



Unit 5

Advanced HTML

Introduction

In this unit we will build upon the knowledge we gained in the previous units (unit-2,3and 4) and learn some advanced things about HTML Table, Frame, Form and Dynamic HTML. Some time we need to display data in Tabular format. Tables are used to display data in Tabular format, containing rows and columns, on the screen. In HTML document the <TABLE> tag is used to create tables. The <TR> tag locate marks the beginning and end of a row. The <TD> tag locate marks each cell within the row. An effective way to organize web documents, visually, and also logically, by dividing the page into different parts is the necessity of the website today. The creation of document with different layouts, dividing the page into different parts and getting user information can be possible by using some advance HTML elements such as table, frames and forms in your web page.

Lesson 5.1

HTML – TABLE



Outcomes

Table tag <table>

Upon completion of this unit you will be able to:

Understand HTML Table.

Create Table.

Modify Tables appearance.

Hope you probably know what a table is? To just remind you; a table is an arrangement of vertical columns and horizontal rows. The intersection of a row with a column is called a cell. We can add just about anything inside the cells like links, images, headings, paragraphs and lists etc. The creation of a table in HTML is very simple and easy. A table in HTML begins with <table> and ends with </table>. Between these tags <tr> and </tr> is used to specify rows. <td> and </td> is used to specify a cell.

The table element can contain the following:

<CAPTION>: Caption can be used to specify a title for the table. The CAPTION element, by default is center-aligned at the top of the Table. It's ALIGN attribute that takes value left, right, center can be used to align the caption. The <CAPTION> tag should appear inside <TABLE>

<TR>: Table row, is to specify the row in the table. It holds-

<TH>: Table Heading and



<TD>: Table Data.

<TH>: Table Header, is used for giving Heading to Table. By default header elements contents display the text in bold and centered.

<TD>: "Table Data," within the row you create columns by <TD> tag. The Table data can contain text, images, lists, forms and other element. The TD is a true container that can hold other HTML elements, even more tables.

Example A Simple table in HTML

```
<HTML>
<HEAD>
<TITLE> SIMPLE TABLE IN HTML </TITLE>
</HEAD> <BODY>
<TABLE>
<CAPTION> TEST TABLE </CAPTION>
<TR>
<TH> Heading 1</TH>
<TH> Heading 2</TH>
<TH> Heading 3</TH>
</TR>
<TR>
<TD> Cell 1 </TD>
<TD> Cell 2 </TD>
<TD> Cell 3 </TD>
</TR>
<TR>
<TD> Cell 4 </TD>
<TD> Cell 5 </TD>
<TD> Cell 6 </TD>
</TR>
</TABLE> </BODY> <HTML>
```

After write the above code save the page and open it in your browser. This is what you should see.

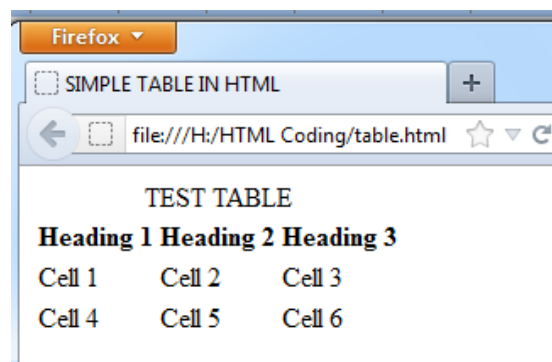


Figure 1.1 simple Table without border

Attributes of <TABLE>

If you do not specify a border attribute, the table will be displayed without borders. Most of the time, we want the borders to show in a table.



To display a table with borders, specify the BORDER attribute. BORDER is used to draw borders around all the Table cells. By default, tables are shown without borders i.e. BORDER=0. The size of border can set by assigning an integer value. For example BORDER=3, gives table a three pixel border.

ALIGN: Used to align a table relative to windows border. It can set to left, right or center.

CELLSPACING: Used to set the space between the cells in a table. It takes value in pixel.

CELLPADDING: Used to set the space between the cell data and cell wall in a table. It takes value in pixel.

