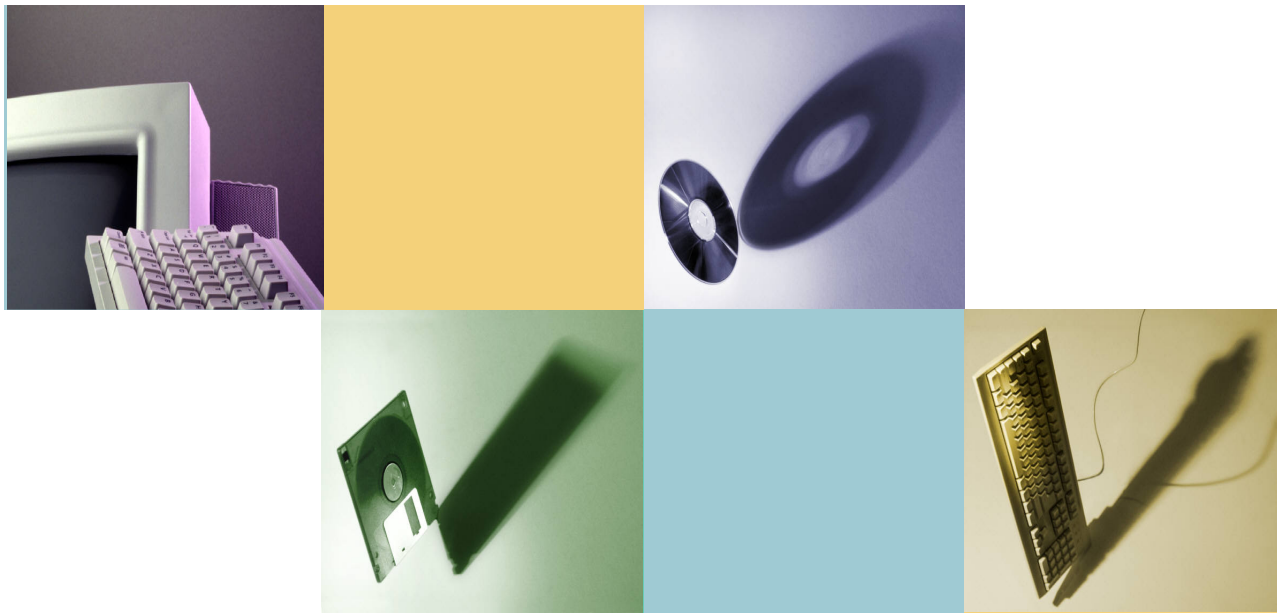


# Express 070-528

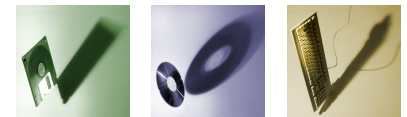


TS: Microsoft .NET Framework 2.0 - Web-Based Client Development

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# Objectives

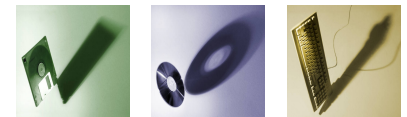
- Understand the Web Application Development concepts
- Clear 070-528 !!

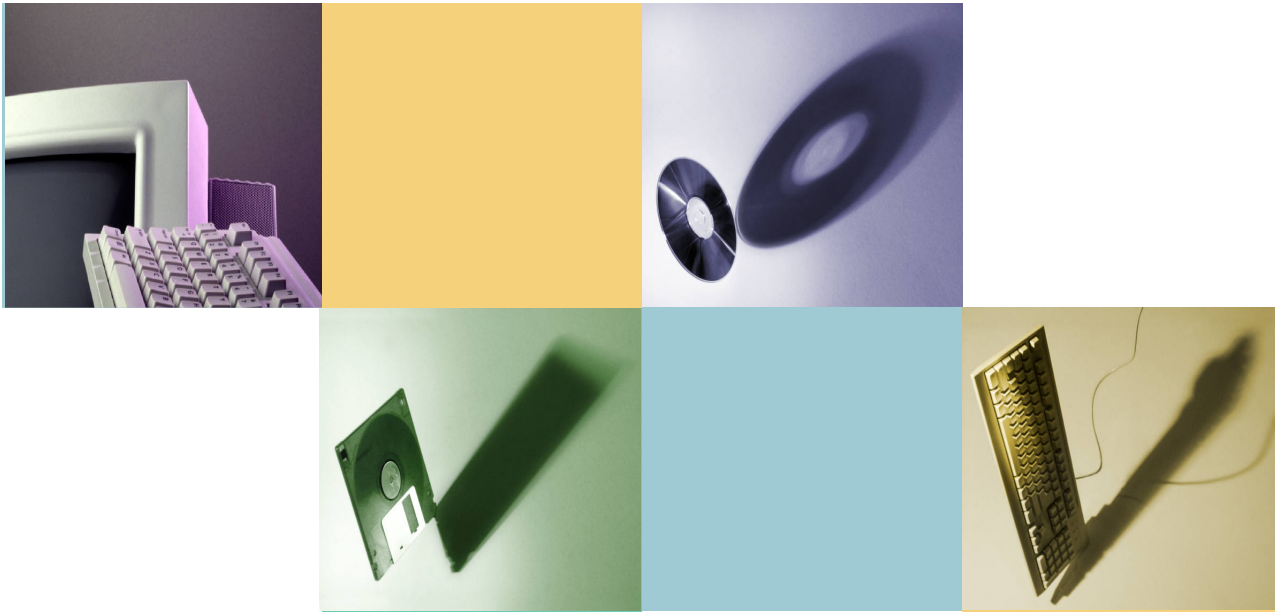


# Exam Format

Specifically the exam 070-528 focuses on the Web Application Development using the .Net technology. You can attempt the exam in either C#, VB.NET or VC++ languages. At the start of the exam, you are given an option to choose the programming language that you want to consider for the exam. You can attempt the exam in any of your favorite language.

NOTE: The language that you select for taking the exam is not mentioned in your score sheet or the certificates.



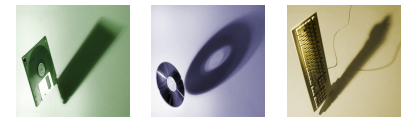


# Creating and Programming a Web Application

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# Course Outline

1. Creating and Programming a Web Application
2. Integrating Data in a Web Application by Using ADO.NET, XML, and Data-Bound Controls
3. Creating Custom Web Controls
4. Tracing, Configuring, and Deploying Applications
5. Customizing and Personalizing a Web Application
6. Implementing Authentication and Authorization
7. Creating ASP.NET Mobile Web Applications



**Q1: You create a Web Form. The Web Form allows users to calculate values and display the results in a label named lblResults. You need to capture all unhandled exceptions on the Web Form through the Error event. The Error event must capture each unhandled exception and display it on the Web Form. Which code segment should you use?**

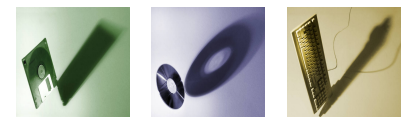
**A.** `protected void Page_Error(object sender, EventArgs e) {  
lblResults.Text = e.ToString();  
e=null;}`

**B.** `protected void Page_Error(object sender, EventArgs e) {  
lblResults.Text = Server.GetLastError().ToString();  
Server.ClearError();}`

**C.** `protected void Page_Error(object sender, EventArgs e) {  
Response.Write(e.ToString());  
e=null;}`

**D.** `protected void Page_Error(object sender, EventArgs e) {  
Response.Write(Server.GetLastError().ToString());  
Server.ClearError();}`

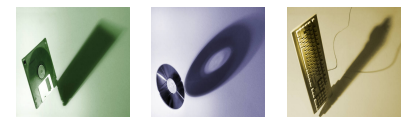
**Answer: D**



**Q2: You create a Web Form that contains a button named btnCancel that enables users to exit the page. When users click this button, validation must not occur. During testing you learn that clicking the Cancel button does not enable users to exit the page. You need to ensure that users can always exit the page. What should you do?**

- A.** Set the Enabled property of the validation controls on the Web Form to False.
- B.** Set the CausesValidation property of the btnCancel button to False.
- C.** Set the CausesValidation property of the btnCancel button to True.
- D.** Set the Visible property of the validation controls on the Web Form to False.

**Answer: B**



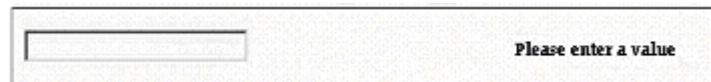
**Q3: You create a Web Form for the acceptance of donations. Users type donation amounts by using a TextBox control named txtAmount. The donation amount must be between 10 dollars and 10,000 dollars. You add the following RequiredFieldValidator and RangeValidator.**

```
<asp:RangeValidator ID="valAmount" runat="server" ControlToValidate="txtAmount"
    ErrorMessage="The valid range is 10 to 10000" MaximumValue="10000" MinimumValue="10"
    Type="Currency">
</asp:RangeValidator>
<asp:RequiredFieldValidator ID="valAmountRequired" runat="server" ControlToValidate="txtAmount"
    ErrorMessage="Please enter a value">
</asp:RequiredFieldValidator>
```

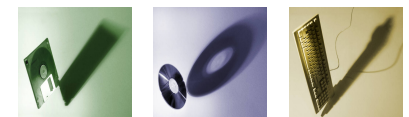
**During testing you learn that when users fail to enter values before submitting the Web Form to the server, the message "Please enter a value" appears, as shown in the exhibit. You need to ensure that the message appears immediately following the txtAmount TextBox control without extra spaces. What should you do?**

- A.** In the RangeValidator, set the Display property to Dynamic.
- B.** In the RangeValidator, set the Display property to Static.
- C.** In the RequiredFieldValidator, set the Display property to Dynamic.
- D.** In the RequiredFieldValidator, set the Display property to Static.

**Answer: A**



The screenshot shows a rectangular text box on the left and the text "Please enter a value" on the right, both within a single container. This illustrates the current state where the validation message is not immediately adjacent to the text box.

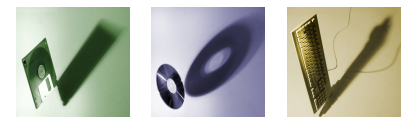




**Q4: You create a Web Form that contains a text box named txtDate. You want the text box to allow users to enter any valid date. You need to use an ASP.NET validation control to ensure that only valid date values are submitted to the server. What should you do?**

- A.** Add a CompareValidator control to the Web Form. Set its ControlToValidate property to txtDate. Set its Type property to Date. Set its Operator property to DataTypeCheck.
- B.** Add a RangeValidator control to the Web Form. Set its ControlToValidate property to txtDate. Set its Type property to Date. Set its MinimumValue property to 01/01/1900 and its MaximumValue to the current date.
- C.** Add a CustomValidator control to the Web Form. Set its ControlToValidate property to txtDate. Write a function in the partial class that verifies the values as dates and returns a Boolean variable. Set the CustomValidators ClientValidationFunction to the name of your function.
- D.** Add a RegularExpressionValidator control to the Web Form. Set its ControlToValidate property to txtDate. Set the ValidationExpression property to ensure that the users input follows the format of nn-nn-nnnn, where n represents a number from 0 through 9.

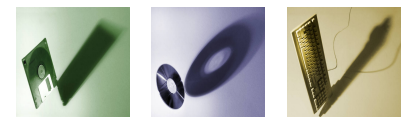
**Answer: A**



**Q5: You write a logging function for a Web Form. You call the logging function from the Page\_Unload event handler. You test the Web Form and notice that the Page\_Unload event handler does not call the logging function. You need to ensure that the logging function is called. What are two possible ways to achieve this goal? (Each correct answer presents a complete solution. Choose two.)**

- A.** Set the Page attribute to AutoEventWireup="False".  
Remove the attribute onunload="Page\_Unload" from the Web Form element.
- B.** Set the Page attribute to AutoEventWireup="False".  
Add the attribute OnUnload="Page\_Unload" to the Web Form element.
- C.** Set the Page attribute to AutoEventWireup="False".  
Add the Web Form attribute autocomplete=on.
- D.** Set the Page attribute to AutoEventWireup="True".

