



70-305

Developing and Implementing Web Applications
with Microsoft Visual Basic .NET

Q&A

DEMO Version

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Note 1:

Section A contains 134 questions.
Section B contains 57 questions.
The total number of questions is 191.

Note 2: Answers to the unanswered questions will be provided shortly. First customer, if any, faster than the Chinatag team in providing the answers will receive credit for each answer provided.

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Section A

QUESTION NO: 1

You are a Web developer for Chinatag. You create an ASP.NET application that accesses sales and marketing data. The data is stored in a Microsoft SQL Server 2000 database on a server named Chinat01.

The company purchases a factory automation software application. The application is installed on Chinat01, where it creates a second instance of SQL Server 2000 named Factory and a database named FactoryDB. You connect to FactoryDB by using Windows Integrated authentication.

You want to add a page to your ASP.NET application to display inventory data from FactoryDB. You use a SqlConnection object to connect to the database. You need to create a connection string to FactoryDB in the instance of SQL Server named Factory on Chinat01. Which string should you use?

- A. "Server=Chinat01;Data Source=Factory;
Initial Catalog=FactoryDB;Integrated Security=SSPI"
- B. "Server= Chinat01;Data Source=Factory;
Database=FactoryDB;Integrated Security=SSPI"
- C. "Data Source= Chinat01\Factory;Initial Catalog=Factory;
Integrated Security=SSPI"
- D. "Data Source= Chinat01\Factory;Database=FactoryDB;
Integrated Security=SSPI"

Answer: D

Explanation: The Data Source attribute of the connection string contains the name, instance or network address of the instance of SQL Server to which to connect. In this scenario we are to connect to the Factory Instance on Chinat01 so we use Chinat01\Factory as data source. To specify the database we should either use the Database or the Initial Catalog attribute. Here we use **Database=FactoryDB**.

Note: The SQL Server .NET Data Provider provides connectivity to Microsoft SQL Server version 7.0 or later using the SqlConnection object. The connection string includes the source database name, and other parameters needed to establish the initial connection.

Reference:

.NET Framework Class Library, SqlConnection.ConnectionString Property [Visual Basic]

Incorrect Answers

A, B: We can use either the **Server** attribute or the **Data Source** property, but not both.

C: There is no **Initial Category** attribute in the connection string. We can use Database or the Initial Catalog attribute to specify the database.

QUESTION NO: 2

You are creating an ASP.NET application for Chinatag's Internet Web site. You want to create a toolbar that will be displayed at the top of each page in the Web site. The toolbar will contain only static HTML code. The toolbar will be used in only your application.

You plan to create the toolbar as a reusable component for your application. You need to create the toolbar as quickly as possible.

What should you do?

- A. Create a new Web Control Library project.
Create the toolbar within a Web custom control.
- B. Add a new Web user control to your ASP.NET project.
Create the toolbar within the Web user control.
- C. Add a new Web Form to your ASP.NET project.
Use HTML server controls to design the toolbar within the Web Form and save the Web Form with an .ascx extension.
- D. Add a new component class to your ASP.NET project.
Use HTML server controls to design the toolbar within the designer of the component class.

Answer: B

Explanation: Web user controls enable you to easily define controls as you need them for your applications, using the same programming techniques that you use to write Web Forms pages.

Reference: Visual Basic and Visual C# Concepts, Introduction to Web User Controls

Incorrect Answers

A: You can use the Web Control Library project template to author custom Web server controls. However, since the toolbar is only going to be used in this application there is no need of the complexity of a Web customer control.

C: An HTML server control would be inadequate.

D: The Component class Provides the base implementation for the IComponent interface and enables object-sharing between applications. It does not fit in this scenario.

QUESTION NO: 3

You ASP.NET application manages order entry data by using a DataSet object named TKorderEntry. The TKorderEntry object includes two DataTable objects named orderNames and OrderDetails. A ForeignKeyConstraint object named orderDetailsKey is defined between the two DataTable objects.

You attempt to delete a row in orderNames while there are related rows in OrderDetails, and an exception is generated.

What is the most likely cause of the problem?

- A. The current value of OrderDetails.KeyDeleteRule is Rule.Cascade.
- B. The current value of OrderDetails.KeyDeleteRule is Rule.SetNull.
- C. The current value of OrderDetails.KeyDeleteRule is Rule.SetDefault.
- D. The current value of OrderDetails.KeyDeleteRule is Rule.None.

