# INTRODUCTION TO HTML

# The Concept of Hypertext

- The languages used to develop web pages is called HTML.
- HTML stands for Hyper Text Markup Language.
- Created by Berners-Lee in late 1991.
- HTML provides tags that help in creating, formatting, and enhancing the web pages by inserting graphics and specifying fonts and colors for the text.

- HTML is based on SGML.(Standardized General Markup Language)
- HTML has evolved into a presentation language.
- Hyper Text Markup Language is a "markup language". It is a set of instructions to web browser to cause the text to be displayed in a certain way.

- HTML is not a programming language, it doesn't allow decisions or loops.
- HTML is not a case sensitive language.
- HTML uses Markup tags to describe web pages.
- The HTML tags are predefined.
- The closing tag always begins with a forward slash /.

- □ Tags can be combined.
- □ They must be nested symmetrically.
  - Ex:<P><B><I>Bold Italic</I></B>.

## First html example

#### Output:

```
<!DOCTYPE>
```

<html>

<body>

<hI>HTML</hI>

Paragraph

</body>

</html>

#### HTML

Paragraph

## Features of HTML

- □ Easy and simple language.
- Being a markup language it gives flexibility in designing web pages.
- □ Facilitates programmers to add link on web pages.
- Main feature of HTML is platform independent.
- □ It also enable the programmers to add multimedia.
- HTML directly interpreted by browser.
- HTML scripts do not require any compiler or assemblers.
- Simple Text editor are used to write a HTML pages.

# HTML Tags

- Tags are instructions that are embedded directly into the text of the document.
- All HTML tags begins with an open angle bracket (<) and end with a close angle bracket (>).

- □ Basic syntax is:
  - <tag>content</tag>

# Types of HTML tags

- Paired Tags
- Singular Tags

#### Paired Tags:

- A tag is said to be a paired tag if it, along with a companion tag, flanks the text.
- Example:
  - <B> tag is a paired tag.
  - <B> tag with its companion tag</B> causes the text contained between them to be rendered in bold.
  - First tag is known as opening tag and end tag is known as closing tag.
  - The opening tag activates the effect and end tag turns off the effect.

#### Singular Tags:

- Second type of tag is the singular or standalone tag.
- A stand-alone tag does not have a companion tag.
- Example:
  - BR/> : tag will insert a line break.

# Tag attributes:

- The additional information supplied to an HTML tag is known as Attributes of a tag.
- The attributes are written followed by tag separated by space. Multiple attributes can be associated with a tag.
- For e.g, < body text="green" > here the text color is defined as green for body of html page
- A tag doesnot contain any attribute known as empty tag.

## HTML Elements

- HTML documents are text files made up of HTML elements.
- □ HTML elements are defined using HTML tags.

```
<html>
<head>
<title>Title of page</title>
</head>
<body>
  This is my first homepage
<b>This text is bold</b>
</body>
</html>
```

Here <b> This text is bold</b> is the HTML element. The HTML element starts with a start tag <b>. The content of the HTML element is "This text is bold. The HTML element ends with an end tag </b>. The purpose of the <b> tag is to be define an HTML element that should be displayed as bold.

- <hl align="left"> Example Heading</hl>

```
<html>
<head>
<title>Example for <br/> tag</title>
</head>
<body>
 One of those few tags that never have to be closed. <br/>
 One of those few tags that never have to be closed.
</body>
</html>
```

#### Output:

One of those few tags that never have to be closed.

One of those few tags that never have to be closed.

#### The Structure Of An HTML

#### program

```
<!DOCTYPE HTML>
<HTML>
<HEAD>
<TITLE>My web page</TITLE>
</HEAD>
<BODY>
Content of the document
</BODY>
</HTML>
```

## Continue..

- The HTML page starts with Doctype definition which indicates the version of HTML and document type definition for HTML version.
- □ The HTML page starts with <HTML> root element.
- An HTML document starts and ends with <a href="html">html</a> and </a> </a> /html> tags.
- These tags tell the browser that the entire document is composed in HTML.
- Inside these two tags, the document is split into two sections:
  - <head> section
  - cbody> section

## Continue..

- The <head>···</head> elements, which contain information about the document such as title of the document, author of the document etc.
- □ Information inside this tag does not display outside.
- The <head> section is where the information about the web page is put for the browser. This has nothing to do with the heading that you want to see on the web page.
- The <head> section includes keywords for search engines or the title of web page.
- The some of the keyword are <meta>, <script> , <style>, link>.

## Continue..

- □ The <body>...<body> elements, which contain the real content of the document that is viewed in the browser.
- The <body>section is where the web page is coded.

## .. Continue

- □ The HTML section
  - <HTML>----</HTML>
- □ The Header section
  - <HEAD><TITLE>----</TITLE></HEAD>
- □ The Body section
  - <BODY>---</BODY>

```
□ Example:
       <html>
   <head>
   <title>My Web page</title>
   </head>
   <body>
     Hi.....This is my first HTML
   </body>
   </html>
```

## Elements of HTML

#### □ The HTML element:

- The <a href="html">html</a> tag is indicates start of the simplest web page.
- The <a href="html">html</a> tag is root element tells the browser that document is an HTML document, so the browser understands how to show the page.
- The first line in each file will be <a href="html">html</a> and last line is </a></a>html>.

#### □The Head element:

- The <head> tag of an HTML document contains information which is not displayed on the browser, but is important to include the other important tags <link>, <style>, <meta>, <title>, tags for making the document more readable.
- We need both opening <head> and closing </head> tag.

- An example of a tag that would appear in the head of an HTML document is the <title></ title> tag. Any text within this tag is not seen directly in the browser window, but is displayed in the title bar of the browser.
- <style> is used to apply internal style to web page.

# The Body element:

- The <body> tag contains the part of the document that will be viewed in the webpage.
- We need opening <body> and closing </body> tag.
- We can set optional attribute for the <body> tag that will be applied to the entire web page.

## The important attributes of body

#### tag are:

Attribute	Ualve	Description
background	Image url	Sets the background image to the image found at URL. The image should be in .gif, . jpg, or .jpeg format
bgcolor	Colorname or # hexa value	Sets the background color for the page.
Text	Colorname or #hexa value	Sets the text color of the web page.
Link	Colorname or #hexa value	Sets the color for unvisited link.
	C. I	Catallandon

# Example:

```
<html>
<head><title>My page</title>
</head>
<body bgcolor="blue" text="yellow">
<hl>This is heading I</hl>
The bgcolor attribute sets the background color to a
 html document
</body>
</html>
```

## OUTPUT:

# This is heading 1

The bgcolor attribute sets the background color to a html document

- The bgcolor attribute sets the background to a color. The value of this attribute can be a hexadecimal number, an RGB value, or a color name.
- □ The possible way of representations is,
  - <body bgcolor="#000000">
  - cbody bgcolor="rgb(0,0,0)">
  - cbody bgcolor="black">

# Basic HTML Tags

#### Heading tags:

- Many documents start with a heading. We use different sizes of font for headings.
- HTML contains six levels of headings, which use the elements <h1>, <h2>, <h3>, <h4>, <h5>, and <h6>.
- While displaying any heading, browser adds one line before and after that heading.
- The heading <hI> is the biggest and <h6> is the smallest heading.

#### Example:

<hI>This is heading I</hI>
<h2>This is heading 2</h2>
<h3>This is heading 3</h3>
<h4>This is heading 4</h4>
<h5>This is heading 5</h5>
<h6>This is heading 6</h6>

```
<html>
<head><title>My page</title>
</head>
<body bgcolor="blue" text="green">
<hI>This is heading I</hI>
<h2>This is heading 2</h2>
<h3>This is heading 3</h3>
<h4>This is heading 4</h4>
<h5>This is heading 5</h5>
<h6>This is heading 6</h6>
</body>
</html>
```

# This is heading 1

This is heading 2

This is heading 3

This is heading 4

This is heading 5

This is heading 6

#### Paragraph Tag :

- Paragraphs are defined with the tag.
- HTML automatically adds an extra blank line before and after a paragraph.
- The tag has several attributes; the most common of which is ALIGN.
- ALIGN can be set to "LEFT", "RIGHT", or "CENTER", to affect the horizontal alignment of the paragraph.

