

You create a serviced component named OrderProcessor. OrderProcessor implements the IOrderInit interface. The component and the interface contain the following code segments:

```
<GuidAttribute("0B6ABB29-43D6-40a6-B5F2-83A457D062AC"), _
    InterfaceType(ComInterfaceType.InterfaceIsDual)> _
Public Interface IOrderInit
    ' IOrderInit methods go here
End Interface

Public Class OrderProcessor
    Inherits ServicedComponent
    Implements IOrderInit
    ' OrderProcessor methods go here.
End Class
```

You discover that every time you rebuild OrderProcessor, existing unmanaged client code fails. The HRESULT for the exception is 0x80040154.

The exception includes the following message: "Class not registered." You need to resolve this problem.

What should you do?

- A. Add a Guid attribute to the OrderProcessor class.
- B. Add a ComImport attribute to the IOrderInit interface.
- C. To the OrderProcessor class, add the following attribute:
ClassInterface(ClassInterfaceType.AutoDual)
- D. To the end of every method, add the following line of code:
Marshal.ReleaseComObject(Me)

Answer: C

Explanation: The class interface, which is not explicitly defined in managed code, is an interface that exposes all public methods, properties, fields, and events that are explicitly exposed on the .NET object. This interface can be a dual or dispatch-only interface. Class interfaces are only generated when the `ClassInterfaceAttribute` is set to `ClassInterfaceType.AutoDual`.

Reference: .NET Framework Class Library, `ClassInterfaceAttribute` Class

Incorrect Answers

- A:** The `Guid` attribute is used to specify a globally unique identifier (GUID) for a class or an interface. This information is primarily useful for interoperability with COM.
- B:** When placed on a class, the `ComImport` attribute marks the class as an externally implemented COM class. Such a class declaration enables the use of a C# name to refer to a COM class.
- D:** The `Marshal.ReleaseComObject` method decrements the reference count of the supplied runtime callable wrapper

QUESTION NO: 63

You are using Visual Studio .NET to develop a new application to replace an older COM-based application named TestKingLegacy. The new application will use some of the old COM components until they can be replaced by Visual Studio .NET code.

Your application uses a COM DLL named OurCOM.dll. The Visual Studio .NET assembly for OurCOM.dll must be named OurDotNetCOM. You must use the name "ProjectX" for the namespace of the COM components. You must ensure that your application uses these naming guidelines.

What should you do?

- A. Reference OurCOM.dll from Visual Studio .NET.
Change the assembly name in Solution Explorer.
Change the namespace name by editing the assembly.
- B. Reference OurCOM.dll from Visual .NET.
Change the assembly name in Solution Explorer.
Change the namespace name by using the `Namespace` property of a `CodeNamespaceImport` object.
- C. Run the Type Library Importer (Tlbimp.exe) with the `/namespace` and `/out` options to create the assembly.
- D. Run the Type Library Importer (Tlbimp.exe) with the `/out` option to create the assembly.
Change the namespace by using the `Namespace` property of a `CodeNamespaceImport` object.

Answer: C

Explanation: The Type Library Importer converts the type definitions found within a COM type library into equivalent definitions in a common language runtime assembly. We should use the `/namespace` option to

specify the namespace in which to produce the assembly. We must use the /out option to specify output file, assembly, and namespace in which to write the metadata definitions.

Reference: .NET Framework Tools, Type Library Importer (Tlbimp.exe)

Incorrect Answers

A: Not a practical solution.

B: An incomplete solution.

D: We should use the /namespace option to specify the namespace in which to produce the assembly.

QUESTION NO: 64

You create an XML Web service named TestKingA. You use the Debug.Assert method in your code to verify parameter values and ranges.

You find that TestKingA does not display assertion failure messages. Instead, TestKingA returns an HTTP 500 error message when an assertion fails. You want to view the assertion failure messages.

What should you do?

- A. Modify the Web.config file to stop the Debug.Assert method from displaying a message box.
- B. Modify the compilation element of the Web.config file by setting the debug attribute to **“true”**.
- C. In the constructor for TestKingA, set the Debug.AutoFlush property to **false**.
- D. In the constructor for TestKingA, add an EventLogTraceListener object to the Listeners property of the Debug class.

Answer: B

Explanation: To set debug mode for an ASP.NET application, you must edit the application's Web.config configuration file. More specifically the following attribute must be added to the compilation element:
debug="true"

Reference:

Visual Studio, Debug Mode in ASP.NET Applications
.NET Framework Class Library, Debug Members

Incorrect Answers

A: No messages boxes are displayed.

C: Setting AutoFlush to true means that data will be flushed from the buffer to the stream. It would not affect the problem at hand, however.

D: The Listeners property of the debug class is a read only property. An EventLogTraceListener object cannot be added to the Listeners property of the Debug class.

QUESTION NO: 65

You create an XML Web service that provides stock information to its customers. You successfully test the service. You are now ready to deploy the service to a new virtual directory on a production computer. You want to deploy the service without having to manually configure any settings on the production computer.

Which deployment mechanism should you use?

- A. FTP
- B. Xcopy command
- C. Web setup project
- D. Copy Project command

Answer: C

Explanation: Using deployment to install files on a Web server provides an advantage over simply copying files, in that deployment handles any issues with registration and configuration automatically.

Reference: Visual Studio, Deployment of a Web Setup Project

Incorrect Answers

A: Download files through FTP would require manual registration and configuration.

B: Just copying the files would require manual registration and configuration.

D: Copying a project, rather than deploying it, is the simpler way to move your project's content to a target Web server. However, copying does not automatically configure Internet Information Services (IIS) directory settings.

QUESTION NO: 66

You are using Visual Studio .NET to develop an application that uses a non-COM DLL named TestKFunctions.dll. This DLL is written in unmanaged code.

The DLL contains a function that parses a string into an array of string words and an array of numbers.

A call to the function includes the following pseudocode:

```
input = "A string with 6 words and 2 numbers"
words = Nothing
Numbers = Nothing
Parse(input, words, numbers)
```

After execution, words contains all string words found in input and numbers contains all integers found in input. You need to enable your application to call this function.

Which code segment should you use?

- A. Declare Function Parse Lib "TestKFunctions.dll" _
 (ByVal input As String, ByVal words() As String, ByVal Numbers()
 As Integer) As Integer
- B. Declare Function Parse Lib "TestKFunctions.dll" _
 (ByVal input As String, ByRef Words() As String, ByRef numbers()
 As Integer) As Integer
- C. Declare Function Parse Lib "TestKFunctions.dll" _
 (ByRef input As String, ByVal words() As String, ByVal numbers()
 As Integer) As Integer
- D. Declare Function Parse Lib "TestKFunctions.dll" _
 (ByRef input As String, ByRef words() As String, ByRef numbers()
 As Integer) As Integer

Answer: B

Explanation: Only the value of the *input* parameter is used by the function so we must use **ByVal**. The *words* and the *Numbers* parameters on the other hand must be changed by the function. We must pass these parameters with **ByRef**.

Note: Functions cannot change a **ByVal** variables or any of their members. Functions can **ByRef** variables and their members.

Reference: Visual Basic Language Concepts, Argument Passing Mechanism

Incorrect Answers

A, C: The *Words* are and *Numbers* parameters are changed by the function, they must be passed with **ByRef**.

D: The *input* parameter is not changed by function, and therefore **ByVal** is preferred.

QUESTION NO: 67

You create a .NET Remoting object named AdminService, which is hosted in Internet Information Services (IIS). The object uses an HttpChannel and a BinaryFormatter.

AdminService is in an assembly named AdminService.dll. The URL for AdminService is http://LocalHost/AdminService/AS.rem.

You write a test console application named Tester.exe to test the AdminService interface. Tester.exe includes the following code segment:

```
Module Tester
    Sub Main()
        Dim service As New AdminService()
    End Sub
End Module
```

You write a configuration file for Tester.exe. The configuration file is named Tester.exe.config and includes the following code segment:

```
<configuration>
  <system.runtime.remoting>
    <application>
      <client>
        <wellknown
          url="http://TestKingSrv/AdminService/AS.rem"
          type="AdminService, AdminService"
        />
      </client>
    </application>
  </system.runtime.remoting>
</configuration>
```

You run Tester.exe. The application immediately throws a System.NullReferenceException. The exception includes the following message: "Object reference not set to an instance of an object." You need to resolve this exception.

What should you do?

- A. To the application element of the Tester.exe.config file, add the following code segment:

```
<channels>
  <channel ref="http">
    <clientProviders>
      <formatter ref="binary"/>
    </clientProviders>
  </channel>
</channels>
```

- B. Replace the use of the AdminService constructor in Tester.exe with the following code segment:

```
Dim o as Object
o = Activator.CreateInstance(GetType(AdminService))
service = CType(o, AdminService)
```

- C. At the beginning of the Main method in Tester.exe, add the following line of code:

```
RemotingConfiguration.Configure("Tester.exe.config")
```

- D. Rename the configuration file from Tester.exe.config to Tester.config.

Answer: C

Explanation: To use the remoting settings in the Tester.exe.config file, we must call RemotingConfiguration.Configure on the application configuration file name.

Note: Developers publishing or consuming remotable objects are responsible for configuration of the .NET Remoting system so that applications using .NET Remoting work correctly. You can do this programmatically, or using the application configuration file or the machine configuration file.

Reference: .NET Framework Developer's Guide, Remote Object Configuration

Incorrect Answers

A, B: There is no need to change the application configuration file.

D: The current file name is appropriate.

QUESTION NO: 68

You are creating an XML Web service that processes credit card information. This service will be consumed by computers that run on Microsoft Windows operating systems, as well as computers that run on other operating systems.

You must ensure that client credentials passed to the service are secure and cannot be compromised. You are not as concerned with the length of time that Web method calls take to maintain this level of security.

You need to configure authentication for this service.

Which type of authentication should you use?

- A. Basic
- B. Forms
- C. Client Certificate
- D. Integrated Windows

Answer: C

Explanation: Client certificates can be used on both Windows and non-Windows systems. Client certificates provide a secure connection.

Note: Client Certificates is used for secure identification of clients in Internet and intranet scenarios. It requires each client to obtain a certificate from a mutually trusted certificate authority.

Reference: .NET Framework Developer's Guide, Securing XML Web Services Created Using ASP.NET [Visual Basic]

Incorrect Answers

A: Basic authentication is not secure. Login name and password are transferred unencrypted in clear text.

B: Forms authentication is not supported by XML Web services. It is a system by which unauthenticated requests are redirected to an HTML form using HTTP client-side redirection.

D: Integrated Windows authentication can only be used on Windows computers.

QUESTION NO: 69

You create a serviced component named StockQuote that implements the IStockQuote interface. The StockQuote class includes the following code segment:

```
Public Class StockQuote
Inherits ServicedComponent Implements IStockQuote
Public Function GetQuote(stock as Ticker) as Price_
    Implements IStockQuote.GetQuote
    'Implementation code goes here.
End Function
End Class
```

You want to secure StockQuote so that it can only be accessed by users in the Customers and Managers roles. Which actions should you take? (Each correct answer presents part of the solution. Choose two)

- A. To the StockQuote class, add the following attribute:
<ComponentAccessControl>
- B. To the StockQuote class, add the following attribute:
<Transaction(TransactionOption.Required)>
- C. Implement the ISecurityCallContext COM interface in the StockQuote class.
Implement the IsCallerInRole method for the Customers and Managers roles.
- D. To the StockQuote class, add the following attributes:
<SecurityRole("Customers", False),_
SecurityRole("Managers", False)>
- E. To the beginning of the GetQuote method, add the following code segment:
IfNot ContextUtil.IsCallerInRole("Managers,Customers")_
Then Throw New SecurityException("Access is denies.")

Answer: A, D

Explanation:

- A:** The component attribute ComponentAccessControl is used to enable or disable access checks at the component level.
- D:** You can use the SecurityRole attribute to add the roles at the assembly level. We must set the **SetEveryoneAccess** property to **false**:
[SecurityRole("Customers", false)]
[SecurityRole("Managers", false)]

Incorrect Answers

- B:** We are not interested in configuring a transaction.
- C:** Incomplete.
- E:** The IsCallerInRole method determines whether the caller is in the specified role. We must specify a single role, we cannot specify two roles.

QUESTION NO: 70

You create a collection of serviced components that performs bank transfers for TestKing Ltd. All the components are marked with the Transaction(TransactionOption.Required) attribute. All the methods in the components are marked with the AutoComplete() attribute. You discover that incorrect balance amounts are being transferred. You decide to debug the components. During debugging, a System.Runtime.InteropServices.COMException is thrown. The HRESULT for the exception is 0x8004E002. The exception includes the following message: "The root transaction wanted to commit, but transaction aborted."

You find that this exception occurs only during the debugging session, and not when the components run outside of the debugger. This exception is preventing you from continuing to debug the components. You need to resolve this problem.

What should you do?