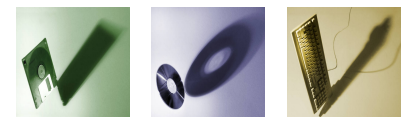
**Answer: B, D**



**Q6: You create a large, n-tier Web application that has a custom event tracking system. You need to create a custom event type that enables your event tracking system to record all relevant event details for all types of events. The events must be stored in Microsoft SQL Server. From which base type should your custom event type inherit?**

- A.** IWebEventCustomEvaluator
- B.** WebEventProvider
- C.** WebBaseEvent
- D.** WebAuditEvent

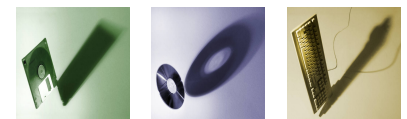
**Answer: C**



**Q7: You create a Web application. The Web application enables users to change fields in their personal profiles. Some of the changes are not persisting in the database. You need to raise a custom event to track each change that is made to a user profile so that you can locate the error. Which event should you use?**

- A.** WebAuditEvent
- B.** WebEventManager
- C.** WebBaseEvent
- D.** WebRequestEvent

**Answer: C**



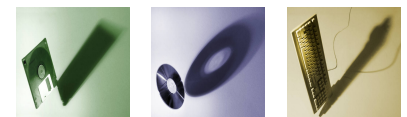
**Q8: You create a Web site. At the top of every page on the site is the following code segment.**

```
<%@ OutputCache Duration="60" VaryByParam="none" %>
```

**You need the pages to display the current user's name at the top without turning off the output cache. Which control should you use?**

- A.** AccessDataSource
- B.** Localize
- C.** ImportCatalogPart
- D.** Substitution

**Answer: D**



**Q9: You write a Web application. This application must support multiple languages. You store the localized strings in the application as resources. You want these resources to be accessed according to a users language preference. You create the following resource files in the App\_GlobalResources folder of your application.**

myStrings.resx  
myStrings.en-CA.resx  
myString.en-US.resx  
myStrings.fr-CA.resx  
myStrings.es-MX.resx

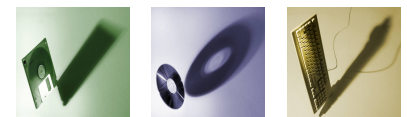
**Each resource file stores a localized version of the following strings: Name, E-mail, Address, and Phone. You create a Web Form that contains one label for each of these strings. You need to ensure that the correct localized version of each string is displayed in each label, according to a users language preference. What should you do?**

**A.** Add the following configuration section to the Web.config file.

```
<globalization culture="Auto" />
```

**B.** Set the directive for each page in your site as follows:

```
<%@ Page UICulture="Auto" %>
```



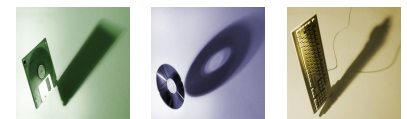
**C.** Add the following code segment to the pages load event.

```
lblName.Text = @"{myStrings}Name";  
lblAddress.Text = @"{myStrings}Address";  
lblEmail.Text = @"{myStrings}Email";  
lblPhone.Text = @"{myStrings}Phone";
```

**D.** Add the following code segment to the pages load event.

```
lblName.Text = Resources.myStrings.Name;  
lblAddress.Text = Resources.myStrings.Address;  
lblEmail.Text = Resources.myStrings.Email;  
lblPhone.Text = Resources.myStrings.Phone;
```

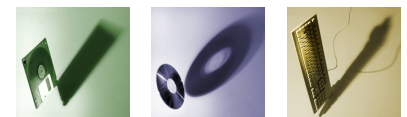
**Answer: D**



**Q10: You create a Web Form. The Web Form uses the FormView control to enable a user to edit a record in the database. When the user clicks the Update button on the FormView control, the application must validate that the user has entered data in all of the fields. You need to ensure that the Web Form does not update if the user has not entered data in all of the fields. Which code segment should you use?**

**A.** `protected void FormView1_ItemUpdating(object sender, FormViewUpdateEventArgs e)`  
{  
    foreach (DictionaryEntry entry in e.Keys) {  
        if (entry.Value.ToString() == System.String.Empty) {  
            e.Cancel = true; return;  
        }  
    }  
}

**B.** `protected void FormView1_ItemUpdated(object sender, FormViewUpdateEventArgs e)`  
{  
    foreach (DictionaryEntry entry in e.NewKeys)  
    {  
        if (entry.Value.Equals("")) {  
            e.KeepEditMode = true;  
            return;  
        }  
    }  
}

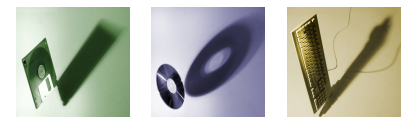




```
C. protected void FormView 1_ItemUpdating(object sender, FormViewUpdateEventArgs e)
{
    foreach (DictionaryEntry entry in e.NewValues)
    {
        if (entry.Value.Equals(""))
        {
            e.Cancel = true;
            return;
        }
    }
}
```

```
D. protected void FormView 1_ItemUpdating(object sender, FormViewUpdateEventArgs e)
{
    foreach (DictionaryEntry entry in e.Keys)
    {
        if (entry.Value.ToString() == System.String.Empty)
        {
            e.KeepInEditMode = true;
            return;
        }
    }
}
```

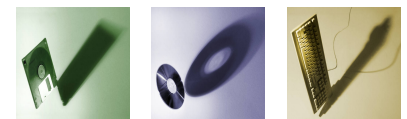
**Answer: C**



**Q11: You create a master page named PageBase.master. The master page contains a Label control named lblTitle. You create a content page that references the master page. You need to change the Text property of the master page's lblTitle control from the content page. Which code segment should you use?**

- A.** `Label lblTitle = (Label)Master.FindControl("lblTitle");  
lblTitle.Text = "Articles";`
- B.** `Label lblTitle = (Label)Parent.FindControl("lblTitle");  
lblTitle.Text = "Articles";`
- C.** `Master.Page.Title = "Articles";`
- D.** `((Label)Page.FindControl("lblTitle")).Text = "Articles";`

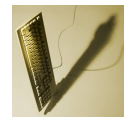
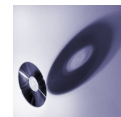
**Answer: A**



## Parent master

Child.master

Article.aspx



**Q12: You create a master page named Parent.master that contains a global header for your Web application. You add a ContentPlaceHolder to Parent.master by using the following code segment.**

```
<asp:ContentPlaceHolder ID="pagebody" runat="server" />
```

**You also create a content page named Article.aspx by using the following code segment.**

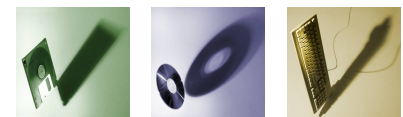
```
<%@ Page Language="C#" MasterPageFile="~/navigation.master"%>
```

```
<asp:Content ContentPlaceHolderID="article" Runat="Server"> Article content to go here</asp:Content>
```

**You need to create a child master page that contains the navigation for each section. The users must be able to see the header, the navigation, and the article when they view the page, as shown in the exhibit. Which code segment should you use?**

**A.**

```
<%@ Master Language="C#" MasterPageFile="~/parent.master"%>  
<asp:Content runat="server" ContentPlaceHolderID="pagebody">  
Navigation element 1<br />  
Navigation element 2<br />  
<asp:contentplaceholder id="article" runat="server">  
</asp:contentplaceholder>  
</asp:Content>
```

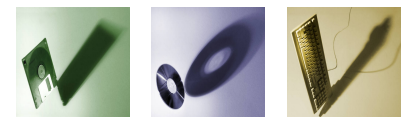


**B.** `<%@ Master Language="C#" MasterPageFile="~/parent.master"%>`  
`<asp:Content runat="server" ContentPlaceHolderID="pagebody">`  
`<asp:contentplaceholder id="article" runat="server">`  
Navigation element 1<br />  
Navigation element 2<br />  
`</asp:contentplaceholder>`  
`</asp:Content>`

**C.** `<%@ Master Language="C#" MasterPageFile="~/parent.master"%>`  
`<asp:Content runat="server" ContentPlaceHolderID="article">`  
Navigation element 1<br />  
Navigation element 2<br />  
`<asp:contentplaceholder id="pagebody" runat="server">`  
`</asp:contentplaceholder>`  
`</asp:Content>`

**D.** `<%@ Master Language="C#" MasterPageFile="~/parent.master"%>`  
`<asp:Content runat="server" ContentPlaceHolderID="article">`  
`<asp:contentplaceholder id="pagebody" runat="server">`  
Navigation element 1<br />  
Navigation element 2<br />  
`</asp:contentplaceholder>`  
`</asp:Content>`

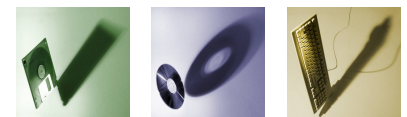
**Answer: A**



**Q13: You develop a Web application that contains two master pages. You need to dynamically set the master page when a user views pages in the application. What should you do?**

- A.** Set Page.MasterPageFile in the Page's Page\_Init event.
- B.** Set Page.MasterPageFile in the Page's OnInit event.
- C.** Set Page.MasterPageFile in the Page's Page\_Load event.
- D.** Set Page.MasterPageFile in the Page's Page\_PreInit event.

**Answer: D**



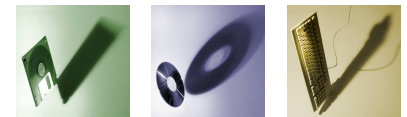
**Q14: You create a master page named Article.master. Article.master serves as the template for articles on your Web site. The master page uses the following page directives.**

```
<%@ Master Language="C#" Src="~/article.master.cs" Inherits="article" %>
```

**You need to create a content page that uses the master page as a template. In addition, you need to use a single master page for all devices that access the Web site. Which code segment should you use?**

- A.** `<%@ Page Language="C#" Theme="article"%>`
- B.** `<%@ Page Language="C#" MasterPageFile="~/article.master"%>`
- C.** `<%@ Page Language="C#" ie:MasterPageFile="~/article.master"%>`
- D.** `<%@Page Language="C#" all:MasterPageFile="~/article.master"%>`

**Answer: B**



**Q15: You create a master page named Template.master. Template.master contains the following ContentPlaceHolder server controls.**

```
<asp:contentplaceholder id="area1" runat="server"/>
```

```
<asp:contentplaceholder id="area2" runat="server"/>
```

**You also create 10 Web Forms. The Web Forms reference Template.master as their master page. Each Web Form has the following Content controls that correspond to the ContentPlaceHolder controls in Template.master.**

```
<asp:Content ContentPlaceHolderID="area1" Runat="Server"/>
```

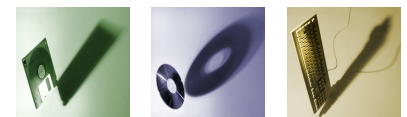
```
<asp:Content ContentPlaceHolderID="area2" Runat="Server"/>
```

**You need to configure the Web pages so that default content will be shown in the area2 ContentPlaceHolder control whenever a Web Form does not provide that content. What should you do?**

- A.** Move default content inside area2 in Template.master. Remove area2 from Web Forms that do not provide content.
- B.** Move default content inside area2 in Template.master. Leave area2 blank in Web Forms that do not provide content.
- C.** Move default content inside area2 in the Web Forms. Remove area2 from Template.master.
- D.** Create an additional ContentPlaceHolder control in Template.master named area2\_default.

Place default content inside area2\_default. Remove area2 from Web Forms that do not provide content.

**Answer: A**





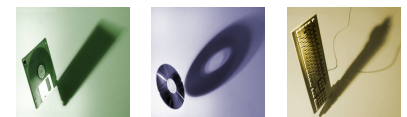
**Q16: You create a Web Form that contains connected Web Parts. You write the following declaration in your Web Form.**

```
<asp:WebPartConnection ID="WebPartConnection1" ProviderID="customerPart" ConsumerID="ordersPart" />
```

**You need to ensure that your Web Part connection is valid. Which two actions should you perform? (Each correct answer presents part of the solution. Choose two.)**

- A.** Include a data source identified as "WebPartConnection1" on the Web Form.
- B.** Include a Web Part identified as "customerPart" on the Web Form.
- C.** Include a Web Part identified as "ordersPart" on the Web Form.
- D.** Ensure that you declare an interface named "IOrdersPart".
- E.** Ensure that you declare an interface named "ICustomerPart".
- F.** Ensure that each Web Part declares either a GetInterface or ProvideInterface method.

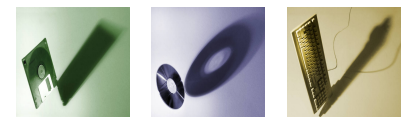
**Answer: B, C**



**Q17: You want to enable users of a Web application to modify the Web application's UI and behavior. These modifications must be maintained at the user level so that when users return to the Web application, the changes are still in effect. You need to achieve this goal by using the minimum amount of custom code. What should you do?**

- A.** Persist control data by using view state.
- B.** Use Web Part controls.
- C.** Maintain a profile for each user.
- D.** Enable session state on the Web application.

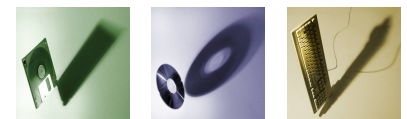
**Answer: B**



**Q18: You create a Web site. You add an EditorZone control to the home page on the Web site. You need to enable users to customize the size and location of the Web Parts on their home pages. Which two controls should you add to the EditorZone control? (Each correct answer presents part of the solution. Choose two.)**

- A.** BehaviorEditorPart
- B.** AppearanceEditorPart
- C.** PropertyGridEditorPart
- D.** LayoutEditorPart

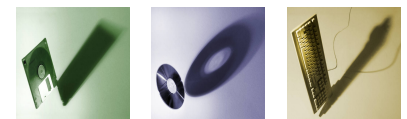
**Answer: B, D**



**Q19: You create a Web Form. The Web Form contains two Web Parts named CustomerPart and OrdersPart. CustomerPart contains a drop-down list of customers. OrdersPart contains a list of orders that a customer has placed. You need to create a static connection between CustomerPart and OrdersPart. When a user selects a customer from CustomerPart, OrdersPart must update. Which four actions should you perform? (Each correct answer presents part of the solution. Choose four.)**

- A.** Add the ConnectionProvider attribute to OrdersPart.
- B.** Add the ConnectionProvider attribute to CustomerPart.
- C.** Add the ConnectionConsumer attribute to CustomerPart.
- D.** Add the ConnectionConsumer attribute to OrdersPart.
- E.** Add OrdersPart and CustomerPart to the WebParts directory.
- F.** Add OrdersPart and CustomerPart to the App\_Code directory.
- G.** Declare the connections within a StaticConnections subtag of a WebPartZone class.
- H.** Declare the connections within a StaticConnections subtag of a WebPartManager class.
- I.** Define an interface specifying the methods and properties that are shared between the Web Parts.

