Unit –III

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3.1 Images in HTML Pages

Text

3.2 Tables in HTML

Table Tag<table>:-
One of the most useful tools for presenting information is a table. Unlike with most word-processing programs, however, there is no preset table structure or framework available in HTML into which information can be placed. <TABLE> and </TABLE>: Creates a table with a row or rows of one or more cells, each cell containing data. Tables may be nested (one table inside of another table inside of another table). The table tag itself may include certain attributes that control how the whole table will appear. These attributes are listed below:

BORDER="2":-
Creates a border of 2 pixels, around the edge of a table. The parameter BORDER by itself will produce a uniform border of 2 pixels width around the table (and around individual cells within the table). Excluding the BORDER parameter from the <TABLE> tag will cause the borders around and within the table to be invisible. BORDER="0" causes there to be no borders whatsoever, either visible or invisible.
BORDERCOLOR="COLOR":
Colors the border around and within a table.
BGCOLOR="COLOR":
Colors the background of an entire table. This command is overridden by any BGCOLOR command found within a table heading cell tag (<TH>), table row tag (<TR>), or data cell tag (<TD>), each described later.
ALIGN="RIGHT":
Positions a table at a specific location on the page. The possible values for align attribute are left, right and center.
WIDTH="500":
Defines the horizontal width of an entire table on the page. Width can be expressed as a percentage (of the total width of the page) or simply as a whole number without the percent (indicating the number of pixels wide).
HEIGHT="600":
Defines the vertical height of a table. Height can be expressed as a percentage (of the total height of the browser window) or simply as a whole number without the percent (indicating the number of pixels high). In most cases, specifying the height of a table is unnecessary. (One example where it can be useful is in a frames document.)

CELLSPACING="5":
Causes the non-colored portion of the border (whether visible or invisible) around a table and between adjacent cells of the table to be spaced in pixels in width. The default cellspacing width is 2 pixels. Even with CELLSPACING="0", a border will be 2 pixels wide. This automatic 2-pixel width also is present when the border is invisible, unless the parameter BORDER="0" has been added.
CELLPADDING="5":
Creates a minimum distance of 5 pixels between the contents (text or graphic image) of each table cell and the closest (visible or invisible) border of the cell. The default cellpadding is 1 pixel. These parameters will create the most compact table possible: <TABLE BORDER="0" CELLSPACING="0" CELLPADDING="0">.

An example of above table attributes is given as below:

<table align="right" bgcolor="yellow" border="2" bordercolor="red" cellpadding="5" cellspacing="5" width="200" height="200">

In this instance, our table will be aligned to the right, it will have a background color of yellow, it will have visible border of 2 pixels, the red color is applied to table, it will have a small amount of blank space between each cell, a small amount of blank space around the outside of each cell, it will take up 200 pixels width and 200 pixels height.

<CAPTION> Title </CAPTION>:-
Places a horizontally centered title at the top or at the bottom of a table. If a caption is wider than the table, the caption will break and continue onto the next line(s) so as to remain within the left and right boundaries of the table. A caption's location can be adjusted as described below. A <**CAPTION**> tag may contain within it an alignment parameter as part of the command.
•**ALIGN**="left":
Positions caption (title) horizontally at a specific location in relation to a table. The possible values for align attribute are left, right and center.
•**VALIGN**="bottom":
Positions caption (title) vertically at a specific location in relation to a table. The possible values for align attribute are top and bottom.

<TH>text</TH>:-
Places an optional heading above any column of a table. The text of the heading is bold, and it is centered(horizontally and vertically) unless otherwise specified. A <TH> tag may contain within it other parameters as part of the command:
•**BGCOLOR**="COLOR":Colors the background of a heading cell. This command overrides any BGCOLOR command found within the table tag (<TABLE>).
•**ALIGN**=" CENTER":
Positions the text in a heading cell at a specific location horizontally within the cell.
"LEFT": aligns the text in a heading cell with the left margin of the cell.
"CENTER": (the default): centers the text in a heading cell horizontally within the cell.
"RIGHT": aligns the text in a heading cell with the right margin of the cell.

•**VALIGN**="MIDDLE":
Positions the text in a heading cell at a specific location vertically within the cell. IT,Latur.
 "TOP": aligns the text in a heading cell with the top margin of the cell. **"MIDDLE" :** centers the text in a heading cell vertically within the cell. **"BOTTOM":** aligns the text in a heading cell with the bottom margin of the cell. **"BASELINE":** aligns the baseline of the data in each heading cell of that row with the baseline of the data in every other heading cell in the row.