WIDTH: Used to set the width of the table, as either an absolute width in pixels, or a percentage of the document width. For example: WIDTH=<width in pixel or percent>

BGCOLOR: Set the background color of the table. For Example: BGCOLOR=red,

BORDERCOLOR: Set the color of the border of the table. For example: BORDERCOLOR=BLUE

Example

```
<HTML>
<HEAD> <TITLE> Simple table border</TITLE>
</HEAD>
<BODY>
<TABLE BORDER="1">
<TR>
<TD>row 1, cell 1</TD>
<TD>row 1, cell 2</TD>
</TR>
<TR>
<TD>row 2, cell 1</TD>
<TD>row 2, cell 2</TD>
</TR>
</TABLE> </BODY>
</HTML>
```

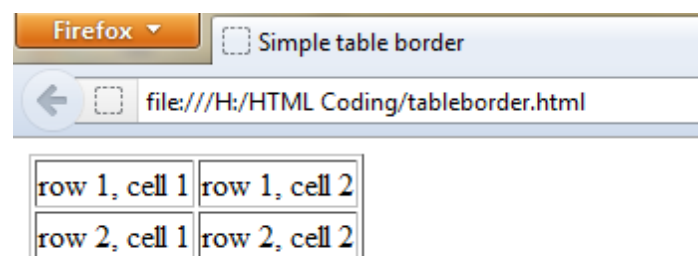


Figure 1.2 Table with border



Example: Use of <TABLE> attributes

```
<HTML>
<HEAD><TITLE> A SIMPLE TABLE IN HTML </TITLE></HEAD>
<BODY>
<TABLE BORDER=3 BGCOLOR=BLUE
BORDERCOLOR=YELLOW
CELLPADDING=5 CELLSPACING=5 ALIGN=CENTRE>
<CAPTION> TEST TABLE </CAPTION>
<TR>
<TH> HEADING 1</TH>
<TH> HEADING 2</TH>
<TH> HEADING 3</TH>
</TR>
<TR>
<TD> CELL 1 </TD>
<TD> CELL 2 </TD>
<TD> CELL 3 </TD>
</TR>
<TR>
<TD> CELL 4 </TD>
<TD> CELL 5 </TD>
<TD> CELL 6 </TD>
</TR>
</TABLE></BODY></HTML>
```

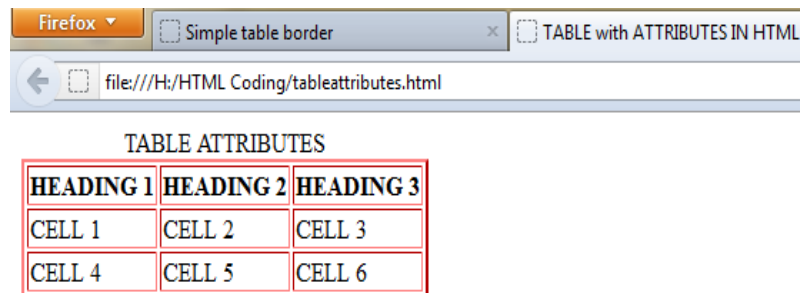


Figure 1.3 Table with attributes



Tip

You can also use the height and width attributes to define the size of individual cells. Just include the attributes in the <TD> tag of the cell that you want to size.

**Activity**

1. Write the HTML code to create the following table?

Name of the book	Price
Computer basics	Tk. 250/-
Computer networks	Tk. 330/-



Assessment



Assessment

Fill in the blanks

1. _____ are used to display data in Tabular format.
2. By default, tables are shown without _____.

State whether the following statements are true or false

1. <TR> is used for giving Heading to Table.

Multiple Choice questions

1. Which one of the sets the color of the border of a table?
 - a) BORDERCOLOR
 - b) BGCOLOR
 - c) CELLPADDING
 - d) CELLCOLOR.
2. What is cell padding?
 - a) Used to separate cell walls from their contents.
 - b) Used to set space between cells
 - c) Both a and b above
 - d) Used to provide width to a cell.
3. Which of these tags are all <table> tags?
 - a) <table><head><tfoot>
 - b) <table><tr><td>
 - c) <table><tr><tt>
 - d) <thead><body><tr>.

Exercises

1. Write the steps to create table in HTML.
2. Write notes on BORDER attribute.
 1. Explain Border, Cellspacing, Cellpadding and Bgcolor attributes of the table tag.



Lesson 5.2

HTML - FRAME



Outcomes

Upon completion of this unit you will be able to:

Describe Frame.

Create Frame.

Modify Frame.

Create Frame based Navigation Layout.

