

# WEB TECHNOLOGY

## UNIT 1

### Multiple Choice Questions:

1. IIS Stands for-  
A. Index Information Service  
**B. Internet Information Service**  
C. Internet Interface Service  
D. Information Internet Service
2. ASP.Net helps us to build \_\_\_\_  
**A. Dynamic websites**  
B. Static websites  
C. Web servers  
D. Web services
3. \_\_\_\_\_ are customized control that provides high-level functionality.  
A. Data Control  
B. Validation Control  
**C. Rich Web Control**  
D. Standard control
4. The web forms are web pages that serve as the user interface for a \_\_\_\_  
**A. Web application**  
B. Web Server  
C. Web Page  
D. Web design
5. Standard HTML controls are called as \_\_\_\_  
A. Data Control  
B. HTML Control  
C. Server Control  
**D. Client Control**
6. If we want to add graphics using asp.net which of the following web control will you use?  
A. Link Button  
**B. AdRotator.**  
C. Grid View  
D. Layout
7. Which protocol is used for requesting a web page in ASP.NET from the Web Server?  
A. **HTTP**  
B. TCP  
C. SMTP  
D. None of the above
8. What is the fully qualified name of the base class of all server controls?  
**A. System.Web.UI.Control.**  
B. System.Web.UI  
C. System.Control  
D. All of the above
9. Which attribute is necessary for HTML control to work as a HTML server control?  
**A. runat=" server"**  
B. runat=" web-server"  
C. ID=" server"  
D. ID=" web- server"
10. Which control can be used to update only the portion of the web page?  
**A. UpdatePanel.**  
B. ScriptManager  
C. AsyncPostBackTrigger  
D. None of the above.
11. \_\_\_\_\_ event is raised on the server when the checkbox is checked or unchecked.  
A. Checkbox Changed  
B. Textbox Changed  
C. Changed Checked  
**D. Checked Changed**
12. Which property enables you to post the form containing the textbox back to the server automatically when the content of the Textbox changed?  
A. Enabled  
**B. AutoPostBack**  
C. Text Mode  
D. Visible

13. If you want to validate the email addresses, Social Security numbers, phone numbers, and dates types of data, which validation control will be used?

- A. **RegularExpressionValidator**
- B. CompareValidator
- C. RequiredFieldValidator
- D. None of the above

14. ASP.NET Validation Control works at \_\_\_\_\_

- A. Client side only.
- B. Server side only.
- C. **Both Client Side and Server Side**
- D. None of the above.

15. Which validation control in ASP.NET can be used to determine if the data is entered into a TextBox control is of type Currency?

- A. ValidationSummary
- B. **CompareValidator**
- C. RequiredFieldValidator
- D. None of the above.

16. What is the mandatory property for all validation controls?

- A. **ControlToValidate..**
- B. Message
- C. EnableClientScript
- D. EnableServerScript

17. Data control is used to display data from \_\_\_\_\_

- a. Data Grid
- b. Data Sheet
- c. Data List
- d. **Data Source**

18. Client-side validation is turned on by default. If you want that particular validation control should not validate at the client side, what will you do?

- A. **Set the EnableClientScript property to false**
- B. Set the validate property to false
- C. Set the EnableClientScript property to true
- D. Set the Page. Invalid property to false.

19. Which of the following validation control is used to ensure that a user does not skip a form entity field?

- A. CompareValidator
- B. **RequiredFieldValidator**
- C. RangeValidator
- D. RegularExpressionValidator

20. Which type of validation is used to check and confirm password in a login form?

- A. CustomValidator
- B. RangeValidator
- C. **Compare Validator**
- D. RequiredFieldValidator

21. Which type of validation is used to ensure that the value entered by an user is within the specific range?

- a. CustomValidator
- b. ValidationSummary
- c. **RangeValidator**
- d. None of the above

22. Which part of the VB IDE is used to select different controls to design the form-

- A. Solution Explorer
- B. Property window
- C. Tool bar
- D. **Tool Box**

23. The first event triggers in an aspx page is.
- Page\_Init()..**
  - Page\_Load()
  - Page\_click()
  - page\_start()
24. What class does the ASP.NET Web Form class inherit from by default?
- System.Web.UI.Page**
  - System.Web.UI.Form
  - System.Web.GUI.Page
  - System.Web.Form

### Long Answer Questions:

1. Write the difference between Server-side scripting and Client-side scripting?

Client-side scripting	Server-side scripting
Source code is visible to the user.	Source code is not visible to the user because its output of server-sideside is an HTML page.
Its main function is to provide the requested output to the end user.	Its primary function is to manipulate and provide access to the respective database as per the request.
It usually depends on the browser and its version.	In this any server-side technology can be used and it does not depend on the client.
It runs on the user's computer.	It runs on the webserver.
There are many advantages linked with this like faster. response times, a more interactive application.	The primary advantage is its ability to highly customize, response requirements, access rights based on user.
It does not provide security for data.	It provides more security for data.
It is a technique used in web development in which scripts run on the client's browser.	It is a technique that uses scripts on the webserver to produce a response that is customized for each client's request.
HTML, CSS, and javascript are used.	PHP, Python, Java, Ruby are used.
No need of interaction with the server.	It is all about interacting with the servers.
It reduces load on processing unit of the server.	It surge the processing load on the server.

