

Client Side Programming

Overview of HTML

HTML stands for **H**ypertext **M**arkup **L**anguage, and it is the most widely used language to write Web Pages.

- **Hypertext** refers to the way in which Web pages (HTML documents) are linked together. Thus, the link available on a webpage is called Hypertext.
- As its name suggests, HTML is a **Markup Language** which means you use HTML to simply "mark-up" a text document with tags that tell a Web browser how to structure it to display.

HTML is a markup language for telling a Web browser how to format and display a Web page. It can be viewed as a subset of the Standard Generalized Markup Language (SGML), which is for defining general document format. Predefined tags are employed to describe the format of a document. For example, by putting the word "Italics" inside the <I></I> tag pair (i.e., <I> Italics </I>), the word "Italics" will be displayed by the Web browser in Italics form. Most tags have a "start tag" and an "end tag" (also called container tags) and the content is embedded between the two tags. Some tags are standalone only without any content. An example is the <HR> tag, which adds a horizontal rule. For most tags, one can also specify its attributes so as to define additional properties about the tag. For example, one can change the font face by applying the FACE attribute of the tag as shown below:

```
<FONT FACE="Arial"> The font face is Arial</FONT>
```

Basic Structure of an HTML Document

The Basic structure of HTML as follows:

```
<!DOCTYPE HTML PUBLIC "-//W3C//DTD HTML 4.0 Final//EN">
<HTML>
<HEAD>
<TITLE>

</TITLE>
</HEAD>
<BODY>

</BODY>

</HTML>
```

The <!DOCTYPE> tag specifies the version of the HTML document and other related information. <HTML> and </HTML> tags define the start and the end of an HTML document, respectively. Within the <HTML> tag pair, there are two main sections namely the **HEAD** section as included inside the <HEAD></HEAD> tag pair and the **BODY** section as included inside the <BODY></BODY> tag pair. The **HEAD** section provides information (e.g. the document title) for the web browser to process the document but the information **is** not displayed. The web browser only displays the information within the <BODY></BODY> tag pair.

Basic Text Formatting

HTML defines elements for formatting the text. HTML elements like `` and `<i>` are used to bold and italics the text.

HTML Text formatting elements are as follows:

Heading

The heading tags `<H1>` and `<H2>` are used to create a first and second level heading, respectively. Altogether there are six levels of headings: `<H1>`, `<H2>`, `<H3>`, `<H4>`, `<H5>`, and `<H6>`. The `ALIGN` attribute specifies the alignment method. Possible options are `LEFT`, `CENTER`, and `RIGHT`. For instance, in the earlier example, the first level heading is aligned to the center whereas the second level heading is aligned to the left because no attribute is specified, so the default alignment method is used.

Paragraph

You can define the start and the end of a paragraph by using the `<P>` and `</P>` tags, respectively. Similar to the heading tag, the `ALIGN` attribute can be used to specify the alignment method.

Font

As shown in the example, the `` tag is used to define the font properties. Its common attributes are as follows:

Attribute	Meaning
COLOR	Defines the font color (i.e. color of the text)
FACE	Defines the font style listed in order of preference. For example, "Arial, Courier" means that Arial is preferred to Courier (i.e., Courier is used if Arial is not supported.)
SIZE	Defines the default font size (an absolute scale of 1-7 can be used)

Other special tags for formatting text

We can also set the text in italics by using either the `` or `<I>` tag. For underlining the text, the `<U>` tag can be used. The `` tag can be used to display the text using bold face. Alternatively, the `` tag can be used for the same purpose. The `<SUB>` and `<SUP>` tags are for displaying text as subscript and superscript, respectively. To create blinking text, we can put the text between the `<BLINK>` and `</BLINK>` tags.

List element

To format text using a list for ease of reading, the `` or `` tag can be used. `` and `` are for creating an ordered list and unordered list, respectively. After creating the list tag, the list items are specified by the `` tag.