## □ Example:

```
This is a paragraph
This is another paragraph
align="left">Your text
align="right">your text
```

```
<html>
<head><title>My page</title>
</head>
<body bgcolor="blue" text="green">
This is a paragraph
This is another paragraph
Your text
Your text
</body>
</html>
```

This is another paragraph

You text

Your text

### Line Break Tag <br>:

- The line break <br > tag is used when we want to end a line, but don't want to start a new paragraph.
- The <br/>br> tag forces a line break or new line wherever we place it.
- The HTML 4.0 and above version define line break as <br/>br/>.
- The line break is empty tag does not contain attribute.

## □ Example:

```
 this <br > is a para <br > graph with line breaks this is a paragraph two  this is third <br > paragraph
```

this is a para graph with line breaks

this is a paragraph two

this is third paragraph

- □ Horizontal Rule <hr>:
  - The <hr> tag stands for horizontal rule.
  - This tag will cause a horizontal line to be drawn on the screen.
  - This tag has several options; the most common ones include:
    - Align: Set the alignment left, right, center
    - Width: Set the width of the line in number of pixels or percentage
    - Color: Set the color using color name or hexacode
    - Size: Set the size of the line in number of pixels

## □ Example:

```
chr align="left" size="2px" color="red"
  width="80%">
  </hr>
```

#### Comments in HTML:

- The comment tag is used to insert a comment in the HTML source code.
- A comment will be ignored by the browser. We can use comments to explain the code.
- Example:
  - <! -This is a comment in HTML- >

```
<html>
<head>
<title>
</title>
</head>
<body>
this is my first web page
<!--this is comment-->
</body>
</html>
```

# Text formatting tags

### ■ Bold(<b> tag):

- The text inside bold tag is displayed with bold style.
- <b> this text will be in bold</b>

## □Italic (<i> tag ):

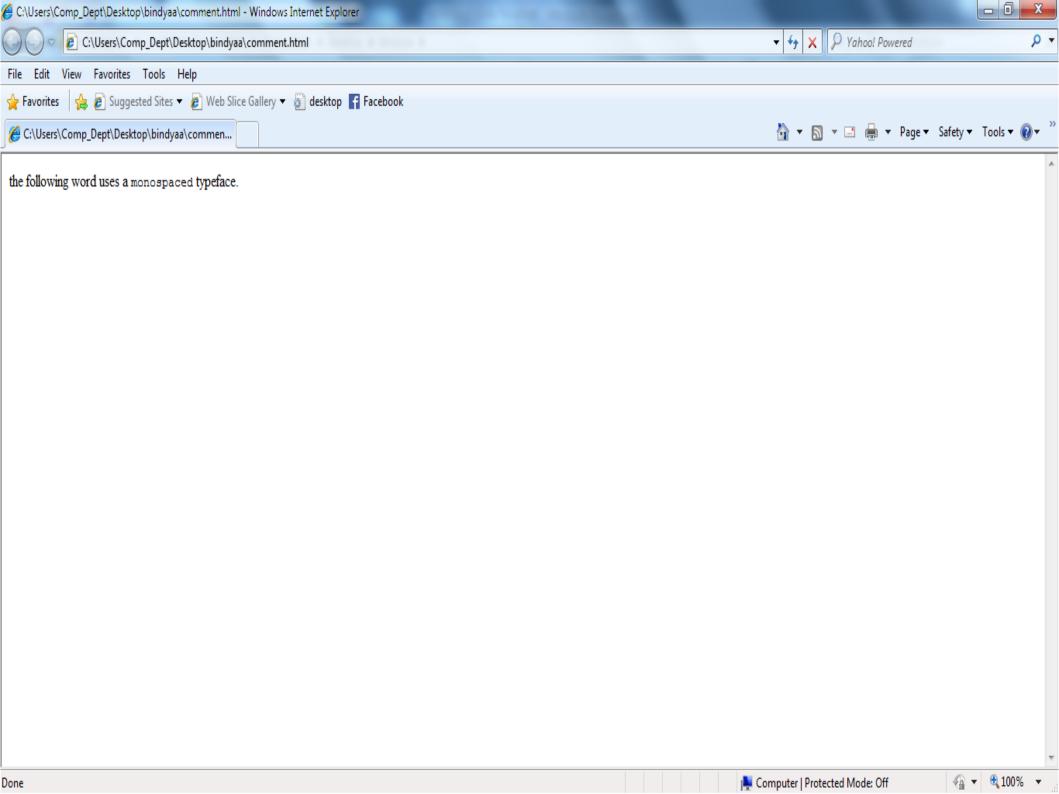
- The text within the italic tag is displayed in italic style of font.
- <i>this is italic</i>
- I this is italic

- □ Underlined Element (<u> tag):
  - The <u> tag is used to give underline to a text. This tag is depreciated in XHTML4.0 and above version.
  - <u>this text is underlined</u>
- □ Monospaced font or tele type font (<tt> tag):
  - The content of a <tt> element is written in monospaced font.
  - Most fonts are known as variable-width fonts because different letters are of different widths (for example, the letter m is wider than the letter i).
  - In a monospaced font, however, each letter is the same width.

# Continue..

Example ( <tt> tag):
 the following word uses a <tt> monospaced
 tt> typeface.

```
<html>
<head>
<title>
</title>
</head>
<body>
 the following word uses a <tt> monospaced</tt>
 typeface.
</body>
</html>
```



### Strike tag(<strike>):

- The text appears inside the 'strike'...'/strike' element is displayed with strikethrough, which is a thin line through the text.
- Example
  - The following word uses a <strike>strikethrough
    strike> typeface.
  - The output will be:
    - The following word uses a strikethrough typeface.

- □ Big (<big> tag) :
  - This tag is used to make text with big font.
  - The content of the <big> element is displayed one font size larger than the rest of it surrounding it.
- □ Small (<small> tag):
  - This tag is used to make text with small font.
  - The content of the <small> element is displayed one font size smaller than the rest of the text surrounding it.

#### □ Sup (<sup> tag):

- The content of a <sup> element is written in superscript; the font size used is the same size as the characters surrounding it but is displayed half a characters height above the other characters.
- Example: e<sup>x<sup> displays e.

#### □ Sub (<sub> tag):

- The content of a <sub> element is written in subscript; the font size used is the same as the characters surrounding it, but is displayed half a characters height beneath the other characters.
- Example: H<sub>2</sub>0 displays H<sub>2</sub>O

# Uses of Font tags and its

## Attributes:

- The HTML webpage text style can be changed using <font> tag.
- Font face and color depends entirely on the computer and browser that is being used to view your page.
- But the <font> tag is used to add style, size, and color to the text on the web page.
- To change any of the font attributes at any time within the page, simply use the <font> tag.

## Continue...

- □ The text that follows will remain changed until you close with the </font> tag.
- We can change any or the entire font attributes at the one time, by including all the required changes within the one <font> tag.
- □ The <font> tag is deprecated in the latest in the latest versions of HTML(HTML 4 and XHTML).
- □ The font tag is having three attributes called size, color, and face to customize your fonts.

# Attributes of font tag

Attributes	Description
Face	Set the font face type by giving font family face name.
color	Set the color of the font.
size	Set the size of the font from I to 7 the default font size is 3.  The size also can be given in terms of increments.