Answer: D

Explanation: The rule enumeration indicates the action that occurs when a ForeignKeyConstraint is enforced. **None** specifies that no action will occur, but exceptions are generated. This is what has occurred in this scenario.

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

Incorrect Answers

A: Cascade specifies that all rows containing that value are also deleted.

B: SetNull specifies that values in all child columns are set to null values.

C: SetDefault specifies that all child columns be set to the default value for the column.

QUESTION NO: 4

You are creating an ASP.NET application to track sales orders for Chinatag Ltd. The application uses an ADO.NET DataSet object that contains two DataTable objects. One table is named Orders, and the other table is named OrderDetails. The application displays data from the Orders table in a list box. You want the order details for an order to be displayed in a grid when a user selects the order in the list box. You want to modify these objects to enable your code to find all the order details for the selected order.

What should you do?

- A. Add a DataRelation object to the Relations collection of the DataSet object.
- B. Use the DataSet.Merge method to connect the Orders table and the OrderDetails table to each other.
- C. Add a ForeignKeyConstraint to the OrderDetails table.
- D. Add a keyref constraint to the OrderDetails table.

Answer: A

Explanation: In order to enable the DataGrid to display from multiple tables we need to relate the tables with DataRelation.

Reference: Visual Basic and Visual C# Concepts, Introduction to the Windows Forms DataGrid Control

Incorrect Answers

B: We don't want to merge the two datasets into a single dataset.

C: A foreignKeyConstraint represents an action restriction enforced on a set of columns in a primary key/foreign key relationship when a value or row is either deleted or updated. However, a foreign key constraint does not create a relation between the tables.

D: We need to define a relation not a constraint.

QUESTION NO: 5

You create an ASP.NET application to display a sorted list of products in a DataGrid control. The product data is stored in a Microsoft SQL Server database named ChinatagProducts. Each product is identified by a numerical value named ProductID, and each product has an alphabetic description named ProductName. You write ADO.NET code that uses a SqlDataAdapter object and a SqlCommand object to retrieve the product data from the database by calling a stored procedure.

You set the CommandType property of the SqlCommand object to CommandType.StoredProcedure. You set the CommandText property of the object to procProductList. Your code successfully fills a DataTable object with a list of products that is sorted by ProductID in descending order.

You want the data to be displayed in reverse alphabetic order by ProductName.

What should you do?

- A. Change the CommandType property setting of the SqlCommand object to **CommandType.Text**.
Change the CommandText property setting of the SqlCommand object to the following:
SELECT * FROM procProductList ORDER BY ProductName DESC;
Bind the DataGrid control to the DataTable object.
- B. Create a new DataView object based on the DataTable object.
Set the Sort Property of the DataView object to "**ProductName DESC**".
Bind the DataGrid control to the DataView object.
- C. Set the AllowSorting property of the DataGrid control to True.
Set the SortExpression property of the DataGridColumn that displays ProductName to "**ProductName DESC**".
Bind the DataGrid control to the DataTable object.
- D. Set the DisplayExpression property of the DataTable object to "**ORDER BY ProductName DESC**".
Bind the DataGrid control to the DataTable object.

Answer: B

Explanation: We can create a DataView object, set the appropriate Sort Property and bind the DataGrid control to the DataView, and not the DataTable object.

Reference: .NET Framework Developer's Guide, Sorting and Filtering Data Using a DataView [Visual Basic]

Incorrect Answers

- A:** procProductList is a stored procedure. It cannot be used in the FROM clause of a SELECT statement.
- C:** The DataGrid.AllowSorting property gets or sets a value that indicates whether sorting is enabled. The DataGridColumn.SortExpression property gets or sets the name of the field or expression to pass to the OnSortCommand method when a column is selected for sorting. However, the sorting only occurs when a user clicks the column header.
- D:** The DataTable.DisplayExpression gets or sets the expression that will return a value used to represent this table in the user interface. This is only a display string. We cannot use it to sort the DataTable.

QUESTION NO: 6

You create an ASP.NET application and deploy it on a test server named ChinatagSrv. The application consists of a main page that links to 30 other pages containing ASP.NET code.

