HTML Server Controls

HTML server controls are a set of server controls that closely resemble their corresponding HTML tags. to declare an HTML server control on a page, all you have to do is take an existing HTML tag and add the runat="server" attribute. HTML elements in ASP.NET files are, by default, treated as literal text.

HTML server controls are HTML tags understood by the server.

The id attribute is used to identify and manipulate the server control.

Remember:

All HTML server controls must be within a <form> tag with the runat="server" attribute.

The runat = "server" attribute indicates that:

- 1. the element should be treated as a server control
- 2. the form should be processed on the server. It also indicates that the
- 3. enclosed controls can be accessed by server scripts.

Use .NET Framework Class Library namespaces: System.Web.UI.HtmlControls.HtmlControl

to declare an HTML server control on a page, all you have to do is take an existing HTML tag and add the runat="server" attribute we mentioned earlier.

If there's an HTML server control that corresponds to the HTML tag you've "contol-ized," the HTML tag becomes the corresponding type of server control. Otherwise it will simply default to an HTML control of type HtmlGenericControl.

HTML Server Control	Description
<u>HtmlAnchor</u>	corresponding an <a> HTML element
<u>HtmlButton</u>	corresponding a <button> HTML element</button>
<u>HtmlForm</u>	corresponding a <form> HTML element</form>
HtmlGeneric	Controls other HTML element not specified by a specific HTML server control, like <body>, <div>, , etc.</div></body>
<u>HtmlImage</u>	corresponding an <image/> HTML element
HtmlInputButton (Button/Reset/Submit)	corresponding <input type="button"/> , <input type="submit"/> , and <input type="reset"/> HTML elements
<u>HtmlInputCheckBox</u>	corresponding an <input type="checkbox"/> HTML element
<u>HtmlInputFile</u>	corresponding an <input type="file"/> HTML element
<u>HtmlInputHidden</u>	corresponding an <input type="hidden"/> HTML element
HtmlInputImage	corresponding an <input type="image"/> HTML element
<u>HtmlInputRadioButton</u>	corresponding an <input type="radio"/> HTML element
HtmlInputText (Password/Text)	corresponding <input type="text"/> and <input type="password"/> HTML elements
<u>HtmlSelect</u>	corresponding a <select> HTML element</select>
<u>HtmlTable</u>	corresponding a HTML element
<u>HtmlTableCell</u>	corresponding and HTML elements
<u>HtmlTableRow</u>	corresponding a HTML element
<u>HtmlTextArea</u>	corresponding a <textarea> HTML element</td></tr></tbody></table></textarea>

Common attributes (properties) of HTML server controls:

Property	Description
Attributes	Returns all attribute name and value pairs of the element
Disabled	A Boolean value that indicates whether or not the control should be disabled. Default is false
Visible	A Boolean value that indicates whether or not the control should be visible. Default is true
id	A unique id for the control. In the browser, refer control with "id" property.
Name	A unique name of the control. In server side coding, refer control with "name" property.
InnerHtml	Sets / returns the content between the opening and closing tags of the HTML element. Special characters are not automatically converted to HTML entities
Inner Text	Sets / returns all text between the opening and closing tags of the HTML element. Special characters are automatically converted to HTML entities

OnServerClick	The name of the function to be executed when the link is clicked
runat	Specifies that the control is a server control. Must be set to "server"
Style	Sets / returns the CSS properties
TagName	Returns the element tag name
Target	The target window to open. possible values:
Title	A title to be displayed by the browser (like the alt attribute of the img element)

^{--&}gt; Normally, for server controls, **name** and **id** are set to same value.

HtmlAnchor Control

It is used to control an <a> element. It is used to create a hyperlink. The hyperlink may link to a bookmark or to another Web page.

