# 2. Basics of HTML

**History of HTML:** HTML 1.0 was originally developed by Tim-Berners-Lee. During the course of the 1990s it has blossomed with the explosive growth of the web.

HTML 2.0 was developed under the aegis of the Internet Engineering Task Force (IETF) to in 1995.

HTML 3.0 proposed much richer versions of HTML

HTML 4 extends HTML with mechanisms for style sheets, scripting, frames, embedding objects, improved support for right to left and mixed direction text, richer tables and enhancements to forms.

**Syntax of HTML:** The original language used for http type documents was HTML. Mark-up refers to tags added to a document to indicate how to display or format some object.

HTML is composed of tags. HTML tags are always enclosed in angle-brackets (< >) and are case-insensitive, i.e. it doesn't matter whether it is in lower case or upper case.

Tags typically occur in begin-end pairs. These pairs are in the form <tag>…</tag>, where <tag> indicates the beginning of a tag-pair and the </tag> indicates the end.

**Questions:**

**1. What are Document tags?**

A.        Document tags mean the tags which divide up a Web page into its basic sections, such as header information and the part of the page which contains the displayed text and graphics. These tags are also called as "Basic Tags".

The document tags are classified into two types

1. **Document Head**: The information placed in document head is essential to the inner workings of the document and has nothing to do with the content of the document. With the exception of information contained within the <Title>…</Title> tags, all information placed within <Head>…</Head> tags is not displayed in the browser. The HTML tags used to indicate all start and end of the head section are:

   <Head>
           <Title>…</Title>
   </Head>

2. **Document Body:** The tags used to indicate the start and end of the main body of the textual information are:

   <Body>
   ---------
   ---------
   ---------

</Body>

HTML tags can be of two types:

1. **Paired Tags**: A tag is said to be a paired tag if it has a Companion tag (Closing tag). The effect of the text will be from the beginning of the tag to the end of the tag. The opening tag activates the effect and the closing tag turns the effect off.
   **E.g.**: <B> is used for bold, the effect will turn off with </B>

2. **Singular Tags:** It is also called as stand-alone tag. Does not require any companion tag.
   **E.g**.: <BR> will insert a line break. This tag does not require any companion tag.

## 2. **Explain Formatting with HTML tags:**
A.

(i). <u><H1> through <H2>:</u> Creating a heading in the web page like a heading using bold font and various sizes. <H1> creates the largest text and <H6> the smallest.

    <u>Attribute:</u> Align – specifies the alignment of text in the heading. Set to left, center, right or justify.

(ii). <u><B>:</u>  sets the text style to bold

(iii). <u><I>:</u>   Displays text in italics.

(iv). <u><TT>:</u>  Displays text in a monospace teletype font.

(v). <u><U>:</u>   Underlines text

(vi). <u><S> or <Strike>:</u> Displays text in strike through style.

(vii). <u><Big>:</u> Renders the text in a bigger font than the current default.

(viii). <u><Small>:</u> Renders the text in a smaller font than the current default

(ix). <u><Sup>:</u> Styles text as a superscript

(x). <u><Sub>:</u> Styles text as a subscript

(xi). <u><Em>:</u> Emphasizes text, usually rendered in italics.

(xii). <u><Strong>:</u> Emphasizes text strongly, usually rendered in bold.

(xiii). <u><Code>:</u> Styles text as program code in a monospace.

(xiv). <u><Font>:</u> Used to select text size, color and face.
    <u>Attributes:</u> 1. Color – Color of the text, set it to a color value or predefined color.

2. Face – Font face can be a list of names separated by commas. The browser will select the first font face form the list it can find in the system it's running on.
3. Point-size – Size of the text in points
4. Size – Size of the text. Possible values from 1 to through 7.
5. Weight – Sets the font weight from 100 to 900.

Example: <font size=5 color="0000ff" face="Arial"> This text if for font </font>

(xv). <Basefont>: Sets the basefont. Relative font changes set with the <font> are made.
Attributes: 1. Color – Color of the text set it to a color value or predefined color.
2. Face – Font face can be a list of names separated by commas. The browser will select the first face from the list it can find in the system it's running on.
3. Size – Size of the default text. Possible values range from 1 through 7.
Example: <body>
<basefont size=4>
Here's some <font size="+2"> bigger </font> text
</basefont>
</body>

(xvi). <Blink>: Displays enclosed text as blinking on and off approximately once a second.

(xvii). <Br>: Inserts a line break into a page.

(xviii). <P>: Formats text into a paragraph and adds space before the paragraph
Attribute: Align – sets the alignment of the text in the paragraph. Set to left, right, center or justify.