You want to accomplish the following goals:

- Enable tracing on all the pages in the application except the main page.
- Display trace output for up to 40 requests.
- Ensure that trace output is appended to the bottom of each of the pages that will contain trace output.
- Ensure that any configuration changes affect only this application.

You need to accomplish these goals with the minimum amount of development effort. Which three actions should you take? (Each correct answer presents part of the solution. Choose three)

- A. Add the following element to the Web.config file:
<trace enabled="true" pageOutput="True"/>
- B. Add the following attribute to the Trace element of the application's Web.config file:
requestLimit=40
- C. Add the following attribute to the Trace element of the application's Machine.config file:
RequestLimit=40
- D. Set the Trace attribute of the Page directive to **true** for each page except the main page.
- E. Set the Trace attribute of the Page directive to **false** for the main page.
- F. Set the TraceMode attribute of the Page directive to SortByTime for the main page.

Answer: A, B, E

Explanation:

A: You can enable tracing for an entire application in the web.config file in the application's root directory. We should use the **trace** element and set the **enabled** attribute to **true**.

Note: If the **pageOutput** attribute is set to true trace information is displayed both on an application's pages and in the .axd trace utility,

- B:** We should also set the RequestLimit attribute of TraceElement, the number of trace requests to store on the server, to 40, since the default value is 10.
- E:** When you enable tracing for an entire application in the web.config file (A), trace information is gathered and processed for each page in that application. To disable tracing for a particular page in the application, set the Trace attribute in that page's @ Page directive to false.

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

Incorrect Answers

- C:** A Machine.config file is the base configuration for all .NET assemblies running on the server. It is not related to a single application.
- D:** We must disable tracing for the main page.
- F:** The TraceMode attribute is used to specify the order in which you want your trace messages to appear. However, there is no such requirement in this scenario.

QUESTION NO: 7

You are creating an ASP.NET page for Chinatag. The page uses string concatenation to gather data from multiple e-mail messages and format the data for display on the page.

You want to ensure that the page displays as quickly as possible.

What should you do?

- A. Write code that uses the Append method of the StringBuilder object.
- B. Write code that uses the Substring method of the String object.
- C. Write code that uses the Concat method of the String object.
- D. Write code that uses the plus-sign (+) operator to concatenate the strings.

Answer: A

Explanation: The StringBuilder.Append method appends the string representation of a specified object to the end of this instance. The StringBuilder class represents a string-like object whose value is a mutable sequence of characters. The value is said to be mutable because it can be modified once it has been created by appending, removing, replacing, or inserting characters.

Reference: .NET Framework Class Library, StringBuilder.Append Method [Visual Basic]

Incorrect Answers

- B:** The Substring method is used to select a part of a string, not to concatenate multiple strings.
- C:** The String.Concat method Concatenates one or more instances of String, or the String representations of the values of one or more instances of Object. However, compared to the Append method of the StringBuilder object, the Concat method create new instances, and is therefore not the preferred method.
- D:** Not he best solution.

QUESTION NO: 8

You are creating an ASP.NET application that uses the Microsoft SQL Server .NET Data Provider to connect to Chinatag's database. Your database administrator reports that, due to heavy usage of the application, data requests are being blocked while users wait for new connections to be created.

You want to improve throughput by setting a minimum connection pool size of 10.

What should you do?

- A. Add a connection element under an appSettings element in the Web.config file for your application, and specify a minimum size of 10 for the connection pool.
- B. Add a connection element under an appSettings element in the Machine.config file on your Web server, and specify a minimum size of 10 for the connection pool.
- C. Add a Min Pool Size property to the connection string you use when opening a connection, and specify a minimum size of 10 for the connection pool.
- D. Add a Min Pool Size property to your ADO.NET connection objects, and assign a value of 10 to the property.

Answer: C

Explanation: The Min Pool Size property of the connection string denotes the minimum number of connections maintained in the pool.

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

Incorrect Answers

A, B: The appSettings element contains custom application settings. However, Minimum pool size should be configured in the connection string, not in the custom application settings.

D: Min Pool Size is not a property of a connection object. It is an attribute in the connection string.

QUESTION NO: 9

You create an ASP.NET application named TKProject on your client computer. The application has a page named ProjectCalendar.aspx. This page is located in a virtual directory named Scheduling, which is a child of the TKProject root directory. ProjectCalendar.aspx uses cookies to track modifications to the schedule during a user's session so that the user can undo modifications if necessary.