2. What is server control? Explain with an example.

- Server controls have the capability to be processed and manipulated at server machine rather than a client machine. Server controls provide .NET native server-side programming support.
- Generally, you want to use server controls whenever possible. They are object- oriented, consistent in use, and support events and methods

**Example** ClickTime.aspx

```
<script runat="server">
```

```

protected void Button1_Click(object Source, EventArgs e)
{
    DateTime currDate = new DateTime();
    currDate = DateTime.Now; myDateLabel.Text = currDate.ToString();
}
</script>
<html >
<head>
<title>Date and Time</title>
</head>
<body>
<h3 align="center"> The time on server is:

</h3>
<form runat="server">
<center>
<asp:Label id="myDateLabel" runat="server" />
<br /><br />
<asp:Button id="Button1" runat="server" Text="Update" onclick="Button1_Click" />
</center>
</form>
</body>
</html>

```

When you run this program and click the button; this program will always show you the time of the machine where the website is hosted (i.e. server machine); because all the processing is being done on the server machine by the C#.

### 3. How to add controls at run-time? Explain.

You can also programmatically add a control at run time. The following code to demonstrate creates a textbox using programmatically.

```

        TextBox txt = new TextBox();
        txt.Text = "";
        txt.ID = "que1";
        pnlQuestions.Controls.Add(txt);

```

Every control has specific properties and methods. You can set control properties to modify the appearance or behavior of controls. For example, you can set the font, color, and size of the control. You can use control methods to perform a specific task, such as moving control. You can set control properties at design times by using the Properties window or at run time by using the code. Every control has a property called ID that is used for the unique identification of the control. You can set the property of a control at run time by using the following syntax:

```
ControlID.PropertyName=Value
```

In this syntax:

- ControlID represents the ID property of the control.
- PropertyName represents the control property.
- Value represents the value assigned to PropertyName, which is a control's property.

#### 4. What are the steps required to install IIS Server?

Steps to follow while installing the IIS server in Windows operating system.

1. On the Start page, click the Control Panel tile.
2. In Control Panel, click Programs, and then click Turn Windows features on or off.
3. In the Windows Features dialog box, click Internet Information Services to install the default features.
4. Expand the Application Development Features node and click ASP.NET 4.5 to add the features that support ASP.NET. (If you installed .NET 3.5, select ASP.NET 3.5 also.)

The following additional features are automatically selected:

- .NET Extensibility 4.5
- ISAPI Extensions
- ISAPI Filters
- .NET Extensibility 3.5 (If ASP.NET 3.5 was selected)

5. Click OK to close the Windows Features dialog box.

6. To verify that IIS installed successfully, type the following into a web browser:

`http://localhost`

The default IIS Welcome page is displayed.

#### 5. Explain TextBox Control with syntax and examples.

The TextBox Web Server control is used to accept input from the user. They appear like a box and allow the user to enter some text, like, username, password, etc.

Here's an example:

```
<asp:TextBoxID="TextBox1" runat="server"></asp:TextBox>
```

The TextBox control can be used to display three different types of input fields depending on the value of its **TextMode** property. The **TextMode** property accepts the following three values:

- **SingleLine**—Displays a single-line input field.
- **MultiLine**—Displays a multi-line input field.
- **Password**—Displays a single-line input field in which the text is hidden.

You can use the following properties to control the rendering characteristics of the TextBox control (this is not a complete list):

- **AutoPostBack**—Enables you to post the form containing the TextBox back to the server automatically when the contents of the TextBox is changed.
- **Columns**—Enables you to specify the number of columns to display.
- **Enabled**—Enables you to disable the text box.
  - **MaxLength**—Enables you to specify the maximum length of data that a user can enter in a text box. (This does not work when TextMode is set to Multiline.)
- **ReadOnly**—Enables you to prevent users from changing the text in a text box.
- **Rows**—Enables you to specify the number of rows to display.
  - **Wrap**—Enables you to specify whether text word wraps when the TextMode is set to Multiline.