# Continue..

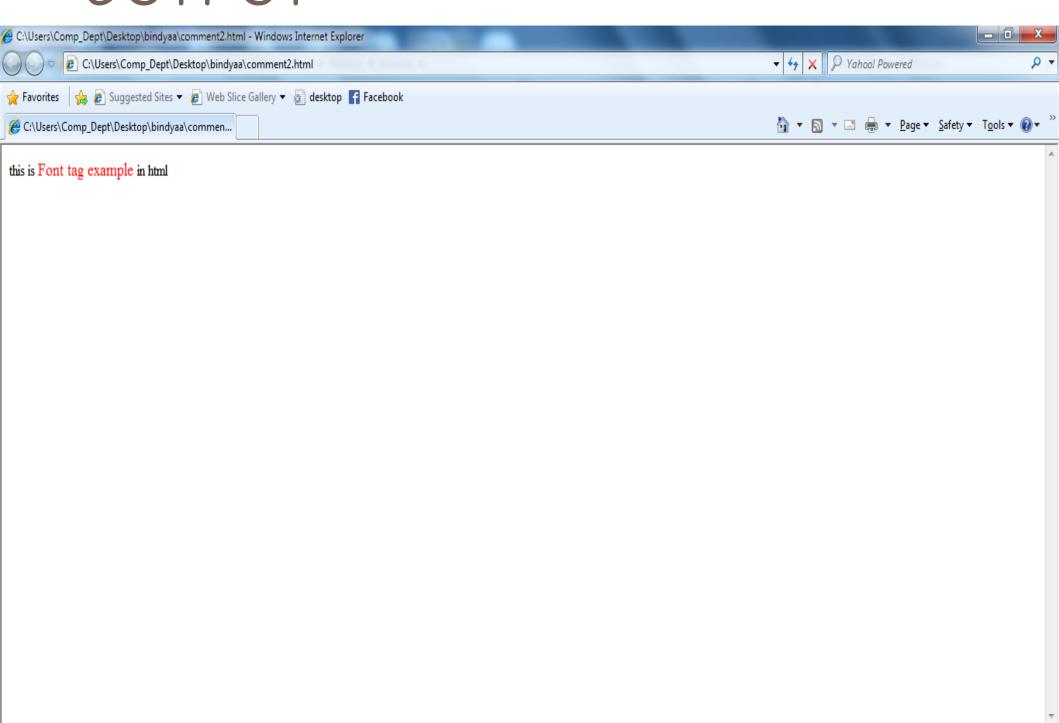
#### □ Example:

- op> this is <font face="times new roman"
  size="4" color="red"> Font tag example </
  font>in html
- font size="+2"> some text</font>
- font color="#0000FF"> this text is in blue color</font>
- ofont face="Calibri"> This is in Calibri</font>

```
<html>
<head>
<title>
</title>
</head>
<body>
 this is <font face="times new roman" size="4" color="</p>
 red"> Font tag example </font>in html
</body>
</html>
```

## OUTPUT

Done



Note: Off

## Continue...

The more commonly seen font size can be changed by using the font style attribute. This type of style is known as inline style.

### □ Example:

- <FONT STYLE="font-size:20px">this is the text that it applies to 20px font size</FONT>
- font style="font-size:16px; font-face:arial; font-color:green">This will be in Arial 16px and with green color</font>

```
<html>
<head>
<title>
</title>
</head>
<body>
<FONT STYLE="font-size:110px">this is the text that it
 applies to 110px font size</FONT>
</body>
</html>
```

# OUTPUT



# The preformatted tag( tag):

- The tag allows the user to follow the exact format of how it is written in the HTML document.
- □ In those cases, you can use the preformatted tag ().
- Any text between the opening 'pre' tag and the closing '/pre' tag will preserve the following formatting of the source document.

# Continue...

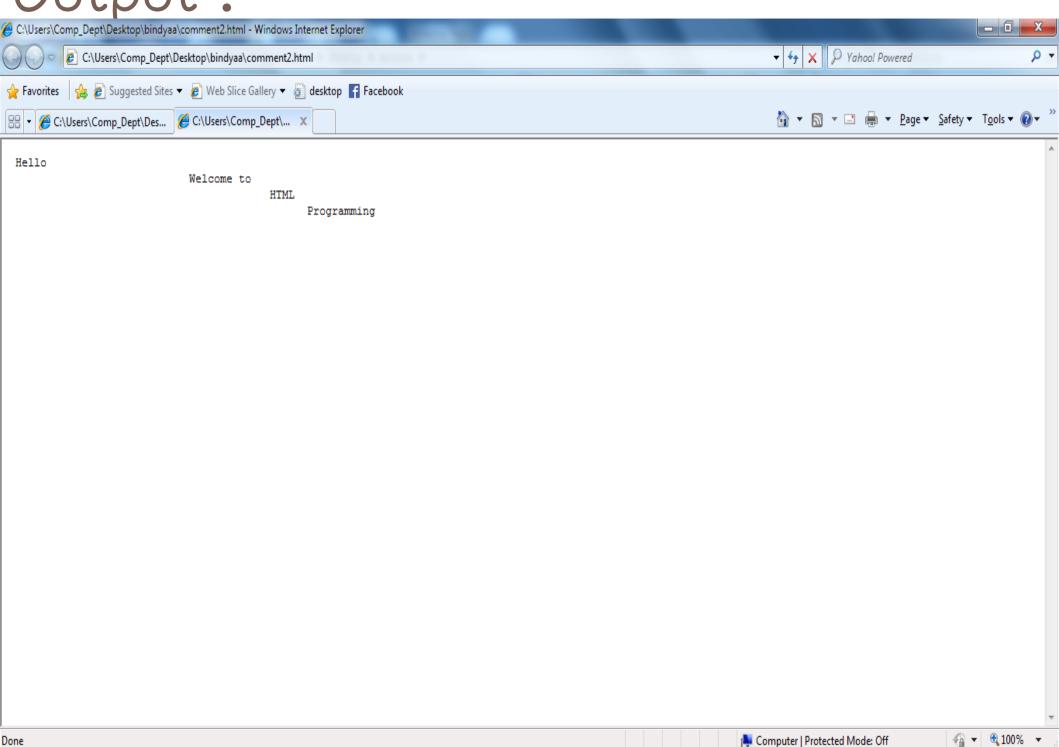
- □ Example for tag
  - Pre> Hello

Welcome to

HTML

Programming

Output:



# The <center> tag:

- The <center> tag places the text or the content to the center of webpage.
- □ For example:
  - center><hI>Welcome to HTML programming 
    hI> </center>
  - The content of the text will be placed in the center of the page.

# The grouping element tags:

- The <div> and <Span> elements allow you to group together several elements to create sections or subsections of a page.
  - OIU> tag: This tag is used to divide up a web page and, in doing so, to provide a definite structure that can be used to great effect when combined with CSS.

```
<html>
<head><title>Text atyling using DIU</title>
</head>
<body>
<div align="LEFT">
Register Evaluation<br/>
Mangalore University<br>
Konaje, Manglore
</div>
>
Dear sir,
<DIU align="CENTER" style="color:BLUE; FONT-style:ITALIC">
Please give the result at the earliest
</DIU>
<DIU align="RIGHT">
students<br>
BCA stream
```

Register Evaluation Mangalore University

Konaje,Manglore

Dear sir,

Please give the result at the earliest

students

BCA stream

#### 2. SPAN (<span> tag ):

<span> tag element is used to highlight the text words inside the paragraph. Instead of applying the style to all paragraphs we can set style to particular words.

#### For eg:

Using paragraph style:

The quick brown fox jumps over the
lazy dog.