You deploy your application on a computer named Chinatag1. Users report that the undo functionality stops working after they execute a specific sequence of actions. You need to view the cookie values after the sequence of actions to help identify the cause of the problem.

You add the following element to the Web.config file:

```
<trace enabled="true" pageOutput="false"/>
```

You want to display the trace output information on your client computer.

Which URL should you use?

- A. HTTP://Chinatag1/TKProject/Scheduling/ProjectCalendar.aspx?Trace=true

- B. HTTP://Chinatag1/TKProject/Scheduling/ProjectCalendar.aspx?trace.axd
- C. HTTP://Chinatag1/TKProject/Scheduling/ProjectCalendar.aspx
- D. HTTP://Chinatag1/TKProject/ProjectCalendar.aspx?trace.axd
- E. HTTP://Chinatag1/TKProject/ProjectCalendar.aspx?trace.axd
- F. HTTP://Chinatag1/TKProject/trace.axd

Answer: F

Explanation:

Trace.axd is an Http Handler that we can use to request application trace details. To use trace.axd, simply request trace.axd in the same application directory, not the virtual directory, that the request for the sample application was made. The output provided by tracing view, either through Trace.axd or on a page, provides six sections of detail:

- **Cookies collection**-Any cookies that the client sends in the request headers are parsed, and their names, values, and sizes are displayed.
- **Request details**
- **Trace information**
- **Control tree.**
- **Headers collection.**
- **Server variables**

Reference: 70-305/70-315 Training kit, Reading the Trace log, pages 298-299
ASP.NET Columns: Nothin' but ASP.NET, Tracing

QUESTION NO: 10

You are creating an ASP.NET application for your company Chinatag. Chinatag data is stored in a Microsoft SQL Server 6.5 database. Your application generates accounting summary reports based on transaction tables that contain million of rows.

You want your application to return each summary report as quickly as possible. You need to configure your application to connect to the database and retrieve the data in a way that achieves this goal.

What should you do?

- A. Use a SqlConnection object to connect to the database, and use a SqlCommand object to run a stored procedure that returns the data.
- B. Use an OleDbConnection object to connect to the database, and use an OleDbCommand object to run a stored procedure that returns the data.
- C. Configure SQL Server to support HTTP access, and create an XML template to run a stored procedure that returns the data in XML format.
- D. Use COM interop to create an ADODB.Connection object, and use an ADODB.Command object to run a SQL statement that returns the data.

Answer: B

Explanation: We need to use an OleDbConnection to connect to SQL Server Version 6.5 (or earlier).

Note: The .NET Framework includes the SQL Server .NET Data Provider (for Microsoft SQL Server version 7.0 or later), and the OLE DB .NET Data Provider.

Reference: .NET Framework Developer's Guide, .NET Data Providers [Visual Basic]

Incorrect Answers

A: We could use a SqlConnection object only if the SQL Server were SQL Server 7.0, 2000 or later.

C: HTTP functionality is not required in this scenario. It would introduce unnecessary overhead.

D: ADODB is a legacy standard and should not be used here.

QUESTION NO: 11

You are creating an ASP.NET page to retrieve sales data from a Microsoft SQL Server database named ChinatagDB. You are writing a method named GetYTDSales to run a stored procedure in the SQL Server database. The stored procedure has one input parameter that is used to specify a product. The stored procedure returns to the year-to-date sales for that product.

You declare a numeric variable in the GetYTDSales method. You want to assign the return value of the stored procedure to the variable.

What should you do?

- A. Create a SqlDataAdapter object and call its Fill method to run the stored procedure and assign the year-to-date sales value to your numeric variable.
- B. Create a SqlDataAdapter object and call its Update method to run the stored procedure and assign the year-to-date sales value to your numeric variable.
- C. Create a SqlCommand object and call its ExecuteScalar method to run the stored procedure and assigns the year-to-date sales value to your numeric variable.
- D. Create a SqlCommand object and call its ExecuteReader method to run the stored procedure and assign the year-to-date sales value to your numeric variable.

Answer: C

Explanation: The SqlCommand.ExecuteScalar method executes the query, and returns the first column of the first row in the resultset returned by the query. Extra columns or rows are ignored. The ExecuteScalar method to retrieve a single value (for example, an aggregate value) from a database.