The TextBox control also supports the following method:

- **Focus**—Enables you to set the initial form focus to the text box.

- **TextChanged**—Raised on the server when the contents of the text box are changed.

## 6. Explain CheckBox Control with syntax and example.

The CheckBox Web server control gives us the option to select, say, yes/no, or true/false. A checkbox is clicked to select and clicked again to deselect some option. When a checkbox is selected, a check (a tick mark) appears indicating a selection. Checkboxes are similar to radio buttons, and in HTML, they were used to allow multiple choices from a group of buttons. A typical

<asp:checkbox> looks like this:

```
<asp:checkbox id="check1" runat="server" />
```

The CheckBox control also supports the following method:

- **Focus**— Enables you to set the initial form focus to the check box. And, the CheckBox control supports the following event:
- **CheckedChanged**—Raised on the server when the check box is checked or unchecked.

Property	Description
Text	Represents the caption of the CheckBoxcontrol.
TextAlign	Represents the text orientation of the CheckBox and CheckBoxList controls.
Items	Represents the collection of individual check boxes in the CheckBoxList control. Each item has three properties, Text, Value, and Selected, associated with it.

## 7. Explain Radio Button Control with syntax and example.

Radio buttons provide a set of choices or options that you can select. Radio buttons traditionally display themselves as a label with a dot to the left of it, which can be either selected or not. Radio buttons are controls that are generally used in groups.

When one button is selected, any others grouped with it are generally unselected. As such, they are helpful when the user has a limited number of choices to make. They are also handy when you want all the choices to be displayed—for example, when selecting gender, male or female, or selecting marital status, single or married. To create a radio button, you use the Radio Button class.

Property	Description
Text	Represents the caption of the Radio Button control.
Checked	Enables you to get or set whether the Radio Button control is checked.
GroupName	It is used a group a set of radio buttons so only one of them can be selected at a time.

The RadioButton control supports the following method:

- **Focus**—Enables you to set the initial form focus to the Radio Button control.

Finally, the RadioButton control supports the following event:

- **CheckedChanged**—Raised on the server when the Radio Button is checked or unchecked.

Example:

```
<asp:RadioButton ID="RadioButton1" runat="server" Text="Male"
GroupName="gender"/>
```

## 8. Explain ListBox Control with syntax and examples.

The ListBox control is a list of predefined items and allows users to select one or more items from the list. The ListBox control is a collection of items. The individual list items can be added by using the `Items` property of the ListBox control.

Property	Description
Items	The <code>Items</code> property allows us to add the items we want to be displayed in the list box. Doing so is simple, click on the ellipses to open the String Collection Editor window and start entering what you want to be displayed in the ListBox. After entering the items click OK and doing that add all the items to the ListBox. Each list item has three properties associated with it: <code>Text</code> , <code>Value</code> , and <code>Selected</code> .
Width	Represents the widthwise size of a ListBox control and takes value in pixels.
Height	Represents the vertical size of the ListBox control and takes value in pixels.
Rows	Represents the vertical size of the ListBox control and takes value in number of rows. If the control contains more than the specified number of items, the control displays a vertical scroll bar
SelectionMode	Represents the number of items that can be selected. To allow users to select only one item, set the <code>SelectionMode</code> property to <code>ListSelectionMode.Single</code> . To allow users to select multiple items, set the <code>SelectionMode</code> property to <code>ListSelectionMode.Multiple</code> . To select more than one item, users can hold the Ctrl or Shift key while clicking multiple items. This is possible only when you set the <code>SelectionMode</code> property to <code>ListSelectionMode.Multiple</code> .
Sorted	The default value is set to False. Set it to True if you want the items displayed in the ListBox to be sorted by alphabetical order.

## 9. What is Client-side validation? Explain.

- Client-side validation involves checking form values directly on the browser via JavaScript before passing the information on to the server.

- If the user is working with a browser that supports Dynamic HTML (DHTML), such as Internet Explorer 4.0 or higher, validation controls can perform validation using client script (i.e. javascript, VBScript, etc). Because the controls can provide immediate feedback (without a roundtrip to the server), the user experience with the page is enhanced.

#### Advantages

- We can provide instant feedback to the user. For example, if a user neglects to enter a value in a required form field, you can instantly display an error message without requiring a roundtrip back to the server.
- There will be comparatively less load on the server as the computing of validation will be shifted to the client machine.

#### Disadvantages

- Browser Compatibility issue- First of all, not all browsers support client-side scripting. So obviously we cannot use this approach everywhere.
- Security Settings- Some folks turn off scripting because they see it as a security risk. For these folks, client-side validation will simply not work.