Syntax:

properties:

HRef	The URL target of the link
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Example

Declare one HtmlAnchor controls in an .aspx file. Then modify the URL, target, and title of the HtmlAnchor controls in an Page_Load event.

```
<script runat="server">
Sub Page_Load
   a1.HRef="http://www.google.com"
   a1.Target="_blank"
   a1.Title="google"

End Sub
</script>
<html>
<body>
<form runat="server">
<a id="a1" runat="server">search using google!</a>
<br/>
</form>
</body>
</html>
```

using code behind:

default.aspx.vb

Protected Sub Page_Load(ByVal sender As Object, ByVal e As System.EventArgs) Handles Me.Load

```
a1.HRef = "http://www.google.com"
a1.Target = "_blank"
a1.Title = "google"
```

End Sub

default.aspx

```
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        </div>
 </form>
```

HtmlButton Control

The HtmlButton control a <button> element. It is used to create a push button.

syntax:

```
<Button id = "Button1" runat = "server" Text = "Button" />
```

Examples

</html>

Declare two HtmlButton controls in an .aspx file. Next, write an event handler that specifies what to happen when a button is clicked.

```
<script runat="server">
       Sub button1_click(Source As Object, e As EventArgs)
              MsgBox("You clicked the blue button!")
       End Sub
       Sub button2_click(ByVal Source As Object, ByVal e As EventArgs)
              MsgBox("You clicked the pink button!")
       End Sub
</script>
<html>
<body>
<form id="Form1" runat="server">
    <button id="button1" OnServerClick="button1 click"</pre>
           style="background-color:green"
           runat="server">
      green button
  </button>
  <button id="button2"
           OnServerClick="button2_click"
           style="background-color:yellow"
            runat="server">
         Yellow button!
    </button>
  </form>
</body>
```

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HtmlForm Control

The HtmlForm control map a <form> element. It is used to create a form.

Note: All HTML server controls must be within the HtmlForm control. If the <form> element is not present on the page, web controls and HTML controls will not be able to participate in page post backs, nor will they be able to save their state in the page's ViewState. They will continue to function otherwise.

Properties

Property	Description
Action	A URL indicating where to send the data when the form is submitted.
	Note: This attribute is always set to the URL of the page itself
ЕпсТуре	The mime type used to encode the content of the form
Method	How the form posts data to the server. Possible Values are: "post" and "get". Default is "post"

Examples

Declare one HtmlInputText controls, one HtmlInputButton control, and one HtmlGeneric control in an .aspx file. When the submit button is clicked, the submit subroutine is executed. The submit subroutine writes a welcome message to the p element.

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HtmlGeneric Control

The HtmlGeneric control controls other HTML element not specified by a specific HTML server control, like <body>, <div>, , , , etc.

Examples

Declare one HtmlInputText controls, one HtmlInputButton control, and one HtmlGeneric control in an default.aspx file. When the submit button is clicked, the submit1_click is executed. It write message to the p element.

```
<script runat="server">
       Sub submit1_click(sender As Object, e as EventArgs)
              p1.InnerHtml = "Your favourite fruite is: " & name.Value & "!!!"
       End Sub
</script>
<html>
<body>
<form id="Form1" runat="server">
       Enter your favourite fruit: <input id="name" type="text" runat="server" />
       <br /><br />
       <input id="Submit1"
               type="submit"
                value="Submit"
                OnServerClick="submit1_click"
                runat="server" />
       id="p1"
  <p
      runat="server" />
</form>
</body>
</html>
```

HtmlImage Control

The HtmlImage control is used to display image. (like an HTML element).

Properties

Property	Description
Align	the image alignment according to surrounding elements. Possible values are: top middle bottom left right
Src	The URL of the image to display
Alt	Description of the image, if image not found specified in Src
Border	The width of the borders around the image
Height	The height of the image
Width	The width of the image

Examples

Declare an HtmlImage control. Then modify the src, alt and border properties of the HtmlImage control:

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HtmlInputButton Control

Definition and Usage

The HtmlInputButton control is used to control <input type="button">, <input type="submit">, and <input type="reset"> elements. In HTML, these elements are used to create a command button, a submit button, and a reset button.