(xix). <Hr>: Draws a horizontal line to separate or group elements vertically.
Attributes: 1. Align – Sets alignment of rule, set to left, right or center. Width attribute must set to some value before using align attribute.
2. Color – Sets the color of the rule. Set to a color values or predefined colors.
3. Size – Sets the vertical size of the horizontal rule in pixels.
4. Width – Set horizontal width of rule. Set to actual pixel count or percentage.

(xx). <Center>: Centers its enclosed text in the browser.

**3. Explain the different types of Lists in HTML.**
A. There are five different types of lists.
  ➢ Unordered List
  ➢ Ordered List
  ➢ Definition List
  ➢ Menu List
  ➢ Directory List

Unordered List: The term "unordered list" is also called the "bullet list". That's exactly what an unordered list is a list of items, each one preceded by a bullet (A small black circle).

The list begins and ends with the tags <UL> and </UL> respectively. Each item in the list is marked using the <LI> tag, which stands for "List Item". <LI> has a corresponding </LI>, but this closing tag is not required to end the list item.

Unordered List can be customized by setting the TYPE attribute to 3 different values as Disc (the default), Square and Circle which set the type of bullet that appear before each list item.

```
<UL type=square>
  <LI>Monday
  <LI>Tuesday
  <LI>Wednesday
  <LI>Thursday
  <LI>Friday
  <LI>Saturday
  <LI>Sunday
</UL>
```

Ordered List: Ordered List look a lot like unordered lists and a lot of the same rules apply to both constructs. The list begins and ends with the tags <OL> and </OL> respectively. Each item in the list is marked using the <LI> tag, which stands for "List Item". <LI> has a corresponding </LI>, but this closing tag is not required to end the list item.

Unordered List can be customized by setting the TYPE attribute to the following values:
- ➢ 1 - Default numbering scheme (1, 2, 3…)
- ➢ Uppercase letters (A, B, C…)
- ➢ A-lowercase letters (a, b, c…)
- ➢ Large Roman Literals (I, II, III …)
- ➢ I-Small Roman Literals (i, ii, iii …)

```
<OL type="A">
  <LI>Monday
  <LI>Tuesday
  <LI>Wednesday
  <LI>Thursday
  <LI>Friday
  <LI>Saturday
  <LI>Sunday
</OL>
```

Definition List: It starts and ends with <DL> and </DL>. Unlike unordered and ordered lists, definition lists are not based on all items. They are based on term-definition pairs.

<DL>

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        &lt;DT&gt;Internet
        &lt;DD&gt; Networks of Networks
        &lt;DT&gt;Web
        &lt;DD&gt; Collection of Hypertext documents
&lt;/DL&gt;

&lt;DT&gt; stands form Definition-List-Term and &lt;DD&gt; stands for Definition-List-Definition.

Directory List: Creates a directory list usually displayed simply as an unordered list.

&lt;Dir&gt;
    &lt;LI&gt;Monday
    &lt;LI&gt;Tuesday
    &lt;LI&gt;Wednesday
    &lt;LI&gt;Thursday
    &lt;LI&gt;Friday
    &lt;LI&gt;Saturday
    &lt;LI&gt;Sunday
&lt;/Dir&gt;

Menu List: Creates a menu list usually displayed simply as an unordered list.

&lt;Menu&gt;
    &lt;LI&gt;Monday
    &lt;LI&gt;Tuesday
    &lt;LI&gt;Wednesday
    &lt;LI&gt;Thursday
    &lt;LI&gt;Friday
    &lt;LI&gt;Saturday
    &lt;LI&gt;Sunday
&lt;/Menu&gt;

# 3.Forms & Graphics in HTML

**4. Explain the Form in HTML.**
**A.** An HTML form is a section of a document containing normal content, markup, special elements called controls (checkboxes, radio buttons, menus etc.) and labels on those controls. Forms provide a means for the user to add graphical user interface (GUI) components to the web pages. Forms are generally used to accept data and pass it on to CGI (Common Gateway Interface) programs for processing. They are often used as front-end to CGI programs that serve as gateways to databases.

      Forms should be included in between the &lt;BODY&gt; and &lt;/BODY&gt; tags within &lt;FORM&gt;…&lt;/FORM&gt; tags like most HTML tags. Then, the user can start adding form elements like the radio buttons, checkboxes or text input fields.

      The HTML for a basic form:
      &lt;HTML&gt;

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```
<HEAD>
<TITLE>…</TITLE>
</HEAD>
<BODY>
<FORM>

Form Elements

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

At least a couple of attributes are required for the form to do some sort of function.

1. METHOD specified which technical protocol the web server will use to pass the form data to the program which processes it. Two methods are available GET and POST.

(i). METHOD="GET" – Most HTML documents are retrieved by requesting a single URL from the server. In accordance, all information from the form using GET method is appended onto end of the URL being requested.