### 10. What is server-side validation? Explain.

The server-side validation is the validation that occurs in the server system.

After the user enters data into a Web form, clicks the Submit button, and sends the form data to the server as a request, you can perform server-side validation on the data. If you do this, it is called server-side validation because it occurs on the server

#### Advantages

- Server-side validation means that the validation checks are performed on the server; so more secure as they cannot be bypassed easily.
- Browser-independent: As the processing is done on server, there is not client-side coding that are dependent on browsers.
  - More secure- No validation coding will be sent to browser, so no one can see the coding and post it again to bypass the validation security.

#### Disadvantages

- It requires trips back and forth to the server. This takes a lot of resources and makes for a slower-paced form for the user. Nothing is more annoying to a user who is on a dial-up connection than clicking the Submit button on the form and then waiting for 20 seconds to find out that they didn't enter their password correctly.
- The processing for all the clients to validate entries is done on server. So the load on the server will be comparatively more.

### 11. Explain RequiredField Validator.

The RequiredFieldValidator control ensures that the user has entered the required data in the input control, such as text box control to which it is bound. With this control, the validation fails if the input value does not change from its initial value. By default, the initial value is an empty string (""). The InitialValue property does not set the default value for the input control. It indicates the value that you do not want the user to enter in the input control.

#### Syntax



```
<asp:RequiredFieldValidator id="accessID"
  ControlToValidate = "ID of input control to validate"
  InitialValue = ""
  ErrorMessage = "message to display in ValidationSummary control"
  Text = "message to display in control"
  ForeColor = "color value"
  BackColor = "color value"
  runat="server" />
```

## 12. Explain Comparison Validator.

The `CompareValidator` control enables you to perform three different types of validation tasks. You can use the `CompareValidator` to perform a **data type check**. In other words, you can use the control to determine whether a user has entered the proper type of value into a form field, such as a `date` in a birth date field.

You also can use the `CompareValidator` to compare the value entered into a form field **against a fixed value**. For example, if you are building an auction website, you can use the `CompareValidator` to check whether a new minimum bid is greater than the previous minimum bid.

Property	Description
ControlToCompare	Obtains or sets the input control to compare with the input control being validated
Operator	Sets the comparison operator like equal, notequal, greaterthan, lessthan
ValueToCompare	Sets a constant value to compare with the value entered by the user in the input control being validated
Type	Specifies the data type of the values to compare. The types are: <ul style="list-style-type: none"> <li>Currency, Date, Double, Integer, String</li> </ul>

## 13. Explain Range Validator with an example.

The `RangeValidator` Control checks whether or not the value of an input control lies within a specified range of values. This control is used to check that the user enters an input value that falls between two values. It is possible to check ranges within numbers, dates, and characters. The validation will not fail if the input control is empty. Use the `RequiredFieldValidator` control to make the field required. The following are the properties of `RangeValidator` control:

```
<asp:RangeValidator id="accessID"
  ControlToValidate = "ID of input control to validate"
  MinimumValue = "lower bound value"
  MaximumValue = "upper bound value"
  Type = "datatype to convert to before comparing"
  ErrorMessage = "message to display in ValidationSummary control"
  Text = "message to display in control"
  ForeColor = "color value"
  BackColor = "color value"
  runat="server" />
```

Property	Description
MaximumValu	Specifies the maximum value of the input control

e	
MinimumValue	Specifies the minimum value of the input control
Type	The type of comparison to perform. Possible values are String, Integer, Double, Date, and Currency.

**14. What is AdRotator control? Explain.**

- The AdRotator control is used to display flashing ads, such as banner ads and newsflashes on Web pages. The control is capable of displaying ads randomly, because the control refreshes the display every time the Web page is refreshed, thereby displaying different ads for different users.
- Also, you can assign priorities to the ads so that certain ads are displayed more frequently than others. You can store the list of advertisements in either an XML file or in a database table. The AdRotator control supports the following important properties

Property	Description
AdvertisementFile	Specifies the path to the XML file that contains ad information.
AlternateTextField	Enables you to specify the name of the field for displaying alternate text for the banner advertisement image. The default value is "AlternateText".
DataMember	Enables you to bind to a particular data member in the data source.
DataSource	Enables you to specify a data source programmatically for the list of banner advertisements.
ImageUrlField	Enables you to specify the name of the field for the image URL for the banner advertisement. The default value for this field is "ImageUrl".
KeywordFilter	Specifies a filter to limit ads after categories.
NavigateUrlField	Enables you to specify the name of the field for the advertisement link. The default value for this field is "NavigateUrl".
Target	Enables you to open a new window when a user clicks the banner advertisement.