Properties

Property	Description
Attributes	Returns all attribute name and value pairs of the element
Disabled	A Boolean value that indicates whether or not the control should be disabled. Default is false
id	A unique id for the element
Name	The name of the element
OnServerClick	The name of the function to be executed when the button is clicked
runat	Specifies that the element is a server control. Must be set to "server"
Style	Sets or returns the CSS properties that are applied to the control
TagName	Returns the element tag name
Туре	The type of the element
Value	The value of the element
Visible	A Boolean value that indicates whether or not the control should be visible

Examples

In this example we declare one HtmlInputText controls, one HtmlInputButton control, and one HtmlGeneric control in an .aspx file (remember to embed the controls inside an HtmlForm control). When the submit button is triggered, the submit subroutine is executed. The submit subroutine writes a welcome message to the p element.

```
<script runat="server">
Sub submit(sender As Object, e as EventArgs)
if name.value<>"" then
    p1.InnerHtml="Welcome " & name.value & "!"
end if
End Sub
</script>
<html>
<body>
<form runat="server">
```

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HtmlInputCheckBox Control

Definition and Usage

The HtmlInputCheckBox control is used to control an <input type="checkbox"> element. In HTML, this element is used to create a checkbox.

Properties and Events

Property	Description
Attributes	Returns all attribute name and value pairs of the element
Checked	A Boolean value that specifies whether or not the element is to be checked
Disabled	A Boolean value that indicates whether or not the control should be disabled. Default is false
id	A unique id for the control
Name	The name of the element
runat	Specifies that the element is a server control. Must be set to "server"
Style	Sets or returns the CSS properties that are applied to the control
TagName	Returns the element tag name
Туре	The type of the element
Value	The value of the element
Visible	A Boolean value that indicates whether or not the control should be visible

Event	Description
ServerChange	Occurs when the state of the control has changed

Examples

HTMLInputCheckbox

In this example we declare two HtmlInputCheckBox controls, one HtmlInputButton control, and one HtmlGeneric in an .aspx file (remember to embed the controls inside an HtmlForm control). When the submit button is triggered, the submit subroutine is executed. The submit subroutine may respond in two ways: if the "red" checkbox is checked, the server sends the message "You prefer red!" to the p element. If the "blue" checkbox is checked, the server sends the message "You prefer blue!" to the p element.

```
<script runat="server">
Sub submit(Source As Object, e As EventArgs)
if red.Checked=True then
    p1.InnerHtml="You prefer red!"
else
    p1.InnerHtml="You prefer blue!"
end if
red.checked=false
blue.checked=false
End Sub
</script>
<html>
<body>
```

```
<form runat="server">
What color do you prefer?
<br/>
<br/>
<br/>
<input id="red" type="checkbox" runat="server" /> Red
<br/>
<br/>
<input id="blue" type="checkbox" runat="server" /> Blue
<br/>
<br/>
<input type="button" value="Submit" OnServerClick="submit" runat="server"/>

</form>
</body>
</html>
```

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HtmlInputRadioButton Control

Definition and Usage

The HtmlInputRadioButton control is used to control an <input type="radio"> element. In HTML, this element is used to create a radiobutton.

Properties

Property	Description
Attributes	Returns all attribute name and value pairs of the element
Checked	A Boolean value that specifies whether or not the element is to be selected
Disabled	A Boolean value that indicates whether or not the control should be disabled. Default is false
id	A unique id for the element
Name	The name of the radio button group
runat	Specifies that the element is a server control. Must be set to "server"
Style	Sets or returns the CSS properties that are applied to the control
TagName	Returns the element tag name
Туре	The type of the element
Value	The value of the element
Visible	A Boolean value that indicates whether or not the control should be visible