- A. Remove the AutoComplete attribute from each method.
Within each method implementation, add calls to the ContextUtil.SetComplete() and ContextUtil.SetAbort() methods
- B. Remove the AutoComplete attribute from each method.
Within each method implementation, add calls to the ContextUtil.MyTransactionVote and ContextUtil.DeactivateOnReturn properties.
- C. Increase the transaction timeout in the Component Services tool by using the **Properties** dialog box for My Computer.
- D. Replace each method implementation with the following code segment:

```
Try
    ' The original method implementation goes here.
Finally
    ContextUtil.SetComplete()
End Try
```

Answer: C

Explanation: The debugging process makes the execution time longer. The transactions will get timed out. We must therefore increase the transaction timeout interval.

Note: A COMException is thrown when an unrecognized HRESULT is returned from a COM method call.

Reference: .NET Framework Class Library, COMException Class [Visual Basic]

Incorrect Answers

Note: The COM+ done bit determines how long the object remains active after finishing its work and can affect the duration of a transaction. The consistent bit casts a vote to commit or abort the transaction in which it executes, and the done bit finalizes the vote.

A: The ContextUtil.SetComplete method sets the consistent bit and the done bit to true in the COM+ context. The ContextUtil.SetAbort method sets the consistent bit to false and the done bit to true in the COM+ context.

- B:** The ContextUtil.MyTransactionVote property gets or sets the consistent bit in the COM+ context. The ContextUtil.DeactivateOnReturn property gets or sets the done bit in the COM+ context.
- D:** The ContextUtil.SetComplete method sets the consistent bit and the done bit to true in the COM+ context. If asked, the COM+ context will commit the current transaction, and the object is deactivated on method return.

QUESTION NO: 71

You create an XML Web service named myService. This service exposes a Web method named MyMethod. You need to register myService in UDDI. First, you add a new business name and a new tModel. You now need to list a valid access point to myService. Which URL should you use?

- A. `http://TestKServer/AppPath/myService`
- B. `http://TestKServer/AppPath/myService=wsdl`
- C. `http://TestKServer/AppPath/myService.asmx`
- D. `http://TestKServer/AppPath/myService.asmx?MyMethod`

Answer: C

Explanation: XML Web services are access through Web browser using an URL. The URL to access an XML Web service has the format:

`http://servername/apppath/webservicename.asmx`

The XML Web service's HTML description file is displayed. The XML Web service's HTML description page shows you all the XML Web service methods supported by a particular XML Web service, including a valid access to the method.

Note: The UDDI (Universal Description, Discovery and Integration) specifications define a standard way to publish and discover information about XML Web services. The XML schemas associated with UDDI define four types of information that would enable a developer to use a published XML Web service. These are: business information, service information, binding information, and information about specifications for services.

Reference: .NET Framework Developer's Guide, Accessing XML Web Services from a Browser [Visual Basic]

Incorrect Answers

- A:** The .asmx extension must be specified as well.
- B:** Use of Web Services Description Language (WSDL) is not required (and the syntax is incorrect as well).
- D:** This is not the format used to access a method within a XML Web service. The format to directly access an method within a service is: `http://servername/appath/webservicename.asmx/Methodname?parameter=value`

QUESTION NO: 72

You create a serviced component named BankTransfer. BankTransfer is in a COM+ application named TestKing Bank. BankTransfer is secured by using the SecurityRole attribute for the Tellers and Managers roles.

You want members of the TestKingBankTellers group to be assigned to the Tellers role. What should you do?

- A. Add another SecurityRole attribute to the BankTransfer class for the TestKingBankTellers group.
- B. Modify the Tellers SecurityRole attribute on the BankTransfer class to include the TestKingBankTellers group.
- C. Use the Component Services tool to add a new role named TestKingBankTellers.
- D. Use the Component Services tool to add the TestKingBankTellers group to the existing Tellers role.

Answer: D

QUESTION NO: 73

You create an XML Web service named TestK1 that exposed your company's inventory data. This data is used by other companies to place orders. TestK1 must conform to existing formatting standards for inventory data.

You deploy TestK1. You discover that some client applications are rejecting your XML formatting because the XML is inconsistent with the expected standard. You want to debug this problem by tracing the XML responses.

What should you do?

- A. In the Web.config file, enable tracing by setting the enabled attribute of the trace element to **"true"**.
- B. Inside each Web method, use the Debug class to write the contents of the inherited Context.Response property to a log file.
- C. Create a SOAP extension to log the SoapMessageStage.AfterSerialize output to a log file.
- D. On each Web method, use the SoapHeader attribute to map all SOAP headers to a member variable for the TestK1 class.
Then use the Trace.WriteLine method to log the headers to a log file.

Answer: C

Explanation: The AfterSerialize stage occurs after a SoapMessage is serialized, but before the SOAP message is sent over the wire. Logging the output of this stage is useful in this scenario.

Reference: .NET Framework Class Library, SoapMessageStage Enumeration [Visual Basic]

QUESTION NO: 74

You are creating a serviced component named TKComponent that will be distributed to your customers. You are also creating a setup project that will register the component in the global assembly cache on each customer's computer.

You anticipate that there will be future updates to TKComponent that you will provide to your customers. All updates to TKComponent will be backward compatible. You will create similar setup projects for each update of TKComponent that will register the updated assembly in the global assembly cache.

You need to ensure that any applications on your customers' computer that reference TKComponent use the most recent version of the component.

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

- A. Sign TKComponent by using a strong name.
- B. Compile TKComponent as a satellite assembly.
- C. Include a publisher policy file that is registered in the global assembly cache on your customer's computers.
- D. Increment the assembly version for each update of TKComponent.
- E. Add an application configuration file to TKComponent that includes assembly binding information that redirects prior versions to the updated version.

Answer: A, C, D

Explanation:

A: We must use a strong name for TKComponent.

Note: You cannot redirect versions for assemblies that are not strong-named. The common language runtime ignores the version for assemblies that are not strong-named.

C: Vendors of assemblies can state that applications should use a newer version of an assembly by including a publisher policy file with the upgraded assembly. In this scenario a publisher policy can be used since the newer versions of the component will be backward compatible.

D: We must make sure that we increment the assembly version for each update of the component.

Reference: .NET Framework Developer's Guide, Redirecting Assembly Versions

Incorrect Answers

B: An satellite assembly is not required.

Note: By definition, satellite assemblies only contain resource files. They do not contain any application code. In the satellite assembly deployment model, you create an application with one default assembly (which is the main assembly) and several satellite assemblies.

E: An application configuration file can be used redirect one version of an assembly to another. However, it is not the preferred solution and is mostly used for non-backward compatible components.

QUESTION NO: 75

You create a serviced component named HealthInfo. The component exposes patient health records. You declaratively secure HealthInfo by using role-based security.

You must ensure that the security checks are enforced. You want to prevent HealthInfo from executing if administrators turns off security for the COM+ application.

What should you do?

- A. To the project source code, add the following attribute:

```
<Assembly: ApplicationAccessControl(AccessChecksLevel:=
    AccessChecksLevelOption.ApplicationComponent)>
```
- B. To all methods, add the following attribute:

```
<SecurityRole("Administrators", False)>
```
- C. To the beginning of all methods, add the following code segment:

```
IfNot ConnectUtil.IsSecurityEnabled
    Then ContextUtil.DisableCommit()
End If
```
- D. To the beginning of all methods, add the following code segment:

```
IfNot ContextUtil.IsSecurityEnabled
    Then Throw New SecurityException(_
        "Security must be enabled.")
End If
```

Answer: D

Explanation: We use ContextUtil.IsSecurityEnabled property to decide whether role-based security is active in the current context. If it is not active we throw a securityException. This will prevent HealthInfo from executing if security is disabled.

Reference: .NET Framework Class Library, ContextUtil.IsSecurityEnabled Property [Visual Basic]

Incorrect Answers

- A:** The AccessChecksLevelOption.ApplicationComponent specifies the level of access checking for an application. It is not of use here.
- B:** Does not apply here.
- C:** The ContextUtil.DisableCommit method is used in the context of transactions. It does not apply here.

QUESTION NO: 76

You create a Windows service named FxListener that performs financial transactions by using files in a drop directory. When a new XML file appears in the drop directory, FxListener opens the file and performs the financial transaction contained within the XML code.

You want updates to each XML file to be logged in the Windows application log. A String object named TKMessage contains the message to be logged. Which code segment should you use?

- A. `EventLog.WriteEntry("FxListener", TKMessage)`
- B. `Dim log As New EventLog("Application")`
`log.WriteEntry(TKMessage)`
- C. `Dim log As New EventLog("Application")`
`Trace.WriteLine(log, my Message)`
- D. `Dim log As New EventLog("FxListener")`
`log.Source = "Application"`
`log.WriteEntry(TKMessage, EventLogEntryType.SuccessAudit)`

Answer: D

Explanation:

Statement 1: `Dim log As New EventLog("FxListener")`

The EventLog (*logname*) constructor initializes a new instance of the EventLog class. It associates the instance with a log on the local computer.

Statement 2: `log.Source = "Application"`

We must set the Source property on your EventLog component before writing entries to the log.

Statement 3: `log.WriteEntry(myMessage, EventLogEntryType.SuccessAudit)`

The EventLog.WriteEntry (*message, EventLogEntryType*) method writes an entry of a specified EventLogEntryType to the event log.

Reference:

.NET Framework Class Library, EventLog Constructor (String) [Visual Basic]

.NET Framework Class Library, EventLog.WriteEntry Method (String, EventLogEntryType) [Visual Basic]

.NET Framework Class Library, EventLog.Source Property [Visual Basic]

Incorrect Answers

- A:** The EventLog.WriteEntry method (*source, message*) writes an information type entry with the given message text to the event log, using the specified registered event source. However, we specify the Windows service FxListener not a valid event source. The event source must already be registered as an event source for the appropriate log.
- B:** We should set the Source property on your EventLog component before writing entries to the log.
- C:** We are writing log entries, not tracing entries.

QUESTION NO: 77

You have an application named MyApp that contains a reference to version 1.0.0.0 of a strongly named serviced component named TestKingComponent. This component is located in the bin directory of MyApp.

You receive version 2.0.0.0 of TestKingComponent, which you install in the global assembly cache. You reconfigure the application configuration file to redirect calls to version 2.0.0.0.

You now receive version 3.0.0.0 of TestKingComponent, which you install in the global assembly cache. You do not reconfigure the application configuration file. You then run MyApp.

Which version of TestKingComponent is loaded and from which location is it loaded?

- A. Version 1.0.0.0 from the bin directory.
- B. Version 2.0.0.0 from the global assembly cache.
- C. Version 2.0.0.0 from the bin directory.
- D. Version 3.0.0.0 from the global assembly cache.

Answer: B

Explanation: The runtime uses the following steps to resolve an assembly reference:

1. Determines the correct assembly version by examining applicable configuration files, including the application configuration file, publisher policy file, and machine configuration file.
In this scenario the application configuration file states that Version 2.0.0.0 should be used.
2. Checks whether the assembly name has been bound to before and, if so, uses the previously loaded assembly.
3. Checks the global assembly cache. If the assembly is found there, the runtime uses this assembly.
In this scenario Version 2.0.0.0 is installed in the Global assembly cache.
4. Probes for the assembly using additional steps.

Reference: .NET Framework Developer's Guide, How the Runtime Locates Assemblies

Incorrect Answers

A: The application configuration file states that version 2.0.0.0 should be used.

C: The global assembly cache is checked first.

D: The application configuration file states that version 2.0.0.0 should be used. Newer versions will not be considered.

QUESTION NO: 78

You create a serviced component named WorkItem that implements an interface named IWorkItem. You want to ensure that calls to the serviced component through IWorkItem are queued.

What should you do?

- A. To WorkItem, add the following attribute:
`<InterfaceQueuing(True, Interface:="IWorkItem")>`
- B. To WorkItem, add the following attribute:
`<Transaction(TransactionOption.Disabled, _
Isolation:=TransactionIsolationLevel.Serializable)>`
- C. To the WorkItem assembly, add the following attribute:

```
<Assembly: ApplicationQueuing(Enabled:=True, _
    QueueListenerEnabled:=True)>
```

- D. In the WorkItem implementation, override the Activate method from the ServicedComponent class. In the Activate method, add the following code segment:
- ```
Dim q As New Queue() q.Enqueue(Me)
```

**Answer: A**

**Explanation:** In addition to enabling queued component support at the application level, you must mark your interfaces as capable of receiving queued calls. You do that by using the InterfaceQueuing attribute.

**Incorrect Answers**

- B:** Transactions are not helpful for interface queuing configuration.
- C:** The ApplicationQueuing assembly attribute is used to configure queuing support for the hosting COM+ application. However, we must configure the interface, not the application, for queuing.
- D:** Creating a new queue in the Active method is not correct in this scenario.