The `TYPE` attribute of the `` tag specifies the numbering style of the list. The available ones are

`TYPE=1` - Arabic numerals starting from 1

`TYPE=a` - alphabetical order starting from a (i.e. small letters are used)

`TYPE=A` - alphabetical order starting from A (i.e. capital letters are used)

TYPE=i - lowercase Roman numerals starting from i

TYPE=I - uppercase Roman numerals starting from I

To specify the starting value of the ordered list, we can use the **START** attribute of the **COL**> tag. For example, **<OL TYPE=1 START=6>** means that the first item of the list starts at **6**. For the **** tag, the **TYPE** attribute specifies the bullet shape. The available ones are

TYPE=CIRCLE -the bullet type is a circle

TYPE=DISC - the bullet type is a disc

TYPE=SQUARE - the bullet type is a square

The **** tag has the same attributes as the corresponding **** or **** tag. Therefore, we can override the original attribute by applying the new attribute in the respective **** tag. Furthermore, for the **** tag of the ordered list, we can assign a new value with the **VALUE** attribute. For example, **<LI TYPE=1 VALUE=11>** specifies that the respective item is assigned as the 11th item irrespective of the previous order

Links

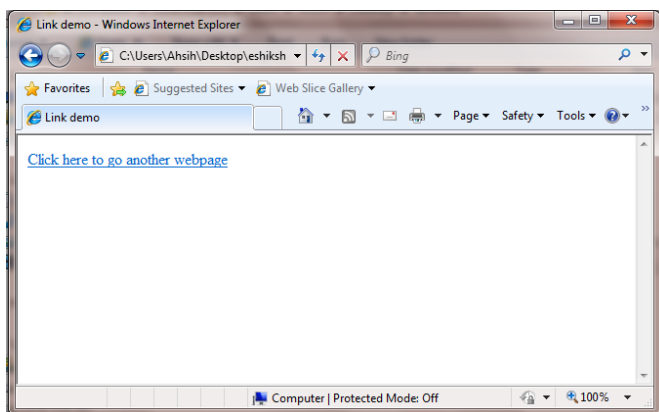
Links (or hyperlinks) are the most powerful feature of an HTML document. They are used to link web pages.

We can link a webpage with another webpage so that user can redirect from one webpage to another webpage

Links are defined by the anchor tag pair: **<A>** and ****. For example, a basic

hyperlink looks like the following:

```
<html>
<head>
<title> Link demo</title>
</head>
<body>
<a href="C:\Users\Ahsih\Desktop\eshiksha\webpage2.html"> Click here to go another
webpage</a>
</body>
</html>
```



In the above example href attribute is used to give source location and in between the anchor tag the text will be actually hyperlinked and it has been seen in blue color in the output screen.

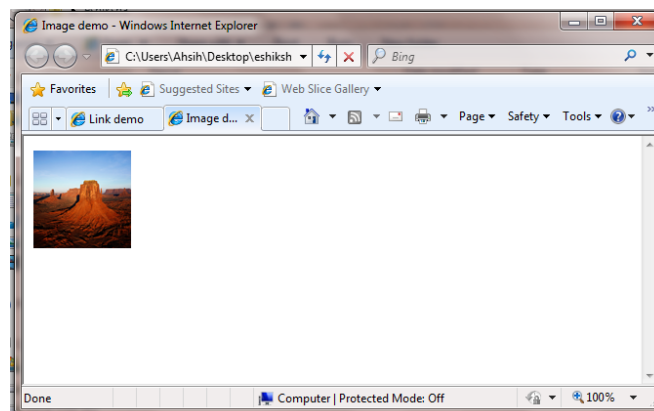
Images

In the webpage images are one of the most important content which is generally used to attract the actual user of the webpage. We can add image in the webpage by using tag. There are various attributes of tag which are explained as under:

Attribute	Meaning
ALIGN	Defines the alignment method (i.e., LEFT, RIGHT, TOP, MIDDLE, or BOTTOM)
ALT	Gives a description of the image, which is displayed when the image is not available (e.g. during loading)
BORDER	Sets the border size in pixels
HEIGHT	Fixes the height of the image in pixels
HSPACE	Specifies the additional horizontal space to be added
SRC	Specifies where (i.e., the URL) to load the source image
VSPACE	Specifies the additional vertical space to be added
WIDTH	Fixes the width of the image in pixels

Example:-

```
<html>
<head>
<title> Image demo</title>
</head>
<body>
<IMG SRC="C:\Users\Public\Pictures\Sample Pictures\desert.jpg " HEIGHT= 100 WIDTH=100
ALIGN= " LEFT "
BORDER="1" ALT="Picture not found">
</body>
</html>
```