Examples

HTMLInputRadio button

In this example we declare three HtmlInputRadioButton controls, one HtmlInputButton control, and one HtmlGeneric control in an .aspx file (remember to embed the controls inside an HtmlForm control). When the submit button is triggered, the submit subroutine is executed. The submit subroutine may respond in three ways: if the radiobutton with id="r1" is selected, the server sends the message "Your favorite color is red" to the p element. If the radiobutton with id="r2" is selected, the server sends the message "Your favorite color is green" to the p element. If the radiobutton with id="r3" is selected, the server sends the message "Your favorite color is blue" to the p element.

```
<script runat="server">
Sub submit(Source As Object, e As EventArgs)
if r1.Checked=True then
    p1.InnerHtml="Your favorite color is red"
else
    if r2.Checked=True then
    p1.InnerHtml="Your favorite color is green"
else
    if r3.Checked=True then
        p1.InnerHtml="Your favorite color is blue"
end if
end if
end if
```

```
End Sub
</script>
<html>
<body>
<form runat="server">
Select your favorite color:
<br />
<input id="r1" name="col" type="radio" runat="server">Red</input>
<input id="r2" name="col" type="radio" runat="server">Green</input>
<br />
<input id="r3" name="col" type="radio" runat="server">Blue</input>
<input type="button" value="Submit" OnServerClick="submit" runat="server"/>
</form>
</body>
</html>
```

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HtmlInputText Control

Definition and Usage

The HtmlInputText control is used to control <input type="text"> and <input type="password"> elements. In HTML, these elements are used to create a text field and a password field.

Properties

Property	Description
Attributes	Returns all attribute name and value pairs of the element
Disabled	A Boolean value that indicates whether or not the control should be disabled. Default is false
id	A unique id for the element
MaxLength	The maximum number of characters allowed in this element
Name	The name of the element
runat	Specifies that the element is a server control. Must be set to "server"
Size	The width of the element
Style	Sets or returns the CSS properties that are applied to the control
TagName	Returns the element tag name
Туре	The type of the element
Value	The value of the element
Visible	A Boolean value that indicates whether or not the control should be visible

Examples

In this example we declare one HtmlInputText controls, one HtmlInputButton control, and one HtmlGeneric control in an .aspx file (remember to embed the controls inside an HtmlForm control). When the submit button is triggered, the submit subroutine is executed. The submit subroutine writes a welcome message to the p element.

```
<script runat="server">
Sub submit(sender As Object, e as EventArgs)
if name.value<>"" then
   p1.InnerHtml="Welcome " & name.value & "!"
end if
```

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```
End Sub
</script>

<html>
<body>

<form runat="server">
Enter your name: <input id="name" type="text" size="30" runat="server" />
<br /> <br />
<input type="submit" value="Submit" OnServerClick="submit" runat="server" />

</form>

</body>
</html>
```

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HtmlSelect Control

Definition and Usage

The HtmlSelect control is used to control a <select> element. In HTML, the <select> element is used to create a drop-down list.

Properties

Property	Description
Attributes	Returns all attribute name and value pairs of the element
DataMember	A name of a data table to use
DataSource	A data source to use
DataTextField	A field in the data source to be displayed in the drop-down list
DataValueField	A field in the data source that specifies the value of each selectable item in the drop-down list
Disabled	A Boolean value that indicates whether or not the control should be disabled. Default is false
id	A unique id for the control
InnerHtml	Sets or returns the content between the opening and closing tags of the HTML element. Special characters are not automatically converted to HTML entities
InnerText	Sets or returns all text between the opening and closing tags of the HTML element. Special characters are automatically converted to HTML entities
Items	The list of items in the drop-down list
Multiple	Whether multiple items can be selected at a time
OnServerChange	The name of the function to be executed when the selected item has changed
runat	Specifies that the control is a server control. Must be set to "server"
SelectedIndex	The index of the currently selected item
Size	The number of visible items in the drop-down list
Style	Sets or returns the CSS properties that are applied to the control
TagName	Returns the element tag name
Value	The value of the currently selected item
Visible	A Boolean value that indicates whether or not the control should be visible

Examples

HTMLSelect

In this example we declare an HtmlImage and an HTMLSelect control in an .aspx file (remember to embed the controls inside an HtmlForm control). Then we modify the src property of the HtmlImage control based on user choices. The value selected in the HtmlSelect control determines which image to display.