**QUESTION NO: 79**

**You are using Visual Studio .NET to develop an application to replace a COM-based application. A former colleague began writing a .NET class for the new application. This class will be used by client applications as a COM object. You are assigned to finish writing the class.**

**The class includes the following code segment:**

```
<ComVisible(False)>
 Public Class TKClass
 Public Sub New()
 'Implementation code goes here.
 End Sub
 <ComVisible(True)>_
 Public Function TKMethod(param As String) As Integer
 Return 0
 End Function
 <ComVisible(True)>_
 Protected Function TKOtherMethod() As Boolean
 Return True
 End Function
 <ComVisible(True)>_
 Public ReadOnly Property TKProperty() As Integer
 Get
 Return 0
 End get
 End Property
 'More implementation code goes here.
```

End Class

**When this code runs, it will expose one or more methods to the client applications through COM. Which member or members will be exposed? (Choose all that apply)**

- A. MyMethod
- B. MyOtherMethod
- C. MyProperty
- D. MyClass constructor

**Answer: A, C**

**Explanation:** The ComVisible attribute must be **True** to make a member visible. Furthermore, the member must also be declared as public.

**Incorrect Answers**

**B:** A protected function is not visible.

**D:** ComVisible(False) ensures that the TKClass Constructor is not visible.

**QUESTION NO: 80**

**You are creating an XML Web service named Tracker to track orders for your company. Tracker includes a Web method named OrderStatus for tracking the status of individual orders. You anticipate that many client applications will use the service.**

**You want administrators of Tracker to be able to monitor the requests per second for OrderStatus. Which code segment should you use?**

- A. `Dim counter As New PerformanceCounter("Tracker", _  
"TestKing OrderStatus req/sec", False)`
- B. `PerformanceCounterCategory.Create("Tracker", _  
"category", "TestKing OrderStatus req/sec", "req/sec")`
- C. `Dim counterData() As CounterCreationData = _  
{New CounterCreationData("TestKing OrderStatus req/sec",  
"help", PerformanceCounterType.RateOfCountsPerSecond32) }  
Dim collection As New _  
CounterCreationDataCollection(counterData)  
PerformanceCounterCategory.Create("Tracker", _  
"Tracker performance counters", collection)`
- D. `Dim counterData() As CounterCreationData = _  
{New CounterCreationData("Int32", "second", _  
PerformanceCounterType.AverageTimer32) }  
Dim collection As New _  
CounterCreationDataCollection(counterData)`

```
PerformanceCounterCategory.Create("OrderStatus",_
 "requests per second", collection)}
```

**Answer: C**

**Explanation:** A CounterCreationData object defines the counter type, name, and help string for a custom counter. A counter with the **RateOfCountsPerSecond32** PerformanceCounterType is a difference counter that shows the average number of operations completed during each second of the sample interval.

**Reference:** .NET Framework Class Library, CounterCreationData Class [Visual Basic]  
.NET Framework Class Library, PerformanceCounterType Enumeration [Visual Basic]

**Incorrect Answers**

- A:** The use of the PerformanceCounter constructor is incorrect. The first parameter should be categoryName and the second parameter should be counterName.
- B:** Just creating a new PerformanceCounterCategory would not enable us to use any new counters.
- D:** We want to measure the requests per second not the average time it takes to complete the process. We should not use the PerformanceCounterType of AverageTimer32.
- Note:** An AverageTimer32 counter is an average counter that measures the time it takes, on average, to complete a process or operation.

**QUESTION NO: 81**

**You create a Windows service named TKService that requires a table named Orders in a Microsoft SQL Server database. You want TKService to check every 30 seconds for new rows in Orders.**

**You create the following method in myService:**

```
Private Sub ProcessOrders(ByVal source As Object, ByVal eventArguments As
Timers.ElapsedEventArgs)
'Code to process orders goes here.
End Sub
```

**You need to add additional code to myService to invoke the ProcessOrders method.  
What should you do?**

- A. To the OnStart method, add the following code segment:
- ```
Dim TKTimer As New Timers.Timer()
AddHandler TKTimer.Elapsed, AddressOf ProcessOrders
myTimer.Interval = 30000
myTimer.Enabled = True
```
- B. To the OnCustomCommand method, add the following code segment:
- ```
Dim TKTimer As New Timers.Timer()
AddHandler TKTimer.Elapsed, AddressOf ProcessOrders
```

```
TKTimer.Interval = 30000
TKTimer.Enabled = True
```

- C. To the OnStart method, add the following code segment:

```
Dim TKTimer As New Timers.Timer()
AddHandler TKTimer.Elapsed, AddressOf ProcessOrders
TKTimer.Interval = 30000
TKTimer.AutoReset = True
```

- D. To the OnCustomCommand method, add the following code segment:

```
Dim myTimer As New Timers.Timer()
AddHandler TKTimer.Elapsed, AddressOf ProcessOrders
TKTimer.Interval = 30000
TKTimer.AutoReset = True
```

**Answer: A**

**Explanation:**

Use OnStart to specify the processing that occurs when the service receives a Start command. OnStart is the method in which you specify the behavior of the service. OnStart can take arguments as a way to pass data, but this usage is rare.

After configuration of the timer we must start it by raising the Enabled event.

**Reference:**

.NET Framework Class Library, ServiceBase.OnStart Method [Visual Basic]

.NET Framework Class Library, Timer Members

.NET Framework Class Library, ServiceBase.OnCustomCommand Method [Visual Basic]

**Incorrect Answers**

**B, D:** OnCustomCommand executes when the Service Control Manager (SCM) passes a custom command to the service. The OnCustomCommand is not a good place to place define and configure a timer.

**C:** The Timer.AutoReset property indicates whether the Timer should raise the Elapsed event each time the specified Interval elapses or only after the first time it elapses. The default value is True, so there is no need to set to true in this scenario. Furthermore, the timer will not start until the Enabled property is set to true.

**QUESTION NO: 82**

You are using Visual Studio .NET to develop an application named NewApp to replace a COM-based application TKOrderProcessing. You are assigned to write a .NET class that will be used by client applications as a COM object. Your class code is being moved and modified while development continues on the new application.

You want to minimize any possible disruption to the COM interface as a result of code changes. Which code segment should you use?

- A. `<ClassInterface()>`  
     `Public Class MyClassToExpose`  
     `Public Function Calc() as Integer`  
     `'Implementation code goes here.`  
     `End Function`  
     `End Class`
- B. `<Guid("9ED54F84-A89D-4fcd-A854-44251E92F09")>`  
     `Public Interface IMyClassToExpose`  
     `Public Function Calc() as Integer`  
     `End Interface`  
     `<ClassInterface(ClassInterfaceType.None)>_`  
     `Public Class MyClassToExpose Implements IMyClassToExpose`  
     `Public Function Calc() as Integer`  
     `'Implementation code goes here.`  
     `End Function`  
     `End Class`
- C. `<Guid("9ED54F84-A89D-4fcd-A854-44251E92F09"),`  
     `_ComVisible(true)>_Public Class MyClassToExpose`  
     `Public Function Calc() as Integer`  
     `'Implementation code goes here.`  
     `End Function`  
     `End class`
- D. `<ClassInterface(ClassInterfaceType.AutoDispatch)>`  
     `Public Class MyClassToExpose`  
     `Public Function Calc() as Integer`  
     `' Implementation code goes here.`  
     `End Function`  
     `End class`

**Answer: B**

**Explanation:** `ClassInterfaceType.None` indicates that no class interface is generated for the class. If no interfaces are implemented explicitly, the class will only provide late bound access through `IDispatch`. Users are expected to expose functionality through interfaces that are explicitly implemented by the class.

**Reference:** .NET Framework Class Library, `ClassInterfaceType` Enumeration

**Incorrect Answers**

**A, C:** The interface would be disrupted if the implementation of it would be changed.

**D:** `ClassInterfaceType.AutoDispatch` indicates that the class only supports late binding for COM clients.

**QUESTION NO: 83**

**You are creating a .NET Remoting object. You want to add code to the object to log error messages and warning messages. You want to log messages written to both a log file and to the Windows application log.**

**Which code segment should you use?**

- A. `Dim eventLog As New EventLog("remobj")`  
`Dim fileLog As FileStream = File.Create("remobj.log")`  
`Trace.WriteLine(eventLog, "testking sample message")`  
`Trace.WriteLine(fileLog, "testking sample message")`
- B. `Dim eventLog as New EventLog("remobj")`  
`Dim fileLog As FileStream = File.Create("remobj.log")`  
`Trace.Write(eventLog)`  
`Trace.Write(fileLog)`  
`Trace.WriteLine("testking sample message")`
- C. `Trace.Listeners.Add(new EventLogTraceListener("remobj"))`  
`Trace.Listeners.Add(_`  
`new TextFileTraceListener("remobj.log"))`  
`Trace.WriteLine("testking sample message")`
- D. `Trace.Listeners.Add(new EventLogTraceListener())`  
`Trace.Listeners.Add(_`  
`new TextFileTraceListener("remobj.log"))`  
`Trace.WriteLine("testking sample message")`

**Answer: C**

**Explanation:** Listeners direct the tracing output to an appropriate target, such as a log, window, or text file. An EventLogTraceListener redirects output to an event log. A TextWriterTraceListener redirects output to an instance of the TextWriter class.

We should take care to use the **new EventLogTraceListener("remobj")** constructor.

**Note:** Any listener in the Listeners collection gets the same messages from the trace output methods. If we set up two listeners: a TextWriterTraceListener and an EventLogTraceListener. Each listener receives the same message. The TextWriterTraceListener would direct its output to a stream, and the EventLogTraceListener would direct its output to an event log.

**Reference:** Visual Basic and Visual C# Concepts, Trace Listeners  
.NET Framework Class Library, EventLogTraceListener Class [Visual Basic]

**Incorrect Answers**

- A:** The EventLog object provides interaction with Windows event logs and FileStreams enables writing of data to files. However, they are not appropriate for logging warning and error messages.
- B:** The following statements are incorrect.  
`Trace.Write(eventLog);`  
`Trace.Write(fileLog);`  
 The correct usage is `Trace.Write(Parameter)`, where Parameter is either an Object or a String that should be written.
- D:** The EventLogTraceListener constructor() (with no parameter) initializes a new instance of the EventLogTraceListener class without a trace listener.

**QUESTION NO: 84**

**You are using Visual Studio .NET to develop an application. You have a common business logic component that was created in COM that you want to use until you can replace it with Visual Studio .NET code.**

**You create the Visual Studio .NET solution for the new application. You want to use the COM component in your Visual Studio .NET solution.**

**What should you do?**

- A. Register the COM component by using Regsvr32.exe.
- B. Run the Type Library Exporter (Tlbexp.exe) and pass the COM component as the filename parameter.
- C. Use Visual Studio .NET to add a reference to the COM component.
- D. Run the Assembly Registration tool (Regasm.exe) and pass the COM component as the filename parameter.

**Answer: D**

**Explanation:** To register or unregister a .NET class with COM, you must run a command-line tool called the Assembly Registration Tool (Regasm.exe). Regasm.exe adds information about the class to the system registry so COM clients can use the .NET class transparently.

**Reference:**

.NET Framework Developer's Guide, Registering Assemblies with COM  
 .NET Framework Tools, .NET Framework Tools

**Incorrect Answers**

- A:** Regsvr32 is not required in Visual Studio .NET. Regsvr32 was used for Visual Basic 6.0, and for Visual C++ 6.0 components.
- B:** Tlbexp.exe generates a type library from a common language runtime assembly. Tlbexp.exe generates a type library but does not register it. This is in contrast to the Assembly Registration tool (Regasm.exe),

which both generates and registers a type library. To generate and register a type library with COM, use Regasm.exe.

**C:** This is not enough to ensure interoperability.

#### QUESTION NO: 85

**You are creating a serviced component that will perform several distributed transactions across different databases. The serviced component will be called from managed and unmanaged client applications.**

**You create a new class library project. You write code in the class modules to implement the logic.**

**You want to detect and correct any registration errors before any client applications use the component.**

**What should you do next?**

- A. Assign a string name to the assembly.  
Compile the assembly.  
Run the .NET Services Installation tool (Regsvcs.exe) to add the component to Component Services.
- B. Run the Type Library Exporter (Tlbexp.exe) to export the definition for the assembly.
- C. Assign a string name for the assembly.  
Compile the assembly.  
Run the Global Assembly Cache tool (Gacutil.exe) to add the component to the global assembly cache.
- D. Use the Assembly Registration tool (Regasm.exe) to create entries in the registry that describe the assembly.

#### Answer: A

**Explanation:** The .NET Services Installation tool performs loads and registers an assembly, generates, registers, and installs a type library into a specified COM+ 1.0 application, and configures services that you have added programmatically to your class.

**Reference:** .NET Framework Tools, .NET Services Installation Tool (Regsvcs.exe)

#### Incorrect Answers

- B:** The Type Library Exporter generates a type library that describes the types defined in a common language runtime assembly.
- C:** The Global Assembly Cache tool allows you to view and manipulate the contents of the global assembly cache and download cache.
- D:** The Assembly Registration tool reads the metadata within an assembly and adds the necessary entries to the registry, which allows COM clients to create .NET Framework classes transparently.

