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# Different Server Controls In ASP.Net

- Server Controls are the tags that are understood by the server.
- The ASP.NET page framework includes a number of built-in server controls that are designed to provide a more structured programming model for the Web.

## These controls provide the following features:

- Automatic state management.
- Simple access to object values without having to use the Request object.
- Ability to react to events in server-side code to create applications that are better structured.
- Common approach to building user interfaces for web pages.
- Output is automatically customized based on the capabilities of the browser.

## Different Types Of Controls In ASP.Net.

- **HTML Server Controls** - Traditional HTML tags
- **Web Server Controls** - New ASP. NET tags
- **Validation Server Controls** - For input validation
- **List Controls** - For binding to collections.
- **Rich Controls** - Are built with multiple HTML elements and contain rich functionality
- **User Controls** - enhance and extend existing controls to build a much richer user interface.

# HTML Server Controls

- HTML server controls mainly used for converting classic ASP pages into ASP.NET pages.
- There is no separate HTML server controls in ASP.NET but if you apply the attribute `runat="server"`, then plain HTML controls is converted to HTML server controls.
- The HTML server controls have the same HTML output and the same properties as their corresponding HTML tags. In addition, HTML server controls provide automatic state management and server-side events.
- The `System.Web.UI.HtmlControls.HtmlControl` base class contains all of the common properties. HTML server controls derive from this class.
- These controls are grouped together in the Visual Studio Toolbox in the HTMLControl tab.

# WEB Server Controls

- Web controls are similar to the HTML server controls such as Button, TextBox, and Hyperlink, except that Web controls have a standardized set of property names.
- These Controls Runs on the web server.
- All ASP.NET server control have `runat="server"` attribute, by default.
- Server controls provide state management.
- You can access these controls from code-behind.
- Server controls have predefined classes.
- The `System.Web.UI.WebControls.WebControl` base class contains all of the common properties. Most of the Web server controls derive from this class.

# Validation Server Controls

- Validation controls are used to validate the values that are entered into other controls of the page.
- Validation controls perform client-side validation, server-side validation, or both, depending on the capabilities of the browser in which the page is displayed.
- You can associate one or more validation controls with each control that you want to validate.
- The validation is performed when the page is submitted.
- You can specify programmatically whether validation should occur, which is useful if you want to provide a cancel button so that the user can exit without having to fill valid data in all of the fields.
- The validation controls automatically detect whether validation should be performed on the client side or the server side.



## List Controls

- List controls are special Web server controls that support binding to collections.
- You can use list controls to display rows of data in a customized, template's format.
- All list controls expose DataSource and DataMember properties, which are used to bind to collections.

## Rich Controls

- Rich controls are built with multiple HTML elements and contain rich functionality.
- Examples of rich controls are the Calendar control and the AdRotator control.

## User Controls

- In addition to the built-in controls, the ASP.NET page framework also provides the ability to create user controls and custom controls.
- User controls and custom controls can enhance and extend existing controls to build a much richer user interface.

*THANK*

*YOU*