• **WIDTH**="100":
Defines the width of a heading cell. Width can be expressed as a percentage of the total width of the table or simply as a whole number without the percent (indicating the number of pixels wide). Whether expressed as a percentage or as a whole number, the combined widths of all heading cells should add up to the total width of the table.
•**HEIGHT**="50":
Defines the height of a heading cell in pixels. If the height of one heading cell in a row is specified, all heading cells in that row will become that same height. If different heights are specified for heading cells in a row, all heading cells in that row will become the largest height.
•**COLSPAN**="2":
Specifies how many columns of a table a heading cell will merge.
•**ROWSPAN**="2":
Specifies how many rows of a table a heading cell will merge. A row span made to extend into rows which have not been created with <TR> & </TR> tags will be truncated. This parameter rarely will be used for headers, since the text of headers most likely will be on the same row.

•**NOWRAP**:
Causes the string of text in a heading cell not to be broken to fit the allocated width of the cell. Use of this parameter

may force the width of that heading cell (and of the entire column) to be wider than is assigned by the WIDTH parameter, and excessively wide cells may result.

\<TR> \</TR>:-

Defines each horizontal row of table data cells inside of a table. A \<TR> tag may
contain within it other parameters as part of the command:

•**BGCOLOR**="COLOR":

Colors the background of an entire row. This command overrides any BGCOLOR command found within the table tag (\<TABLE>), and it is overridden by any BGCOLOR command found within a data cell tag (\<TD>).

•**ALIGN**="CENTER":

Positions the data in each cell of a row at a specific location horizontally within the cell. This command is overridden by any ALIGN command found within an individual data cell tag (\<TD>).

"LEFT": (the default) aligns the data in each cell of that row with the left margin of the cell.

"CENTER": centers the data in each cell of that row horizontally within the cell.

"RIGHT": aligns the data in each cell of that row with the right margin of the cell.

•**VALIGN**="MIDDLE":

Positions the data in each cell of a row at a specific location vertically within the cell. This command is overridden by any VALIGN command found within an individual data cell tag (\<TD>).

"TOP": aligns the data in each cell of that row with the top margin of the cell. **"MIDDLE":** centers the data in each cell of that row vertically within the cell. **"BOTTOM":** aligns the data in each cell of that row with the bottom margin of

the cell.

"BASELINE": aligns the baseline of the data in each cell of that row with the baseline of the data in every other cell in the row.

\<TD> \</TD>:-

Defines each table data cell within a row, into which text and/or graphic images may be placed. A \<TD> tag may contain within it other parameters as part of the command:

•**BGCOLOR**="COLOR":

Colors the background of a cell. This command overrides BGCOLOR commands found within the table tag (\<TABLE>) or row tag (\<TR>).

•**ALIGN**="CENTER":

Positions the text in a data cell at a specific location horizontally within the cell. These commands override ALIGN commands found within row tags (\<TR>). **"LEFT":** (the default) aligns the data in a cell with the left margin of the cell. **"CENTER":** centers the data in a cell horizontally within the cell.

"RIGHT": aligns the data in a cell with the right margin of the cell.

•**VALIGN**="MIDDLE":

Positions the text in a data cell at a specific location vertically within the cell. These commands override VALIGN commands found within row tags (\<TR>). **"TOP":** aligns the data in a cell with the top margin of the cell.

"MIDDLE": (the default) centers the data in a cell vertically within the cell.

"BOTTOM": aligns the data in a cell with the bottom margin of the cell.

•**WIDTH**="100":

Defines the width of a data cell. Width can be expressed as a percentage (of the total width of the table) or simply as a whole number without the percent (indicating the number of pixels wide). Whether expressed as a percentage or as a whole number, the combined widths of the data cells in a row should add up to the total width of the table.

•**HEIGHT**="50":

Defines the height of a data cell in pixels. If the height of one data cell in a row is specified, all data cells in that row will become that same height. If different heights are specified for data cells in a row, all data cells in that row will become the largest height.

•**COLSPAN**="2":

Specifies how many columns of the table a data cell will merge.

•**ROWSPAN**="2":

Specifies how many rows of the table a data cell will merge. A row span made to extend into rows which have not been created with \<TR> & \</TR> tags will be truncated.

•**NOWRAP**:

Causes the string of data in a data cell not to be broken to fit the allocated width of the cell. Use of this parameter may force the width of that data cell (and of the entire column) to be wider than is assigned by the WIDTH

parameter, and excessively wide cells may result.