#### QUESTION NO: 86

**You create an XML Web service that uses the Trace class to output error messages, warning messages, and informational messages to a log file. The service uses a TraceSwitch object to filter the trace output.**

The `DisplayName` property of the `TraceSwitch` object is “TestKSwitch”. On a development computer, all trace output appears in the log file.

You move the service to a production computer. You must configure the production XML Web service to output only error messages to the log file.

What should you do?

- A. To the `Web.config` file, add the following code segment:  

```
<system.diagnostics> <switches> <add name="TestKSwitch" value="1" />
</switches> </system.diagnostics>
```
- B. To the `Web.config` file, add the following code segment:  

```
<system.diagnostics> <switches> <add name="TestKSwitch"
value="TraceSwitch" /> </switches> </system.diagnostics>
```
- C. To the `Web.config` file, add the following code segment:  

```
<system.diagnostics> <switches> <add name="TraceSwitch" value="1" />
</switches> </system.diagnostics>
```
- D. To the `Web.config` file, add the following code segment:  

```
<system.diagnostics> <switches> <add name="TraceSwitch"
value="TestKSwitch" /> </switches> </system.diagnostics>
```

**Answer: A**

**Explanation:** In the `Web.config` file we should specify the name of the switch (`TestKSwitch`) and the appropriate `Tracelevel` through the `value` attribute. `Tracelevel` corresponds to the values 1 through 4. `Tracelevel` 1 only displays error messages.

**Note:** A switch provides an efficient mechanism for controlling tracing and debugging output at run time using external settings. The `Switch` class implements default behavior for switches, allowing you to change the switch level at run time.

**Reference:** .NET Framework Class Library, `Switch` Class [Visual Basic]  
 Visual Basic and Visual C# Concepts, Trace Switches

#### Incorrect Answers

**B:** Incorrectly the `value` attribute is set to “TraceSwitch”. Valid `Tracelevel` values are 1 through 4.

**C, D:** We should specify the name of the switch with a `name` attribute in the `Web.config` file. We must specify `TestKSwitch`, not `TraceSwitch`.

#### QUESTION NO: 87

You create an XML Web service named `PhoneNumberService` that returns the telephone numbers of people in a specified geographical region. If an error occurs when the service is processing requests, a custom application exception named `PhoneNumberException` is thrown.

You create an ASP.NET application named TKPhoneBook that contains a Web reference to PhoneNumberService. You need to wrap any calls made to PhoneNumberService in a try/catch block to catch any PhoneNumberException that may be thrown.

Which two code segments are possible ways to achieve this goal? (Each correct answer presents a complete solution. Choose two)

- A. Try
  - \ Code to call PhoneNumberService method goes here.
  - Catch ex As SoapException
  - \ Handle the exception
  - End Try
- B. Try
  - \ Code to call PhoneNumberService method goes here.
  - Catch ex As SoapHeaderException
  - \ Handle the exception.
  - End Try
- C. Try
  - \ Code to call PhoneNumberService method goes here.
  - Catch ex As Exception
  - \ Handle the exception
  - End Try
- D. Try
  - \ Code to call PhoneNumberService method goes here.
  - Catch ex As ApplicationException
  - \ Handle the exception.
  - End Try

**Answer: C, D.**

**Explanation:**

**C:** The Exception class is the base class for all exceptions. Any exception would be intercepted.

**D:** An applicationException is thrown by a user program, not by the common language runtime. In this scenario a custom application exception is used.

**Reference:**

.NET Framework Class Library, Exception Class [Visual Basic]

.NET Framework Class Library, ApplicationException Class [Visual Basic]

**Incorrect Answers**

- A:** A SoapException that is thrown when an XML Web service method is called over SOAP and an exception occurs.
- B:** The SoapHeaderException exception that is thrown when an XML Web service method is called over SOAP and an exception occurs during processing of the SOAP header.

**QUESTION NO: 88**

**You create a class named Billings that stored billing information for TestKing Inc. Billings connects to a local Microsoft SQL Server database to store the billing information. Billing must run under a local user account to connect to the database.**

**The billing class includes the following code:**

```
Public Class Billings
Public Sub Submit(By Val name As String, ByVal As DateTime, By Val hours
As Double)
' Method implementation goes here.
End Sub
' Private implementation goes here.
End Class
```

**You want to ensure that client applications on other computers can use Billings by using .NET Remoting. What should you do?**

- A. Derive the Billings class from MarshalByRefObject.
- B. Implement the ISerializable interface in the Billings class.
- C. Implement the IRemoteDispatch interface in the Billings class.
- D. To the Billings class, add the following attribute:  
<Serializable()>

**Answer: A**

**Explanation:** The MarshalByRefObject enables access to objects across application domain boundaries in applications that support remoting.

**Reference:** .NET Framework Class Library, MarshalByRefObject Class  
.NET Framework Class Library, ISerializable Interface

**Incorrect Answers**

- B:** The ISerializable interface allows an object to take part in its own serialization and deserialization. It would not enable other computer to using the interface by .NET remoting however.
- C:** The IRemoteDispatch interface supports the .NET Framework infrastructure and is not intended to be used directly from your code.
- D:** The Serializable attribute would not by itself enable other computer to using the interface by .NET remoting.

**QUESTION NO: 89**

**You create an XML Web service that uses an existing COM component. You implement the service so that it does not return COM exceptions to its callers. Instead, the service translates the COM exceptions into more specific exception types based on the HRESULT, as shown in the following code segment:**

```
<WebMethod> Try
 ' Code to call the COM component goes here.
Catch ce As COMException
 Select Case ce.ErrorCode
 Case &H80070005
 Throw New SecurityException("Access denied", ce)
 ' Additional case statements go here.
End Select
End Try
```

**You want to record the original COM exception that was thrown. What should you do?**

- A. At the beginning of the catch block, add the following code segment:  
`Console.WriteLine("{0} COMException caught.", ce)`
- B. At the beginning of the catch block, add the following code segment:  
`Context.Trace.Write(ce, "COMException caught.")`
- C. Within each case statement add the following code segment:  
`ce.ToString()`
- D. Within each case statement, add the following code statement:  
`Console.WriteLine("{0} COMException caught.", ce.StackTrace)`

**Answer: B**

**Explanation:** The original exception is caught in the following statement:

```
Catch ce As COMException
```

We should immediately save this information with the following statement:

```
Context.Trace.Write(ce, "COMException caught.")
```

**Reference:** .NET Framework Class Library, Trace.Write Method (String, String) [Visual Basic]

#### **Incorrect Answers**

- A:** Console.WriteLine only displays the message on the console. The message will not be recorded.
- C:** We should only record the statement in the beginning of the catch block. Furthermore, ce.ToString() will not record the exception.
- D:** We should only record the statement in the beginning of the catch block. Furthermore, Console.WriteLine only displays the message on the console. The message will not be recorded.

**QUESTION NO: 90**

You are developing a Windows-based application that requires the use of a calculation named **CalculateValue**. This function includes the following signature:

```
CalculateValue (x As Integer) As Integer
```

**CalculateValue** is located in an unmanaged DLL named **UsefulFunctions.dll**, and is not part of a COM interface. You need to be able to use **CalculateValue** in your application. Your project directory contains a copy of **UsefulFunctions.dll**.

While you are working in Debug mode, you attempt to run your application. However, a **System.DllNotFoundException** is thrown.

You verify that you are using the correct function name. You also verify that the code in the DLL exposes **CalculateValue**. You have not modified the project assembly, and you have not modified machine-level security. You need to test your application immediately.

What should you do?

- A. Move **UsefulFunctions.dll** to your project's bin directory.
- B. Move **UsefulFunctions.dll** to your project's Debug directory.
- C. Immediately before the declaration of **CalculateValue**, add the following code segment:  
`<SuppressUnmanagedCodeSecurityAttribute()>_`
- D. Immediately before the call to **CalculateValue**, add the following code segment:

```
Dim perm As New _
 SecurityPermission(_
 SecurityPermissionFlag.UnmanagedCode)
perm.Assert()
```

**Answer: D**

**Explanation:** The **UnmanagedCode SecurityPermissionFlag** denotes the ability to call unmanaged code. The proposed solution gives permission to run unmanaged code.

**Note:** The **DllNotFoundException** is thrown when a DLL specified in a DLL import cannot be found.

**Reference:**

.NET Framework Class Library, **DllNotFoundException** Class [Visual Basic]  
.NET Framework Class Library, **SuppressUnmanagedCodeSecurityAttribute** Class [Visual Basic]  
.NET Framework Class Library, **SecurityPermissionFlag** Enumeration [Visual Basic]

**Incorrect Answers**

- A:** The dll is located in the Project folder. The debugger should be able to locate the dll file in this folder.
- B:** No special directory is used for debugging.
- C:** The **SuppressUnmanagedCodeSecurityAttribute** allows managed code to call into unmanaged code without a stack walk. It can be applied to methods that want to call into native code without incurring the

performance loss of a run-time security check when doing so. It only affects performance and would not solve the problem of this scenario.

**QUESTION NO: 91**

**You have a .NET Remoting object named TestKingOrder. The TestKingOrder class allows remote client applications to submit orders in batches.**

**Each TestKingOrder object holds state information that is specific to each remote client application. The TestKingOrder class has overloaded constructors for initializing an object.**

**You want to develop a server application to host TestKingOrder objects.**

**What should you do?**

- A. Create a Windows service, and register TestKingOrder as a client-activated object.
- B. Create a Windows service, and register TestKingOrder as a server-activated Singleton object.
- C. Host TestKingOrder in Internet Information Services (IIS) and create a Web.config file to register TestKingOrder as a server-activated SingleCall object.
- D. Host TestKingOrder in Internet Information Services (IIS) and create a Web.config file to register TestKingOrder as a server-activated object with an infinite lease.

**Answer: A**

**Explanation:** Client-activated objects are objects whose lifetimes are controlled by the calling application domain. This is the appropriate solution in this scenario.

**Reference:**

.NET Framework Developer's Guide, Client Activation

.NET Framework Developer's Guide, Server Activation

**Incorrect Answers**

**B, C:** Singleton types never have more than one instance at any one time. If an instance exists, all client requests are serviced by that instance.

**D:** Server-activated objects with an infinite lease would not be appropriate.

**QUESTION NO: 92**

**You create an XML Web service that calculates taxes. You deploy the service to a production computer named TestKing1. The URL of the production XML Web service is <http://TestKing1/WS/TaxCalc.asmx>. The service does not support all international tax rates. You want to find out which unsupported tax rates are being requested by users. If a user requests a tax rate that is not supported, the service records the request by using a trace message. You want to view the unsupported rates that have been requested. Which two actions should you take? (Each correct answer presents part of the solution. Choose two)**

- A. Modify the trace element in the Web.config file of the service by setting the pageOutput attribute to “true”.
- B. Modify the trace element in the Web.config file of the service by setting the enabled attribute to “true”.
- C. To the constructor of the TaxCalc class, add the following code segment:
 

```
Public Sub New()
 InitializeComponent()
 Trace.AutoFlush = True
End Sub
```
- D. To the constructor of the TaxCalc class, add the following code segment:
 

```
Public Sub New()
 InitializeComponent()
 Trace.Flush()
End Sub
```
- E. View the page at <http://TestKing1/WS/TaxCalc.aspx>.
- F. View the page at <http://TestKing1/WS/Trace.axd>.

**Answer: B, F**

**Explanation:**

- B:** You can enable tracing for an entire application in the web.config file in the application's root directory. We should set the trace attribute enabled to true:
- ```
<trace enabled="true"...
```
- F:** Once you have enabled tracing for your application, when each page in the application is requested, it will execute any trace statements that it contains. You can view these statements and the additional trace information in the trace viewer. You can view the trace viewer by requesting **trace.axd** from the root of your application directory.

Reference: .NET Framework Developer's Guide, Enabling Application-Level Tracing

Incorrect Answers

- A:** If you want trace information to appear appended to the end of the page that it is associated with, set the pageOutput attribute in the tracing configuration section of the web.config file to true. However, only you, and not the users should view the tracing information.
- C:** Setting AutoFlush to true means that data will be flushed from the buffer to the stream. This will not help on providing trace information.
- D:** The Trace.Flush method flushes the output buffer, and causes buffered data to be written to the Listeners.
- E:** This is the application file. We don't want it to show any trace information.

QUESTION NO: 93

You are creating an XML Web service named TKStockService. The service contains a Web method named RetrieveStockInfo.

RetrieveStockInfo takes as input a stock symbol and returns a **DataSet** object that contains information about that stock. You want to capture all incoming SOAP messages in **RetrieveStockInfo** and write the messages to a file for future processing.

What should you do?

- A. Enable sessions in **RetrieveStockInfo**.
- B. Create a SOAP extension for **RetrieveStockInfo**.
- C. Apply a **SoapHeader** attribute to **RetrieveStockInfo**.
- D. Apply a **SoapRpcMethod** attribute to **RetrieveStockInfo**.