Frame

Frame provides an outstanding tool for page navigation. It also provides an effective way to organize your HTML documents in one screen. By Frames, the browser screen divides into a number of panels, which might be completely independent; for instance, you might have seen screen that contains top frame to hold banner or title graphics, left frame - contains table of contents that links to different documents, right frame - to display the contents of the documents, when click over the item in the table of contents in left frame and a bottom frame - to display some copyrights, contacts information etc. Frame enables you to multiple pages in a single window. Frame allows you to keep some content static as other content changes.

Frame Elements

First step in working with frame we need to understand the elements that are used to create a frame. The basic frame elements are:

- `<FRAMESET> </FRAMESET>`
- `<FRAME>`

`<FRAMESET>` Tag

The `<FRAMESET>` element crates multiple frames. Use this frameset element instead of the `<BODY> </BODY>` element when creating a frame based page. Frameset tag defines the number of columns and rows in a frameset.

Attributes of `<FRAMESET>`

The essential attributes are rows and columns attributes. Cols attributes defines a frameset in columns. The default setting is one column and takes up to 100 % of the page. If you need more than one column, specify the width of the each column separated by commas. The rows attribute defines a frameset in rows. The default setting is one row and takes up to



100 % of the page. If you need more than one column, specify the width of the each column separated by commas.

Example

`<FRAMESET rows="20%, 70%, 10 %">`

The screen divide into three rows 20% row is on top, 70% row is in the middle, and 10% row is on the bottom.

`<FRAMESET cols="20%, 80 %">`

The screen divides into two columns one 20% on left and other 80% on right.

The value assigned to rows and cols are in

Percentage: Percentage of an available window space.

Pixels: Absolute number of screen pixels.

Number and Asterisk: Adjust the size of the specified column (1, 2, 3 and so on) to take the remaining space.

Example: `<FRAMESET COLS="290, 2*">`

This says, "It gives the first column a width of 290 pixels and the second column whatever is left"

<FRAME> Tag

By using `<FRAMESET>`, you can only define rows and columns that you want, but, nothing shows up in them without the `<FRAME>` tag. The `<FRAME>` tag enables you to specify just what appears in row or column you defined. Like ``, `<FRAME>` is an empty tag. For each `<FRAME>` you also must use the SRC attribute to tell the browser which file to load in that particular frame.

Example: `<FRAME SRC="contents.html">`

Attributes of <FRAME>

NAME: It enables you to name a frame, so that, it can function as the target for a link.

`<FRAME NAME="content">`

FRAMEBORDER: Turn borders on or off with `FRAMEBORDER=""`.

You can choose 1(yes) or 0 (no). The default is 1. Example: `<FRAME FRAMEBORDER="0">`

MARGINWIDTH: Add a left and right margin to the frame. You must specify this in pixels. The value must be greater than 1. Example:

`<FRAME MARDINWIDTH="10">`

MARGINHEIGHT: Add a top and bottom margin to the frame. You must specify this in pixels. The value must be greater than 1. The default is 1. Example: `<FRAME MARGINHEIGHT="10">`

NORESIZE: Fixes the frame so that it cannot be resized.

SCROLLING: Select scrolling option. It can take the values auto (the default setting) - displays scroll bars only when the window is not large

enough to accommodate the frame yes - always display scroll bars, no - never displays scroll bars. Example: `<FRAME SCROLLING="no">`

Example

```
<HTML>
<HEAD>
<TITLE> SIMPLE FRAME</TITLE>
</HEAD>
<FRAMESET ROWS="20 %, 80%" COLS="20%, 80 %">
<FRAME SRC="BOLD TEXT.HTML" />
<FRAME SRC="SUBSCRIPT.HTML" />
<FRAME SRC="LINK.HTML" />
<FRAME SRC="IMAGEBORDER.HTML" />
</FRAMESET>
</HTML>
```



Figure 2.1 Table with attributes

Unit summary



Summary

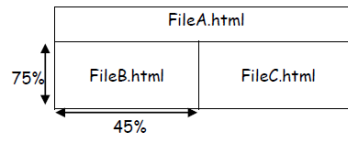
In this lesson we have study what is FRAME

- Frames allow the display of the document visually. It allows the window to be split into segments that can contain multiple different documents. Frame consists of different types of tags and they are as follows:
- `<FRAMESET>` - it consists of the frames that include the layout using the attributes of rows and cols.
- `<FRAME>` - it consists of a single frame and gets included within the frameset. It is always come up with a SRC attribute that provides the source that has to be shown in a particular frame.