Ex: In this example the span is used to highlight specific word "jumps"

the quick brown fox<span style="font-style:italic; font-weight:bold">jumps</span>over the lazy dog

# Creating Lists:

- In a Web page you may want to have many items as list, for example a Web page may contain lists of hypertext links.
- HTML supports three types of lists tags, they are
  - Ordered List(Numbered List)
  - Unordered List (Bulleted list)
  - Definition list

### 1. The OL(Ordered List) Tag

- The OL tag defines a sequentially numbered list of items.
- OL is used in conjunction with the LI (List Item) tag, which is use to tag the individual list items in a list.
- Example:

<HTML>

<HEAD><TITLE>Testing Lists</TITLE></HEAD>

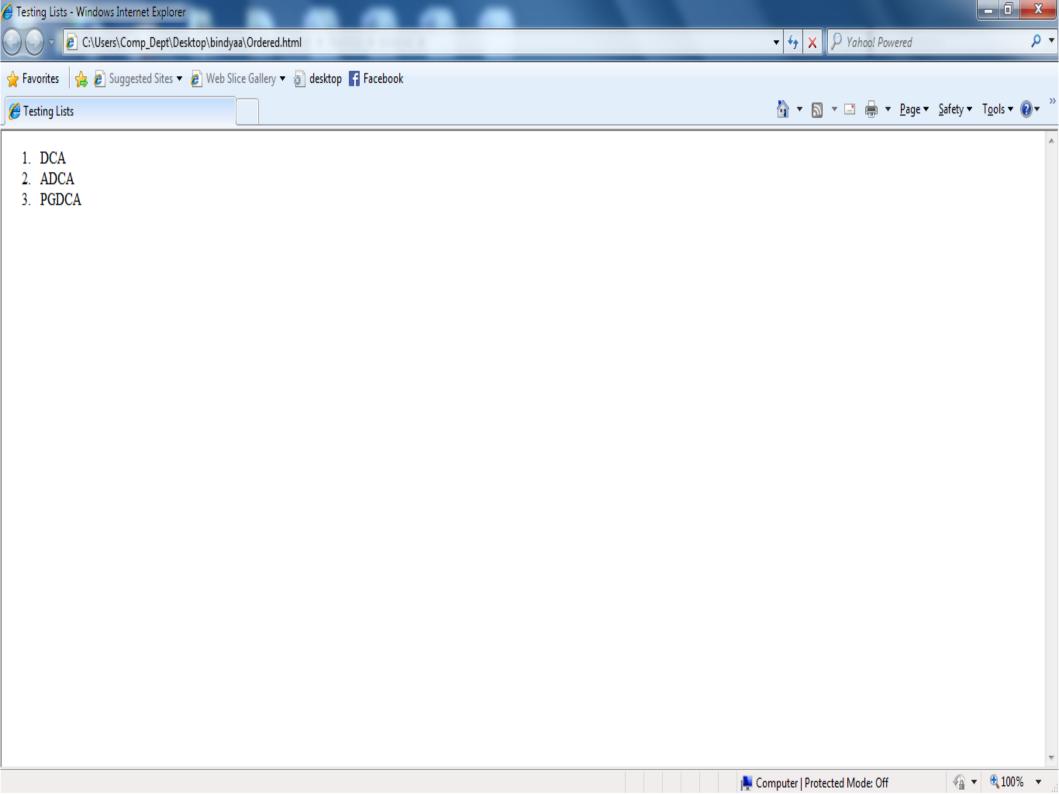
<BODY>

<0L>

<LI>DCA

<LI>ADCA

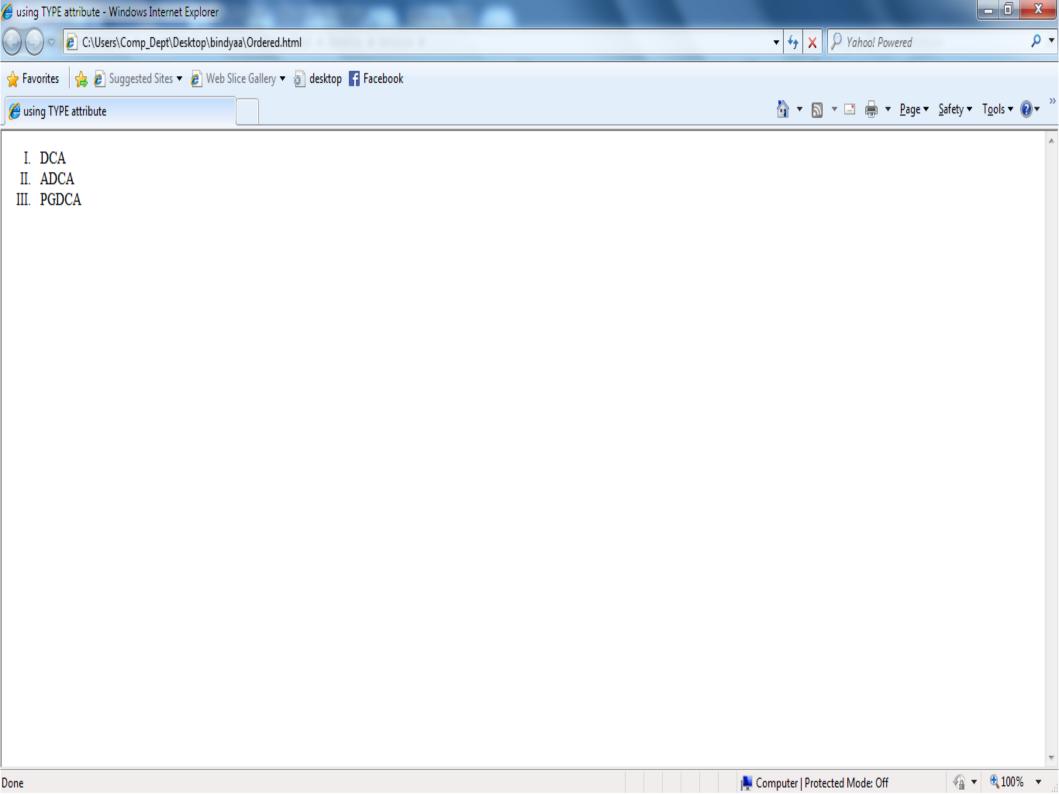
<LI>PGDCA



# Using TYPE attribute in an Ordered List:

- The TYPE attribute allows you to specify the number type for an ordered list. Besides making it possible for you to specify a number type for a numbered list, this attribute allows you to create multilevel outlines.
- The values that you can use with the TYPE attribute are "A", "a", "I", "I", "I" for specifying uppercase letters, lowercase letters, uppercase roman numerals, lowercase roman numerals, or Aeabic numbers respectively.

```
□ Example:
<HTML>
<HEAD>
<TITLE> using TYPE attribute</TITLE></HEAD>
<BODY>
<OL TYPE="I">
<LI>DCA
<LI>ADCA
<LI>PGDCA
</0L>
</BODY></HTML>
```



# Creating a multilevel Ordered List with different types:

You can create a multilevel Ordered List by applying different number types to the different levels of a nested ordered list.

```
<html>
<head><title>Multilevel</title></head>
<body>
<OL type="I">
   <LI>First Level
        <OL type="A">
        <LI>Second Level
          <OL type="1">
             <LI>Third Level
                <OL type="a">
                  <LI>Fourth Level
                  <LI>Fourth Level
                </0L>
             <LI>Third Level
          </0L>
        <LI>Second Level
     </0L>
  <LI>First Level
</0L>
</BODY></HTML>
```

# Start and Value attribute in an ordered list:

- To start a numbering sequence in a particular number the START attribute in an OL tag is used.
- To restart the numbering sequence at a particular number the UALUE attribute in LI tag is used.

### Example:

```
<HTML>
<HEAD><TITLE>First Page</TITLE></HEAD>
<BODY>
<OL start="5">
<LI>BCOM
<LI>BCA<br>
Now it restarts at 9
<LI value="9">PGDCA
<LI>BCOM
<LI>BA
</0L>
</BODY></HTML>
```

### 2. The UL (Unordered List) tag

The UL tag defines a bulleted list of items. The LI(list item) tag is nested inside the UL tag and defines each item within the ist.