(ii). METHOD="POST" – This method transmits all form input information immediately after the requested URL. In other words, once the server has received a request from a form using POST it knows to continue listening for the rest of the information. This is the preferred method.

2. ACTION indicates the script that will be called to process the form when it is submitted. This URL will almost always point to a CGI script to decode the form results. If the referencing script lives on the same server as the form, the user doesn't need to include the full URL.

<FORM METHOD= "POST" METHOD="http://www.google.com">

## 5. Explain the Form Elements in HTML.
A. The elements within the form are indicated by the <INPUT> tag. This tag takes at least two attributes: TYPE and NAME.

<INPUT TYPE="input type" NAME="name of the element">

(i). TYPE defines the various types of input fields recognized in the current HTML specification (text, radio, checkbox, password, submit, etc.)

(ii). NAME attribute indicates the name of the element. It defines the name of the data for the field. It's how the program which processes the form references the data from the field. The form element sends data to the CGI script in terms of NAME-VALUE pairs. The value is the actual value the user enters.

(iii).Another important attribute for any input attribute for any element is the VALUE attribute. This attribute is used to specify what text the user wants to appear on the element.

## 6. Explain the different Text input elements in HTML.

A. The following are the different text input elements used in the form of HTML.

(i).<u>Text Field:</u> A text input box is used to enter and edit a single piece of text by the user. This element can take in other attribute.

    <INPUT       TYPE="text"       NAME="fname"      SIZE=10      VALUE="abc" MAXLENGTH=50>

       <u>Attributes:</u> 1. SIZE specifies the length of the text box.
                    2. VALUE specifies the value in the text box which can of course be changed to any other name.
                    3. MAXLENGTH specifies the maximum length of the text that can be entered into the text box.

(ii). <u>Password Text Field:</u> One variation to the text type is

    <INPUT TYPE="password" NAME="pwd">

This works the same way as the text field except the characters typed is displayed in a masked format (asterisks).

       <u>Attributes:</u> 1. SIZE specifies the length of the text box.
                    2. VALUE specifies the value in the text box which can of course be changed to any other name.
                    3. MAXLENGTH specifies the maximum length of the text that can be entered into the text box.

(iii). <u>Text Area Field:</u> Text Area fields can contain many lines of text giving the user opportunity to type in larger inputs unlike the regular text input fields. HTML code for a text area is different from input elements of the form. It is made up of both an opening and closing tags.

    <TEXTAREA NAME="address" ROWS=4 COLS=25> </TEXTAREA>

    <u>Attributes:</u> 1. NAME is the name of the field sent to the CGI script when the form is submitted.
                    2. ROWS gives the height of the text area or the number of lines.
                    3. COLS specifies the width of the text area in columns or the number of characters in one row.

(iv). <u>Hidden Field:</u> This field is of great importance and is very often to pass variables and other data to the CGI script. It is used to store values in forms which the user doesn't have to enter. Moreover, the value the hidden field submits is invisible to the user and obviously cannot be changed. This field always returns the same value. A hidden form field looks like a text a text field to the web server when the form is submitted, as though the user had typed in the value.

    <INPUT TYPE="hidden" NAME="variablex" VALUE=100>

    <u>Attributes:</u> 1. VALUE specified the value for the hidden text field to be sent to be sent to the decoding script

(v). <u>Check Boxes:</u> Check Boxes can be used to choose multiple items in a list. Each check box can be either on or off i.e. it can be selected or not selected. When the user has to choose more options at a time checkbox is good element to use.

    <INPUT TYPE="checkbox" NAME="Sunday">Sunday
    <INPUT TYPE="checkbox" NAME="Monday">Monday
    <INPUT TYPE="checkbox" NAME="Tuesday">Tuesday

                                                                                                                                                  

```
<INPUT TYPE="checkbox" NAME="Wednesday">Wednesday
<INPUT TYPE="checkbox" NAME="Thursday">Thursday
<INPUT TYPE="checkbox" NAME="Friday">Friday
<INPUT TYPE="checkbox" NAME="Saturday">Saturday
```

<u>Attributes:</u> 1. TYPE indicates that this is checkbox.

        2. NAME is unique for each member in the list and specifies the variables where the required value will be stored.

        3. CHECKED, the boxes can be checked by default by using the CHECKED attribute.

          `<INPUT TYPE="checkbox" NAME="Sunday" CHECKED>Sunday`

        4. VALUE attribute is used to indicate the value that would be seen in the script.

(vi). <u>Radio Buttons:</u> Radio buttons are used for a list of items of which only one can be chosen. When the user chooses one option i.e. if one radio button is selected any previously selected option is unselected.

      When compared with checkboxes, the difference is that instead of being able to have a different variable associated with every checkbox, all radio buttons in a group must have identical NAMEs.