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

Incorrect Answers

A, B: A SqlDataAdapter object represents a set of data commands and a database connection that are used to fill the DataSet and update a SQL Server database. However, in this scenario we only want to retrieve a single scalar value.

D: The SqlCommand.ExecuteReader method Sends the CommandText to the Connection and builds a SqlDataReader. However, we are only interested in a single scalar value, not a SqlDataReader object capable of providing a stream of data.

QUESTION NO: 12

You are developing an ASP.NET application for Chinatag's intranet. Employees will use the application to administer their employee benefits. The benefits information is stored in a Microsoft SQL Server database named Benefits.

An employee can select benefit options from 10 different drop-down list boxes. The values for each list are stored in separate tables in the Benefits database. The values that are available for employees to choose can change once each year during the benefits enrollment period.

You want to minimize the number of times your application must access the Benefits database to obtain the values for the drop-down list box.

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

- A. Create one stored procedure that returns the result for all 10 drop-down list boxes.
Create one DataTable object for each of the 10 drop-down list boxes.
Use a SqlDataReader object to populate 10 DataTable objects by calling the NextResult() method.
Bind the drop-down list boxes to the DataTable objects.
- B. Create a stored procedure that returns the result set for all 10 drop-down list boxes.
Bind the drop-down list boxes to the DataReader object.
- C. Create one DataTable object for each of the 10 drop-down list boxes.
Create a stored procedure for each of the 10 tables.
Use a SqlDataReader object to populate the 10 DataTable objects.
Bind the drop-down list boxes to the DataTable objects.
- D. Store the result sets for the 10 drop-down list boxes in a DataSet object.
Add the DataSet object to the Cache object for the application.
- E. Store the result sets for the 10 drop-down list boxes in a file on the user's computer by using the DataSet.WriteXml() method.

Answer: A, D

Explanation:

A: We want to use a single result set provided by a single stored procedure. We are able to use the NextResult() method to retrieve each result in the result set.

We also need one DataTable for each drop-down list box and one SqlDataReaderObject.

Note: The SqlDataReader.NextResult method advances the data reader to the next result, when reading the results of batch Transact-SQL statements.

D: We use a DataSet object to store the result sets for the drop-down list boxes. We cache the result by adding the DataSet object to the Cache object.

Reference:

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

.NET Framework Class Library, SqlDataReader.NextResult Method [Visual Basic]

Incorrect Answers

- B:** You can use the ADO.NET DataReader to retrieve a read-only, forward-only stream of data from a database. However, in this scenario we should use SqlDataReader.
- C:** It would be more effective to create a single stored procedure that returns a single result set.
- E:** A cache object is preferred to a file in this scenario.

QUESTION NO: 13

You are creating an ASP.NET page that displays a list of products. The product information is stored in a Microsoft SQL Server database. You use SqlConnection object to connect to the database.

Your SQL Server computer is named ChinatagSrv. The database that contains the product information is named SalesDB. The table that contains the product information is named Products. To connect to SalesDB, you use a SQL Server user account named WebApp that has the password Chinatn123.

You need to set theConnectionString property of the SqlConnection object. Which string should you use?

- A. "Provider=SQLOLEDB.1;File Name =\"Data\\MyFile.udl
- B. "Provider=MSDASQL;Data Source=ChinatagSrv;
Initial Catalog=SalesDB;
User ID=WebApp;Password= Chinatn123"
- C. "Data Source= ChinatagSrv;Initial Catalog=SalesDB;
User ID=WebApp;Password= Chinatn123"
- D. "Data Source= ChinatagSrv;Database=SalesDB;
Initial File Name=Products;User ID=WebApp;Pwd= Chinatn123"

Answer: C

Explanation: We specify the name of the SQL Server computer with the **Data Source** attribute. The database is specified with the **Initial Catalog** attribute.

Reference: .NET Framework Class Library, SqlConnection.ConnectionString Property [Visual Basic]

Incorrect Answers

- A, B:** The SqlConnection.ConnectionString has no **Provider** attribute. The provider is implicitly SQL Server 7.0 or later.
- D:** There is no **Initial File name** attribute in the SqlConnection.ConnectionString. This attribute makes the connection string invalid.

QUESTION NO: 14