**Answer: B, D, H, I**



**Q20: You create a Web application for your company's intranet. You want to enable users to customize their versions of the intranet home page. You create sections of content as Web Parts. You need to ensure that users can customize content at any time. Which two code segments should you use? (Each correct answer presents part of the solution. Choose two.)**

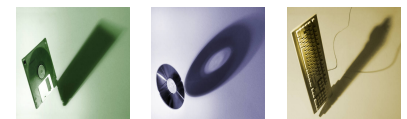
**A.** `<asp:ConnectionsZone ID="ConnectionsZone1" Runat="server">  
<ConnectVerb Enabled="true" />  
</asp:ConnectionsZone>`

**B.** `<asp:CatalogZone ID="CatalogZone1" Runat="server">  
<ZoneTemplate>  
<asp:PageCatalogPart Runat="server" ID="PageCatalogPart1" />  
</ZoneTemplate>  
</asp:CatalogZone>`

**C.** `<asp:WebPartZone ID="WebPartZone1" Runat="server">  
<ZoneTemplate> </ZoneTemplate>  
</asp:WebPartZone>`

**D.** `<asp:ProxyWebPartManager ID="ProxyWebPartmanager1" Runat="server" />`

**Answer: B, C**



**Q21: You create a Web Form that contains a TreeView control. The TreeView control allows users to navigate within the Marketing section of your Web site. The following XML defines the site map for your site.**

```
<siteMapNode url="~/default.aspx" title="Home"
description="Site Home Page">
<siteMapNode url="Sales.aspx" title="Sales"
description="Sales Home">
<siteMapNode url="SalesWest.aspx" title="West Region"
description="Sales for the West Region" />
<siteMapNode url="SalesEast.aspx" title="East Region"
description="Sales for the East Region" /> </siteMapNode>
<siteMapNode url="Marketing.aspx" title="Marketing"
description="Marketing Home">
<siteMapNode url="MarketNational.aspx" title="National Campaign"
description="National marketing campaign" />
<siteMapNode url="MarketMidwest.aspx" title="Midwest Campaign"
description="Midwest region marketing campaign" />
<siteMapNode url="MarketSouth.aspx" title="South Campaign"
description="South region marketing campaign" />
</siteMapNode>
</siteMapNode>
```

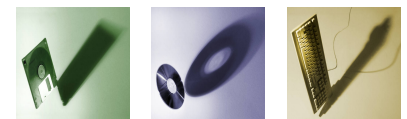
**You need to bind the TreeView control to the site map data so that users can navigate only within the Marketing section. Which three actions should you perform?**

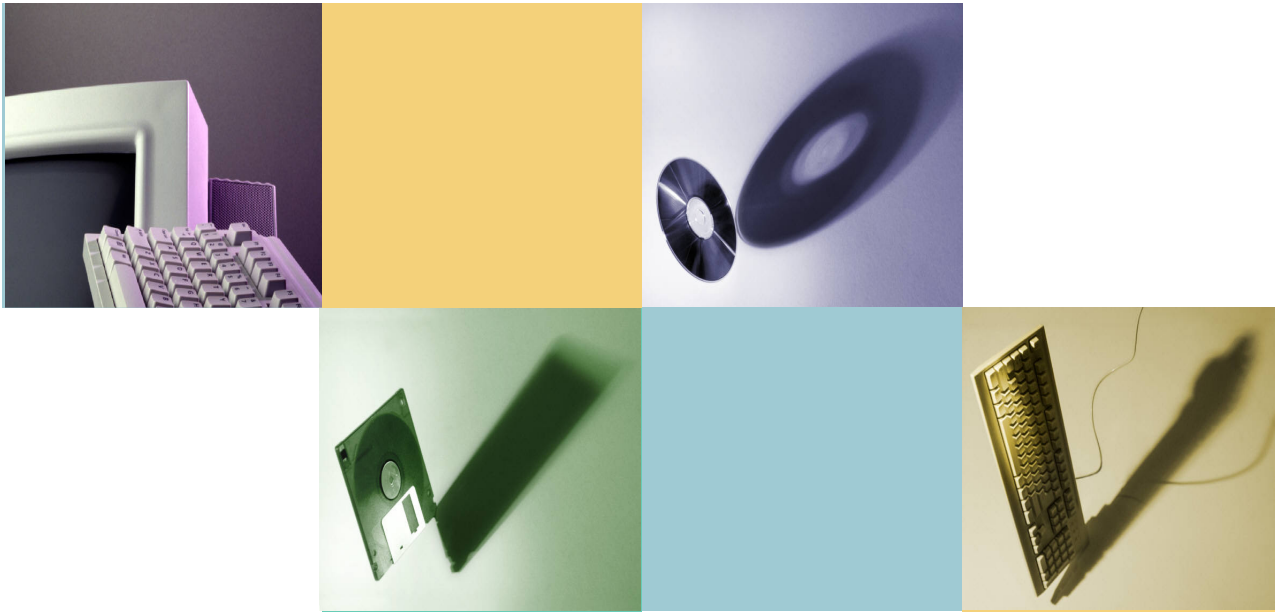
**(Each correct answer presents part of the solution. Choose three.)**



- A.** Add a SiteMapDataSource control to the Web Form and bind the TreeView control to it.
- B.** Add a SiteMapPath control to the Web Form and bind the TreeView control to it.
- C.** Embed the site map XML within the SiteMap node of a Web.sitemap file.
- D.** Embed the site map XML within the AppSettings node of a Web.config file.
- E.** Set the StartingNodeUrl property of the SiteMapDataSource control to ~/Marketing.aspx.
- F.** Set the SkipLinkText property of the SiteMapPath control to Sales.

**Answer: A, C, E**





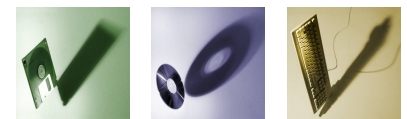
# Integrating Data in a Web Application by Using ADO.NET, XML, and Data-Bound Controls

For internal use only.



# Course Outline

1. Creating and Programming a Web Application
2. Integrating Data in a Web Application by Using ADO.NET, XML, and Data-Bound Controls
3. Creating Custom Web Controls
4. Tracing, Configuring, and Deploying Applications
5. Customizing and Personalizing a Web Application
6. Implementing Authentication and Authorization
7. Creating ASP.NET Mobile Web Applications



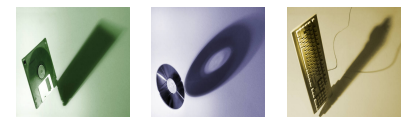
**Q1: Your Web site processes book orders. One of the application methods contains the following code segment.**

```
XmlDocument doc = new XmlDocument();  
doc.LoadXml("<book><discount>10</discount>"+  
    "<title>Dictionary</title></book>");
```

**You need to remove the discount element from XmlDocument. Which two code segments can you use to achieve this goal? (Each correct answer presents a complete solution. (Choose two.)**

- A.** XmlNode root = doc.DocumentElement;  
root.RemoveChild(root.FirstChild);
- B.** XmlNode root = doc.DocumentElement;  
root.RemoveChild(root.SelectSingleNode("discount"));
- C.** doc.RemoveChild(doc.FirstChild);
- D.** doc.DocumentElement.RemoveChild(doc.FirstChild);

**Answer: A, B**



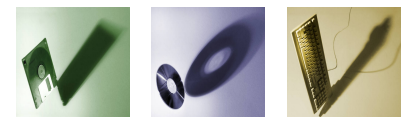
**Q2: You load an XmlDocument named doc with the following XML.**

```
<bookstore>
  <books>
    <book>
      <title>World Atlas</title>
    </book>
    <book>
      <title>Dictionary</title>
    </book>
  </books>
</bookstore>
```

**You need to use an XPath query string to select the two book nodes. Which code segment should you use?**

- A.** XmlDocument root = doc.DocumentElement;  
XmlNodeList nodes = root.SelectNodes(".");
- B.** XmlDocument root = doc.DocumentElement;  
XmlNodeList nodes = root.SelectNodes("book");
- C.** XmlDocument root = doc.DocumentElement;  
XmlNodeList nodes = root.SelectNodes("bookstore//book");
- D.** XmlDocument root = doc.DocumentElement;  
XmlNodeList nodes = root.SelectNodes("books/book");

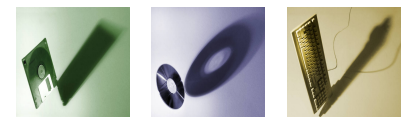
**Answer: D**



**Q3: You create an application. The application processes hundreds of XML documents per minute. The XML documents are validated against inline schemas. You need to load XML documents from the file system and read them as quickly as possible. XML comments must be ignored while reading the XML documents. What should you do?**

- A.** Create an instance of the XmlReader class by using the XmlReader Create method with an instance of the XmlReaderSettings class.
- B.** Create an instance of the XmlReader class with an instance of the XmlTextReader class.
- C.** Create an instance of the XmlDocument class and specify a location for the application schema.
- D.** Create an instance of the XmlReader class with an instance of the XmlNodeReader class.

**Answer: A**



**Q4: You load an XmlDocument named doc with the following XML.**

```
<bookstore>
<books>
<book genre="reference" >
<title>Dictionary</title>
</book>
<book genre="reference" >
<title>World Atlas</title>
</book> </books>
</bookstore>
```

**You need to change the value for the genre attribute to NA for all book attributes. First, you add the following code segment to your class.**

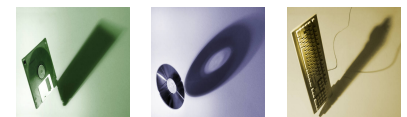
```
XmlElement root = doc.DocumentElement;
XmlNodeList nodes = root.SelectNodes("books/book");
```

**Which additional two code segments can you use to achieve this goal? (Each correct answer presents a complete solution. Choose two.)**

**A.** `foreach` (XmlNode node in nodes)  
{ node.Attributes[0].Value = "NA";}

**B.** `foreach` (XmlNode node in nodes)  
{ node.Attributes[1].Value = "NA";}

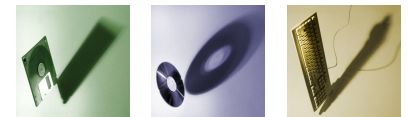
**C.** `foreach` (XmlNode node in nodes){  
XmlNode genre = node.SelectSingleNode("/genre");  
genre.Value = "NA";}



```
D. foreach (XmlNode node in nodes){
XmlNode genre = node.SelectSingleNode("@genre");
genre.Value = "NA";
}
```

```
E. foreach (XmlNode node in nodes){
XmlNode genre = node.SelectSingleNode("genre");
genre.Value = "NA";
}
```

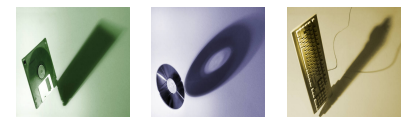
**Answer: A, D**



**Q5: You create a Web application to process XML documents. The Web application receives XML document files from several sources, reads them, and stores them in a Microsoft SQL Server database. The Web application parses all incoming data files to ensure that they conform to an XML schema. You need to find all validation errors in the XML document. What should you do?**

- A.** Load the XML data by using an instance of the XmlDocument class and specify a location for the application schema.
- B.** Configure the ValidationEventHandler in the XmlReaderSettings of the XmlReader object.
- C.** Read the XML file into a DataSet object and set the EnforceConstraints property to True.
- D.** Read the XML file into a DataSet object. Handle the DataSet.MergeFailed event to parse the data that does not conform to the XML schema.

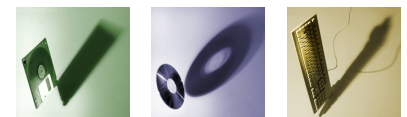
**Answer: B**



**Q6: You are transferring records from one database to another. You need to decide whether you can use the SqlBulkCopy class to transfer the records. What should you do?**

- A.** Ensure that the source database is Microsoft SQL Server.
- B.** Ensure that the destination database is Microsoft SQL Server.
- C.** Ensure that the column names in the source table match the column names in the destination table.
- D.** Ensure that the bulk copy program (bcp) utility is installed on the destination server.

**Answer: B**





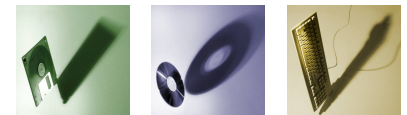
**Q7: You are creating a DataTable. You use the following code segment to create the DataTable. (Line numbers are included for reference only.)**

```
01 DataTable dt = new DataTable("Products");  
02 dt.Columns.Add(new DataColumn("Price", typeof(decimal)));  
03 dt.Columns.Add(new DataColumn("Quantity", typeof(Int32)));  
04 DataColumn dc = new DataColumn("Total", typeof(decimal));  
05 dt.Columns.Add(dc);
```

**You need to ensure that the Total column is set to the value of the Price column multiplied by the Quantity column when new rows are added or changed. What should you do?**

- A.** Add the following code segment after line 05.  
`dc.ExtendedProperties["Total"] = "Price * Quantity";`
- B.** Add the following code segment after line 05.  
`dc.Expression = "Price * Quantity";`
- C.** Write an event handler for the DataTable's TableNewRow event that updates the row's Total.
- D.** Write an event handler for the DataTable's ColumnChanged event that updates the row's Total.

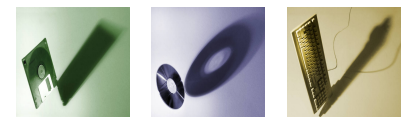
**Answer: B**



**Q8: You are developing an application that connects to a Microsoft SQL Server database using the SqlConnection object. Your connection objects are being pooled. As the pool fills up, connection requests are queued. Some connection requests are rejected. You need to ensure that the application releases connections back to the pool as soon as possible. Also, you need to decrease the likelihood that connection requests will be rejected. Which three actions should you perform? (Each correct answer presents part of the solution. Choose three.)**

- A.** Ensure that the Close method is called on each connection object after it has finished executing.
- B.** Ensure that each connection object is left open after it has finished executing.
- C.** Increase the Max Pool Size value inside the connection string.
- D.** Increase the Min Pool Size value inside the connection string.
- E.** Increase the Connection Lifetime value inside the connection string.
- F.** Increase the value of the ConnectionTimeout property of the SqlConnection object.