Activity

1. Write the HTML code to create a framed web page in the following format:





Assessment



Assessment

Fill in the blanks

1. Frames documents are generated by _____ and _____ tag.
2. Frameset tag defines the number of _____ and _____ in a frameset.

State whether the following statements are true or false

1. <FRAME> is an empty tag.
2. For each <FRAME> you also must use the SRC attribute.

Multiple Choice questions

1. Which one of the following provides an effective way to organize web documents, visually, and also logically, by dividing the page into different parts?
 - a) Frame
 - b) Table
 - c) Form
 - d) all of the above.

Exercises

1. Explain frames. Mention the advantages of using Frames?
2. Write down the syntax of Frameset and Frame tags with its attributes.
3. What are the different types of frames tags used in HTML?



Lesson 5.3

HTML – Form



Outcomes

Upon completion of this unit you will be able to:

Describe Form.

Create Form.

Understand Form elements.

Develop sample web page using Nesting Frames and Table.

Use forms to accept data.

HTML Form

Forms are used in HTML for getting inputs from the user. An HTML form contains different types of input elements like text field, label, field set, checkbox, list box, and radio-button; submit button and more that allow user to enter information. When data entry is complete the user submit the form by clicking the submit button on the page. On submit, the data send to server for processing. The processing is done through CGI Scripts - PHP, ASP, Java Script, VB script or etc. This CGI scripts resides at the server side. After fills up the form and click the submit button the data passes either through method POST (used to pass large amount of data) or GET (used to pass small amount of data, passed along with the URL) to the server side script that then handles data and perform appropriate action. The Syntax of the form tag is:

```
<FORM>.....</FORM>
```

Form Elements

The most important form element is the `<input>` element. The `<input>` element is used to select user information. An `<input>` element can vary in many ways, depending on the type attribute. An `<input>` element can be of type text field, checkbox, password, radio button, submit button, and more. In the following section, we explore the most common input types one by one.

Text Field

To add single line text entry fields for text input (first name, last name and so on) use the `<input>` element with the `type="text"` attribute.



Example

`<input type="text">` defines a single-line input field that a user can enter text into:

```
<HTML>
<HEAD>
<TITLE> Simple Input Box </TITLE>
</HEAD>
<BODY>
<FORM>
<B>First Name: </B> <input type="text" name="firstname"><BR><BR>
<B>Last Name: </B> <input type="text" name="lastname">
</FORM>
</BODY>
</HTML>
```

How the HTML code above looks in a browser

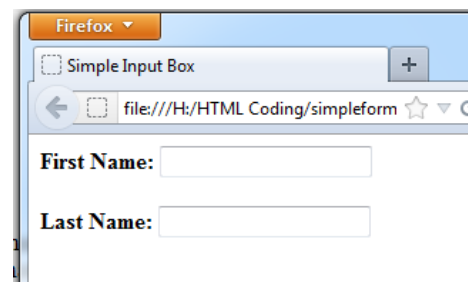


Figure 3.1 Form



Note it!

The form itself is not visible. Also note that the default width of a text field is 20 characters.

To set a text field that allows maximum 10 characters to be entered, use the following:

```
<input type="text" name="firstname" maxlength="10">
```

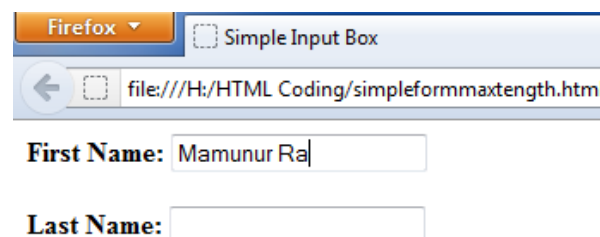


Figure 3.2 Form input

Password Field

```
<input type="password"> Defines a password field:  
<HTML>  
<HEAD>  
<TITLE> Simple Input Box Password </TITLE>  
</HEAD>  
<BODY>  
<FORM>  
<B>First Name: </B> <input type="text" name="firstname"><BR><BR>  
<B>Last Name: </B> <input type="text" name="lastname"><BR><BR>  
<B>Password: </B> <input type="password" name="pwd">  
</FORM>  
</BODY>  
</HTML>
```

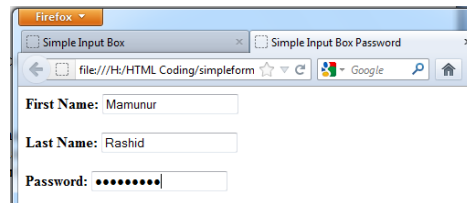


Figure 3.3 Form input and password

Radio Button

RADIO - It is used to accept only one value from a set of alternatives. When you want to select a single item from a list of possible choices, you might want to use radio buttons. Each radio button field in the group should be given the same name. The following code demonstrates how radio button element can be constructed.