Answer: B

Explanation: The ASP.NET SOAP extension architecture revolves around an extension that can inspect or modify a message at specific stages in message processing on either the client or the server. A SOAP extension would allow the capture and processing of SOAP messages.

Reference: .NET Framework Class Library, **SoapExtension** Class

Incorrect Answers

- A:** Would not help.
- C:** **SoapHeader** is applied to an XML Web service method or an XML Web service client to specify a SOAP header the Web service method or XML Web service client can process.
- D:** Applying the **SoapRpcMethodAttribute** to a method specifies that SOAP messages sent to and from the method use RPC formatting. This would not help in capturing the SOAP messages however.

QUESTION NO: 94

You have a .NET Remoting object named **Promotions**. The **Promotions** class allows remote client applications to add new product promotions to an online catalog application. The **Promotions** class is an assembly file named **TestKing.dll**.

You have an Internet Information Services (IIS) virtual directory named **PromotionsObject**. The **TestKing.dll** file is in the **PromotionsObject\bin** directory. You want to host the **Promotions** class in IIS. What should you do?

A. Create a Web.config file that includes the following code segment:

```
<appSettings>
    <add key="activation" value="wellknown"/>
</appSettings>
<httpHandlers>
    <add verb="*" path="Promotions.rem"
        type="TestKing, Promotions"/>
</httpHandlers>
```

B. Create a Web.config file that includes the following code segment:

```
<appSettings>
```

```

    <add key="activation" value="wellknown"/>
    <add key="mode" value="SingleCall"/>
</appSettings>
<httpHandlers>

```

```

    <add verb="*" path="Promotions.rem"
    type="TestKing, Promotions"/>
</httpHandlers>

```

C. Create a Web.config file that includes the following code segment:

```

<configuration>
  <system.runtime.remoting>
    <application>
      <service>
        <wellknown>
          mode="SingleCall" objectUri="Promotions.rem"
          type="Promotions,TestKing"/>
        </wellknown>
      </service>
    </application>
  </system.runtime.remoting>
</configuration>

```

D. Create a Web.config file that includes the following code segment:

```

<configuration>
  <system.runtime.remoting>
    <application>
      <service>
        <wellknown>
          mode="SingleCall" objectUri="Promotions.rem"
          type="Promotions,TestKing"/>
        </wellknown>
      </service>
    </application>
  </system.runtime.remoting>
</configuration>

```

Answer: C

Explanation: The HTTP channel does not require a custom-written listener because IIS provides the listening functionality. Advantages of using IIS as the HTTP listener include: ease of configuration, scalability, and process recycling.

Reference: Visual Studio Samples: Fitch and Mather 7.0, .NET Remoting

Incorrect Answers

- A, B:** These are inadequate since we want to host the application on the IIS server. We must, for example, configure channels.
- D:** TCP channel would require development of an extra listener to process the request that enters the TCP channel.

QUESTION NO: 95

You are creating an XML Web service named CustomerService. This service receives an XML file of customer information in the following format:

```
<CustomerData> <Customers> <CustomerID>1234</CustomerID>
<CompanyName>Adventure Works</CompanyName> </Customers> <Customers>
<CustomerID>2345</CustomerID> <CompanyName>TestKing Ltd</CompanyName>
</Customers> </CustomerData>
```

You want to parse the XML file to build a flat file that will be used by another application. The flat file should be in the following format:

```
CustomerID=1234 CompanyName=Adventure Works CustomerID=2345
CompanyName=Coho Winery
```

You write the following code:

```
Dim myXML.Doc As New XmlDocument() myXML.Doc.Load("C:\TableSchemaXML.xml")
Dim myRootNode As XmlNode = myXML.Doc.FirstChild
Dim customerOutput As String
Dim curNode As XmlNode
Dim i As Integer
```

You need to write the code that will parse the document and build the customerOutput string that will be used to write each row in the file.

Which code segment should you use?

```
A. Dim myNodeList As XmlNodeList =
    _myRootNode.SelectNodes("/CustomerData/Customers")
    For Each curNode In myNodeList
        If curNode.HasChildNodes Then
            customerOutput = ""
            For i = 0 To curNode.ChildNodes.Count - 1
                customerOutput = curNode.ChildNodes(i).Name & _ "=" +
                curNode.ChildNodes(i).InnerText ` Code to write the output files goes
                here.
            Next i
        End If
    Next
```

```

B. Dim myNodeList As XmlNodeList =
    _myRootNode.SelectNodes("/CustomerData/Customers")
    For Each curNode In myNodeList
        If curNode.HasChildNodes Then
            customerOutput = ""
            For i = 0 To curNode.ChildNodes.Count - 1
                customerOutput = curNode.ChildNodes(i).Name & _ "=" +
                    curNode.ChildNodes(i).Value
                'Code to write the output file goes here.
            Next i
        End If
    Next

C. Dim myNodeList As XmlNodeList = myRootNode.SelectNodes("/Customers")
    For Each curNode In myNodeList
        If curNode.HasChildNodes Then
            customerOutput = ""
            For i = 0 To curNode.ChildNodes.Count - 1
                customerOutput = curNode.ChildNodes(i).Name & _ "=" +
                    curNode.ChildNodes(i).InnerText
                'Code to Write the output file goes here.
            Next i
        End If
    Next

D. Dim myNodeList As XmlNodeList = _myRootNode.SelectNodes("/Customers")
    For Each curNode In myNodeList
        If curNode.HasChildNodes Then
            customerOutput = ""
            For i = 0 To curNode.ChildNodes.Count - 1
                customerOutput = _ curNode.ChildNodes(i).Attributes(0).value + "="
                & _ curNode.ChildNodes(i).Attributes(1).Value
                'Code to write the output file goes here.
            Next i
        End If
    Next

```

Answer: A

Explanation: The **SelectNodes** property selects a list of nodes matching the XPath expression. We should use the XPath expression `/CustomerData/Customers` to match the format in the XML file.

The **InnerText** property gets or sets the concatenated values of the node and all its children.

Reference:

.NET Framework Class Library, XmlElement Members
 .NET Framework Class Library, XmlNode.SelectNodes Method [Visual Basic]

Incorrect Answers

- B:** The Value property gets or sets the value of the current node only.
C: The XPath expression used, /Customers, does not match the XML file.
D: The XPath expression used, /Customers, does not match the XML file. Furthermore we should use the InnerText property, not the Value property.

QUESTION NO: 96

You are creating an XML Web service named InventoryService for a nationwide clothing retailer TestKing Inc. The service provides near real-time inventory information to individual store managers by using a virtual private network (VPN).

InventoryService exposes a Web method named RetrieveInventory that returns inventory information to the caller. You configure Internet Information Services (IIS) and InventoryService to use Integrated Windows authentication.

You need to write code in InventoryService to ensure that only members of the Manager group can access RetrieveInventory.

What should you do?

- A. To the <authorization> section of the Web.config file, add the following element:
`<allow roles="Manager" />`
- B. To the <authorization> section of the Web.config file, add the following element:
`<allow users="Manager" />`
- C. In RetrieveInventory, add the following code segment:

```
If User.Identity.Name.Equals("Manager") Then
    ' Code to retrieve inventory data goes here.
End If
```
- D. In RetrieveInventory, add the following code segment:

```
If User.Identity.AuthenticationType.Equals("Manager")_
Then
    ' Code to retrieve inventory data goes here.
End If
```

Answer: A

Explanation: We should use the authorization element of the Web.config file to allow the Manager group with the `<allow roles="Manager" />` element.

Reference: .NET Framework General Reference, <authorization> Element

Incorrect Answers

B: This proposed solution would allow the user name Manager access, not the group.

C: The Name property gets the user's Windows logon name. We cannot compare this to a group name.

D: The proposed solution is incorrect. The AuthenticationType cannot be equal to "Manager".

QUESTION NO: 97

You create a class named BankAccount that represents a customer's bank account. BankAccount includes the following code segment:

```
Public Class BankAccount
Public ReadOnly
Property AccountId() As String
Get
Return acctId
End Get
End Property
Public ReadOnly Property Balance() As Decimal
Get
Return bal
End Get
End Property
Sub New(ByVal AccountId As String, ByVal balance As Decimal)
acctId=AccountId bal = balance
End Sub
Private acctId As String
Private Bal As Decimal
End Class
```

You are now creating a .NET remoting object named Teller. The Teller Class returns lists of BankAccount objects.

You anticipate that large numbers of client applications will use the Teller object to retrieve BankAccount objects. You must ensure that network traffic is minimized.

What should you do?

- A. Add the Serializable attribute to the BankAccount class.
- B. Add the NonSerialized attribute to the BankAccount class.
- C. Derive the BankAccount class from MarshalByRefObject.
- D. Implement the ISerializable interface in the BankAccount class.

Answer: D

Explanation: The basic concept of object serialization is the ability to read and write objects to streams. This would, in this scenario, ensure that network traffic is minimized. The most effective method to implement serialization is to implement ISerializable interface and serialize only the required fields.

Reference: .NET Framework Developer's Guide, Serialization guidelines
.NET Framework Class Library, ISerializable Interface

Incorrect Answers

- A:** It is possible to serialize the entire class with the Serializable attribute. However, this would not minimize network traffic.
- B:** We want to serialize to minimize network traffic through use of streams.
- C:** The MarshalByRefObject enables access to objects across application domain boundaries in applications that support remoting. This is not called for in this scenario.

QUESTION NO: 98

You are creating an XML Web service named DistributionService. This service must be able to access and manipulate data in a table named TestKingInventory in a Microsoft SQL Server database. Some functions within Distribution Service need the inventory data to be exposed as XML data. Other functions within DistributionService need the inventory data to be exposed as a DataSet object. You need to create the object that will provide this data access. Which object should you use?

- A. XmlDocument
- B. XmlDocumentFragment
- C. XPathDocument
- D. XmlDataDocument

Answer: D

Explanation: XmlDataDocuments allows structured data to be stored, retrieved, and manipulated through a relational DataSet. XMLDataDocuments enables you to load either relational data or XML data and manipulate that data

Reference: .NET Framework Class Library, XmlDataDocument Class [Visual Basic]

Incorrect Answers

- A:** XmlDocument does not support relational data.
- B:** An XmlDocumentFragment object represents a lightweight object that is useful for tree insert operations.
- C:** XPathDocument provides a fast and performant read-only cache for XML document processing.

QUESTION NO: 99

You develop an application that uses a Windows Form, a Microsoft SQL Server database, and several database components. You want to restrict users from writing their own applications to access your application's database components.

You need to configure your database component assemblies to accomplish this goal.

What should you do?

- A. Apply the StrongNameIdentityPermission attribute, and specify SecurityAction.LinkDemand. Set the PublicKey property to the public key of the key file you use to sign your application's assemblies.
- B. Apply the StrongNameIdentityPermission attribute, and specify SecurityAction.RequestMinimum. Set the PublicKey property to the public key of the key file you use to sign your application's assemblies.
- C. Apply the PublisherIdentityPermission attribute, and specify SecurityAction.Deny.
- D. Apply the PublisherIdentityPermission attribute, and specify SecurityAction.RequestMinimum.

Answer: B

Explanation: The RequestMinimum security action is used to request for the minimum permissions required for code to run. We use the PublicKey property and the public key of our software certificate to protect the assembly.

Reference:

.NET Framework Class Library, SecurityAction Enumeration

Incorrect Answers

- A:** A link demand causes a security check during just-in-time compilation and only checks the immediate caller of your code.
- C, D:** The PublisherIdentityPermission represents the identity of a software publisher. However, we have not specified the specified the software publisher. A certificate must be used.

QUESTION NO: 100

You create a class named TestKingUser that provides user information from a variety of data sources. Different instances of User connect to different data sources to load the data. User is a read-only representation of user information and does not support writing changes back to a data source. The User class includes the following code segment:

```
<Serializable(>
```

```

Public Class TestKingUser
    Public Sub New(connectionString)
        Me.connectionString = connectionString
        ' Additional construction code goes here.
    End Sub
    Friend ReadOnly Property ConnectionString() As String
        Get
            Return connectionString
        End Get
    End Property
    Private connectionString As String
    'Other methods and properties go here.
End Class

```

Once a TestKingUser object has been populated, it no longer needs the connectionString member variable.

You have a .NET Remoting object named Project that returns User objects. You want to prevent remote client applications from being able to view the contents of the connectionString member variable.

What should you do?

- A. Make the ConnectionString property private.
- B. Remove the connectionString parameter from the constructor.
- C. Add the NonSerialized attribute to the connectionString property.
- D. Add the NonSerialized attribute to the connectionString member variable.

Answer: D

Explanation: By making the connectionString member variable NonSerialized it will not be included in serialized data stream and client application from view the contents of it.