Table

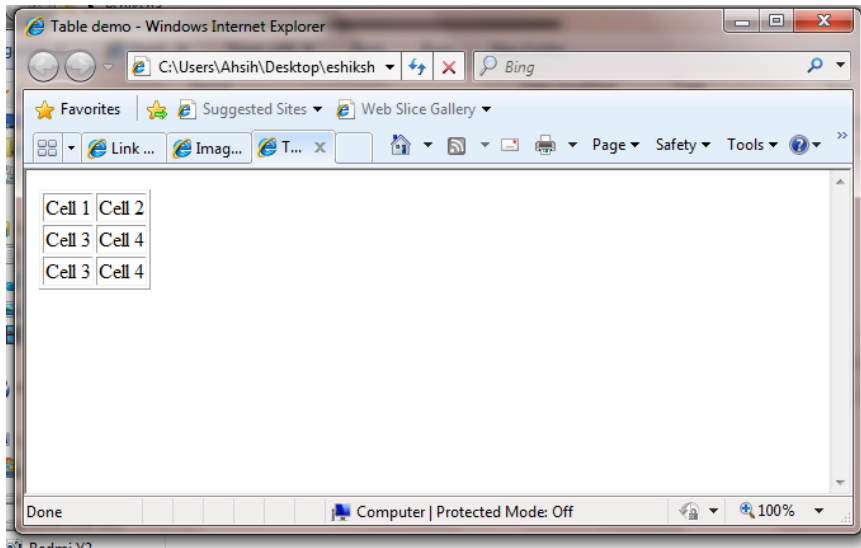
Table is a grid of rows and columns, the intersections of which form *cells*. Each cell is a distinct area, into which you can place text, graphics, or even other tables. HTML handles tables very well, and you can use tables to organize complex data to be presented to your site visitors.

Attributes of Table tag are follows

Attribute	Meaning
ALIGN	Specifies the alignment method (LEFT, CENTER, or RIGHT), e.g., ALIGN = CENTER means that the table is aligned to the center of the document
BGCOLOR	Specifies the background color for the table
BORDER	Sets the border thickness in pixels (Note: BORDER = 0 means that there is no border)
CELLPADDING	Sets the padding (in pixels) between the cell border and content, e.g., CELLPADDING = 2 means that a cell padding of 2 pixels is used
CELLSPACING	Sets the spacing (in pixels) between data cells, e.g., CELLSPACING = 3 means that a cell spacing of 3 pixels is used
COLS	Specifies how many columns the table has
WIDTH	Defines the table width (in terms of a percentage of the document width or pixels), e.g., WIDTH = 50 means that the table width is 50 pixels.

Example

```
<html>
<head>
<title> Table demo</title>
</head>
<body>
<table border=1>
<tr>
<td>Cell 1</td>
<td>Cell 2</td>
</tr>
<tr>
<td>Cell 3</td>
<td>Cell 4</td>
</tr>
<tr>
<td>Cell 3</td>
<td>Cell 4</td>
</tr>
</table>
</body>
</html>
```



Frames

Frame element is used to divide the webpage into different section/frame so that we can add webpage into the different section/frame. To set up frames, we need to use the **<FRAMESET>** tag to define the frame format and then use the **<FRAME>** tag to define the frame content.

Attributes of Frameset element

Attribute	Meaning
FRAMEBORDER	Indicates whether a frame border is used (1) or not used (0)
HEIGHT	Sets the frame height
MARGINHEIGHT	Specifies the top and bottom margins
MARGINWIDTH	Specifies the left and right margins
NAME	Specifies a name for identification purpose
NORESIZE	Does not allow users to change the size of the frame
SCROLLING	Indicates whether a scrollbar is used (YES, NO, or AUTO)
SRC	Specifies the URL of the initial HTML file to be loaded
WIDTH	Sets the frame width

Example

```

<html>
<head>
<title> Frame demo</title>
</head>
<FRAMESET COLS=20%,60%,20%>
<FRAME NAME=LEFT SRC=C:\Users\Ahsih\Desktop\eshiksha\webpage1.html>
<FRAME NAME=MIDDLE SRC=C:\Users\Ahsih\Desktop\eshiksha\webpage2.html>
<FRAME NAME=RIGHT SRC=C:\Users\Ahsih\Desktop\eshiksha\tabledemo.html>
</FRAMESET>
</html>

```