        The code for radio buttons:

```
<INPUT TYPE="radio" NAME=Gender VALUE="M"> Male
<INPUT TYPE="radio" NAME=Gender VALUE="F"> Female
```

<u>Attributes:</u> 1. TYPE indicates that this is a radio button.

        2. NAME is the name for all the radio buttons in a single list.

        3. CHECKED, the radio button can be checked by default by using the CHECKED attribute.

       `<INPUT TYPE="radio" NAME="Gender" VALUE= "M" CHECKED>Male`

        4. VALUE is unique to each of member in the list. Specifies the value of the option to be sent to the server.

(vii). <u>Submit Button:</u> Most forms require the use of a submit button. After the user fills out the form, the Submit button is clicked to submit the data to the CGI script. This element should come after all the other input fields.

      When the user clicks the submit button, the browser collects the values of each of the input fields and sends them to the web server identified in the ACTION keyword of the FORM open tag using the METHOD specified.

```
<INPUT TYPE="submit" VALUE="Send">
```

<u>Attributes:</u> 1. VALUE specifies the text to be displayed on the submit button. If the VALUE keyword is omitted, the button will be labeled "Submit".

(viii). <u>Reset Button:</u> The Reset Button is similar to the Submit Button and can be used along with it at the end of the form. It clears all the selection made by the user in the form and resets them to the default values (if specified in the form elements).

```
<INPUT TYPE="reset" VALUE="Clear">
```

<u>Attributes:</u> 1. VALUE specifies the text to be displayed on the button. If the values
keyword is omitted, the button will be labeled "Reset".

**7. Explain the different types of Selection Lists in HTML.**
A. Selection List is useful element that enables the user to select from a list of items.Each
item can be selected or not selected.

Selection lists can be of three types:
 - ➢ Drop-down list boxes
 - ➢ Simple list boxes
 - ➢ Scrollable list boxes

The type of selected list displayed is determined is determined by the SIZE keyword
in the SELECT tag. SIZE refers to the number of rows visible to the user at a time.
SIZE refers to the number of rows visible to the user at a time.
1. If the SIZE is one, a drop-down listbox is created.
2. If the SIZE is greater than one and the number of options is less than or equal to
   the SIZE, a simple list box is displayed.
3. If the SIZE is greater than one, but the number of options available to the user is
   greater than the SIZE, a scroll bar will appear to the right of the listbox to allow
   the user to scroll through the options.

<u>Drop-Down List Box:</u>

```
<select name="Weekday">
   <Option>Sunday
   <Option>Monday
   <Option>Tuesday
</select>
```

<u>Simple List Box:</u>

```
<select name="Weekday" size=3>
   <Option>Sunday
   <Option>Monday
   <Option>Tuesday
</select>
```

<u>Scrollable List Box:</u>

```
<select name="Weekday" size=3>
   <Option>Sunday
   <Option>Monday
   <Option>Tuesday
   <Option>Wednesday
</select>
```

The MULTIPLE attribute can be used in the select tag to enable multiple selections.