# Using TYPE attribute in an unordered list:

The TYPE attribute can be used to specify the type of bullet for an unordered list. The values disc, circle and square can be used with the TYPE attribute.

```
□ Example:
  <HTML>
  <HEAD><TITLE>Using TYPE attribute in UL</TITLE>
  </HEAD>
  <body>
  <UL type="disc">
  Courses-Science
  <UL type="square">
  BCA
  </UL>
  </UL>
  <UL type="disc">
  <LI>Courses Humanities and Commerce
  <UL type="circle">
  BA
  BCOM
  </01>
  </body>
  </html>
```

### Nesting Lists

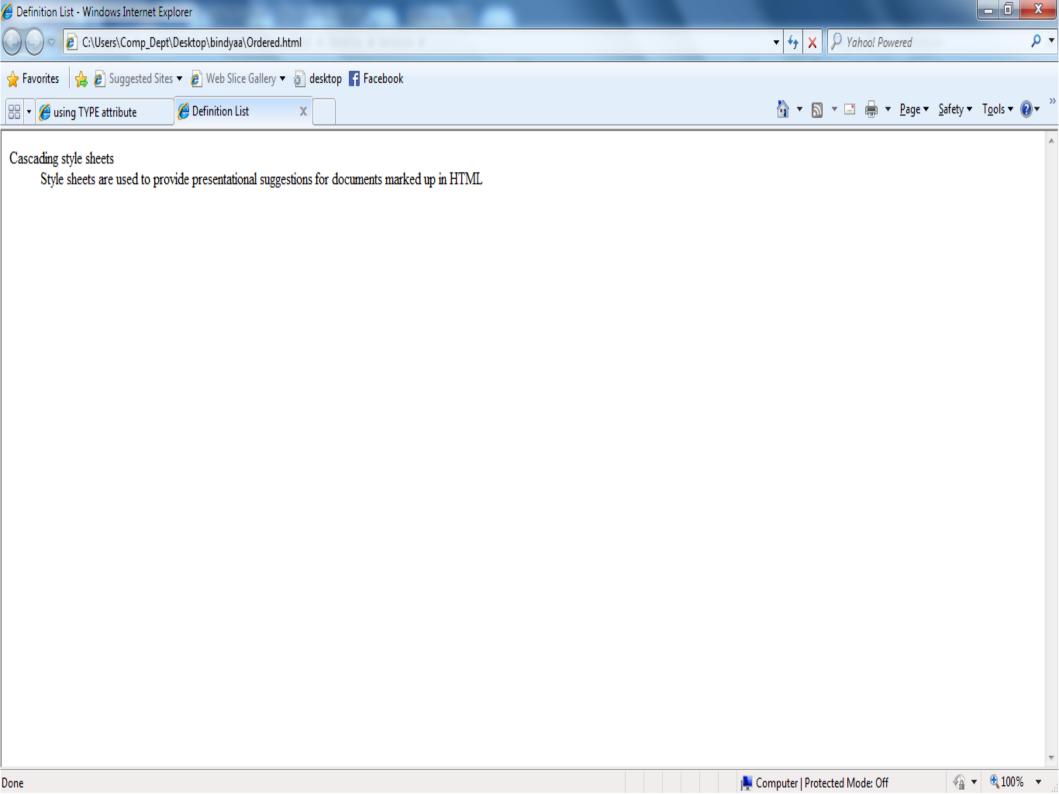
- You can nest a list inside another list. The browser automatically indents nested list levels.
- You can nest the same or different kinds of lists. That is you can nest Ordered list and Unordered lists.

```
<HTML>
<HEAD><TITLE>Nesting of Lists</TITLE>
</HEAD>
<BODY>
<UL>
<LI>SCIENCE
<0L>
<LI>BSC
<LI>BCA
<LI>PGDCA
</0L>
<LI>OTHERS
<0L>
<LI>BA
<LI>BCOM
</0L>
</UL>
</BODY>
</HTML>
```

### Definition List

- The DL(Definition List) tag allows you to create list of terms of your own and their definitions.
- □ It consists of three tag elements:
  - Tag to define the list (Definition list<DL>)
  - Tag to define the term(Definition term<DT>)
  - Tag to define the definitions (definition description<DD>)

```
Example
<html>
<head><title>Definition List</title></head>
<body>
<DL>
<DT>Cascading style sheets</DT>
<DD>Style sheets are used to provide presentational
 suggestions for documents marked up in HTML</DD>
</DL>
</body>
</html>
```



### Hyperlinks(Hypertext links)

- Hypertext links are basically used to link different web pages.
- Clicking on a section of text or an image in one web page will open an entire web page or an image. The text or an image that provides such linkages is called Hypertext or a Hyperlink.

- The browser distinguishes Hyperlinks from normal text. Every Hyperlink,
  - Appears blue in color
  - The hyperlink text/image is underlined
- □ There are two types of Hyperlinks
  - Internal Hyperlinks: used to create links within the document
  - External Hyperlinks: used to create the links to external pages.

## The hyperlinks are created using anchor tag and its attributes:

#### □ Anchor Tag <a>:

- An anchor tag point to any resource on the web: an HTML page, an image, a sound file, a movie etc...
- Anything written between<a>..</a> tag becomes a hyperlink.
- The general syntax is:
  - <a href="url"> text to be displayed </a>
  - The <a> tag is used to create an anchor to link from current page.
  - The **href** attribute is used to tell the address of the document or page that we are linking.
  - The words between the open and close of the anchor tag will be displayed as a hyperlink text.

```
Example:
<html>
<head>
<title>linking pages</title>
</head>
<body>
<h2>Using hypertext links</h2>
click here to jump to
<a href="Definition.html">Another Page</a>
</body>
</html>
```

### Attributes of Anchor(<a>) tag are:

Attribute	Description
Name	Using name attribute we can create a named sections, which links within the document and to other documents.
Target	Specifies where to open the linked document.  The target attribute can have one of the following values: _blank: opens the linked document in a new window or tab

- We can link to sections within a document.
  This is possible by using the named anchors.
- A named anchor is a hidden reference marker for a particular place in your HTML file.
- When you include a named anchor somewhere in an HTML document and then create a link to that anchor, the browser will jump to that line when the link is clicked.

- In order to create a link to a particular section of a page, you must perform two steps:
  - Assign an anchor name to the position
  - Create a link to that position
- These tasks can be performed through use of the NAME attribute of the <a> tag, as <a name="anchor\_name"></a></a>
- Suppose we want to link to a section in another page then we have to use pagename#section.

### Link Lists

- A link list is just a list of hypertext links; it can be bulleted or numbered.
- To create a simple link list, all you have to do is combine an unordered list and list item being the hypertext links with some text to identify each of the items in the list.

```
Example:
<html>
<head><title>Link list</title>
</head>
<body>
<h3>courses </h3>
<0(>
<a href="bcom.html">BCom</a>
<a href="bca.html">BCA</a>
<a href="ba.html">BA</a>
<a href="pgdca.html">pgdca</a>
```

# Setting the background, text and link colors:

- You can set the colors for the background, text, and links by using the following attributes of the BODY tag
- BGCOLOR sets the background color
- TEXT sets the text color
- LINK sets the color of hypertext links
- ULINK sets the color of visited links
- ALINK sets the color of activated links (When you hold down the mouse button on a link, without releasing it)

- □ The general form for entering these attributes as color names is:
- cbody bgcolor="colorname" text="colorname"
  link="colorname" vlink="colorname"
  alink="colorname">

```
<html>
<head><title>Link List</title></head>
<body bgcolor="aqua" text="red" link="green" vlink="navy"</pre>
 alink="violet">
<h3>Courses</h3>
<UL>
<a href="bcom.html">BCOM</a>
<a href="ba.html">BA</a>
<a href="pgdca.html">PGDCA</a>
</body>
</html>
```

### Marquee tag(<marquee>):

### □ Syntax:

- | (marquee).....(/marquee)
- This tag is unique to Internet explorer. It displays the content as moving text. (the text inside the marquee element will be scrolled.