**Answer: A, C, F**



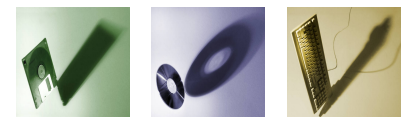
**Q9: You are creating a Web Form. The Web Form allows users to rename or delete products in a list. You create a DataTable named dtProducts that is bound to a GridView. DataTable has the following four rows.**

```
dtProducts.Rows[0]["ProductName"] = "Soap";  
dtProducts.Rows[1]["ProductName"] = "Book";  
dtProducts.Rows[2]["ProductName"] = "Computer";  
dtProducts.Rows[3]["ProductName"] = "Spoon";  
dtProducts.AcceptChanges();
```

**The user utilizes a Web Form to delete the first product. You need to set the RowStateFilter property of the DataTables DefaultView so that only products that have not been deleted are shown. To which value should you set the DataTables DefaultView.RowStateFilter?**

- A.** Data ViewRowState.ModifiedOriginal;
- B.** Data ViewRowState.ModifiedCurrent;
- C.** Data ViewRowState.CurrentRows;
- D.** Data ViewRowState.Added;

**Answer: C**



**Q10: You are creating a Web Form. You write the following code segment to create a SqlCommand object.**

```
SqlConnection conn = new SqlConnection(connString);  
conn.Open();  
SqlCommand cmd = conn.CreateCommand();  
cmd.CommandText = "select count(*) from Customers";
```

**You need to display the number of customers in the Customers table. Which two code segments can you use to achieve this goal? (Each correct answer presents a complete solution. Choose two.)**

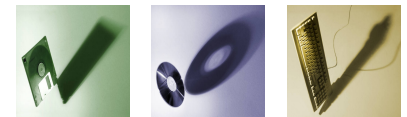
**A.** `object customerCount = cmd.ExecuteScalar();`  
`lblCompanyName.Text = customerCount.ToString();`

**B.** `int customerCount = cmd.ExecuteNonQuery();`  
`lblCompanyName.Text = customerCount.ToString();`

**C.** `SqlDataReader dr = cmd.ExecuteReader();`  
`dr.Read();`  
`lblCompanyName.Text = dr[0].ToString();`

**D.** `SqlDataReader dr = cmd.ExecuteReader();`  
`dr.Read();`  
`lblCompanyName.Text = dr.ToString();`

**Answer: A, C**



**Q11: You have an SQL query that takes one minute to execute. You use the following code segment to execute the SQL query asynchronously.**

```
IAsyncResult ar = cmd.BeginExecuteReader();
```

**You need to execute a method named Do Work() that takes one second to run while the SQL query is executing. DoWork() must run as many times as possible while the SQL query is executing. Which code segment should you use?**

**A.** `while (ar.AsyncWaitHandle == null) {  
DoWork();`

```
}
```

```
dr = cmd.EndExecuteReader(ar);
```

**B.** `while (!ar.IsCompleted) {`

```
DoWork();
```

```
}
```

```
dr = cmd.EndExecuteReader(ar);
```

**C.** `while (Thread.CurrentThread.ThreadState == ThreadState.Running) {`

```
DoWork();
```

```
}
```

```
dr = cmd.EndExecuteReader(ar);
```

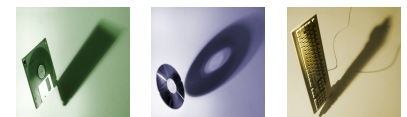
**D.** `while (!ar.AsyncWaitHandle.WaitOne()) {`

```
DoWork();
```

```
}
```

```
dr = cmd.EndExecuteReader(ar);
```

**Answer: B**



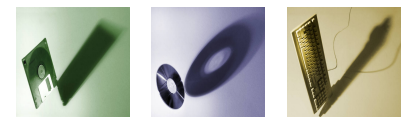
**Q12: You are creating a Web Form. The Web Form allows users to select a category from a DropDownList control. Valid categories are stored in a database table. A SqlDataSource control retrieves the category data. You set the SelectQuery property of the SqlDataSource control by using the following code segment.**

```
SELECT [CategoryID], [CategoryName] FROM [Categories]
```

**You need to bind the DropDownList control to the data source control so that the category name is displayed to the user. The ID of the category must be stored as the user's selected item. Which three actions should you perform? (Each correct answer presents part of the solution. Choose three.)**

- A. Set the DataSourceID property of the DropDownList control to the identifier of the SqlDataSource control.
- B. Set the DataMember property of the DropDownList control to the identifier of the SqlDataSource control.
- C. Set the DataValueField property of the DropDownList control to CategoryID.
- D. Set the DataTextField property of the DropDownList control to CategoryName.
- E. Set the DataValueField property of the DropDownList control to CategoryName.
- F. Set the DataTextField property of the DropDownList control to CategoryID.

**Answer: A, C, D**



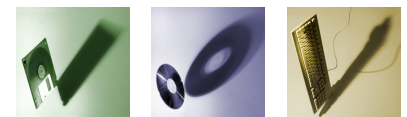
**Q13: You create a Web Form that displays a GridView. The GridView's data source is a DataSet named dsOrders. The DataSet contains two DataTables named Orders and OrderDetails. You create a relation between the two DataTables using the following code segment. (Line numbers are included for reference only.)**

```
01 dtOrders = dsOrders.Tables["Orders"];  
02 dtOrderDetails = dsOrders.Tables["OrderDetail"];  
03 colParent = dtOrders.Columns["OrderID"];  
04 colChild = dtOrderDetails.Columns["ParentOrderID"];  
05 dsOrders.Relations.Add("Rell", colParent, colChild, false);
```

**You need to find the cause of the exception being raised in line 05. What should you do?**

- A.** Ensure that the child column and the parent column have the same names.
- B.** Ensure that the child table and the parent table have the same names.
- C.** Ensure that the child column and the parent column have the same data types.
- D.** Ensure that each row in the child table has a corresponding row in the parent table.
- E.** Ensure that the tables have an explicit relationship defined by a foreign key constraint in the database.

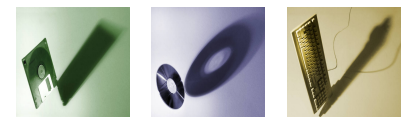
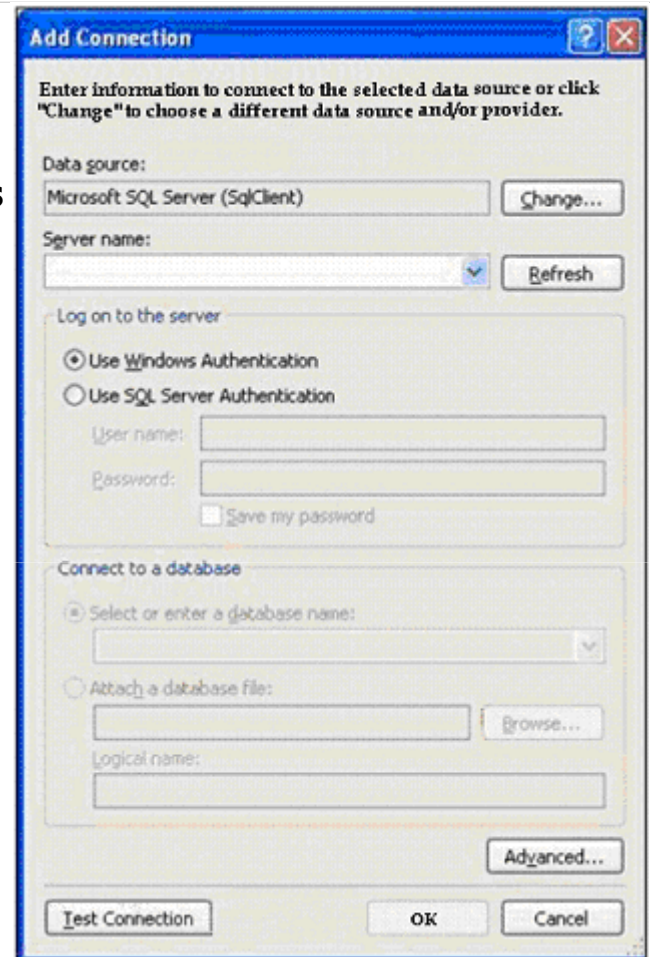
**Answer: C**



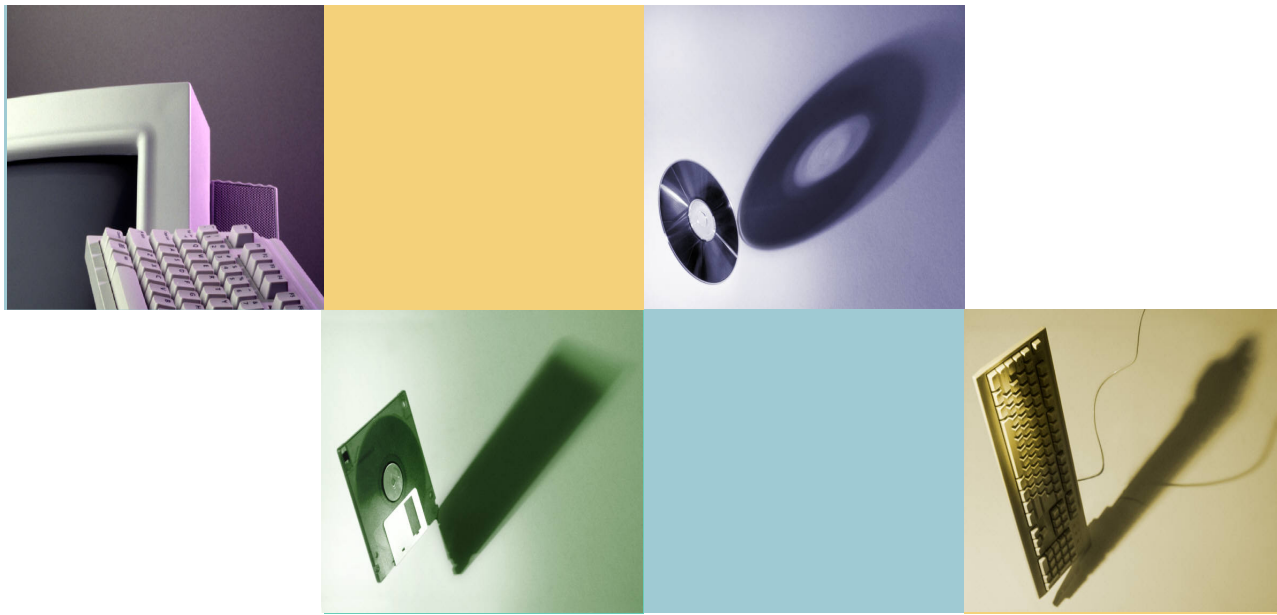
**Q14: You are developing a Web application. The Web application uses a GridView control to display data. You build your Web Forms for the Web application by dragging and dropping tables from the Data Connections tree in Server Explorer. You need to add a connection to your data by using the Add Connection dialog box as shown in the exhibit. During the process, you need to configure the .NET Data Provider that you use to create the data source objects. What should you do?**

- A.** Right-click the connection, and click Properties. Modify the Provider property of the data connection.
- B.** Click the Change button, and change the data provider for the selected data source.
- C.** Click the Advanced button, and change the Data Source property to the target provider.
- D.** Click the Advanced button, and change the Application Name property to the target provider.

**Answer: B**





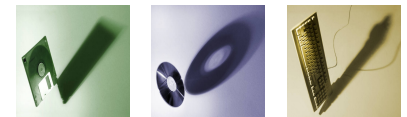


# Creating Custom Web Controls

For internal use only.

# Course Outline

1. Creating and Programming a Web Application
2. Integrating Data in a Web Application by Using ADO.NET, XML, and Data-Bound Controls
3. **Creating Custom Web Controls**
4. Tracing, Configuring, and Deploying Applications
5. Customizing and Personalizing a Web Application
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**UserAddress1** MyCustomControls.UserAddress

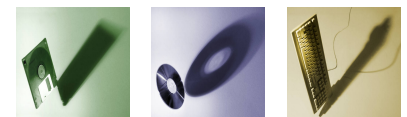
- Accessibility
- Appearance
- Behavior
- Data
- Layout
- Misc

(ID) **UserAddress1**

- UserAddress
  - AddressCity
  - AddressLineOne
  - AddressLineTwo
  - AddressPostalCode
  - AddressStateOrProvince

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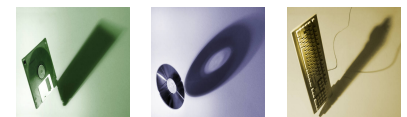
**AddressCity**  
Text box for user's city



**Q1: You are creating a composite control for capturing user address information in a Web application. You define a number of properties that the user can set at design time. You need to group these properties in the Properties dialog box. In addition, you need to ensure that when users click on a particular property, they receive a short explanation of that property. The properties are shown in the exhibit. Which two actions should you perform? (Each correct answer presents part of the solution. Choose two.)**

- A.** Attach the Category attribute class to the controls class definition. Set its value to UserAddress. Mark the class as public.
- B.** Attach the Browsable attribute class to each property in the group. Set its value to True. Mark the property as private.
- C.** Attach the Category attribute class to each property in the group. Set its value to UserAddress. Mark the property as public.
- D.** Attach the Description attribute class to each property in the group. Set each value to a description of the given property.
- E.** Attach the DefaultProperty attribute class to each property in the group. Set each value to a description of the given property.