Reference: .NET Framework Developer's Guide, Selective Serialization

Incorrect Answers

- A:** The ConnectionString property would still be included in the serialized data stream.
- B:** The connectionString parameter must be included to establish a connection.
- C:** The NonSerialized attribute cannot be added to the connectionString property.

QUESTION NO: 101

You are troubleshooting a Visual Studio .NET application that was developed by a former colleague. The application contains a NextToken function. This function reads product names from a file. You find the following code segment code within a large assembly:

```

Dim xwriter As New XmlTextWriter("productNames.xml", _
    System.Text.Encoding.UTF8)

```

```

xwriter.WriteStartDocument(True)
xwriter.WriteStartElement("data", "www.testking.com")
Dim val As String = NextToken()
While val <> ""
xwriter.WriteElementString("item", _
"www.testking.com", val)
val = NextToken()
xwriter.WriteEndElement()
xwriter.WriteEndDocument()
xwriter.Close()

```

**You find that productsNames.xml contains only two entries: prod0 and prod1.
Which XML output is produced by this code segment?**

- A. <?xml version="1.0"?> <data xmlns="www.testking.com"> <item = "prod0"/> <item = "prod1"/> </data>
- B. <?xml version="1.0" encoding="utf-9" standalone="yes"=> <data> <item xmlns="www.testking.com">prod0</item> <item xmlns="www.testking.com">prod1</item> </data>
- C. <?xml version="1.0"?> <data> <item>prod0</item> <item>prod1</item> </data>
- D. <?xml version="1.0" encoding="utf-8" standalone="yes"?> <data xmlns="www.testking.com"> <item>prod0</item> <item>prod1</item> </data>

Answer: D

Explanation: The XmlTextWriter.WriteStartElement writes the specified start tag. A data element is specified.

The XmlWriter.WriteElementString Method write XMLElements such as <item>prod0</item>.

Reference: .NET Framework Class Library, XmlWriter.WriteElementString Method (String, String, String) [Visual Basic]

.NET Framework Class Library, XmlTextWriter.WriteStartElement Method [Visual Basic]

Incorrect Answers

A: Two items with proper start and end tags is produced. There is no </item> end tags here.

B: The xmlns="www.testking.com" attribute is only used in the startelement, not in each XML element.

C: The specified data element in the WriteStartElement statement is not present.

QUESTION NO: 102

You create a .NET Remoting object named **DocumentStore**. **DocumentStore** is a server-activated Singleton object. It uses a **TcpChannel** to listen on port 9000. The object URI for **DocumentStore** is **DocumentStore**.

You need to write a client application to use **DocumentStore** from a computer named **TestKingSrv**.

Which code segment should you use?

- A.

```
RemotingConfiguration.Configure( _
    "tcp://TestKingSrv:9000/DocumentStore")
Dim doc As New DocumentStore()
```
- B.

```
Dim t As Type
t = GetType(DocumentStore)
RemotingConfiguration.RegisterWellKnownClientType( _
    t, "TcpChannel,9000, TestKingSrv")
Dim doc As New DocumentStore()
```
- C.

```
Dim t As Type
Dim temp As Object
Dim doc As DocumentStore
t = GetType(DocumentStore)
temp = Activator.CreateInstance(t, _
    "tcp://TestKingSrv:9000/DocumentStore")
doc = CType(temp, DocumentStore)
```
- D.

```
Dim t As Type
Dim temp As Object
Dim doc As DocumentStore
ChannelServices.RegisterChannel(new TcpChannel(9000))
t = GetType(DocumentStore)
temp = Activator.CreateInstance(t, "TestKingSrv")
doc = CType(temp, DocumentStore)
```

Answer: D

Explanation: Any client that knows the URI of a registered well-known object can obtain a proxy for the object by registering the channel it prefers with **ChannelServices**, and activating the object by calling **new** or **Activator.GetObject**. To activate a well-known object with **new**, you must first register the well-known object type on the client using the **RegisterWellKnownClientType** method. Calling the **RegisterWellKnownClientType** method gives the remoting infrastructure the location of the remote object, which allows the **new** keyword to create it. If, on the other hand, you use the **Activator.GetObject** method to activate the well-known object, you must supply it with the object's URL as an argument, so no prior registration on the client end is necessary.

Reference: .NET Framework Class Library, **RemotingConfiguration.RegisterWellKnownClientType** Method (Type, String)

Incorrect Answers

- A:** The RemotingConfiguration.Configure method reads the configuration file and configures the remoting infrastructure. This solution is inadequate.
- B:** We must register a channel with ChannelServices as well.
- C:** We must register a channel with ChannelServices as well.

QUESTION NO: 103

You are creating an XML Web service that retrieves customer-order data. Customer orders are retrieved by specifying a customer ID or family name.

You write two overloaded Web methods to retrieve this data. The Web method signatures are shown in the following code segments:

- `<WebMethod()>`
`Public Function Load(ByVal customerID As Integer) As DataSet`
`' Code to retrieve and return order data goes here.`
`End Function`
- `<WebMethod()>`
`Public Function Load(ByVal familyName As String) As DataSet`
`' Code to retrieve and return data goes here.`
`End Function`

You need to ensure that the Web service engine can map requests to the appropriate method. What should you do?

- A. Set the Description property of each WebMethod attribute to a unique description.
- B. Set the MessageName property of each WebMethod attribute to a unique message name.
- C. Add the Overloads keyword to both signatures between the Public keyword and the Function keyword.
- D. Add the Overloads keyword to only the second signature between the Public keyword and the Function keyword.

Answer: C

Explanation: The Overloads keyword declares a property or method with the same name as an existing member, but with an argument list different from the original member. The argument list in this declaration must be different from the argument list of every overloaded procedure. The lists must differ in the number of arguments, their data types, or both. This allows the compiler to distinguish which version to use. We must just the Overloads keyword in both signatures.

Reference:

Visual Basic Language Reference, Overloads

Visual Basic Language Reference, Function Statement

.NET Framework Class Library, WebMethodAttribute.MessageName Property

Incorrect Answers

- A:** The WebMethodAttribute.Description property only contains a descriptive message describing the XML Web service method.
- B:** The MessageName property can be used to alias method or property names. The most common use of the MessageName property is to uniquely identify polymorphic methods. However, we don't want to define aliases. Furthermore, the overloads keyword would be needed anyway.
- D:** If you use Overloads in one of the declarations, you must use it in all of them.

QUESTION NO: 104

You have a DataSet object named customersDataSet that contains a DataTable object named TestKCustomers. TestKCustomers retrieves information from a Microsoft SQL Server database. Customers contains a column named Region.

You want to create a DataView object named customersDataView that contains only customers in which the value in the Region column is France.

Which code segment should you use?

- A.

```
Dim customersDataView As  
New DataView(customersDataSet.Tables("TstKCustomers"))  
customersDataView.FindRows("Region = France")
```
- B.

```
Dim customersDataView As  
New DataView(customersDataSet.Tables("TestKCustomers"))  
customersDataView.FindRows("Region = 'France'")
```
- C.

```
Dim customersDataView As  
New DataView(customersDataSet.Tables("TestKCustomers"))  
customersDataView.RowFilter = ("Region = France")
```
- D.

```
Dim customersDataView As  
New DataView(customersDataSet.Tables("TestKCustomers"))  
customersDataView.RowFilter = ("Region = 'France'")
```

Answer: D

Explanation: We use the RowFilter property to set the filter of the DataView. We also take care to use quotes for the value France.

Note 1: The DataView.RowFilter gets or sets the expression used to filter which rows are viewed in the DataView.

Note 2: The DataView.FindRows method returns an array of DataRowView objects whose columns match the specified sort key value.

Reference: .NET Framework Class Library, DataView.RowFilter Property [C#]

Incorrect Answers

- A:** The DataRows method does not update the DataView it just produces a result. Furthermore, the search string is incorrect.
- B:** The DataRows method does not update the DataView it just produces a result.
- C:** The search string is incorrect. The value must be in quotes.

QUESTION NO: 105

You are developing an application that retrieves a list of geographical regions from a table in a Microsoft SQL Server database. The list of regions is displayed in a drop-down list box on a Windows Form. You want to populate the list box with data from a DataSet object. You want to fill the DataSet object by using a SqlDataAdapter object.

You create a SqlConnection object named TKConnection and a SQL query string named regionSQL. You need to write the code to create the SqlDataAdapter object. Which code segment should you use?

- A. `Dim myDataAdapter As New SqlDataAdapter()
myDataAdapter.SelectCommand.Connection = TKConnection
myDataAdapter.SelectCommand.CommandText = regionSQL`
- B. `Dim myDataAdapter As New SqlDataAdapter(regionSQL, TKConnection)`
- C. `Dim SqlCommand As New SqlCommand(regionSQL)
Dim myDataAdapter As New SqlDataAdapter()
myDataAdapter.SelectCommand.Connection = TKConnection
myDataAdapter.SelectCommand = SqlCommand`
- D. `Dim SqlCommand As New SqlCommand()
Dim myDataAdapter As New SqlDataAdapter()
SqlCommand.CommandText = regionSQL
myDataAdapter.SelectCommand.Connection = TKConnection
myDataAdapter.SelectCommand = SqlCommand`

Answer: B

Explanation: The **SqlDataAdapter** (*String, SqlConnection*) constructor initializes a new instance of the SqlDataAdapter class with a SelectCommand and a SqlConnection object.

Note: A SqlDataAdapter represents a set of data commands and a database connection that are used to fill the DataSet and update a SQL Server database. SqlDataAdapter is used in conjunction with SqlConnection and SqlCommand to increase performance when connecting to a Microsoft SQL Server database.

Reference: .NET Framework Class Library, SqlDataAdapter Members

.NET Framework Class Library, SqlDataAdapter Constructor (String, SqlConnection) [Visual Basic]

Incorrect Answers

A: This is also a plausible solution. B) is more straightforward.

C, D: First we set the Adapter.SelectCommand.Connection to TKConnection. But then we reset this property by setting the Adapter.SelectCommand to SqlCommand.

QUESTION NO: 106

You are creating a serviced component named ItemInventory. An online catalog application will use ItemInventory to display the availability of products in inventory.

Additional serviced components written by other developers at TestKing will continuously update the inventory data as orders are placed.

The ItemInventory class includes the following code segment:

```
<Transaction(TransactionOption.Required)> _
Public Class ItemInventory
    Inherits ServicedComponent
    ' Method code goes here.
End Class
```

ItemInventory is configured to require transactions. You want ItemInventory to respond to requests as quickly as possible, even if that means displaying inventory values that are not up to date with the most recent orders.

What should you do?

- A. To the ItemInventory class, add the following attribute:
<ObjectPooling(True)>
- B. To all methods of the ItemInventory class, add the following attribute:
<AutoComplete(False)>
- C. Modify the Transaction attribute of the ItemInventory class to be the following attribute:
<Transaction(TransactionOption.Required, Timeout:=1)>
- D. Modify the Transaction attribute of the ItemInventory class to be the following attribute:
<Transaction(TransactionOption.Required, _
IsolationLevel:=
TransactionIsolationLevel.ReadUncommitted)>

Answer: D

Explanation: The ReadUncommitted transaction isolation level makes a dirty read is possible, meaning that no shared locks are issued and no exclusive locks are honored. This will reduce the number of locks, compared to

the default transaction isolation level of readcommitted. Reduced number of locks will increase the performance.

Reference: .NET Framework Class Library, IsolationLevel Enumeration

Incorrect Answers

- A:** Object pooling is a COM+ service that enables you to reduce the overhead of creating each object from scratch. However, object pooling is not much use in transactions.
- B:** Autocomplete does not apply here.
- C:** Timeout configuration would not address performance issue.

QUESTION NO: 107

You develop an application that uses a Microsoft SQL Server database and a SqlClient data provider.

Your application includes the following four code segments which are each called once:

```
Dim TKConnection1 As New SqlConnection()
TKConnection1.ConnectionString = "Data Source=" _
& "ProdServer;Initial Catalog=Billing;" _
& "Integrated Security=true"
TKConnection1.Open()
Dim TKConnection2 As New SqlConnection()
TKConnection2.ConnectionString = "DataSource=" _
& "ProdServer;Initial Catalog=Billing;" _
& "Integrated Security=true"
TKConnection2.Open()
Dim TKConnection3 As New SqlConnection()
TKConnection3.ConnectionString = "Data Source=" _
& "SearchServer;Initial Catalog=Search;" _
& "Integrated Security=true"
TKConnection3.Open()
Dim TKConnection4 As New SqlConnection() TKConnection4.ConnectionString =
"Data Source=" _ & "ProdServer;Initial
Catalog=OrderEntry;" _ & "Integrated Security=true" TKConnection4.Open()
```

You verify that your application is the only application that is using SQL Server. Your application runs all code segments by using the same identity.

You run the application. Connection pooling is enabled, and the entire application runs within the connection timeout parameter.

How many connection pools are created?