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```
<select name="Weekday" size=3 multiple>
   <Option>Sunday
   <Option>Monday
   <Option>Tuesday
   <Option>Wednesday
 </select>
```

To select or deselect items separated from one another, hold down Control.

**8. Explain about links in HTML.**
**A.** A link in a bit of text is made using the anchor, <A> tag. This stands for anchor. The linking can be done by the HREF attribute.
   **<A HREF="www.**google.com>Google</A>

Every file has a URL, an address where it is stored. There are two methods used to link to a file:
1. Absolute URL: They are easy to put into a link. It is the full address for the file (including the protocol). It is easy to put one in the website.
   <A HREF=http://www.google.com/index.html> Index </A>

2. Relative URL: Relative URLs should be used for files within the website. The name of the server may change in future, in that case there is no need to change the URL if it is Relative URL.
   <A HREF=index.html>Index<A>

   To link to a file called "main.html" that is within a directory called "Web1" in the current directory.
    <A HREF="Web1/main.html">Main</A>

   To link to a file in the directory above the current one, use the following code:
   <A HREF="../main.html">Main</A>

   To link to e-mail address, use the following code:
   <A HREF=mailto:abc@yahoo.com>Mail to abc</A>

**9. Explain about GIF and JPEG image formats.**
**A.** The two standard graphic file formats are:
   1. **GIF:** GIF (Graphics Interchange Format) is a format originally created by CompuServe. The GIF image format is limited to only 256 colors. GIF images use an indexed color map (also called as color index) to store the colors used in the images. Each pixel in the image stores a one-byte number ranging from 0 to 255. GIF file format is a good choice for line art graphics with few colors. There are different types of GIF images:
   (i). Transparent GIF images: One powerful aspect of GIF format files is that they can be transparent. The user can select a background color to make the background transparent. When the image is displayed, the transparent background allows the underlying image to become visible.

(ii). <u>Interlaced GIF images:</u> They are written in such a way that the browser can display the whole image almost immediately in very low resolution, adding resolution as time go on. When the image is displayed immediate on loading, the user can see the image and need not sit watching the blank page in the browser.

(iii). <u>Animated GIF images:</u> They have become very popular in web pages. These images display animation those annoying banner ads. There are a number of popular applications for creating animated GIF images.

2. **JPEG:** Joint Photographic Experts Group takes the name from the group that first created the format. The user can create JPEG images using a virtually unlimited number of colors. The three popular formats are 256 colors (one byte per pixel), 65536 colors (two bytes stored per pixel) or 16777216 colors (three bytes per pixel). JPEG is a compression technology that can store images with various levels of perfection. In general, the JPEG format is a good choice for photographs and for images that have many colors

### 10. Explain about Image tag in HTML.

**A.** Images are placed in Web documents using IMG tag. This tag is empty and therefore has no closing tag. The basic form of the image tag is <IMG>. Images are part of a Web document, but in reality an HTML file and any graphics it refers to are actually at separate files. In other words, one HTML file which has five graphics within it makes a total of six files required to make the page look right. These files are all stored on a Web Server, but don't have to all be in the same exact place. In order to make the IMG tag work, user needs to specify SRC attribute. SRC stands for "source" i.e. source of graphic. The value of SRC is the URL of the graphic to be displayed on web page.

    <IMG SRC="URL of graphic">

Placing images within links is also possible.
    <A HREF=<u>www.yahoo.com</u>> <IMG SRC="image1.gif"> </A>

<u>Attributes:</u>
1. Align – Sets the alignment of text, which follows the IMG reference relative to the image on the screen. Left and Right are used to indicate horizontal alignment of the image in the browser window and the text that follows will wrap around the image. To wrap vertical alignment of text relative to the image when the text is of the same line. Possible values are Left, Right, Top, Texttop, Middle (Center), Absmiddle, Baseline, Bottom and Absbottom.
2. Alt – This attribute to specify text to be displayed in place of an image for browsers that cannot handle graphics or have graphics disabled. Set this attribute to a string of valid alphanumeric characters.
3. Border – Sets whether or not the image has a border. Set to 0 for no border, or a positive integer pixel value.
4. Height – Indicates the height of the image. Specifying a value for the height and width can speed up the downloading of the image.

5. Hspace – Sets the horizontal spacing both left and right sides around the image. Set to pixel measurements.
6. Name – Gives a unique name of the image so that it can be used to refer to it.
7. Src – Specifies the URL of the actual image to be displayed. Set to a URL.
8. Vspace – Sets the vertical spacing both top and bottom sides around the images. Sets to pixel measurements.
9. Width – Indicates the width of the image. Specifying a value for the height and width can speed up the downloading of the image.

<img name=image1 src="http://www.yahoo.com/image1.gif" width=200 height= 250 alt=" Sunset view" border=2>

11. **Explain the colors in HTML?**
**A.** HTML color attributes use the hexadecimal format RRGGBB for the red(R), green (G), blue (B) color components respectively. They can vary in the range from 0(00) to 255(FF) for a total of 256 values for each component. This permits $256^3$ (256 X 256 X 256) or over 16 million different colors.
  E.g. Black="#000000"
     Blue="#0000ff"
     White="#ffffff"
     Red="#ff0000"
     Green="#00ff00"
     There are 16 colors which are recognized by the browsers:
          1) Aqua
          2) Black
          3) Blue
          4) Fuchsia
          5) Gray
          6) Green
          7) Lime
          8) Maroon
          9) Navy
          10) Olive
          11) Purple
          12) Red
          13) Silver
          14) Teal
          15) White
          16) Yellow
     Background Color: The color of the basic background screen in most browsers is either a neutral gray (#808080) or white (#FFFFFF). This default for screen background color can be overridden in HTML using the command syntax.
               <body bgcolor="#RRGGBB">
     Where RRGGBB specifies the background color in hexadecimal format or as a named color. The browser will apply the color value specified to the entire WWW page unless the user has opted to override screen and text color attributes from within the browser's options or preferences setup.

Normal Text Color: The color of the basic text in most browsers is generally black (#000000). This default for normal text color can be overridden in HTML using the command syntax.

<body text="#RRGGBB">

The browser will apply the color value specified to all the text on the entire web page unless the user has opted to override text color attributes from within the browser's options or preferences setup or text color has been explicitly set using the

<font color="#RRGGBB">Text </font>

Link Text Color: The color of links in many browsers depends entirely on the settings or preferences in place. Generally unfollowed links are portrayed in blue (#0000FF) while followed links are portrayed in red (#FF0000). The RGB values used for these colors can vary from browser to browser and from version to version within a single browser application. The defaults for link text colors can be overridden in HTML using

<body link="#RRGGBB"> - for unfollowed links
<body vlink="#RRGGBB"> - for visited links
<body alink="#RRGGBB"> - for active links

## 12. Explain about Image Maps.

**A.** An image map allows an action to be associated with the selecting a part of an image. There are two possibilities.

(i). Server side: In which the coordinates of the location selected are sent to the server to be processed by a CGI program. There exists standard CGI script s to turn coordinates sent to the server into return of the contents of a file specified by a URL associated with the area. The information about which area is associated with which URL is held on the server.

(ii) Client Side: In which the coordinates of the location selected are associated with the action of the selecting the URL. The area selected may be a circle, rectangle or polygon.

As the URL is selected on the client side, the subsequent processing will be faster. An image map is an image that when clicked on causes all the data has been entered into the form plus the x, y coordinates of the position clicked on to be sent to a CGI script.

A client side image map is an image that the URL's associated with the various hot spots on its surface. The hot spots may be a circle, rectangle or polygon.

When a hot spot is selected a hyper link is made to the associated URL. The hot spots on the image are defined using <MAP> and <AREA> tags. This is termed a client side image map as the information about where the hot spots are on the image held in the loaded html page.

e.g.    <IMG SRC="image1.jpg" USEMAP=#Map1>
        <MAP NAME="Map1">
         <AREA SHAPE=RECT
                  COORD="0, 0, 40, 40"
                  HREF="Ex1.html">
The attributes of MAP are:
1.   NAME – The attributes of the <AREA>

2. SHAPE – Defines the shape of the area that is the hot spot. These areas can be RECT, POLYGON or CIRCLE. If omitted RECT is default.
3. AREA – Defines the area of the hot spot.
   RECT – Top left hand corner, Bottom right corner
   POLYGON – Points of the Polygon
   CIRCLE – Center of the circle, radius.

**13. Write a program to space around images.**
**A.**