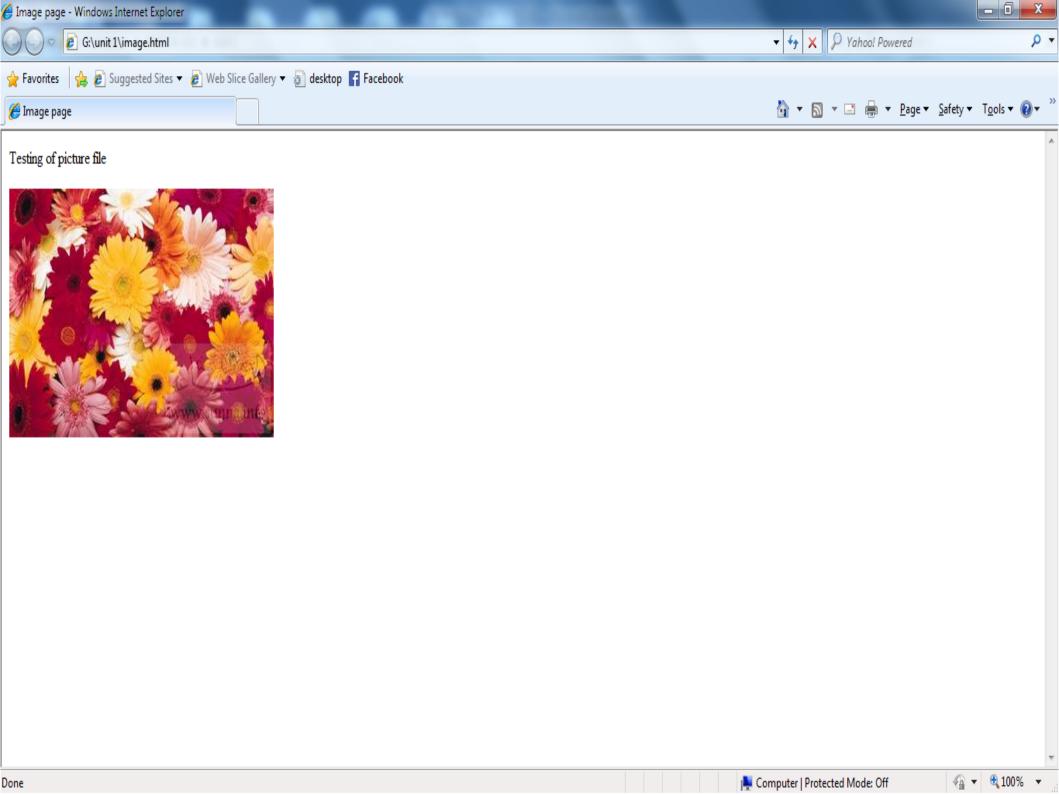
- □ The marquee tag attributes are,
  - Behavior: This sets the motion of the text within the rectangular space set aside for the Marquee tag. The value can be alternate, scroll or slide.
  - BGCOLOR: This establishes the color for the rectangular space reserved for the marquee tag.
  - Direction: This specifies the scrolling direction of the text. Direction can be up, down, left or right.
  - Loop: The number specified here sets the number of times the Marquee text scrolls its contents. After the final scroll, the content remains in a still or fixed positions. If the scroll value is set to -I or infinite scroll, the content scrolls infinitely.
  - Scrolldelay: This specifies the scroll delay in milliseconds. Increasing the scroll delay value slows the scroll speed and decreasing the values makes scrolling go faster.

```
□ Example:
 <html>
<head>
<title>Marquee</title>
</head>
<body>
<marquee behavior="slide" direction="left" width="250"</pre>
 height="75" bgcolor="red" loop="infinite" scrolldelay="90">
Karnataka computer academy</marquee>
</body>
</html>
```

### Inserting Images(<IMG>):

- The IMG (image) tag you to display images on your web page.
- The most commonly used image format for inline images is the GIF and JPEG format. All current graphic web browser should be able to display GIF and JPEF images as inline images.
- The IMG (Image) tag is empty or stand-alone, document element.
- Syntax : <IMG SRC="imagefile">
  - The SRC(source) attribute is a required attribute that identifies the full or partial address (URL) or just the name of the file to display

## <HTML> <HEAD><TITLE>Image page</title></head> <body>Testing of picture file <IMG SRC="flower.jpg"> </body> </html>



- The ALT attribute: The ALT attribute is used to provide an alternative to an image if someone using a text-only browser or using a graphical browser with images turned off.
- If you turn off the display of images capability, the pages in the browser gets loaded faster.

```
<HTML>
<head><title>Image page</title></head>
<body>
<h3>testing of picture file</h3>
<IMG SRC="flowerl.jp" alt="The picture is</p>
 not shown">
</body>
</HTML>
```

# ALIGN attribute in Inline Graphics

The **align** attribute allows you to position an inline image relative to the line of text that it is on. The different values used are: "top", "middle", and "Bottom".

```
<html>
<head><title>Image page</title></head>
<body>
<h3>Testing of picture file with alignments</h3>
<img align="top" src="flower.jpg"><b>is top aligned</b>
<img align="middle" src="flower.jpg"><b>is middle
 aligned</b>
<img align="bottom" src="flower.jpg"><b>is bottom
 aligned</b>
</body>
</html>
```

# Specifying the height and width of an Image:

- Height: specifies the height of the image in pixel or percentage
- Width: specifies the width of the image in pixel or percentage

```
<html>
<head><title>image page</title></head>
<body>
<h3>Testing of picture file with height and width
 h3>
<IMG src="flower.jpg" height="100%" width="50%">
</body>
</html>
```

### Table Layout and presentation

- □ A table is a two dimensional matrix consisting of rows and columns. Tables are created and displayed on the web page.
- □ A table is created using --- tags.
- A table is divided into table rows(with the tag) and each row is divided into data cells(with the tag).
- The letters td stands for "Table data". Which is the content of a data cell. A data cell can contain text, images, list, paragraphs, forms, horizontal rules, tables, etc.
- □ A table row can be a > table header row.

## Creating Columns and Rows

- The TR(table row) and TD (table data) tags are used to create a grid of rows and columns.
- □ table1.txt
- □ table.html

## Adding Column Heading

- The TH(Table Heading) tag is used to define a "cell" as a heading cell rather than as an ordinary data cell.
- To create the headings (column headings) at the top of the table, first create a row using the TR tag and then, use the TH tag and then, use the TH tag to define the cells instead of using the TD tags.
- □ <u>columnheading1.txt</u>
- □ columnheading.html

## Attributes of TABLE tag

- Border
- Cellspacing
- Cellpadding
- Align
- Ualign
- Width
- Colspan
- Rowspan

## Adding BORDER:

- By default, the table does not contain a border. To include a border to the table, specify a border attribute inside the TABLE tag.
- □ borderl.txt
- □ border.html

## Adding Spacing and Padding

- The CELLSPACING attribute adds space between cells, whereas the CELLPADDING attribute adds space within each cell.
- □ spacingpaddingl.txt
- □ <u>spacingpadding.html</u>

# Setting the table Width and Height

- The width and height attribute can be used to specify the size of your table. You can use either the absolute value (number of pixels) or relative values (percentage).
- widthheightl.txt
- □ widthheight.html

## Align cell contents

The align attribute is used to align the contents of TH (table heading) and TD (table data) cells by assigning left, center, or right as the ALIGN value.