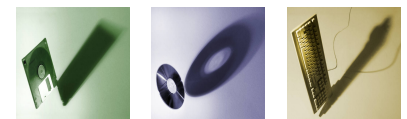
**Answer: C, D**



**Q2: You create a control named ContosoUI for a Web application. You need to add the control to the toolbox of Microsoft Visual Studio .NET. Which two actions should you perform? (Each correct answer presents part of the solution. Choose two.)**

- A.** Create the ContosoUI control as a Web Control Library.
- B.** Create the ContosoUI control as a Web user control.
- C.** Within the Visual Studio .NET toolbox, browse to and select ContosoUI.ascx.
- D.** Within the Visual Studio .NET toolbox, browse to and select ContosoUI.dll.

**Answer: A, D**



**Q3: You define a composite control to capture a user's date. You use following class declaration.**

Public class DateOfBirth : CompositeControl { }

**You need to ensure that the Web control supports templates. Which four code segments should use? (Select four. Each is a part of the solution.)**

List of Code Segments

```
private Label _prompt = new Label();
private TextBox _date = new TextBox();

private string _prompt = "Enter date of birth ";
private DateTime _date = DateTime();
private ITemplate _template = null;

[Bindable(true)]
public string Prompt {
    get {
        EnsureChildControls();
        return _prompt.Text;
    }
    set {
        EnsureChildControls();
        _prompt.Text = value;
    }
}

[Bindable(true)]
public string Date {
    get {
        EnsureChildControls();
        return _date.Text;
    }
    set {
        EnsureChildControls();
        _date.Text = value;
    }
}

[Bindable(true)]
public string Prompt {
    get {
        EnsureChildControls();
        return _prompt;
    }
    set {
        EnsureChildControls();
        _prompt = value;
    }
}

[Bindable(true)]
public DateTime Date {
    get {
        EnsureChildControls();
        return _date;
    }
    set {
        EnsureChildControls();
        _date = value;
    }
}
```

Place Code Segments here

Place first code segment here

Place second code segment here

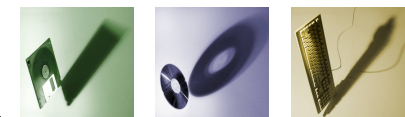
Place third code segment here

Place fourth code, if any, segment here

```
[Bindable(false)]
[PersistableMode(PersistableMode.InheritsProperty)]
[TemplateContainer(typeof(DateTime))]
public ITemplate Template {
    get {
        return _template;
    }
    set {
        _template = value;
    }
}
```

```
protected override void CreateChildControls() {
    if (_template != null) {
        Controls.Clear();
        _template.InstantiateIn(this);
    }
}
```

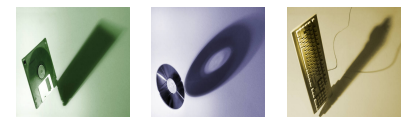
```
protected override void CreateChildControls() {
    this.Controls.Add(_prompt);
    this.Controls.Add(_date);
    base.CreateChildControls();
}
```



**Q4: You develop a Web control. The Web control consists of labels and associated text boxes. You need to ensure that the Web control has both toolbox and visual designer support. What should you do?**

- A.** Add a Web Control Library project to your solution. Define a class that inherits from CompositeControl.
- B.** Add a Windows Control Library project to your solution. Define a class that inherits from UserControl.
- C.** Add a Web User Control to your project. Define a class that inherits from UserControl.
- D.** Add a Mobile Web User Control to your project. Define a class that inherits from MobileUserControl.

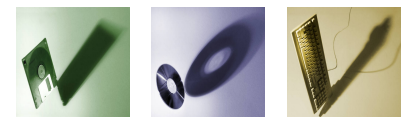
**Answer: A**



**Q5: You are developing a Web application to display products. Products are displayed on different pages on your Web site. You want to create a user control to manage the display of products. You need a default visual implementation of the UI of the user control. In addition, you need to provide developers with the flexibility to change the layout and controls of the UI. Which three actions should you perform? (Each correct answer presents part of the solution. Choose three.)**

- A.** Apply the `TemplateContainerAttribute` to a property of type `ITemplate`. Pass the type of the template's naming container as the argument to the attribute.
- B.** Apply the `TemplateContainerAttribute` to the user control's class declaration.
- C.** Implement a property of type `INamingContainer` in the user control's code-behind class.
- D.** Implement a property of type `ITemplate` in the user control's code-behind class.
- E.** Define a new class that inherits from the `ITemplate` interface. Implement the `InstantiateIn` method of the `ITemplate` interface.

**Answer: A, D, E**

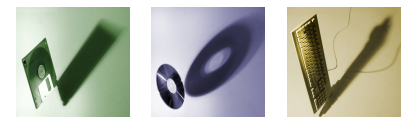




**Q6: You are creating a custom user control. The custom user control will be used on 10 Web Forms for an ASP.NET Web site that allows users to register and log on to a personalized experience. The custom user control uses two TextBox controls and two Button controls. You need to ensure that the controls are visible only when users are not logged on to the Web site. You also need to minimize the amount of effort in development and maintenance for the Web site. Which two actions should you perform? (Each correct answer presents part of the solution. Choose two.)**

- A.** Add the OnClick event handler for the Login button to the code used in the custom user control.
- B.** Add the OnClick event handler for the Login button to the code used in the Web Form where the control is added.
- C.** In the Page\_Load method of the Web Form, add a code segment to set the visibility of the TextBox and Button controls where the control is added.
- D.** In the Page\_Load method of the custom user control, add a code segment to set the visibility of the TextBox and Button controls.

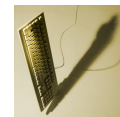
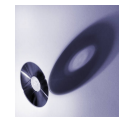
**Answer: A, D**



```

public class CreditCardDetails : CompositeControl
{
    private string _name = "";
    private ITemplate _template = null;
    [Bindable(true), Category("Data"), Description("User name on the credit card")]
    public string Name
    {
        get{
            EnsureChildControls();
            return _name;
        }
        set{
            EnsureChildControls();
            _name = value;
        }
    }
    //Other properties excluded
    [Browseable(false), PersistenceMode(PersistenceMode.InnerProperty),
    TemplateContainer(typeof(CreditCardDetails))]
    public ITemplate Template
    {
        get{
            return _template;
        }
        set{
            _template = value;
        }
    }
    protected override void CreateChildControls(){
        if(Template != null){
            Controls.Clear();
            _template.InstantiateIn(this);
        }
    }
}

```

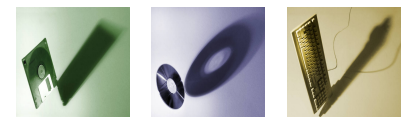


**Q7: You develop a Web control to manage credit card information. The Web control is shown in the exhibit. You register the control on the Web Form by using the following code segment.**

```
<%@ Register Assembly="CreditCardUserDetails"  
Namespace="CreditCardUserDetails" TagPrefix="cc1" %>
```

**You need to declare the control on the Web Form. Which code segment should you use?**

- A.** `<cc1:CreditCardDetails ID="CreditCardDetails1" runat="server" Name="test">  
</cc1:CreditCardDetails>  
<asp:TextBox ID="TxtName" runat="server" Text="<%=#CreditCardDetails1.Name%>">  
</asp:TextBox>`
- B.** `<cc1:CreditCardDetails ID="CreditCardDetails1" runat="server"  
Name="<%=#Container.Name%>">  
</cc1:CreditCardDetails>`
- C.** `<cc1:CreditCardDetails ID="CreditCardDetails1" runat="server">  
<Template>  
<asp:TextBox ID="TxtName" runat="server" Text="<%=#Container.Name%>">  
</asp:TextBox>  
</Template>  
</cc1:CreditCardDetails>`
- D.** `<cc1:CreditCardDetails ID="CreditCardDetails1" runat="server">  
<Template>  
<asp:TextBox ID="TxtName" runat="server" Text="<%=#Container.Template%>">  
</asp:TextBox>  
</Template>  
</cc1:CreditCardDetails>`

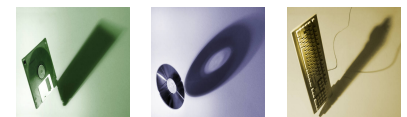


**Answer: C**

**Q8: You are developing a Web control. The Web control captures user address information in a Web application. You create a class named AddressControl that inherits from CompositeControl. This control consists of child controls. You need to ensure that the child controls are properly output to the browser. Developers using your control must be able to set the appropriate text for labels. In addition, they must be able to pull user address information from the associated text boxes during postback. What should you do?**

- A.** Override the EnsureChildControls method of the base class. Add the child controls to the base container.
- B.** Override the CreateControlCollection method of the base class. Add the child controls to the ControlCollection class.
- C.** Override the CreateChildControls method of the base class. Add the child controls to the base container.
- D.** Override the DataBindChildren method of the base class. Add the child controls to the ControlCollection class.

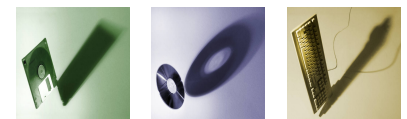
**Answer: C**



**Q9: You are creating a templated Web control for use in your Web application. You need to add the Web control to your Web application pages without compiling your control into a .dll file. What should you do?**

- A.** Ensure that the Web control inherits from the WebControl class.
- B.** Ensure that the Web control inherits from the Control class.
- C.** Ensure that the Web control inherits from the CompositeControl class.
- D.** Ensure that the Web control inherits from the UserControl class.

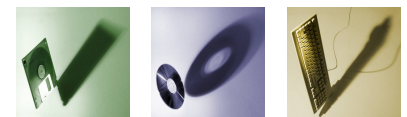
**Answer: D**



**Q10: You create a Web Form with several UI elements on it. During a code review, you realize that some of the UI elements can be grouped into user controls. You need to create a Web control to group the UI elements that do not require server-side processing. Doing so will enable you to programmatically add or remove the UI elements from the page. You want to maintain the UI elements' style properties. What should you do?**

- A.** Use `System.Web.UI.TemplateControl` to group the UI elements.
- B.** Use `System.Web.UI.HtmlControls.HtmlControl` to group the UI elements.
- C.** Use `System.Web.UI.LiteralControl` to group the UI elements.
- D.** Use `System.Web.UI.WebControls.Literal` to group the UI elements.

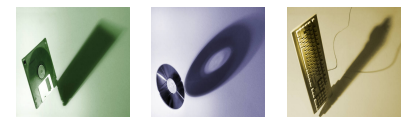
**Answer: C**



**Q11: You create a Web server control named ContosoControls. You add a Web custom control named ContosoMailer to it. You then distribute the Web Control Library files to your team. You need to provide your team with the correct procedure for adding the Web Control Library to the items in the toolbox of Microsoft Visual Studio .NET. Which procedure should you provide to the team?**

- A.** Within the toolbox, click Choose Items and then browse to and select the ContosoControls user control.
- B.** Within the toolbox, click Choose Items and then browse to and select the ContosoMailer user control.
- C.** Right-click Web Project, click Add Reference, and then browse to and select the ContosoControls.dll file.
- D.** Within the toolbox, click Choose Items and then browse to and select the ContosoControls.dll file.

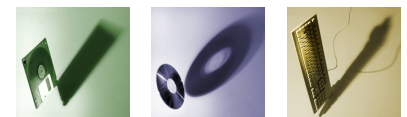
**Answer: D**



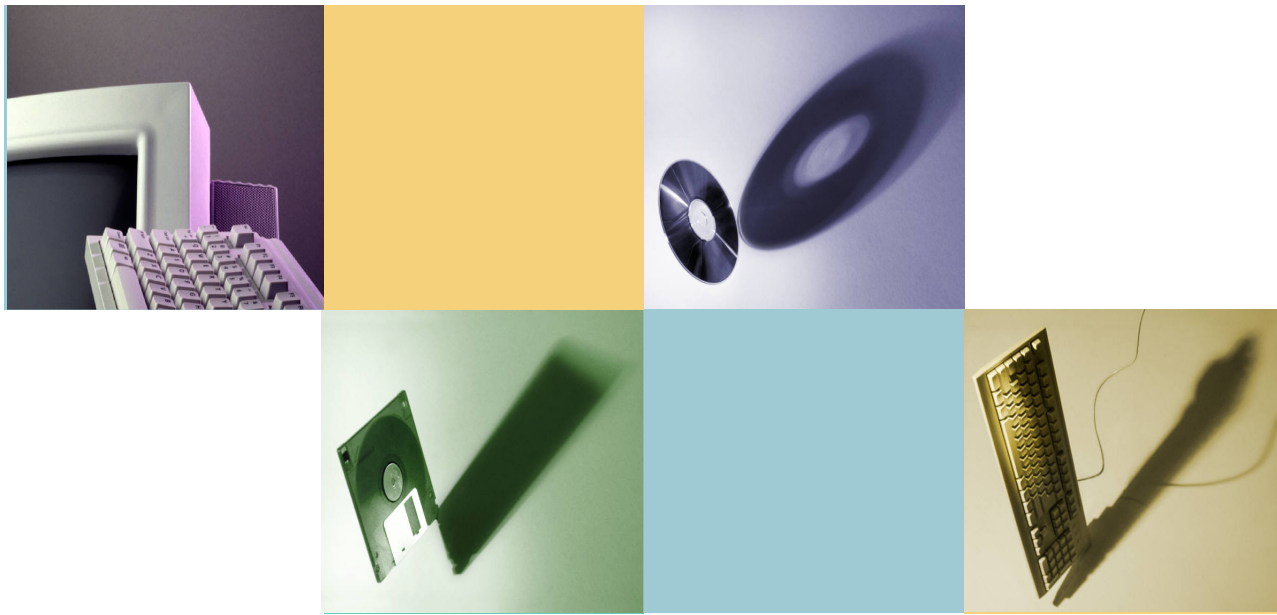
**Q12: You are creating a custom control. The UI of the control must contain several text boxes and two buttons. The control must be available in the global assembly cache for reuse across multiple Web applications. You need to achieve this functionality by using the minimum amount of code. What should you do?**

- A.** Create a control that derives from `System.Web.UI.Control`.
- B.** Create a control that derives from `System.Web.UI.WebControls.CompositeControl`.
- C.** Create a control that derives from `System.Web.UI.WebControls.WebControl`.
- D.** Create a control that derives from `System.Web.UI.UserControl`.