```
<HTML>
  <HEAD>
        <TITLE>Image with Vspace and Hspace</TITLE>
  </HEAD>
  <BODY>
        <CENTER>
                <H2>Setting image spacing</H2>
        <IMG SRC="Flower1.jpg" width=200 height=300 hspace=10 vspace=10>
        <IMG SRC="Flower2.jpg" width=200 height=300 hspace=10 vspace=10>
        <IMG SRC="Flower3.jpg" width=200 height=300 hspace=10 vspace=10>
        <IMG SRC="Flower4.jpg" width=200 height=300 hspace=10 vspace=10>
        </CENTER>
  </BODY>
</HTML>
```

**14. Write a program to align text and images vertically.**
**A.**

```
<HTML>
<HEAD>
      <TITLE>Image with Align Attribute</TITLE>
</HEAD>
<BODY>
<CENTER>
      <H2>Aligning the text and images</H2>
<IMG SRC="Flower1.jpg" width=200 height=300 align=top> Aligned Top
<IMG SRC="Flower2.jpg" width=200 height=300 align=middle> Aligned Middle
<IMG SRC="Flower3.jpg" width=200 height=300 align=bottom> Aligned Bottom
</CENTER>
</BODY>
</HTML>
```

**14. Write a program to align text and images horizontally.**
**A.**

```
<HTML>
<HEAD>
      <TITLE>Image with Align Attribute</TITLE>
</HEAD>
<BODY>
<CENTER>
      <H2>Aligning the text and images</H2>
```

<IMG SRC="Flower1.jpg" width=200 height=300 align=Left> Aligned Left
<IMG SRC="Flower2.jpg" width=200 height=300 align=Center> Aligned Center
<IMG SRC="Flower3.jpg" width=200 height=300 align=Right>Aligned
Right</CENTER>
</BODY>
</HTML>

**15. Explain a program to align text and images horizontally and avoiding text wrapping after a certain point.**

**A.**
<HTML>
<HEAD>
  <TITLE>Image with Align Attribute</TITLE>
</HEAD>
<BODY>
<CENTER>
  <H2>Aligning the text and images</H2>
<IMG SRC="Flower1.jpg" width=200 height=300 align=Right> Aligned Left
<BR Clear=right>
<IMG  SRC="Flower2.jpg"  width=200  height=300  align=Left>Aligned
Right</CENTER>
</BODY>
</HTML>

# 4. Tables & Forms in HTML

**16. What are the various tags and attributes associated with table?**

**A.** A table can be set to have the following.
- ➢ A title
- ➢ Headers, which state something about the table.
- ➢ Rows
- ➢ Cells

Table Elements and Tags:
- ➢ <TABLE>…</TABLE> defines a table in HTML. All the table elements go within these tags.
- ➢ <CAPTION>…</CAPTION> defines the caption or the title of the table. The default position of the title is centered at the top of the table.
- ➢ <TR>…</TR> specifies a table row within a table. Cells within each row are defined within these tags. TR can have both the ALIGN and VALIGN attributes.
- ➢ <TH>…</TH> defines a table header cell. Header cells usually are on the first row and contain information regarding the rest of the table. By default are on the first row and contain information regarding the rest of the table. By default the text is bold and centered.
- ➢ <TD>…</TD> defines a table data cell. By default the text in this cell is aligned left and centered vertical.

Table Format: The following is the format for a table with three rows and two columns. The first row is head.