## Setting column Width

- By inserting a WIDTH attribute in the top cell of a column, you can specify the width of the entire column.
- To ensure that all of the columns are of equal width, you need to set the same WIDTH attribute value, either as a percentage or in pixels, for each column.

- Centering a Table: To center the table, put it inside a CENTER tag.
- Inserting an Image: An image can be inserted in the table.

## CAPTION tag (<CAPTION>)

- This tag creates a caption for the table. The default position for the caption is at the top of the table.
- Align=bottom can be used to put a caption below a table.

- □ Example:
- □ tableexample1.txt
- □ tableexample.html

## Spanning Columns and Rows

- Spanning Columns: The COLSPAN attribute lets you create cells that span columns.
- □ For example COLSPAN="3" indicates that 3 cells are merged to become one cell.
- Spanning Rows: The ROWSPAN attribute is used to specify the number of rows to column.

### Example:

colrowspanningl.txt
colrowspanning.html

#### FRAMES

- Frames give you the ability to split a browser window into vertical or horizontal or both vertical and horizontal.
- Different pages can be loaded into the various frames in the browser, creating a multi page display.
- The frameset element allows an author to define a multiple frame web page, where each frame displays its own HTML document.
- Frames can be scrolled and resized by the user.

- The HTML tags that divide a browser screen into two or more HTML recognizable unique regions is the <FRAMESET></FRAMESET> tags.
- Each unique region is called a frame. Each frame can be loaded with a different document and hence, allow multiple HTML documents to be seen concurrently

## The <FRAMESET> Tag

- The <frameset> tag splits the browser screen into the frames.
- The <frameset> contains two important attribute to split the screen in to rows and column.
- A frameset main page does not contain a <body>.It only divides the screen.

#### □ Attributes of **<frameset>** tag:

- Rows: this attribute used to divide the screen into multiple numbers of rows. It can be set to three different ways:
  - A number of pixels(pixel dimension)
  - Expressed as a percentage of the screen resolution(percentage dimension)
  - The symbol \*, which indicates the remaining space(relative dimension)
- Cols: This attribute is used to divide the screen into multiple columns. It can be It can be set to three different ways:
  - A number of pixels
  - Expressed as a percentage of the screen resolution
  - The symbol \*, which indicates the remaining space

- □ Example:
- cframeset rows="60,300">

The numbers 60 and 300 represent the pixels. It defines 2 rows, with top row being 60 pixels high and bottom row 300 pixels high.

□ <FRAMESET ROWS="60%,30%">

It defines 2 rows, top filling 60% of the browser window and bottom filling 30% of the total height of the browser window.

cFRAMESET COLS="125,\*">

This will create one column 125 pixels in width and assign the remaining horizontal width to other column

Asterisk (\*) to represent the rest of the space available in the browser window.

- <FRAMESET ROWS="\*, 90">

## The <frame> tag:

- Once the browser screen divided into section the required HTML page is inserted using HTML <frame> tag.
- □ The attributes of <frame> tag are:
  - □ Src="url": sets the URL of the HTML page loaded on that frame.
  - □ Name="name": Gives the frame a unique name
  - □ Noresize: disables the frames resizing option
  - □ Scrolling: controls the horizontal and vertical scrollbars in a frame.

    This takes the values YES/NO/AUTO.
  - □ Frameborder: gives the frame border. It takes the values 1/0
  - □ Marginheight / Marginwidth: This sets the amount of left, right, top and bottom margin spaces (minimum value is "2").

## Creating Horizontal Frames

□ You can use ROWS attribute of the <FRAMESET> element to set up the document, and to create each frame with the <FRAME> element. This will create Horizontal frames.

```
<html>
<frameset rows="40%,60%">
<frame name="upperhalf" src="Nextpage.html" marginheight="3"</pre>
 marginwidth="3" scrolling="auto" noresize>
<frame name="bottomhalf" src="oltype.html" marginheight="3"</pre>
 marginwidth="3" scrolling="auto" noresize>
</frameset>
```

</html>

frame3.html

## Creating Vertical Frames

You can use COLS attribute of the <frameset> element to set up the document, and to create each frame with the <frame > element. This will create vertical frames.

## Example:

```
<html>
<frameset cols="40%,60%">
<frame name="lefthalf" src="nextpage.html" marginheight="</pre>
 3" marginwidth="3" scrolling="auto" noresize>
<frame name="righthalf" src="oltype.html" marginheight="</pre>
 3" marginwidth="3" scrolling="auto" noresize>
</frameset>
</html>
□ frame4.html
```

□ If you do not want to show the scroll bar then scrolling attribute can be set to NO which is shown in the following example.

<html>
<frameset cols="40%.60%">

<frame name="lefthalf" src="nextpage.html" marginheight="3"
marginwidth="3" scrolling="NO" noresize>

<frame name="righthalf" src="oltype.html" marginheight="3"
marginwidth="3" scrolling="auto" noresize>

</frameset>

</html>

□frame5.html

## Setting Frame Color:

- The color of the frames can be set with the <FRAMESET> and <FRAME> element's BORDERCOLOR attribute.
- □ Example:
- □ framecolor1.txt
- □ framecolor.html

### Borderless Frames

The borders around the frames can be removed using FRAMEBORDER attribute of the FRAME and FRAMESET elements, and FRAMESPACING attribute.

#### □ Example:

- framenobrdl.txt
- framenobrd.html

## Targeting the named frames

- Each frame is given a name using <frame name="..">.
- These names uniquely identify each frame.
- Using these names, links in other frames can tell the browser which frame the link targets.
- For example, this code creates a framed page, naming the frames TITLE, SIDEBAR, and MAIN:

```
<html>
<frameset rows="15%,*">
<frame src="title.html" name=title>
<frameset cols="20%,*">
<frame src="sidebar.html" name=SIDEBAR>
<frame src="main.html" name=MAIN>
</frameset>
</frameset>
</html>
```

#### Sidebar.html

<html>

<body>

<a href="content.html" target=MAIN>my link</a>

</body>

</html>

mahava pai memorial college	
my link	targeting the named frames

### FORMS

- □ What is a Form?
  - Special tags can be used to get the input from the users when you add forms support to a web page.
- For example: registration information: name, email, address etc..,
- A form will take input from the visitor and send it to the web server

# <fORM> tag

- All HTML forms occur within the <FORM>···
   FORM> tags.
- The <FORM> tag also includes attributes that specify where and how to deliver the input to the appropriate Web server.
- Within the <FORM>···</FORM> tags, all other forms related tags and text must appear.

- □ These tags include methods for:
  - Specifying the input with the help of <INPUT> tag and its many attributes.
  - Setting up text input areas with the help of <TEXTAREA>...</TEXTAREA> tags.
  - Selecting values from a predefined set of possible inputs with the help of <SELECT>...</SELECT> tags.
  - Using the SUBMIT attribute for INPUT to deliver the content to the server, or the RESET attribute to clear its contents, and start again the form's content can be managed.

- □ The forms input tags support multiple ways to interact with users, including:
  - Creating text input fields, where users can type in whatever they want.
  - b. Generating pull-down menus often called as pick lists.
  - c. Creating labeled check boxes or radio buttons on screen, when users can select or deselect to indicate the choices. When multiple selections are needed then check boxes can be used and when one selection is needed Radio button can be used.

## Setting the <FORM> environment:

- METHOD and ACTION are two key attributes within <FORM> tags.
- These attributes control how information is sent to the web server and which input handling program receives the forms contents.

### 1. The Action Attribute:

- The action attribute defines the action to be performed when the form is submitted.
- Action attribute contains the URL.
- The common way to submit a form to a server, is by using a submit button.
- Normally, the form is submitted to a web page on a web server.
  - <form action="action\_page.html">
- If the action attribute is omitted, the action is set to the current page.