**Answer: B**





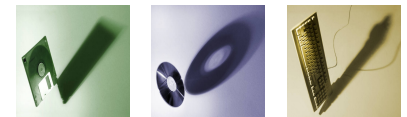


## Tracing, Configuring, and Deploying Applications

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# Course Outline

1. Creating and Programming a Web Application
2. Integrating Data in a Web Application by Using ADO.NET, XML, and Data-Bound Controls
3. Creating Custom Web Controls
4. Tracing, Configuring, and Deploying Applications
5. Customizing and Personalizing a Web Application
6. Implementing Authentication and Authorization
7. Creating ASP.NET Mobile Web Applications



**Q1: You create a Web site for a customer. You need to deploy the Web site to the customers server without any of the source files for the Web site. You do not want the customer to be able to update any of the static pages on the Web site. Which tool should you use?**

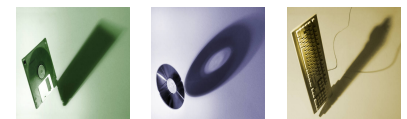
**A.** aspnet\_compiler.exe

**B.** InstallUtil.exe

**C.** CSC.exe

**D.** aspnet\_wp.exe

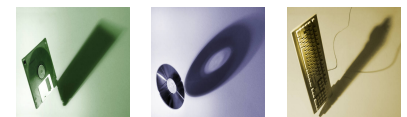
**Answer: A**



**Q2: Your team creates a Web site. The Web site needs to be deployed to a staging server for performance testing. You plan to make a number of performance enhancements and then retest. You need to compile and copy the Web site to the staging server. What should you do?**

- A.** Write a batch file that uses `aspnet_compiler.exe`.
- B.** Write a batch file that uses `InstallUtil.exe`.
- C.** Write a batch file that uses `Csc.exe`.
- D.** Write a batch file that uses `aspnet_wp.exe`.

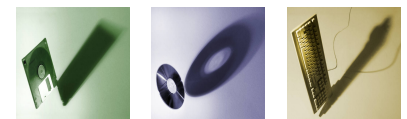
**Answer: A**



**Q3: You create a Web site that you must copy from a development server to a testing server, along with all source files. You do not have terminal access to the testing server. You need to create the virtual directory. Then you must copy the Web site to the virtual directory on the testing server without pre-compiling the site. What should you do?**

- A.** Use the Publish Web tool.
- B.** Use the Copy Web tool.
- C.** Use the command line to XCOPY the files.
- D.** Create a Web Setup project.

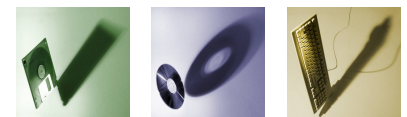
**Answer: B**



**Q4: You are deploying a Web site to a server managed by a hosting company. The only access you have to the server is through FTP. You need to pre-compile and deploy the Web site without its source files. What should you do?**

- A.** Use the Copy Web tool.
- B.** Use the Publish Web tool.
- C.** Use XCOPY.
- D.** Use the Web Setup project Installer.

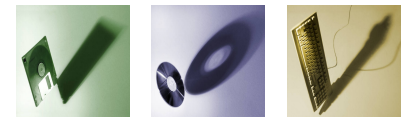
**Answer: B**



**Q5: You are working with a team of developers on a Web site. You copy the Web site from the staging server to work on it locally. While making changes, you create new C# source code files and delete old ones. You need to ensure that your changes propagate to the staging server without affecting any files that you have not modified. Which tool should you use?**

- A.** XCOPY
- B.** the Copy Web tool
- C.** the Publish Web tool
- D.** a Web Setup project

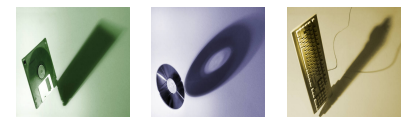
**Answer: B**



**Q6: You copy a Web site from a development site to a staging site. You do not have the Web site in a source control application. Another developer begins to fix bugs on the staging site while the development team adds features on the development site. You need to synchronize the development site and the staging site and copy the latest version of each file to both locations. What should you do?**

- A.** Use the Copy Web tool.
- B.** Create a Web Setup project.
- C.** Use the Publish Web tool.
- D.** Use the command line to XCOPY the files.

**Answer: A**

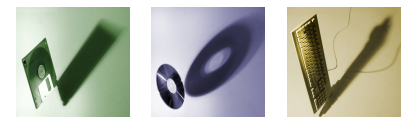




**Q7: Every morning, you inspect your company's development and staging servers. You do this to ensure that the servers have the same versions of all files in your Web application. For security reasons, you can only access the staging server through FTP. You need to synchronize files from the staging server so that the staging server matches the development server. You want to achieve this goal by using the minimum amount of administrative effort. Which tool should you use?**

- A.** FTP
- B.** XCOPY
- C.** the Publish Web tool
- D.** the Copy Web tool

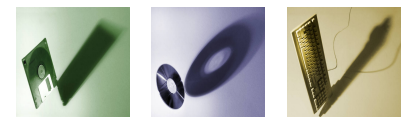
**Answer: D**

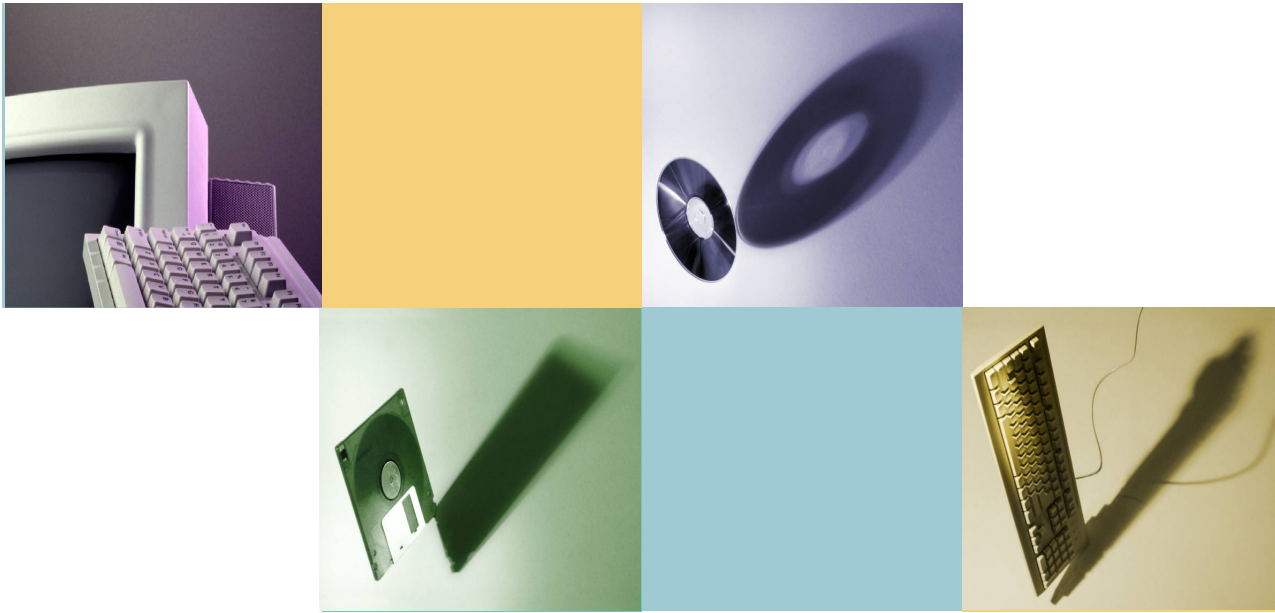


**Q8: You create a Web application. You need to turn on Tracing for a page that is not performing well. You must store the trace information in a database for reporting and trending. Which two actions should you perform? (Each correct answer presents part of the solution. Choose two.)**

- A.** Add a `TraceContextEventHandler` to the `Trace.TraceFinished` event to add the trace records into the database.
- B.** Add a `system.diagnostics` section to the `Web.config` file. Then add a listener to the new section.
- C.** Use the `System.Diagnostics.Trace` object to connect to a database. Then insert the trace records.
- D.** In the `Page_Load` for the page, place the `Trace.Write` call into a SQL `INSERT` statement.

**Answer: A, B**



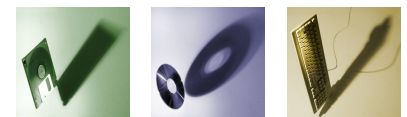


## Customizing and Personalizing a Web Application

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# Course Outline

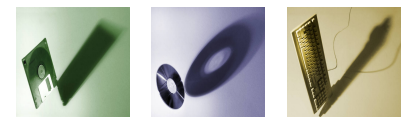
1. Creating and Programming a Web Application
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7. Creating ASP.NET Mobile Web Applications



**Q1: You create Web sites for your company. You apply a consistent design to the pages and controls of the Web sites. You need to make style changes to all of the Web sites on the Web server. You want to achieve this goal without having to edit the individual pages on each Web site. Which two actions should you perform? (Each correct answer presents part of the solution. Choose two.)**

- A.** Place a theme in the App\_Themes directory under the application root directory.
- B.** Place a theme under an ASP.NETClientFiles folder under the ASP.NET installation directory.
- C.** Assign a theme by setting the `<%@ Page Theme="..." %>` directive to the name of the application theme.
- D.** Assign a theme by specifying the `<pages theme="..."/>` section in the Web.config file.

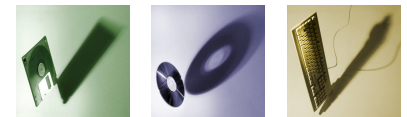
**Answer: B, D**



**Q2: You create a Web site that stores users' active themes in user profile objects. You need to apply users' preferred themes when they log on to the Web site. What should you do?**

- A.** In the InitComplete event handler, set the Theme property of the Page object based on the user profile.
- B.** In the PreLoad event handler, set the Theme property of the Page object based on the user profile.
- C.** In the OnLoad event handler, set the Theme property of the Page object based on the user profile.
- D.** In the PreInit event handler, set the Theme property of the Page object based on the user profile.

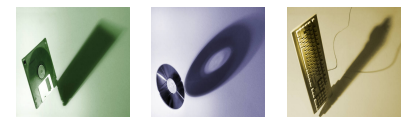
**Answer: D**



**Q3: Your Web site uses custom Themes. Your Web site must support additional Themes based on the user's company name. The company name is set when a user logs on to the Web site. The company's Theme name is stored in a variable named ThemeName. You need to use this variable to dynamically set the Web site's Theme. What should you do?**

- A.** Add the following code segment to the markup source of each page on the Web sit.  
`<%@ Page Theme="ThemeName" ... %>`
- B.** Add the following code segment to the Load event of each page on the Web site.  
`Page.Theme = ThemeName;`
- C.** Add the following code segment to the PreInit event of each page on the Web site.  
`Page.Theme = ThemeName;`
- D.** Add the following code segment to the Web site's configuration file.  
`<pages theme="ThemeName" />`

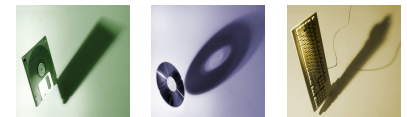
**Answer: C**



**Q4: You develop a Web application. Your application contains two settings in the Web.config file. You deploy your application to production. You need to modify the application settings in the production environment without manually editing the XML markup in the Web.config file. What should you do?**

- A.** Modify the application settings by using the Web Site Administration Tool.
- B.** Modify the application settings by using the Visual Studio property page editor for the project.
- C.** Modify the application settings by using the resource editor.
- D.** Modify the application settings by using the Visual Studio start options editor.