General Table Format:-

HTML tables are made up of rows (using the TR element) of columns (using the TD or TH elements). This creates a very uniform grid of columns and rows. A General Table format in HTML contains Rows and Columns. The First row generally termed as header row and hence is created using <TH> Tag. The other rows are created using <TD> Tags. The table must contain a border. Also a Table must have a caption specified to it. The general table drawn using HTML is shown below.

```
<table align="center" border="2">
<caption> Merit List </caption>
<tr>
<th>Roll No.</th>
<th>Name</th>
<th>Class</th>
</tr>
<tr>
<td>01</td>
<td>Suhas </td>
<td>B.Sc(CS)FY</td>
</tr>
<tr>
<td>02</td>
<td>Anil</td>
<td>BCA FY</td>
</tr>
</table>
```

3.3 Frames

Some web pages employ the use of a frame layout, which is a method of displaying multiple, often scrollable files (documents and/or graphic images) at once on the same page. The file in each frame has its own URL (Uniform Resource Locator or web address). Most graphical browsers will recognize frame commands and are able to display frames. The collection of frames in a browser window is referred to as a "frameset." The document which defines all the frames in a frameset is called the "frameset document." A frameset document is just like any other HTML source document except that the "body" tags (<BODY> & </BODY>) are replaced by "frameset" tags.

3.4 Creating Frames

<FRAMESET> </FRAMESET>:-

Defines a collection of frames or even other framesets, causing a browser window to be partitioned into distinct sections (frames) with a different file (document or graphic image) appearing within each frame. Framesets may be nested (one frameset inside of another frameset).

No <BODY> tag can be placed before a <FRAMESET> tag in a frameset document, or else the browser will ignore the <FRAMESET> tag.

The syntax of framesets is similar to that of tables, in that both are composed of "rows" and/or "columns." A <FRAMESET> tag must contain within it one of two parameters as part of the command.

Simple Frame Example:-

```
<html>
<head>
<title>Frame</title>
</head>
<frameset cols="20%,80%">
```

```
<frame src="page1.html">
<frame src="page2.html">
</frameset>
</html>
```

3.5 Frame attribute

•**ROWS**="30%,*":
Includes a list of values separated by commas, with each value defining the height of a frame (row). The number of values in the list equals the number of frames (rows) in the frameset. The height can be an absolute value in pixels or a percentage, or it can be a "relative value" ("*").

•**COLS**="30%,*":
Includes a list of values separated by commas, with each value defining the width of a frame (column). The number of values in the list equals the number of frames (columns) in the frameset. The width can be an absolute value in pixels or a percentage, or it can be a "relative value" ("*").

•**FRAMEBORDER**="0 ":
Sets the presence or absence of borders between the frames in that frameset. This will be overridden by any FRAMEBORDER parameters within individual
<FRAMESET> or <FRAME> tags within that frameset. The value 0 used to invisible the border and value 1 for visibility.
Since framesets may be nested within one another, a page can be created with both rows and columns on it, with each frameset defining either rows or columns.

<FRAME>:-
Defines a single frame in a frameset. This frame will be part of a row or a column, as designated in the <FRAMESET> tag before it, and it will contain a file (document or
graphic image) different from the files in the other frames of the frameset. A <FRAME>
tag may contain within it parameters as part of the command.

•**SRC**="URL":
Causes the source file at the specified URL to be displayed inside a frame initially. If no URL is included, the frame will be blank.

•**NAME**="frame name":
Assigns a name (optional) to a frame, enabling the frame to be "targeted" by hyperlinks in other documents within the same frameset.

•**MARGINWIDTH**="10":
Sets the width of the left and right margins of a frame. Width is in pixels.

•**MARGINHEIGHT**="10":
Sets the height of the top and bottom margins of a frame. Height is in pixels.

•**SCROLLING**="YES":
Specifies whether or not a scrollbar (or scrollbars) will be present on a frame's border(s).
"YES": causes a scrollbar (or scrollbars) to be visible on a frame.
"NO": causes no scrollbar(s) to be visible on a frame.
"AUTO": (the default) allows the browser to decide whether or not scrollbars are needed and, if so, to place them where necessary.

•**NORESIZE**:
Disables the ability of the user to resize a frame. Any frame adjacent to a nonresizable frame also will not be resizable.