To add radio buttons in a form use the input element with the type attribute set to radio.

Be sure to give all the radio buttons the same name attributes.

You also need to assign a value with the value element.

To preselect an option add the checked attribute to one of the <input> elements.

```
<HTML>  
<HEAD>  
<TITLE> Example radio button </TITLE>  
</HEAD>  
<BODY>  
<FORM>  
<B>Capital of Bangladesh</B><BR>  
<input type="radio" name="capital" value="dhaka" >Dhaka<BR>  
<input type="radio" name="capital" value="rajshahi" >Rajshahi<BR>  
<input type="radio" name="capital" value="tangail" >Tangail<BR>  
<input type="radio" name="capital" value="chittagong" >Chittagong  
</FORM>
```



```
</BODY>
</HTML>
```

How the HTML code above looks in a browser:

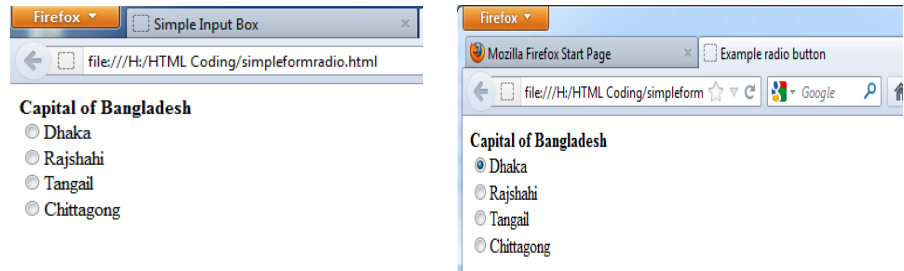


Figure 3.4 Radio Button

Checkbox

To provide multiple choices to a user, you might use checkbox rather than radio buttons. Obviously this is a situation in which user want provide more than one option.

`<input type="checkbox">` defines a checkbox. Checkboxes allow a user select ZERO or MORE options of a limited number of choices.

The code for a series of check boxes might look like the following code:

```
<html>
<head>
<title> Example Checkbox </title>
</head>
<body>
<form>
<b>Capital of Bangladesh</b><br>
<input type="checkbox" name="capital" value="dhaka" >Dhaka<br>
<input type="checkbox" name="capital" value="rajshahi" >Rajshahi<br>
<input type="checkbox" name="capital" value="tangail">Tangail<br>
<input type="checkbox" name="capital" value="chittagong" >Chittagong
</form>
</body>
</html>
```

How the HTML code above looks in a browser:

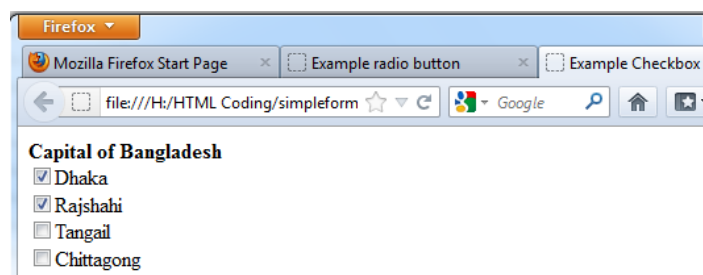


Figure 3.5 Checkbox



Attributes of <INPUT>

NAME: It defines name for the form components. This field is required for all the types of input except submit and clear.

SIZE: Specifies the size of the input field in number of characters, used with text or password field.

MAXLENGTH: Specifies maximum number of characters that can be entered into a text or password field.

VALUE: For a text or password field, it defines the default text displayed. For a check boxes or radio button, it specified the value that is returned to the server if the box or button is selected. For submit and reset buttons, it defines the label of the button.

CHECKED: Sets a checkbox or radio button to 'on'.

TYPE: Set the type of input field.

TEXT: Text is used for single line text field.