**Answer: A**

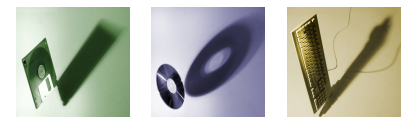


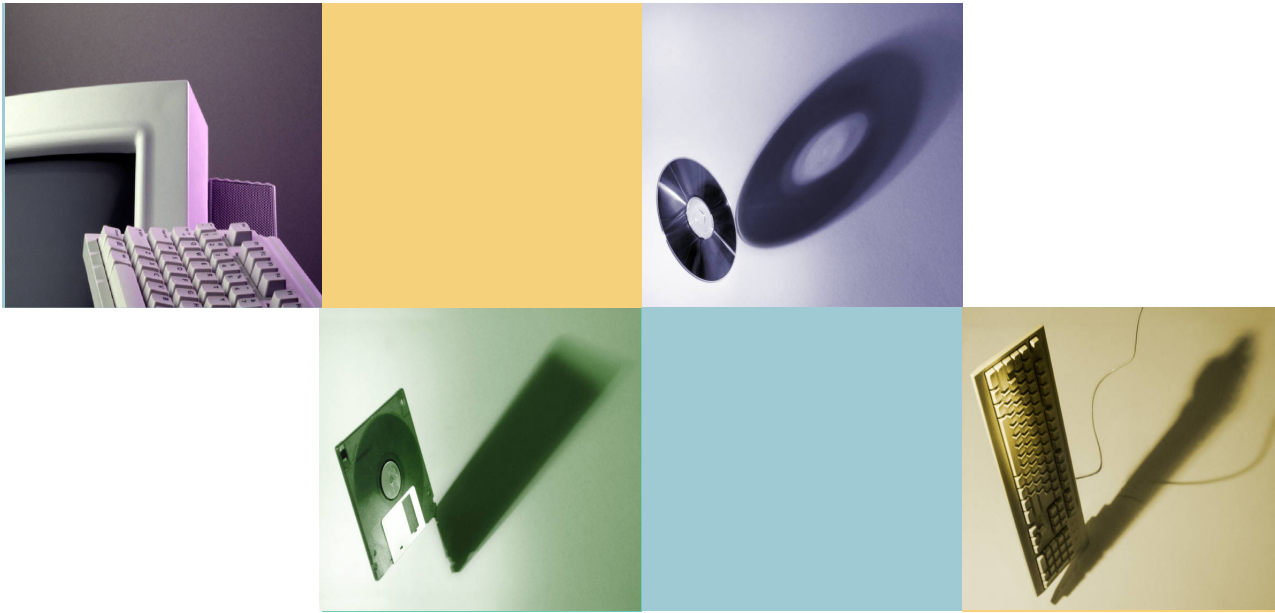


**Q5: You create a Web site. The Web site has many predefined roles and associated users that will be used for security purposes. You need to manage these roles and user accounts. Which tool should you use?**

- A.** the Microsoft .NET Framework Configuration tool
- B.** the Code Access Security Policy tool
- C.** the ASP.NET IIS Registration tool
- D.** the Web Site Administration Tool

**Answer: D**



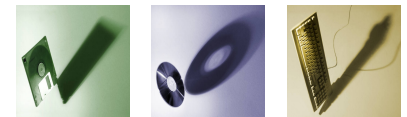


## Implementing Authentication and Authorization

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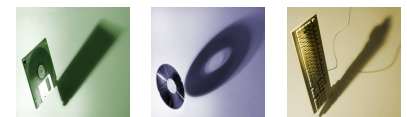
**Q1: You are developing a Web application. The Web application restricts access to an administrative page. The Web application uses the following code segment to protect the page.**

```
if (Page.User.Identity.Name != @"CONTOSO\Administrator") {  
    Response.Redirect("login.aspx");  
}
```

**You are logged on as Administrator. When you display the page, you are redirected to Login.aspx. You discover that the User.Identity.Name property is not being correctly populated. You need to ensure that you can access the page when you are logged on as Administrator. Which two actions should you perform? (Each correct answer presents part of the solution. Choose two.)**

- A.** In the Web.config file, enable impersonation.
- B.** In IIS, enable anonymous access.
- C.** In IIS, disable anonymous access.
- D.** In the Web.config file, set the authentication mode to Windows.

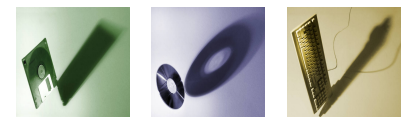
**Answer: C, D**



**Q2: You are developing a Web application. Your code restricts access to some pages based on the users credentials. You need to configure IIS to supply the user's Windows credentials to your Web application. These credentials must be encrypted. What should you do?**

- A.** Enable Anonymous access.  
Enable Integrated Windows authentication.
- B.** Enable Anonymous access.  
Enable Basic authentication.
- C.** Disable Anonymous access.  
Enable Integrated Windows authentication.
- D.** Disable Anonymous access.  
Enable Basic authentication.

**Answer: C**



**Q3: You are developing a Web application. The Web application uses the following code segment to connect to a database.**

```
conn.ConnectionString = "Server=(local);Initial Catalog=NorthWind;Integrated  
Security=SSPI;";
```

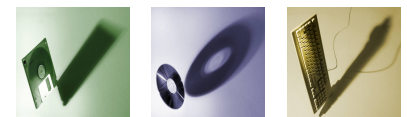
**You create logins in Microsoft SQL Server for each user of the Web application. When you run the Web application, you receive the following error message.**

"Login failed for user 'COMPUTERNAME\ASPNET'."

**You need to resolve this error. Which two actions should you perform? (Each correct answer presents part of the solution. Choose two.)**

- A. In IIS, deny anonymous access.
- B. In the Web.config file, enable impersonation.
- C. In IIS, allow anonymous access.
- D. In the Web.config file, disable impersonation.
- E. In the Web.config file, set the authentication mode to Windows.

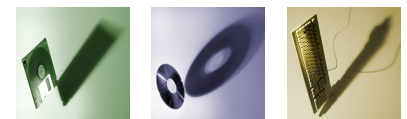
**Answer: A, B**



**Q4: You are creating a Web application that will run on an intranet. The Web application reads comma-delimited text files. The text files reside in a subdirectory below the Web application's root directory. Users must not be able to navigate directly to these files in a Web browser unless they are members of the Accounting role. You need to write an ASP.NET HTTP handler that will use the FileAuthorizationModule class. Which form of authentication should you use?**

- A.** Anonymous
- B.** Certificate
- C.** Forms
- D.** Microsoft Windows Integrated Security

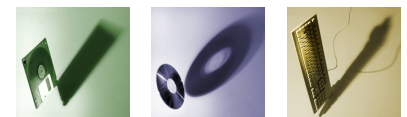
**Answer: D**



**Q5: You create a Web site with membership and personalization enabled. You must use an existing CRM database for storing the membership information. You need to implement the Membership Provider. What should you do?**

- A.** Modify the connection string in the Web.config file to connect to the CRM database.
- B.** Add new a SqlMembershipProvider to the Web.config file.
- C.** Create a custom Membership Provider inheriting from MembershipProvider.
- D.** Create a custom MembershipUser inheriting from MembershipUser.

**Answer: C**





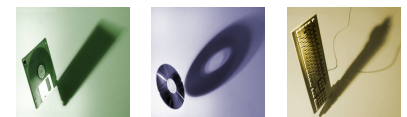
**Q6: You create a Web Form. The Web Form allows users to recover their passwords. You add a PasswordRecovery server control by using the following code segment.**

```
<asp>PasswordRecovery runat="server"/>
```

**You need to ensure that the server control generates a new password and sends it by e-mail to the users e-mail address. Which two actions should you perform? (Each correct answer presents part of the solution. Choose two.)**

- A.** Create a valid <smtp> definition in the Web.config file.
- B.** Set the passwordFormat attribute of the configured membership provider to Encrypted.
- C.** Ensure that the enablePasswordRetrieval attribute of the configured membership provider is set to False.
- D.** Ensure that the enablePasswordRetrieval attribute of the configured membership provider is set to True.

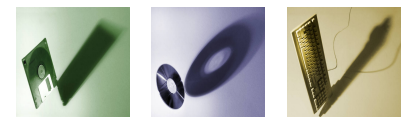
**Answer: A, C**



**Q7: You create a Web site that is for members only. The Web site allows members to create lists of users that have access to information about member profiles. The name of the list is stored in the listName variable. The user name of the user to whom access is given is stored in the username variable. You need to enable members to manage their lists of users. Which code segment should you use?**

- A.** Roles.CreateRole(listName);  
User.InInRole(listName);
- B.** Roles.CreateRole(listName);  
Roles.AddUserToRole(userName, listName);
- C.** Roles.RoleExists(listName);  
Roles.AddUserToRole(userName, listName);
- D.** Roles.RoleExists(listName);  
User.InInRole(listName);

**Answer: B**



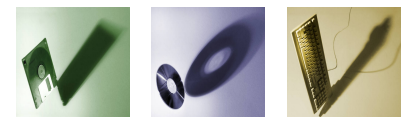
**Q8: You create a Web Form that allows users to create a new account. You add a CreateUserWizard control by using the following code segment.**

```
<asp:CreateUserWizard id="Wizard1" runat="server"/>
```

**You need to ensure that the wizard automatically sends an e-mail message to users when they finish creating their accounts. You add a valid <smtp> element to the Web.config file. Which code segment should you add to the Page\_Load event?**

- A. Wizard1.RequireEmail = true;
- B. Wizard1.Email = "user@address.com";
- C. Wizard1.MailDefinition.From = "registration@mysite.com";
- D. SmtMail.SmtpServer = "mail.contoso.com";

**Answer: C**



**Q9: You deploy your companys Internet Web site. You need to deny anonymous access to the Web site, allowing only authenticated users. Which code segment should you use?**

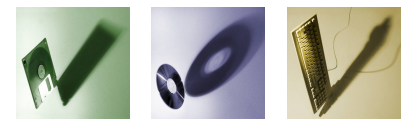
**A.** `<authorization>  
 <allow users="?"/>  
</authorization>`

**B.** `<authorization>  
 <deny users="?"/>  
</authorization>`

**C.** `<authorization>  
 <deny users="*" />  
</authorization>`

**D.** `<authorization>  
 <allow users="*" />  
</authorization>`

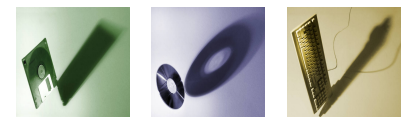
**Answer: B**



**Q10: You create an intranet Web site for management of project documents. You need to enable all users to browse documents on the site. Only members of the administrators group must be able to upload files. Which code segment of the Web.config file should you use?**

- A.** `<allow verbs="GET" users="*" />`  
`<deny verbs="POST" users="*" />`  
`<allow verbs="POST" roles="Administrators" />`
- B.** `<allow roles="Administrators" />`  
`<deny users="*" />`
- C.** `<allow users="Administrators" />`  
`<allow users="*" />`
- D.** `<allow verbs="POST" roles="Administrators" />`  
`<deny verbs="POST" users="*" />`  
`<allow verbs="GET" users="*" />`

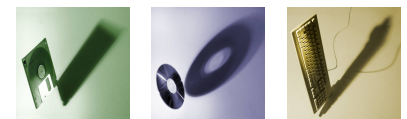
**Answer: D**



**Q11: You have a Web application that is configured for personalization. You need to access personalization data from one of the pages of the Web application by using the minimum amount of administrative effort. What should you do?**

- A.** Access the personalization data from the Session property of the HttpContext object.
- B.** Access the personalization data from the Application property of the HttpContext object.
- C.** Access the personalization data from the Cache property of the HttpContext object.
- D.** Access the personalization data from the Profile property of the HttpContext object.

**Answer: D**



**Q12: You develop a Web application that writes data to a file on a server. You restrict access to the file to specific Windows users. The Web application runs as *CONTOSO\ASPNET*. You deny anonymous access to the application in IIS. You add the following XML segment in the Web.config file.**

```
<authentication mode="Windows"/>
```

**You need to ensure that the application meets the following requirements:**

1. It must impersonate the user when it writes data to the file
2. It must run as *CONTOSO\ASPNET* when a user does not access the file.

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

**A.** Use the following XML segment in the Web.config file.

```
<identity impersonate="false"/>
```

**B.** Use the following XML segment in the Web.config file.

```
<identity impersonate="true"/>
```

**C.** Use the following code segment to access the file.

```
WindowsPrincipal wp = (WindowsPrincipal)HttpContext.Current.User;
```

```
WindowsIdentity wi = (WindowsIdentity)wp.Identity;
```

```
WindowsImpersonationContext wic = wi.Impersonate();
```

```
// Access The file here
```

```
wic.Undo();
```

**D.** Use the following code segment to access the file.

```
WindowsIdentity wi = WindowsIdentity.GetCurrent();
```

```
WindowsImpersonationContext wic = WindowsIdentity.Impersonate(wi.Token);
```

```
// Access the file here
```

```
wic.Undo();
```



**Answer: A, C**

**Q13: You create a Web Form. The Web Form allows users to log on to a Web site. You implement the login logic using a Login control named Login1. The membership data for the application is stored in a SQL Express database in the App\_Data directory.**

**You need to configure your application so that the membership data is stored in a local Microsoft SQL Server database.**

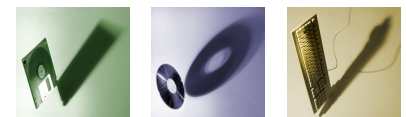
**You add the following code segment to the Web.config file.**

```
<membership defaultProvider="MySqlProvider">
<providers>
<add name="MySqlProvider"
type="System.Web.Security.SqlMembershipProvider, System.Web,
Version=2.0.0.0, Culture=neutral, PublicKeyToken=b03f5f7f11d50a3a"
connectionStringName="MySqlProviderConnection"/>
</providers>
</membership>
```

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

- A.** Use Aspnet\_regsql.exe to create the Microsoft SQL Server database.
- B.** Set Login1's MembershipProvider property to MySqlProviderConnection.
- C.** Add the following code segment to the Web.config file.

```
<connectionStrings>
<add name="MySqlProviderConnection" connectionString="valid connection string"/>
</connectionStrings>
```





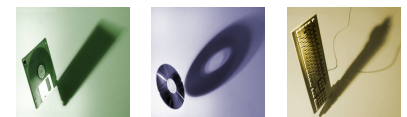
**D.** Add the following code segment to the Web.config file.

```
<appSettings>  
<add key="MySQLProviderConnection" value="valid connection string" />  
</appSettings>
```

**E.** In the ASP.NET configuration settings within IIS, ensure that Role Management Enabled is selected.

**F.** Use the Web Site Administration Tool to select AspNetSqlMembershipProvider as the membership provider for your application.