```
script runat="server">
Sub choose_image(Sender As Object, e As EventArgs)
image1.Src = select1.Value
End Sub
```

```
</script>
<html>
<body>
<form runat="server">
<select id="select1" runat="server">
  <option value="smiley.gif">Smiley</option>
  <option value="angry.gif">Angry</option>
  <option value="stickman.gif">Stickman</option>
</select>
<input type="submit" runat="server" value="Display image"
OnServerClick="choose_image">
<br /><br />
<img id="image1" src="smiley.gif" runat="server" width="32" height="32" />
</form>
</body>
</html>
```

HtmlTable Control

Definition and Usage

The HtmlTable control is used to control a element. In HTML, the element is used to create a table.

Properties

Property	Description
Align	Specifies the alignment of the table
Attributes	Returns all attribute name and value pairs of the element
BGColor	Specifies the background color of the table
Border	Specifies the width of the borders
	Tip: Set border="0" to display tables with no borders!
BorderColor	Specifies the color of the borders
CellPadding	Specifies the space between the cell walls and contents
CellSpacing	Specifies the space between cells
Disabled	A Boolean value that indicates whether or not the control should be disabled. Default is false
Height	Specifies the height of the table
id	A unique id for the control
InnerHtml	Sets or returns the content between the opening and closing tags of the HTML element. Special characters are not automatically converted to HTML entities
InnerText	Sets or returns all text between the opening and closing tags of the HTML element. Special characters are automatically converted to HTML entities
Rows	Returns an HtmlRowCollection object which represents all rows in the table
runat	Specifies that the control is a server control. Must be set to "server"
Style	Sets or returns the CSS properties that are applied to the control
TagName	Returns the element tag name
Visible	A Boolean value that indicates whether or not the control should be visible
Width	Specifies the width of the table

Examples

HTMLTable

In this example we declare two HtmlSelect controls, one HtmlInputButton control, and one HtmlTable control in an .aspx file (remember to embed the controls inside an HtmlForm control). The user may choose number of cells and rows. When the submit button is triggered, the submit subroutine is executed. The submit subroutine generates the table based on what the user did input.

```
<script runat="server">
Sub submit(sender As Object, e As EventArgs)
Dim row,numrows,numcells,j,i
row=0
numrows=cint(rows1.Value)
numcells=cint(cells1.Value)
for j=1 to numrows
 Dim r As New HtmlTableRow()
 row=row+1
 for i=1 to numcells
   Dim c As New HtmlTableCell()
   c.Controls.Add(New LiteralControl("row " & j & ", cell " & i))
   r.Cells.Add(c)
 next
 t1.Rows.Add(r)
 t1.Visible=true
next
End Sub
</script>
<html>
<body>
<form runat="server">
Table rows:
<select id="rows1" runat="server">
  <option value="1">1</option>
  <option value="2">2</option>
  <option value="3">3</option>
</select>
<br />Table cells:
<select id="cells1" runat="server">
  <option value="1">1</option>
  <option value="2">2</option>
  <option value="3">3</option>
</select>
<br /><br />
<input type="submit" value="Display Table" runat="server" OnServerClick="submit">
</form>
</body>
</html>
```

In this example we declare an HtmlTable control and an HtmlInputButton control in an .aspx file (remember to embed the controls inside an HtmlForm control). When the submit button is triggered, the submit subroutine is executed. The submit subroutine modifies the background color and the border color of the table, it also changes the contents of the cells.

```
<script runat="server">
Sub submit(sender As Object, e As EventArgs)
dim i,j
table1.BGColor="yellow"
table1.BorderColor="red"
for i=0 To table1.Rows.Count-1
 for j=0 To table1.Rows(i).Cells.Count-1
  table1.Rows(i).Cells(j).InnerHtml="Row " & i
 next
next
End Sub
</script>
<html>
<body>
<form runat="server">
Cell 1
  Cell 2
 Cell 3
```