- A. One
- B. Two
- C. Three

D. Four

Answer: C

Explanation: TKConnection1 and TKConnection2 use exactly the same connection string, while TKConnection3 and TKConnection4 use separate connections strings. The three separate connection strings will create three connections pools-

Note: When a connection is opened, a connection pool is created based on an exact matching algorithm that associates the pool with the connection string in the connection. Each connection pool is associated with a distinct connection string. When a new connection is opened, if the connection string is not an exact match to an existing pool, a new pool is created.

Reference: .NET Framework Developer's Guide, Connection Pooling for the SQL Server .NET Data Provider

Incorrect Answers

A, B; D: One connection pool will be created for each unique connection strings. Three unique connections strings are used, not 1, 2 or 4.

QUESTION NO: 108

You have a strongly typed DataSet object named customersDataSet. This object contains a single DataTable object named TestKCustomers. TestKCustomers has an integer data column named CustomerID.

You want to access the CustomerID value by using the type-safe code conventions provided by customersDataSet. You want to assign the value to a string variable named customerID.

Which code segment should you use?

- A. `customerID = customersDataSet.TestKCustomers(0).CustomerID.ToString()`
- B. `customerID = customersDataSet.TestKCustomers.Columns("CustomerID").ToString()`
- C. `CustomerID = customersDataSet.Tables("TestKCustomers").Columns("CustomerID").ToString()`
- D. `customerID = customersDataSet.Tables("TestKCustomers").Rows(0)("CustomersID").ToString()`

Answer: A

Explanation: We are ensured type safety if access the columns only by index, and not by name.

Note: Type-safe code is code that accesses types only in well-defined, allowable ways.

Reference:

Incorrect Answers

B, C, D: We must access the columns only by name.

QUESTION NO: 109

You are creating an XML Web service that will consist of a class named Stock. Stock will expose the following public fields:

Symbol, CompanyName, and CurrentPrice.

When serialized by the XMLSerializer, stock will take the following form:

```
<Stock symbol="">
    <Company />
    <CurrentPrice />
</Stock>
```

You need to construct the Stock class.

Which code segment should you use?

- A. Public Class Stock


```

        <XmlElementAttribute("symbol")>_
        Public Symbol As String
        <XmlElementAttribute()>_
        Public Company Name As String
        Public CurrentPrice As Double
      End Class
```
- B. Public Class Stock


```

        Public Symbol As String
        <XmlElementAttribute("Company")>_
        Public CompanyName As String
        Public CurrentPrice As Double
      End Class
```
- C. Public Class Stock


```

        <XmlAttributeAttribute("symbol")>_
        Public Symbol As String
        <XmlElementAttribute("Company")>_
        Public CompanyName As String
        Public CurrentPrice As Double
      End Class
```
- D. Public Class Stock


```

        <XmlAttributeAttribute()>_
        Public Symbol As String
        <XmlElementAttribute()>_
        Public CompanyName As String
```

```

        <XmlElementAttribute()>_
        Public CurrentPrice As Double
    End Class

```

Answer: C

Explanation: `XmlAttributeAttribute("symbol")` specifies that *symbol* will be serialized as an XML attribute. Then we defined a XML element with the `XmlElementAttribute("company")`

Note: XML serialization is the process of converting an object's public properties and fields to a serial format, XML for example, for storage or transport.

Reference: .NET Framework Developer's Guide, Attributes that Control XML Serialization

Incorrect Answers

A: We should use the `XmlAttributeAttribute` for *symbol*.

B: We should use the `XmlAttributeAttribute` for *symbol*.

D: Company, not `CompanyName`, should be defined as an XML element.

QUESTION NO: 109

You are creating a data access component for an XML Web service. You need to populate and process a DataSet object with data from a table named Customers in a Microsoft SQL Server database named TestKingA.

You write the following code segment:

```

Dim myConnection As New:
SqlConnection(myConnectionString)
Dim myDataAdapter As New SqlDataAdapter_
("SELECT * FROM Customers", myConnection)
Dim myDataSet As New DataSet()
Dim CustomerName as String

```

You want to capture all SQL Server errors and general exceptions that occur. You want to process SQL Server errors separate from general exceptions.

Which code segment should you use?

- A. Try myDataAdapter.Fill(myDataSet, "Customers") customerName = myDataSet.Tables(0).Rows(0).Item("CustomerName")
 Catch mySQLException As SQLException
 Throw New SQLException("Sql exception occurred")
 Catch myException As Exception
 ' Code to process general exceptions goes here.

End Try

- B. Try myDataAdapter.Fill(myDataSet, "Customers")
 customerName =myDataSet.Tables(0)._Rows(0).Item("CustomerName")
 Catch mySqlException As SqlException
 For Each mySqlException In mySqlException.Errors
 ` Code to process SQL Server errors goes here.
 Next
 Catch myException As Exception ` Code to process general exceptions
 goes here.
 End Try
- C. Try myDataAdapter.Fill(myDataSet, "Customers")
 customerName = myDataSet.Tables(0)._Rows(0).Item("CustomerName")
 Catch mySqlException As SqlException
 Dim mySqlError As SqlError
 For Each mySqlError In mySqlException.Errors
 `Code to process SQL Server errors goes here.
 Next
 Catch myException As Exception
 ` Code to process general exceptions goes here.
 End Try
- D. Try myDataAdapter.Fill(myDataSet, "Customers") customerName =
 myDataSet.Tables(0)._Rows(0).Item("CustomerName")
 Catch myException As Exception
 Throw New Exception("General exception occurred")
 Catch mySqlException As SqlException
 Dim mySqlError As SqlError
 For Each mySqlError In mySqlExaption.Errors
 `Code to process SQL Server errors goes here.
 Next
 End Try

Answer: C

Explanation: First we most catch the most specific errors, the SQL Errors. We then use a general catching of exceptions.

Note: An SQLException is an exception that is thrown when SQL Server returns a warning or error.

Reference: .NET Framework Class Library, SqlException Class [Visual Basic]

Incorrect Answers

- A:** The scenario requires that each SQLServer error must be processed, not just that an SQLException occurred.
- B:** The following statement is incorrect:
 For Each `mySQLException` In `mySQLException.Errors`
 The `mySQLException` variable should be of `SQLServerError` type, not `SQLException` type. We are processing `SQLErrors`, not `SQLExceptions`.
- D:** We must catch the SQL errors first.

QUESTION NO: 110

You are developing an application that queries a Microsoft SQL Server database. The application will package the results of the query as XML data. The XML data will be retrieved directly from the database and transmitted electronically to a business partner.

The query must retrieve all rows and all columns from a database table named TestKingCustomers. Which query should you use?

- A. `SELECT * FROM TestKingCustomers FOR XML AUTO`
- B. `SELECT * FROM XML FROM TestKingCustomers`
- C. `SELECT * FROM TestKingCustomers as XMLDATA`
- D. `SELECT * FROM OPENXML('<TestKingCustomers'.'/Root/Customers', 1) with (CustomerId varchar(10))`

Answer: A

Explanation: You can execute SQL queries against existing SQL Server relational databases to return results as XML documents rather than as standard rowsets. To retrieve results directly, use the FOR XML clause of the SELECT statement like in this scenario.

Reference: SQL Server 2000 Books Online, Retrieving XML Documents Using FOR XML

Incorrect Answers

- B, C:** Incorrect syntax.
- D:** We should produce XML, not read from a XML data source.

QUESTION NO: 112

You are creating an XML Web service named HousingService that exposed two Web methods name SearchHouse and BuyHouses. Prior to deploying the service, you want to customize the default template that is displayed when a customer makes a request through the browser.

You create a Web Form named HousingServiceDescription.aspx that is a customized version of the default template. You place the Web Form in the bin directory of the HousingService project.

The Web Form needs to override the default template when a request is made. You need to ensure that customers who request HousingService through a browser view HousingServiceDescription.aspx. What should you do?

- A. Create a SOAP extension to redirect the user to HousingServiceDescription.aspx.
- B. Set the Namespace property of the WebService attribute to the location of HousingServiceDescription.aspx.
- C. In the Web.config file, enable tracing and the set TraceMode node to bin\HousingServiceDescription.aspx.
- D. In the Web.config file, set the HRef property of the wsdlHelpGenerator node to bin\HousingServiceDescription.aspx.

Answer: D

Explanation: The wsdlHelpGenerator element specifies the XML Web service Help page (an .aspx file) that is displayed to a browser when the browser navigates directly to an ASMX XML Web services page

Reference: .NET Framework General Reference, <wsdlHelpGenerator> Element

Incorrect Answers

- A:** Soap extensions are used to inspect or modify a message at specific stages in message processing on either the client or the server. It is not useful here.
- B:** We are not interested in defining a name space.
- C:** We are not interested in enabling tracing.

QUESTION NO: 113

You have a SqlDataReader object named productsDataReader. The productsDataReader object contains three columns in the following order:

- ProductID as Integer
- ProductName as nvarchar(40)
- UnitsInStock as Integer

You want to use productsDataReader to create an inventory management report. You define the following three variables:

- TKProductID as Integer
- TKProductName as String
- TKUnits as Integer

You need to ensure that the report runs as quickly as possible. Which code segment should you use?

- A. `TKProductID = productsDataReader.Item(1)`
`TKProductName = productsDataReader.Item(2)`
`TKUnits = productsDataReader.Item(3)`
- B. `TKProductID = productsDataReader.Item(0)`
`TKProductName = productsDataReader.Item(1)`
`TKUnits = productsDataReader.Item(2)`
- C. `TKProductID = productsDataReader.Item("ProductID")`
`TKProductName = productsDataReader.Item("ProductName")`
`TKUnits = productsDataReader.Item("UnitsInStock")`
- D. `TKProductID = productsDataReader.GetName("ProductID")`
`TKProductName = productsDataReader.GetName("ProductName")`
`TKUnits = productsDataReader.GetName("UnitsInStock")`

Answer: B

Explanation: We should use ordinal-based lookups since they are more efficient than named lookups. Column ordinals are zero-based: `TKProductID` has ordinal number 0, `TKProductName` has ordinal number 1, and `TKUnits` has ordinal number 2.

Reference: .NET Framework Class Library, `SqlDataReader.GetOrdinal` Method [Visual Basic]

Incorrect Answers

A: Column ordinals are zero-based, not one-based.

C: Ordinal-based lookups are more efficient than named lookups.

D: The `DataReader.GetOrdinal` method gets the column ordinal, given the name of the column. We are not interested in the Ordinal numbers. They should only be used to speed up the process.

QUESTION NO: 114

You are developing an application that receives product information from external vendors in the form of XML documents. The information will be stored in a Microsoft SQL Server database TestKingSrv. The application must validate all incoming XML data. It uses an `XmlValidatingReader` object to read each XML document. If any invalid sections of XML are encountered, the inconsistencies are listed in a single document.

You must ensure that the validation process runs as quickly as possible.

What should you do?

- A. Set the `ValidationType` property of the `XmlValidatingReader` object to `Schema`.
- B. Set the `CanResolveEntity` property of the `XmlValidatingReader` object to `True`.
- C. Create and register a `ValidationEventHandler` method.
- D. Use a try/catch block to catch validation exceptions.

Answer: C

Explanation: There are two exception events that can occur during schema validation: warnings and errors. To handle errors and warnings, the Schema Object Model (SOM) supports the use of a ValidationEventHandler delegate, which is a callback that you design. This callback is called when an error or warning occurs during validation.

Reference: .NET Framework Developer's Guide, Validation and the Schema Object Model [Visual Basic]

Incorrect Answers

A: The ValidationType Schema validates according to XSD schemas. However, there is no schema in this scenario. Furthermore, we must provide a mechanism that handles the errors.

B: The XmlReader.CanResolveEntity Property is read-only.

Note: CanResolveEntity Property gets a value indicating whether this reader can parse and resolve entities.

D: It would be very awkward to use try/catch blocks. It would be less effective as well.

QUESTION NO: 115

You are creating a serviced component named TravellItinerary. TravellItinerary included the following code segment:

```
<Transaction(TransactionOption.Required)>
Public Class TravelItinerary
Inherits ServicedComponent
<AutoComplete()>_
Public Function SaveIntinerary(ByVal travelData As DataSet) As DataSet
Dim airline As New AirlineServer.AirlineService()
Dim hotel As New HotelServer.HotelService()
airline.ReserveFlight(travelData)
'Code to record reservation in database goes here.
hotel.ReserveHotel(travelData)
'Code to record reservation in database goes here.
Return travelData
End Function
End Class
```

The TransactionOption property of both ReserveFlight and ReserveHotel is set to TransactionOption.Required.

You create an application to test TravellItinerary. When the test application is run, an exception is thrown in HotelService.

How are transactions in TravellItinerary and in each Web service affected by this exception?

A. All transactions are rolled back.

B. Transactions in only HotelService are rolled back.

Transactions in only TravellItinerary and AirlineService remain committed.

- C. Transactions in only HotelService and TravellItinerary are rolled back.
Transactions in only AirlineService remain committed.
- D. Transactions in only AirlineService and TravellItinerary are rolled back.
Transactions in only HotelService remain committed.