```
<TABLE>
<CAPTION> Title of the Table </CAPTION>
<TR>
        <TH>cell contents</TH>
        <TH>cell contents</TH>
</TR>
<TR>
        <TD>cell contents</TD>
        <TD>cell contents</TD>
</TR>
<TR>
        <TD>cell contents</TD>
        <TD>cell contents</TD>
</TR>
</TABLE>
```

Attributes:
1. **Align (Left, center, right)** – Horizontal alignment of a cell. If appearing inside a CAPTION it controls whether the caption appears above or below the table and can have the values top or bottom, defaulting to top. If appearing inside TR, TH or TD it controls whether text inside the table cells is aligned to the left side of the cell, the right side of the cell, or centered within the cell. Values are left, center and right.
2. **VALIGN (Top, Bottom, Middle)** – Vertical alignment of a cell. Appearing inside a TR, TH or TD controls whether text inside the table cells is aligned to the top of the cell, the bottom of the cell, or vertically centered within the cell. It can also specify that all the cells in a row should be vertically aligned to the same baseline. Values are top, bottom, middle and baseline.
3. **COLSPAN** – To number of columns a cell spans. A cell in a row can be made to occupy more the space of a single cell.
4. **ROWSPAN** – To the number if rows in a cell spans.
5. **NOWRAP** – Turn of word wrapping within a cell. By default words are wrapped within the cell and wrapping is turned off, they appear in a single line and this might increase the length of the cell.
6. **BORDER** – To put border around the table. By default the table does not have a border and hence to table lines show when a table is defined.
7. **CELLSPACING** – The distance between the cells can be specified in pixels.
8. **CELLPADDING** – The border around each wall within a table.
9. **WIDTH** – It is used to describe the desired width of the table, either as an absolute width in pixels or a percentage of document width.

**17. Explain about Frames.**
**A. Frames:** Dividing a single browser into multiple regions for separate document viewing is called framing. Frames allow the user to divide a Web page into sections that act as sub-windows. As each frame acts as a separate web page, it has its own attributes and at the same time can communicate with each other.

With the introduction of frames, the web documents can be set to be of two:

1. <u>Frameset documents:</u> Files that contain the information necessary for the browser to determine what kind of frame structure it should use when dividing the window into frames.
2. <u>Body documents:</u> Although frameset documents contain information about the web documents frame layout, they do not contain any information about the actual contents of the frames. Each frame actually points to a document, i.e. each frame is a separate HTML file. These documents are called body documents.

**Frame Syntax:** Frames are defined within <FRAMESET> tags. These tags are defined in a frameset document. <BODY> tags are replaced with <FRAMESET> tags in these documents. The frameset tags tell the browser how many row frames or column frames it should divide the browser window into.
<FRAMESET rows="$size_1$, size2… $size_n$"> for row frame declaration.
<FRAMESET cols="$size_1$, size2… $size_n$"> for column frame declaration.
Where n is the number of rows or columns and should be greater than one.

After declaring a frame with the <FRAMESET> tag, it is also necessary to define it using <FRAME> tag. The definition which is usually pointing to the corresponding HTML file is indicated within the <FRAME> tag.
Frame URLs are specified within the <FRAME> tag by adding the property SRC ="URL", where URL is the address of the document to be displayed.
When a user loads a frameset document, the browser window will first be divided into frames, and then the documents specified in the <FRAME> tags will be loaded and displayed inside the frames.
<u>Example:</u>
<FRAMESET COLS="50%, 50 %">
<FRAME SRC="left.html">
<FRAME SRC="right.html">
</FRAMESET>

<u>Attributes:</u>
1. **Name -** A frame can be given a name which is generally alphanumeric. Naming a frame is used when targeting that frame, otherwise it may be omitted.
2. **Scrolling -** Scrolling attribute can take three values
   a. scrolling="yes"
   b. scrolling="no"
   c. scrolling="auto"
3. **Noresize -** A frame can be resized by default. The user can restrict this by typing
   NORESIZE in the <FRAME> tag.
4. **Marginwidt**h – It sets the left and right margin widths of the frame in pixels.
5. **Marginheight** – It sets the top and bottom margin heights of the frame in pixels.

## 18. Explain Nested Frames.
**A.** A frame is set to be a nested frame if it was formed by dividing another frame called the parent frame into multiple frames.
<FRAMESET ROWS="15%, 70%, 15 %">
<FRAME SRC="top.html">

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```
<FRAMESET Cols="50%, 50 %">
<FRAME SRC="left.html">
<FRAME SRC="right.html">
</FRAMESET>
<FRAMESET SRC="botoom.html">
</FRAMESET>
```

Here the parent frame is the second frame of 70% size and it is divided into two equal frames.