<SELECT> Tag

To build up a pull-down menu, use the <select> element instead of <input>. You can add choices with the option element and use the name and value attributes.

```
<HTML>
<HEAD> <TITLE> Example Pull-Down </TITLE>
</HEAD>
<BODY>
<FORM>
<B>Capital of Bangladesh</B><BR>
<select name=" ">
<option value="dhaka">Dhaka
<option value="rajshahi" >Rajshahi
<option value="tangail">Tangail
</select>
</FORM>
</BODY>
</HTML>
```

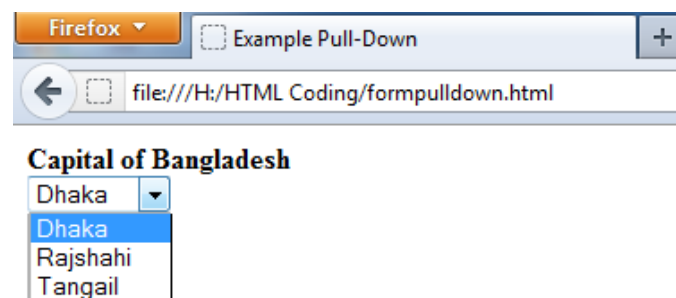


Figure 3.6 select tag



Attributes of <SELECT>

MULTIPLE: Allows for more than one selection to be made from the list (like checkbox).

Example: `<SELECT NAME=" " MULTIPLE="MULTIPLE">`

SIZE: Specifies the number of usable items. By default size=1 - the SELECT element treated as pull down menu. For size more than one, SELECT element treated as a list. For instance, size=4 will display four choices simultaneously.

Example: `<SELECT NAME=" " MULTIPLE="MULTIPLE" SIZE="4">`

Button

SUBMIT - This creates a button that submits the form. When the user clicks on a submit button it submits the data to the server. The user can use VALUE attribute to provide a label to the button. On submit, the data submitted to the scripts specified with the ACTION attribute of the <FORM> Tag.

Example

```
<INPUT TYPE="SUBMIT" VALUE="CLICK ME TO SUBMIT DATA">
```

RESET - Reset buttons in a form are used to clear the contents of the form. When the user clicks on a reset button the contents of every form element is reset. One can set the label of RESET button by using VALUE attribute.

Example: `<INPUT TYPE="RESET" VALUE="SET TO INITIAL">`

HIDDEN - This creates an invisible field, but the content of the field are sent with the submitted form.

Example: `<INPUT TYPE = "HIDDEN">`

Attributes of <FORM>

ACTION: The action attribute Specify the location where to send the information collected from a form. It's generally tells the browser to use the Common Gateway Interface (CGI) scripts to process the data.

METHOD: It specifies how data will be submitted. It has two values:

GET: The data submitted to CGI script is displayed in browser address bar for transfer.

POST: Important data are submitted through post where data not display in browser address bar, during transfer.

Syntax

```
<FORM METHOD="VALUE" ACTION="URL">  
</FORM>
```

Large amount of data can be submitted by post method because the form contents are not in the URL.



Assessment



Assessment

Fill in the blanks

1. _____ accept only one value from a set of alternatives.
2. _____ is used to send form data to a server.

State whether the following statements are true or false.

1. Text fields may be used for multi-line input.
2. Drop down menu is not supported in HTML.

Multiple Choice questions

1. Which one of the following specifies maximum number of characters that can be entered into a text?
 - a) MAXLENGTH
 - b) SIZE
 - c) FIX
 - d) MAX.
2. What is the correct HTML for making a checkbox?
 - a) <checkbox>
 - b) <input type="checkbox" />
 - c) <input type="check" />
 - d) <check>.
3. What is the correct HTML for making a text input field?
 - a) <input type="textfield" />
 - b) <textinput type="text" />
 - c) <textfield>
 - d) <input type="text" />.
4. What is the correct HTML for making a drop-down list?
 - a) <input type="list" />
 - b) <select>
 - c) <list>
 - d) <input type="dropdown" />.
5. What is the correct HTML for making a text area?
 - a) <input type="textarea" />
 - b) <input type="textbox" />
 - c) <textarea>
 - d) <text=textarea>.

Exercises

1. Mention the use of select tag.
2. Write notes on Password field.
3. Write the difference between radio button and checkbox.



Lesson 5.4

Dynamic HTML



Outcomes

Upon completion of this unit you will be able to:

Understand DHTML.