Answer: B

Explanation: Each XML Web service method participates in their own transaction, only the HotelService transaction is rolled backed.

Note: If an XML Web service method, with a TransactionOption property of Required or RequiresNew invokes another XML Web service method with a TransactionOption property of Required or RequiresNew, each XML Web service method participates in their own transaction, because an XML Web service method can only act as the root object in a transaction.

Reference: .NET Framework Class Library, WebMethodAttribute.TransactionOption Property

Incorrect Answers

A, C; D: Only the HotelService transaction is rolled backed.

QUESTION NO: 116

You are developing an application that loads two DataReader objects from a Microsoft SQL Server database TestKingSales. The DataReader objects are named customersDataReader and productsDataReader.

The customersDataReader object is loaded from the Customers table. The productsDataReader object is loaded from the Products table.

You create a SqlCommand object named myCommand and a SqlConnection object named myConnection. You write the following code segment. (Line numbers are included for reference only.)

```

01 myCommand.Connection = myConnection
02 Dim CustomersDataReader As SqlDataReader
03 Dim productsDataReader As SqlDataReader
04 myCommand.CommandText = "SELECT * FROM Customers"
05 myConnection.Open()
06 customersDataReader = myCommand.ExecuteReader
07 ` Code to process the data reader goes here
08 ` Insert new code.
09 myCommand.CommandText = "SELECT * FROM Products"
10 productsDataReader = myCommand.ExecuteReader
11 ` Code to process the data reader goes here.
```

You run the application and an exception is thrown on line 10. To correct the problem, you need to insert additional code on line 08.

Which code segment should you use?

- A. `myCommand.ResetCommandTimeout()`
- B. `myCommand.Dispose()`
- C. `customersDataReader.NextResult()`
- D. `customersDataReader.Close()`

Answer: D

Explanation: You should always call the Close method when you have finished using the DataReader object. While a DataReader is open, the Connection is in use exclusively by that DataReader. You will not be able to execute any commands for the Connection, including creating another DataReader, until the original DataReader is closed.

Reference: .NET Framework Developer's Guide, Retrieving Data Using the DataReader [Visual Basic]

Incorrect Answers

- A:** Resetting the CommandTimeout to its default value will not change anything. It has already the default value.
- B:** The SqlConnection.Dispose method releases the unmanaged resources used by the SqlConnection and optionally releases the managed resources.
- C:** The SqlCommand.NextResult method advances the data reader to the next result, when reading the results of batch Transact-SQL statements.

QUESTION NO: 117

You are creating an XML Web service named TKHealthInfo. TKHealthInfo exposed patient health records for your client customers. To the beginning of each TKHealthInfo method, you add the following code segment:

```
Dim uiPerm As New UIPermission(_
    UIPermissionWindow.AllWindows, _
    UIPermissionClipboard.AllClipboard)
Dim filePerm As New FileIOPermission(_
    PermissionState.None)
filePerm.AllFiles = FileIOPermissionAccess.AllAccess
```

As one part of making HealthInfo as secure as possible, you must ensure that the HealthInfo Web methods do not perform any file I/O or access the user interface.

Which code segment should you use?

- A. `uiPerm.Deny()` `filePerm.Deny()`
- B. `uiPerm.Deny()` `uiPerm.RevertAssert()` `filePerm.Deny()`
- C. `uiPerm.Deny()` `uiPerm.RevertDeny()` `filePerm.Deny()`

```
D. Dim permSet As New PermissionSet(_PermissionState.None)
   permSet.AddPermission(uiPerm) permSet.AddPermission(filePerm)
   permSet.Deny()
```

Answer: D

Explanation: We should add permission for uiPerm. We allow access to Windows windows and user input events and permit use of the Clipboard: `permSet.AddPermission(uiPerm)`
Then we deny filepermission: `permSet.AddPermission(filePerm)`

Note: AllWindows allows users to use all windows and user input events without restriction.
AllClipboard allows clipboard to be used without restriction.

Reference: .NET Framework Class Library, UIPermissionWindow Enumeration [Visual Basic]
.NET Framework Class Library, UIPermissionClipboard Enumeration [Visual Basic]

Incorrect Answers

A, B; C: We should not deny access to Windows and user input or to the clipboard. The code `uiPerm.Deny()` should not be used.

QUESTION NO: 118

You create an XML Web service project named LocalizationService. LocalizationService consists of two XML Web services named ContentService and UserService. Each service contains a Web method named Save.

The Web method signatures are shown in the following code segments:

- `<WebMethod ()> Public Function Save(ByVal contentInfo As DataSet) As DataSet`
- `<WebMethod()> Public Function Save(ByVal userInfo As DataSet) As DataSet`

You are developing an ASP.NET application that will consume LocalizationService. You add a Web reference to the services. You discover that UserService is missing from the resulting proxy class that is generated by Visual Studio .NET. You need to correct the problem in LocalizationService. What should you do?

- A. Set the Name property of the WebService attribute on ContentService and UserService to a unique name.
- B. Set the Namespace property of the WebService attribute on ContentService and UserService to a unique URI.
- C. Set the Description property of the WebMethod attribute on ContentService and UserService to a unique description.

- D. Set the MessageName property of the WebMethod attribute on ContentService and UserService to a unique message name.

Answer: B

Explanation: Because the TargetNamespace is supposed to be a unique identifier for a particular XML document, which in this case is the XML schema, Wsdl.exe assumes that the two XML schemas are identical. In doing so, Wsdl.exe builds a class for just one of the schemas. If this is not the intended result, the TargetNamespace for each XML schema must be changed to a unique URI.

Reference: .NET Framework Developer's Guide, Creating an XML Web Service Proxy

Incorrect Answers

- A:** Unique names are not required. Furthermore, this would change the functionality.
C: Changing the Description property would not achieve much.
D: The MessageName property can be used to alias method or property names. However, the present problem is that only one proxy class is generated.

QUESTION NO: 119

You create an XML Web service named ReportService for an application on TestKing's intranet. You configure Internet Information Services (IIS) and ReportService to use Integrated Windows authentication.

You configure the Access Control List (ACL) for ReportService to allow access to only members of a Windows group named FieldAgents. You test and confirm that only members of the FieldAgents group can use ReportService.

ReportService includes a method named SubmitSurveillance that calls a serviced component named ReportData. ReportData uses COM+ role-bases security to restrict component access to members of the COM+ Agents role. The COM+ Agents role is configured to include the FieldAgents group.

You call SubmitSurveillance. However, when the call to ReportData is attempted, an exception is thrown indicating that access is denied. You need to correct this problem.

What should you do?

- A. In IIS, enable Anonymous access.
 B. In the <system.web> section of the Web.config file, add the following line of code:
`<identity impersonate="true"/>`
 C. In the <system.web> section of the Web.config file, add the following line of code:
`<identity impersonate="false"/>`
 D. In the <system.web> section of the Web.config file, add the following line of code:
`<authentication mode="None"/>`

Answer: B

Explanation: We must allow impersonation to allow the COM+ Agents role to be used, if they the FieldAgent group is running the ReportService.

Note: Impersonation is when ASP.NET executes code in the context of an authenticated and authorized client.

Reference: .NET Framework General Reference, <identity> Element

Incorrect Answers

A: Anonymous access would be a security risk.

C: We should allow, not deny, impersonation.

D: Authentication mode none, specifies that no authentication. Only anonymous users are expected.

QUESTION NO: 120

You have a SqlDataReader object named ordersDataReader. This object contains a column named OrderQuantity as an integer value. This object also contains one row for each order received during the previous week.

You need to write code that will process each row in ordersDataReader and pass OrderQuantity to a function named TKFunction.

Which code segment should you use?

- A. `While ordersDataReader.Read Call
TKFunction(ordersDataReader("OrderQuantity")) End While`
- B. `While ordersDataReader.NextResult Call
TKFunction(ordersDataReader("OrderQuantity")) End While`
- C. `Dim orderCount as Integer While orderCount <
ordersDataReader.FieldCount Call
TKFunction(ordersDataReader("OrderQuantity")) orderCount += 1
ordersDataReader.Read End While`
- D. `Dim orderCount as Integer While orderCount <
ordersDataReader.FieldCount Call
TKFunction(ordersDataReader("OrderQuantity")) orderCount += 1
ordersDataReader.NextResult End While`

Answer: A

Explanation: The SqlDataReader.Read method advances the SqlDataReader to the next record. The return value is true if there are more rows; otherwise, false. We can therefore use it as the condition in the while loop.

Reference: .NET Framework Class Library, SqlDataReader.Read Method [Visual Basic]

Incorrect Answers

- B:** SqlDataReader.NextResult method advances the data reader to the next result, when reading the results of batch Transact-SQL statements. There is not a batch of Transact SQL statements in this scenario however.
- C, D:** The SqlDataReader.FieldCount property gets the number of columns in the current row. It would be incorrect to use this value in the condition expression for the while loop.

QUESTION NO: 121

Your Microsoft SQL Server database contains a table named TestKingCustomers. TestKingCustomers contains three columns named FamilyName, PersonalName, and Address.

You instantiate a SqlCommand object named myCommand that you will use to populate a DataReader object named customersDataReader. You need to initialize myCommand to load customersDataReader to include FamilyName and PersonalName for all rows in TestKingCustomers.

Which code segment should you use?

- A. `myCommand.CommandText = "SELECT FamilyName," & "PersonalName FROM TestKingCustomers"`
- B. `myCommand.CommandType = "SELECT FamilyName," & "PersonalName FROM TestKingCustomers")`
- C. `myCommand.Parameters.Add("SELECT FamilyName," & "PersonalName FROM TestKingCustomers")`
- D. `myCommand.ExecuteNonQuery()`

Answer: A

Explanation: The CommandText property gets or sets the Transact-SQL statement or stored procedure to execute at the data source. We should use it to set the SQL command we want to be executed.

Reference: .NET Framework Class Library, SqlCommand Members

Incorrect Answers

- B:** The CommandType property gets or sets a value indicating how the CommandText property is to be interpreted.
- C:** The parameters should include the SQL code.
- D:** We must the SQL Statements before we execute them.

QUESTION NO: 122

You are creating an XML Web service named TKFlightService that provides flight information to its users. To retrieve flight information, a user first must be authenticated by FlightService. Once authenticated, a key that identifies that user is returned to the caller. This key then will be presented in the SOAP header on all subsequent flight information requests to validate that user.

You need to construct TKFlightService so that it can receive the key in a SOAP header. First, you add a class to TKFlightService by writing the following code segment:

```
Public Class UserKeyHeader
Inherits SoapHeader
Public key As String
End Class
```

Next, you add a Web method to TKFlightService by writing the following code segment:

```
Public keyHeader As UserKeyHeader
<WebMethod(), SoapHeader()>_
Public Function RetrieveFlightInformation() As DataSet
'Code to check SOAP header goes here.
'Code to retrieve flight information goes here.
End Function
```

You attempt to build TKFlightService, and discover that it does not compile. You need TKFlightService to compile.

What should you do?

- A. Change the declaration of the keyHeader variable from public to private.
- B. Set the memberName parameter of the SoapHeader attribute to "keyHeader".
- C. Set the Direction property of the SoapHeader attribute to SoapHeaderDirection.In.
- D. Set the Direction property of the SoapHeader attribute to SoapHeaderDirection.Out.

Answer: B

Explanation: In order for the XML Web service method to receive the contents of the SOAP header, a member is added to the XML Web service class of a type derived from SoapHeader. The SoapHeaderAttribute.MemberName contains the member of the XML Web service class representing the SOAP header contents.

Reference: .NET Framework Class Library, SoapHeaderAttribute.MemberName Property

Incorrect Answers

A: Changing the declaration of keyHeader variable does not achieve much.

C, D: TheSoapHeaderAttribute.Direction property gets or sets whether the SOAP header is intended for the XML Web service or the XML Web service client or both. This attribute is not the reason of the compile error.

QUESTION NO: 123

You Microsoft SQL Server database named TestKingBackOrders that contains a table that consists of more than 1 million rows. You need to develop an application that reads each row in the table and writes

the data to a flat file. The application will run only once each day. You want the application to process the data as quickly as possible.

Which class should you use to retrieve the data?

- A. DataSet
- B. DataTable
- C. DataReader
- D. DataAdapter

Answer: C

Explanation: The ADO.NET DataReader is used to retrieve a read-only, forward-only stream of data from a database. Using the DataReader can increase application performance and reduce system overhead because only one row at a time is ever in memory. DataReader would meet the requirements of this scenario.

Reference: .NET Framework Developer's Guide, Retrieving Data Using the DataReader [Visual Basic]

Incorrect Answers

- A:** Datasets is used when you want to work with a set of tables and rows while disconnected from the data source. It would not be optimal when accessing the amount of data in this scenario. Furthermore, only read-forward access is required.
- B:** A Data table represents one table of in-memory data.
- D:** The DataAdapter serves as a bridge between a DataSet and a data source for retrieving and saving data.