```
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    Cell 4
   <br />
 <input type="button" value="Change Contents" OnServerClick="submit" runat="server"/>
 </form>
 </body>
 </html>
```

HtmlTableCell Control

Definition and Usage

The HtmlTableCell control is used to control and elements. In HTML, these elements are used to create table cells and header table cells.

Properties

Property	Description
Align	The horizontal alignment of cell content
Attributes	Returns all attribute name and value pairs of the element
BGColor	The background color of the cell
BorderColor	The color of the borders
ColSpan	The number of columns this cell should span
Disabled	A Boolean value that indicates whether or not the control should be disabled. Default is false
Height	The height of the cell
id	A unique id for the control
InnerHtml	Sets or returns the content between the opening and closing tags of the HTML element. Special characters are not automatically converted to HTML entities
InnerText	Sets or returns all text between the opening and closing tags of the HTML element. Special characters are automatically converted to HTML entities
Nowrap	A Boolean value that specifies whether or not the text within this control should wrap
RowSpan	The number of rows this cell should span
runat	Specifies that the control is a server control. Must be set to "server"
Style	Gets the CSS properties that are applied to the control
TagName	Returns the element tag name
VAlign	The vertical alignment of cell content
Visible	A Boolean value that indicates whether or not the control should be visible
Width	The width of the cell

Examples

In this example we declare two HtmlSelect controls, one HtmlInputButton control, and one HtmlTable control in an .aspx file (remember to embed the controls inside an HtmlForm control). The user may choose number of cells and rows. When the submit button is triggered, the submit subroutine is executed. The submit subroutine generates the table based on what the user did input.

In this example we declare an HtmlTable control and an HtmlInputButton control in an .aspx file (remember to embed the controls inside an HtmlForm control). When the submit button is triggered, the submit subroutine is executed. The submit subroutine modifies the background color and the border color of the table, it also changes the contents of the cells.

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HtmlTableRow Control

Definition and Usage

The HtmlTableRow control is used to control a element. In HTML, the element is used to create a table row.

Properties

Property	Description
Align	The alignment of the row
Attributes	Returns all attribute name and value pairs of the element
BGColor	The background color of the row
BorderColor	The color of the borders
Cells	Returns the cells in this row
Disabled	A Boolean value that indicates whether or not the control should be disabled. Default is false
Height	The height of the row
id	A unique id for the control
InnerHtml	Sets or returns the content between the opening and closing tags of the HTML element. Special characters are not automatically converted to HTML entities
InnerText	Sets or returns all text between the opening and closing tags of the HTML element. Special characters are automatically converted to HTML entities
runat	Specifies that the control is a server control. Must be set to "server"
Style	Sets or returns the CSS properties that are applied to the control
TagName	Returns the element tag name
VAlign	The vertical alignment of cells in the row
Visible	A Boolean value that indicates whether or not the control should be visible

Examples

In this example we declare two HtmlSelect controls, one HtmlInputButton control, and one HtmlTable control in an .aspx file (remember to embed the controls inside an HtmlForm control). The user may choose number of cells and rows. When the submit button is triggered, the submit subroutine is executed. The submit subroutine generates the table based on what the user did input.

In this example we declare an HtmlTable control and an HtmlInputButton control in an .aspx file (remember to embed the controls inside an HtmlForm control). When the submit button is triggered, the submit subroutine is executed. The submit subroutine modifies the background color and the border color of the table, it also changes the contents of the cells.

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HtmlTextArea Control

It control a <textarea> element. In HTML, the <textarea> element is used to create a text area.

Properties and Events

Property	Description
Attributes	Returns all attribute name and value pairs of the element
Cols	The number of columns of the text area
Disabled	A Boolean value that indicates whether or not the control should be disabled. Default is false
id	A unique id for the control
InnerHtml	Sets or returns the content between the opening and closing tags of the HTML element. Special characters are not automatically converted to HTML entities

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	Sets or returns all text between the opening and closing tags of the HTML element. Special characters are automatically converted to HTML entities
Name	The unique name for the text area
OnServerChange	The name of the function to be executed when the contents of the textarea is changed
Rows	The number of visible rows of the text area
runat	Specifies that the control is a server control. Must be set to "server"
Style	Sets or returns the CSS properties that are applied to the control
TagName	Returns the element tag name
Value	The content of the textarea
Visible	A Boolean value that indicates whether or not the control should be visible

Examples

In this example we declare an HtmlTextarea control, an HtmlInputButton control, and an HtmlGeneric control in an .aspx file (remember to embed the controls inside an HtmlForm control). When the submit button is triggered, the submit subroutine is executed. The submit subroutine sends the message "You wrote: " and the text the user wrote in the text area to the p element.