•**FRAMEBORDER**="0":
Sets the presence or absence of borders for that frame. This will override any FRAMEBORDER command which may be present in the <FRAMESET> tag of the frameset containing the frame.
"1" (the default) causes borders to be present around a frame.
"0" causes no borders to be present around a frame (only if the FRAMEBORDER="0" parameter is present in the <FRAME> tags of all frames sharing those borders).

•**BORDERCOLOR="COLOR"**
Sets the specified color to frame border.

3.6 Linking

Frame Targeting:-
When a hyperlink is in a document which is part of a "frameset," the <A> tag may contain within it a "target"

parameter as part of the command. TARGET="frame name": located inside of a frameset, points to a specific frame defined with that "frame name." A document called up by this hyperlink will appear in the targeted frame when that hyperlink is activated. That is, an activated hyperlink in document 1 (which is located in one frame of a frameset) will call up document 2. Then, document 2 will appear in the frame targeted with the "frame name" from document 1.

This TARGET="frame name" parameter will override any TARGET="frame name" parameter which might appear in the document with the hyperlink. Every frame name must begin with an alphanumeric character (letter or number).

3.7 Complex framesets

In real world applications we have to use some more complex frames which is given as follows.

```
<html>
<head>
<title>Main File</title>
</head>
<frameset rows="10%,90%">
<frame src="page1.htm">
<frameset Cols="30%, 70%">
<frame frameborder="3" bordercolor="red" src="top.htm" Name="Top">
<frame frameborder=1 bordercolor="0000ff" src="bottom.htm" Name="Bottom">
</frameset>
</frameset>
</html>
```

<frameset rows="10%,90%">This frameset creates two rows and , <frameset Cols="30%, 70%"> divides the second row into two columns. Following is the output of this complex frameset.
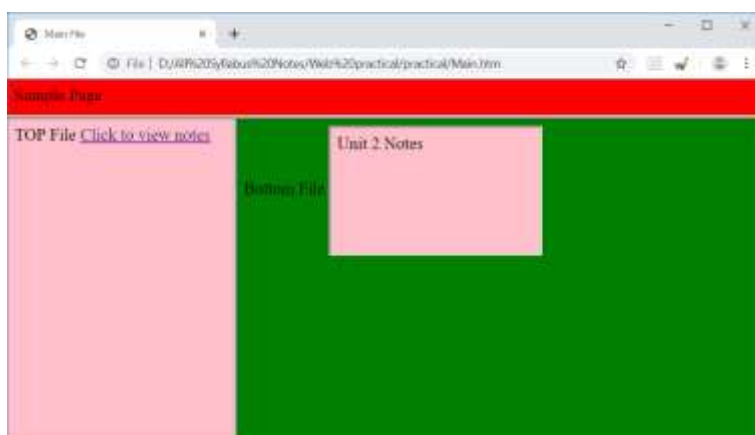
3.8 Inline frames

The idea of the floating frame is to create an inline framed region or window that acts similar to any other embedded object as text can be flowed around it. An inline frame is defined by the <IFRAME> tag and can occur anywhere within the <BODY> of an HTML document. The major attributes to set for an <IFRAME> tag includes SRC, HEIGHT, and WIDTH. The source is set to the URL of the file to load, while the height and width are set either to the pixel or percentage value of the screen that the floating frame region should consume. Like an <IMG> tag floating frames support the align attribute for basic positioning within the flow of text. The <IFRAME> tag also supports MARGINHEIGHT and MARGINWIDTH attributes to control the margins on framed content.

```
<html>
<head>
<title>Frame</title>
</head>
<body>
<iframe src="page1.html" marginheight="30" marginwidth="30" height="300"
width="500" align="center">
</body>
</frameset>
</html>
```

3.9 Image maps

With HTML, it is possible to embed many different graphic hyperlinks within a larger graphic image. This is called "image mapping." Clicking these active areas or regions enables the browser to link to different documents or locations. Either an "ISMAP" or a "USEMAP" parameter is placed inside of an <IMG> tag to indicate which style of map will be used.

Server Side Image Map:-
The ISMAP style of image mapping is supported by all graphical browsers. However, there are certain drawbacks to using it. The entire <IMG> image used must be a hyperlink (placed between <A> & </A> tags). Also, ISMAP references a "server-side" image map, because special server software (usually in a cgi-bin location at the server's site) must be present to translate the coordinates clicked upon and to determine a response. Furthermore, time consuming server-side processing of the coordinates, network delays, and other problems all can make this type of image mapping undesirable.