# 5. Web Designing Principles

### 19. What is Web Designing?
**A**. Web Designing is creating a web site which can work on various browsers of different versions, different operating systems, on different screens, different resolutions etc.

When creating a site, the web designer has to keep the following things in mind.
➢ The various browsers.
➢ The various versions of the browser.
➢ The operating system used by the visitor.
➢ The color depth of the visitor monitor.
➢ The screen display area.
➢ The availability of plug-ins.

The first step in designing any web site is to define the goals. Without a clearly stated mission and objectives the project will drift, bog down or continue past an appropriate endpoint.

Planning a web site is a two-part process:
➢ First gather the development partners, analyze the needs and goals, and work through the development process outlined here to refine the plans.
➢ The second part is creating a site specification document that details what we intend to do and why, what technology and content we need, how long the process will take, what we will spend to do it and how we will assess the results of the efforts.

### 20. What are the steps in Web hosting? Explain.
**A.** The following are the steps in Web Hosting:
Step 1: Get a Domain Name
Step 2: Rent some space for new site
Step 3: Design a website
Step 4: Promote and Manage a Website

1. **Get a Domain Name:** The domain name is the web address on the Internet. A good domain name is short and memorable and reflects the business or business name. Registering a '.com.in' domain name reflects the fact that the vast majority of customers we wish to target are within India and registering '.com' domain name reflects the fact that that it attracts the international visitors.

2. **Web Site Hosting (Rent space for the web site):**
   **a. Shared hosting:** For small to medium size Websites, shared hosting is the most popular and affordable solution. The web site will share space on an IBM

e-server with other websites. For extra stability, the e-mail is managed on a separate IBM e-server. Think it like renting office space in a large commercial or industrial building.

**b. Dedicated hosting:** If the web site is more complex, a corporate or even perhaps a high traffic E-Commerce site, we should need our own individual server. Many of the clients also prefer to have their own space for security or company policy reasons. It is the equivalent of renting an entire office building and is much more secure and surprisingly economical. This allows us to directly control the stability of the environment without being impacted by ours neighbours.

**c. Co Location:** This is for clients that own the Web server and manage their own server and wish to place it within our advanced data centre.

### 3. Design the Website:

**a. Design own site:** There are many web design packages available that allow to create professional Web sites. Examples include Macromedia Dreamweaver or FrontPage. Many of the clients decide to design their own sites.

**b. Designed by professional:** A professional has the ready made experience and will do everything from the graphics to the copy and programming.

### 4. Promote and Manage Website:

**a. Promote the Website:** Place the new Web address and e-mail address on all of the printed material and advertising including business cards. It's a fact that the buying habit of the average customer has changed over the last few years. Now consumers compare an average of seven suppliers before making a buy decision and visiting Web sites is a critical part of this process.

**b. Manage the Website:** All of the hosting services include LiveStats monitoring tools. By measuring the visitors click thorough, seeing exactly how they found the site, studying which country they are visiting from and their patterns as they visit the site allows to fine tune the site.

**21. Explain about Web Presentation.**

A. **Web Presentation:** A web presentation is a collection of associated, hyper linked WebPages that usually have some underlying theme.

Some of the key elements in the web presentation are:

(i). <u>Details:</u> A presentation should include well-thought-out touches can make a positive impression on the reader. Good choices of background color, headers, footers and appropriate font size are all important.

(ii). <u>Features:</u> A few bells and whistles can improve the feel of a set of pages.

(iii). <u>Graphics:</u> A modest use of in-line images is probably one of the most significant ways to enhance the design.

(iv). <u>Layout:</u> If the pages are visually appealing and if they provide convenient navigation, they are likely to be visited by more users. A poor layout discourages people from spending too much time on presentation.

(v). <u>Writing Quality:</u> Good writing and an interesting style are also necessary for a solid presentation.

(vi). <u>Load Time:</u> Proper care should be taken not to include too many graphics or any large graphics. Also users should be given the option of downloading large images separately.

(vii). <u>Hyperlinks:</u> Navigation is a key element to any good web presentation. If the reader can move around the page easily, they will be more impressed.