**Answer: B, D**



**Q14: You are working on an existing Web site. You need to secure the Web site by redirecting all users to the logon page, Login.aspx. After logging on, users must be sent back to the page that they originally requested. Which code segment should you use?**

**A.** In the Web.config file:

```
<authorization>
  <deny users="?" />
</authorization>
```

On each page in the Web site:

```
void Page_Load(object sender, EventArgs E){
FormsAuthentication.Initialize();
//Rest of the Page_Load code goes here
}
```

**B.** On each page in the Web site:

```
void Page_Load(object sender, EventArgs E){
FormsAuthentication.RedirectToLoginPage("login.aspx");
//Rest of the Page_Load code goes here }
```

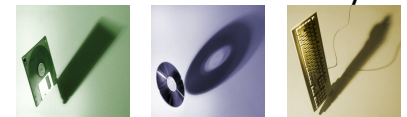
**C.** On each page in the Web site:

```
void Page_Load(object sender, EventArgs E){
Response.Redirect("login.aspx");
//Rest of the Page_Load code goes here }
```

**D.** In the Web.config file:

```
<authentication mode="Forms">
<forms name=".ASPXUSERDEMO" loginUrl="login.aspx" protection="All"timeout="60" />
</authentication>
```

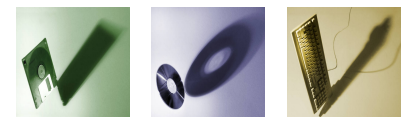
**Answer: D**



**Q15: You are using the ASP.NET membership APIs to manage user accounts for a Web site. The Web.config file contains the definition for the membership provider. After modifying the Web.config file to enable password recovery, you create a PasswordReset.aspx file. You need to enable users to reset their passwords online. The new passwords must be sent to them by e-mail after they have logged on through the Login.aspx page. In addition, users must be required to answer their secret questions before resetting their passwords. Which code logic should you use?**

- A.** Add a PasswordRecovery element to the PasswordReset.aspx file and configure it.
- B.** Modify the Page\_Load to set the Membership.EnablePasswordReset to True in the PasswordReset.aspx file.
- C.** Add a ChangePassword element to the PasswordReset.aspx file and configure it.
- D.** Modify the Login.aspx form to include a Required Field validator on the secret question answer text box. Then redirect users to the PasswordReset.aspx file.

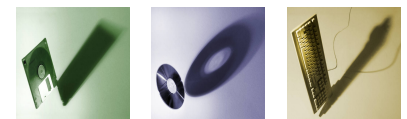
**Answer: A**

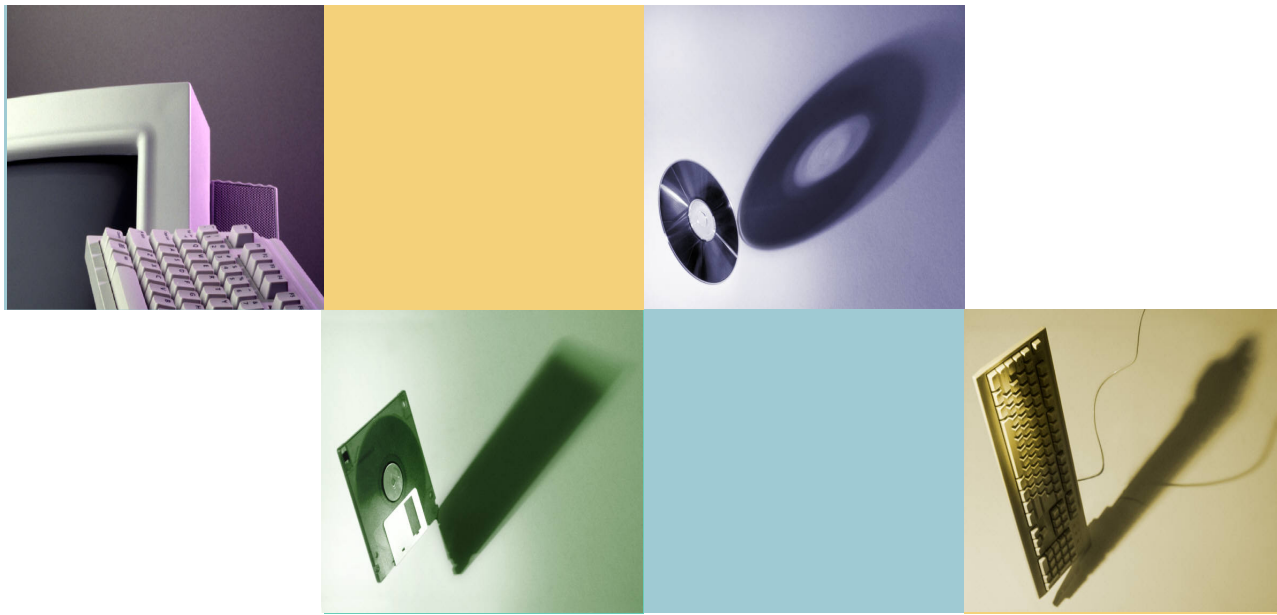


**Q16: You create a Web site that is for members only. The behavior of the Web site changes according to the role of the user. The Web site uses the ASP.NET Membership control for creation of user accounts. You need to find out whether a user is a member of a particular role. What should you do?**

- A.** Pass the user names and passwords to Membership.ValidateUser.
- B.** Pass the role names to User.IsInRole.
- C.** Pass the role names to Roles.RoleExists.
- D.** Pass the user names to Membership.GetUser.

**Answer: B**



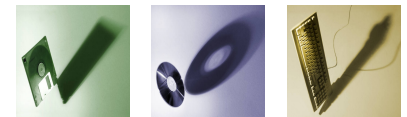


## Creating ASP.NET Mobile Web Applications

For internal use only.

# Course Outline

1. Creating and Programming a Web Application
2. Integrating Data in a Web Application by Using ADO.NET, XML, and Data-Bound Controls
3. Creating Custom Web Controls
4. Tracing, Configuring, and Deploying Applications
5. Customizing and Personalizing a Web Application
6. Implementing Authentication and Authorization
7. **Creating ASP.NET Mobile Web Applications**



**Q1: You are creating a mobile Web Form that displays your company's logo. The Web Form contains the following image control.**

```
<mobile:Image ID="ImageLogo" runat=server ImageURL="logo-bw.gif">
</mobile:Image>
```

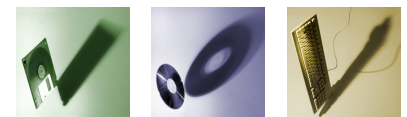
**You need to display the logo in black and white on devices that do not support color. In addition, you need to display the logo in color on devices that support color. Which two actions should you perform? (Each correct answer presents part of the solution. Choose two.)**

- A.** Add a method to the code-behind file named `isColor`. Ensure that it returns a Boolean value and takes an instance of the `MobileCapabilities` class and a string.
- B.** Add a method to the code-behind file named `isColor`. Ensure that it uses the `MobileCapabilities` class and returns a string indicating the URL of the image to display.
- C.** Add the following code segment between your image control definition tags.  

```
<DeviceSpecific> <Choice Filter="isColor" ImageURL="logo-color.gif" />
</DeviceSpecific>
```
- D.** Add the following node to the `deviceFilters` element within the `Web.config` file.  

```
<filter name="isColor" compare="IsColor" argument="true" />
```

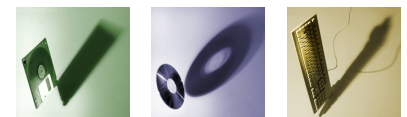
**Answer: A, C**



**Q2: You create a Web Form. You need to add controls that use adaptive rendering to display content. The type of content rendered must depend on the device that is requesting the page. What are two possible ways to achieve this goal? (Each correct answer presents a complete solution. Choose two.)**

- A.** Add custom controls that emit XHTML to the Web Form.
- B.** Add custom controls that emit WML to the Web Form.
- C.** Add mobile controls to the Web Form.
- D.** Add Web server controls to the Web Form.

**Answer: C, D**

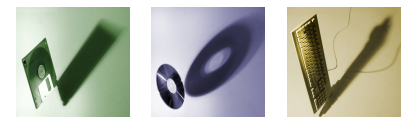




**Q3: You create a mobile Web application. You need to use a Command control to post user input from the UI elements back to the server. What are two possible ways to achieve this goal? (Each correct answer presents a complete solution. Choose two.)**

- A.** Place the Command control within an instance of the System.Web.UI.MobileControls.SelectionList control.
- B.** Place the Command control within an instance of the System.Web.UI.MobileControls.ObjectList control.
- C.** Place the Command control within an instance of the System.Web.UI.MobileControls.Form control.
- D.** Place the Command control within an instance of the System.Web.UI.MobileControls.Panel control.

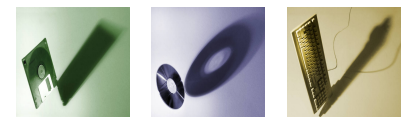
**Answer: C, D**



**Q4: You create a server control that inherits from WebControl. You need to enable the server control to emit markup for a new kind of mobile device. You must not alter the code in the server controls. Which two actions should you perform? (Each correct answer presents part of the solution. Choose two)**

- A.** Create a class that inherits HtmlTextWriter and that can emit the new markup.
- B.** Create a class that inherits StreamWriter and that can emit the new markup.
- C.** Reference the class in the <capabilities> element of the new device's browser definition file.
- D.** Reference the class in the <controlAdapters> element of the new device's browser definition file.

**Answer: A, D**



**Q5: You are creating a mobile Web Form that dynamically displays news items. You want to display news items by using an instance of a mobile TextView control named TextViewNews. You need to configure the Web Form that contains TextViewNews. The Web Form must enable pagination in case a users device does not display the full text of a news item. Which code segment should you use?**

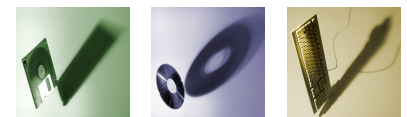
**A.** PagerStyle ps = new PagerStyle();  
ps.NextPageText = "more>";  
ps.PreviousPageText = "<back";  
FormNews.Paginate = true;

**B.** FormNews.PagerStyle.NextPageText = "more >";  
FormNews.PagerStyle.PreviousPageText = "< back";  
TextViewNews.PaginateRecursive(new ControlPager(FormNews, 1000));

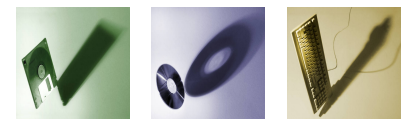
**C.** FormNews.PagerStyle.NextPageText = "more >";  
FormNews.PagerStyle.PreviousPageText = "< back";  
FormNews.PaginateRecursive(new ControlPager(FormNews, 1000));

**D.** FormNews.PagerStyle.NextPageText = "more >";  
FormNews.PagerStyle.PreviousPageText = "< back";  
FormNews.Paginate = true;

**Answer: D**



# Tips!

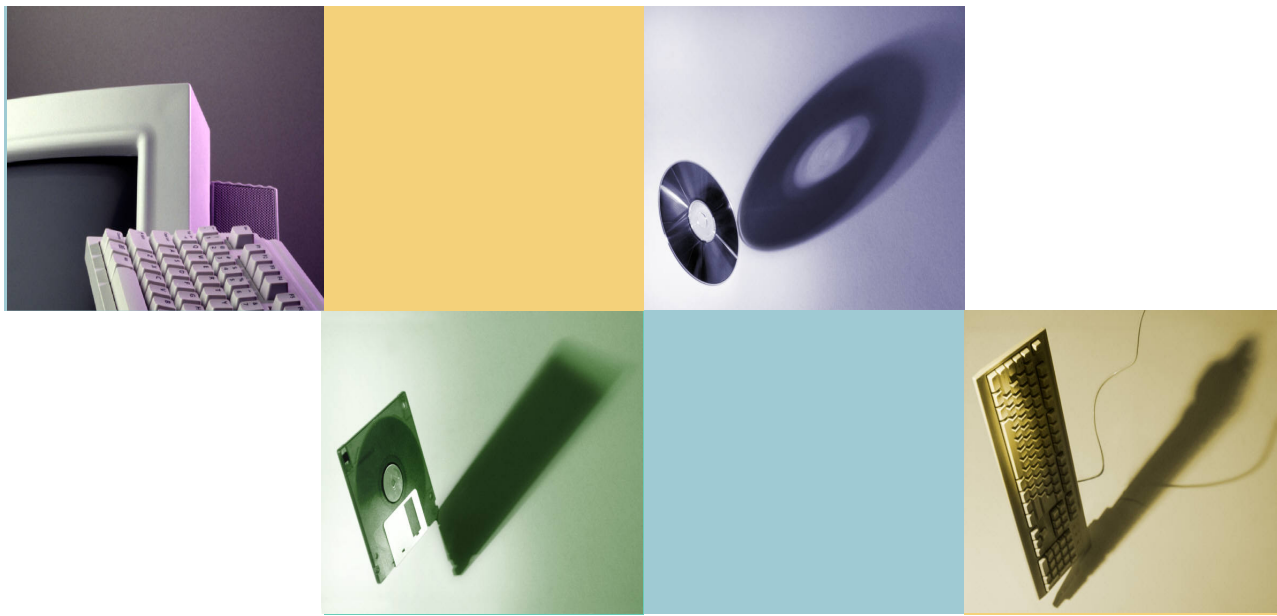


# Review



# Questions





THE END

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