Client Side Image Map:-
The USEMAP style of image mapping now is supported by an increasing number of browsers. The entire <IMG> image used is not a hyperlink; rather, regions of the image are converted into hyperlinks, each with its own specific URL (address). USEMAP references a "client-side" image map, because the HTML author (client) provides the map of coordinates for the image.

USEMAP:-USEMAP="#name": indicates that a client-side map is to be used. The value of the USEMAP parameter is the URL (address) of the document containing the map (which is used within <MAP> & </MAP> tags). The "name" aspect of the URL matches the name of the map to be used (which is located inside the <MAP> tag). Usually, the map is in the same document as the <IMG > tag with the USEMAP parameter, in which case only the "#name" value is required for USEMAP. For a client-side map to work, a set of coordinates and URLs must be included somewhere (typically, in the same document as the <IMG> tag with the USEMAP parameter). This information defines the cursor-sensitive regions of the graphic image and the links taken when these regions are clicked on. Such data is contained between "map" tags labeled with a specific "name". .

<MAP>:-Use <AREA> tag which contains all the information for a client-side map. The map specifications themselves are not displayed on a browser. A <MAP> tag must contain within it a "name" parameter as part of the command:

NAME:- NAME="name": specifies the name of a map. The NAME parameter is unique for any given map and cannot be used by any other map in the document. The "name" value of the NAME parameter must match the "#name" value of the USEMAP parameter in a <IMG> tag for the map instructions to apply to the latter graphic image. The USEMAP parameters for more than one graphic image may reference the same map. Between the <MAP> & </MAP> tags are empty "area" tags:

<AREA>:-Defines the shape and coordinates of a region in a <IMG> graphic image and the action the browser should take if that region is selected by the user. When the user's arrow moves over any region (defined by an <AREA> tag) within the graphic image, the arrow will change into a "hand" shape (as it does when encountering

any hyperlink), and the URL of the link will be displayed at the bottom of the browser window. An <AREA> tag must contain within it other parameters as part of the command:

SHAPE Attribute:- SHAPE defines the shape of a region in a graphic image which will become a hyperlink and will be sensitive to a user's arrow. The SHAPE value determines how the values of the

COORDS parameter will be interpreted by a browser.

"RECT": Defines a region with four sides and angles.

"CIRCLE": Defines a circular region.

"POLYGON" Defines a region with multiple sides and angles.

COORDS:- COORDS defines the pixel coordinates of the SHAPE parameter of a region which will become a hyperlink. (The coordinates of the upper-left corner of a graphic image are 0,0.) The coordinates of points in a graphic image can be determined by using graphic software, such as Paint, Paint Shop Pro or Adobe Photoshop. For a rectangle ("SHAPE=RECT"), the coordinates are "X1,Y1,X2,Y2", where the X1,Y1 coordinates designate the upper-left corner of the rectangular region, and the X2,Y2 coordinates designate the lower-right corner of the region. For a circle ("SHAPE=CIRCLE"), the coordinates are "X,Y,R", where the X,Y coordinates designate the center of the circular region and R is the radius of the region in pixels. For a polygon ("SHAPE=POLY"), the coordinates are "X1,Y1,X2,Y2,...Xn,Yn", where each Xn, Yn set of coordinates designates a vertex of the polygonal region and "n" is the number of vertices. (Since the polygon is closed automatically, it is not necessary to include the first pair of coordinates again at the end of the list.)

HREF Attribute:-

HREF=" #name": defines the URL of the hypertext reference (hyperlink) to which a browser will jump when that region is activated by clicking on it. The "name" attribute is used only if the target is a specific location within the same document or within another document. (In the specific case that the target of the hyperlink is within the same document as the hyperlink, only the "#name" aspect of the address needs to be listed: <HREF="#name">.) The file that a hyperlink targets or "calls up" when activated can be an HTML document, a graphic image, a sound, a video, or an executable piece of software.

Example:

```
<IMG SRC="home.jpg" USEMAP="#cocsit">
<MAP NAME="cocsit">
<AREA SHAPE="rect" COORDS="535,93,596,165" HREF="sound.html">
<AREA SHAPE="circle" COORDS="204,123,42" HREF="triangle.html">
<AREA SHAPE="polygon" COORDS="204,316,311,453,190,554,111,448"
HREF="triangle.html">
</MAP>
Remember, that some browsers do not recognize circular regions (mapped with AREA
SHAPE="CIRCLE").
```