Control objects Positioning.

Create a DHTML page.

Dynamic HTML

Dynamic HTML enables you to control position and animate the various elements of a web page.

Marquee tag

A simple way to add animation to a web page is the <marquee> element. Any text/image enclosed inside the marquee element will scroll across the page.

```
<MARQUEE> WELCOME TO MY FIRST WEB PAGE</MARQUEE>
```

Here we will be showing you how to scroll text using the Marquee tag.

Example

```
<HTML>
```

```
<HEAD>
```

```
<TITLE>
```

```
Marquee example
```

```
</TITLE>
```

```
</HEAD>
```

```
<BODY>
```

```
<MARQUEE> WELCOME TO MY FIRST WEB PAGE</MARQUEE>
```

```
</BODY>
```

```
</HTML>
```

Marquee with attributes

There are some attributes that will alter a marquee's appearance and behavior:

Behavior

This attribute enables how to scroll the text. The default value of scroll allows the text to scroll continuously.



Loop

This attribute is used to determine how many times the text will scroll. A numerical value will cause the action to be performed for that number of times. For example loop=10 will scroll the text 10 times.

Direction

With this attribute you can choose the direction in which the text will move (left or right).

Scrolldelay

This attribute is used to control the movement of the text, time by delaying each separate movement for a specific period of time. The values for this attribute must be in milliseconds, a delay of 100 milliseconds would be equivalent to one tenth of a second.

Some other attributes that can be used to modify the size of the marquee are like bgcolor=" " (enables to specify a background color for the marquee), height=" " (height of the marquee in pixels), width=" " (width of the marquee in pixels), hspace=" " (adds space on the sides of the marquee), vspace=" " (adds space above and below of the marquee). For example set the background color to red.

```
<marquee bgcolor="red">
```

Example

```
<HTML>  
<HEAD>  
<TITLE>  
Marquee WITH Attributes  
</TITLE>  
</HEAD>  
<BODY>  
<MARQUEE BGCOLOR="BLUE" DIRECTION="RIGHT"  
SCROLLDELAY="100">  
WELCOME TO MY FIRST WEB PAGE</MARQUEE>  
</BODY>  
</HTML>
```

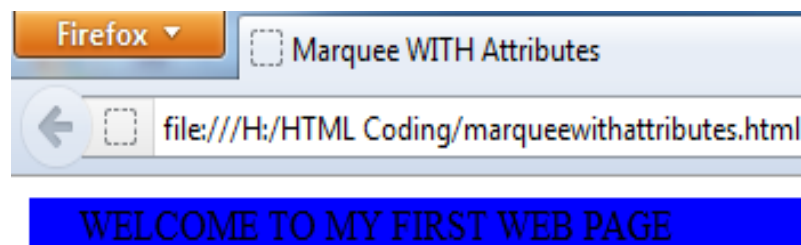


Figure 4.1 Marquee tag



Assessment



Assessment

Fill in the blanks

1. The default value of scroll allows the text to scroll _____.
2. _____ accept only one value from a set of alternatives.

State whether the following statements are true or false

1. Direction attribute choose the direction in which the text will move (left or right).

Multiple Choice questions

1. How do I add scrolling text to my page?
 - a) <scroll>
 - b) <marquee>
 - c) <ciruler>
 - d) <move>.
2. Which attribute is used to determine how many times the text will scroll?
 - a) Loop
 - b) Direction
 - c) Scrollldelay
 - d) Behaviour.

Exercises

1. Explain the attributes of Marquee.



Assignment



Assignment

1. Write the html code for the following to appear one after the other:

(i) A heading with center aligned words, “Welcome to BOU” and the color of its text should be

“Maroon”

(ii) A horizontal rule of black color and size 4 across the page below the heading.

(iii) Background color of the page should be yellow and visited link color should be green.

(iv) Font face of the text on the page is arial.

2. Write an HTML code for creating a form, which contains three textboxes as shown below. The first two textboxes accept two numbers as input from the user and the third textbox displays the sum of these two numbers.

3. Consider the following write the HTML code to generate:

I. Title of the page should be “practice-1”

II. Background colour of the page should be “Silver”, Link colour should be “Maroon”, visited link colour should be “Red”

III. Table should have a border of width 2.

IV. Use the concept of nested lists for creating the list given in the web page with specified bullets.

V. Picture used in the page is the file “beach.jpg”