### 2. Method Attribute

- The METHOD indicates how the information is sent to the server when the form is submitted.
- METHOD can take one of the two possible values POST and GET.
- Of these two methods, we prefer POST because it causes the forms content to be passed one element at a time.
- GET concentrates all the field names and their associated values into one long string.
- Default is "GET" method.

cform action="action\_page.html"
method="get">

or:

<form action="action\_page.html"
method="post">

- □ When to Use POST?
  - If the form is updating data, or includes sensitive information(password).
  - POST offers better security because the submitted data is not visible in the page address.
- □ When to Use GET?
  - The default method
  - When you use GET, the form data will be visible in the page address.

- □ The <form> element can contain one or more of the following form elements:
  - | <input>

  - cbutton>

  - coption>
  - <label>

- □ There are different types of form controls that you can use to collect data from a user.
  - Textbox input controls
  - Textarea control
  - Password control
  - buttons, submit and reset button
  - Checkboxes and radio buttons
  - Select and option
  - File upload control
  - Hidden control

# HTML Forms- Text Input Controls

- □ There are three types of text input used on forms:
  - Single-line text input controls: used for items that require only one line of user input, such as search boxes or names. They are created using the <input> element.
  - Password input controls: single-line text input that mask the characters a user enters.
  - Multi-line text input controls: Used when the user is required to give details that may be longer than a single sentence. Multiline input controls are created with the <textarea> element.

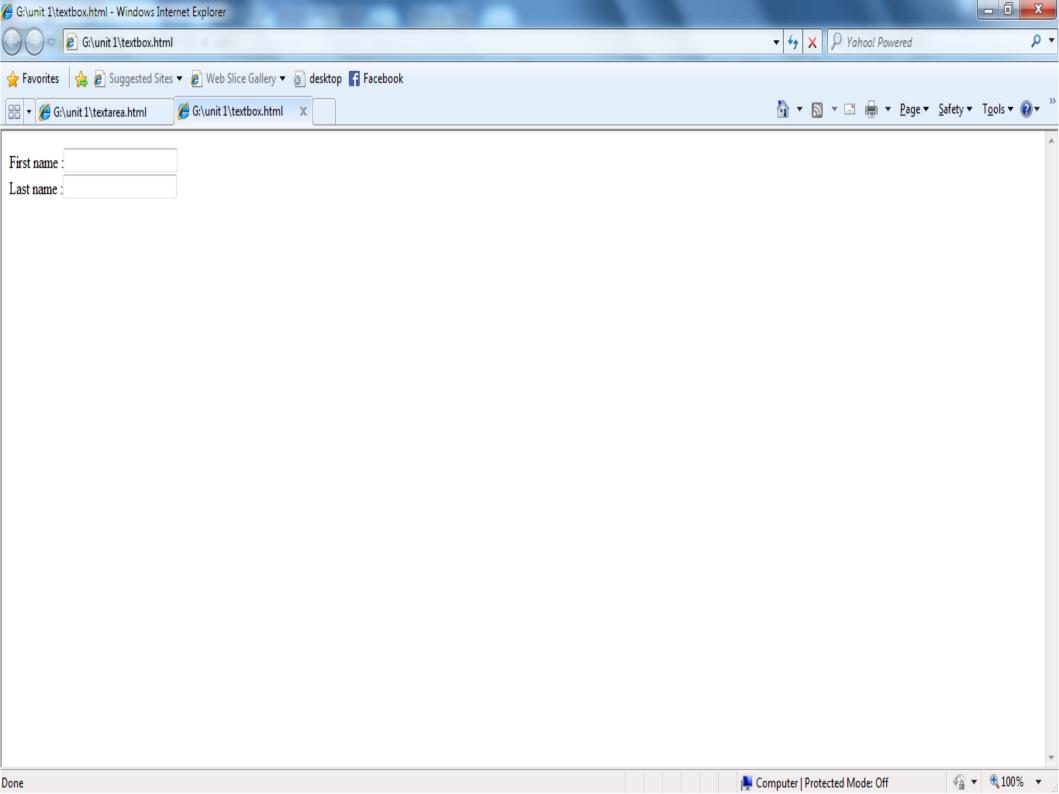
#### □ Textbox:

- Textbox is used to give single line text input.
- Single-line text input controls are created using an <input> element for which type attribute has a value of text.
- The basic example of a single-line text input used to take first name and last name:
- Example:

```
<form>
```

</form>

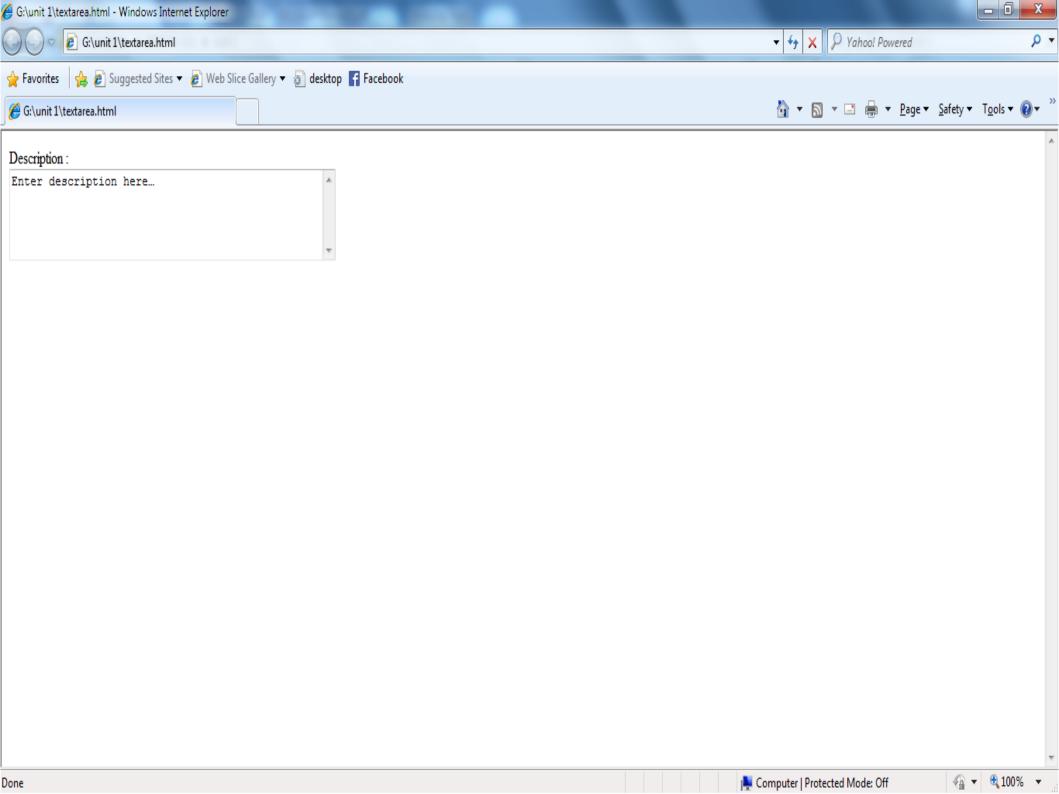
```
First name :<input type="text" name="firstname"/><br>
Last name :<input type="text" name="lastname"/><br>
```



- Following is the list of attributes for <input> tag.
- □ **Type**: Indicates the type of input control you want to create. This element is also used to create other form controls such as radio buttons and checkboxes.
- □ Name: Used to give the name part of the name/value pair that is sent to the server, representing each form control and the value the user entered.
- □ **Value**: provides an initial value for the text input control that the user will see when the form loads.
- □ Size: to specify the width of the text-input control in terms of characters.

#### □ Textarea:

- The <textarea> is used to enter multi line input.
- The textarea is used when there is an input like remarks, comments, user review in paragraph etc.

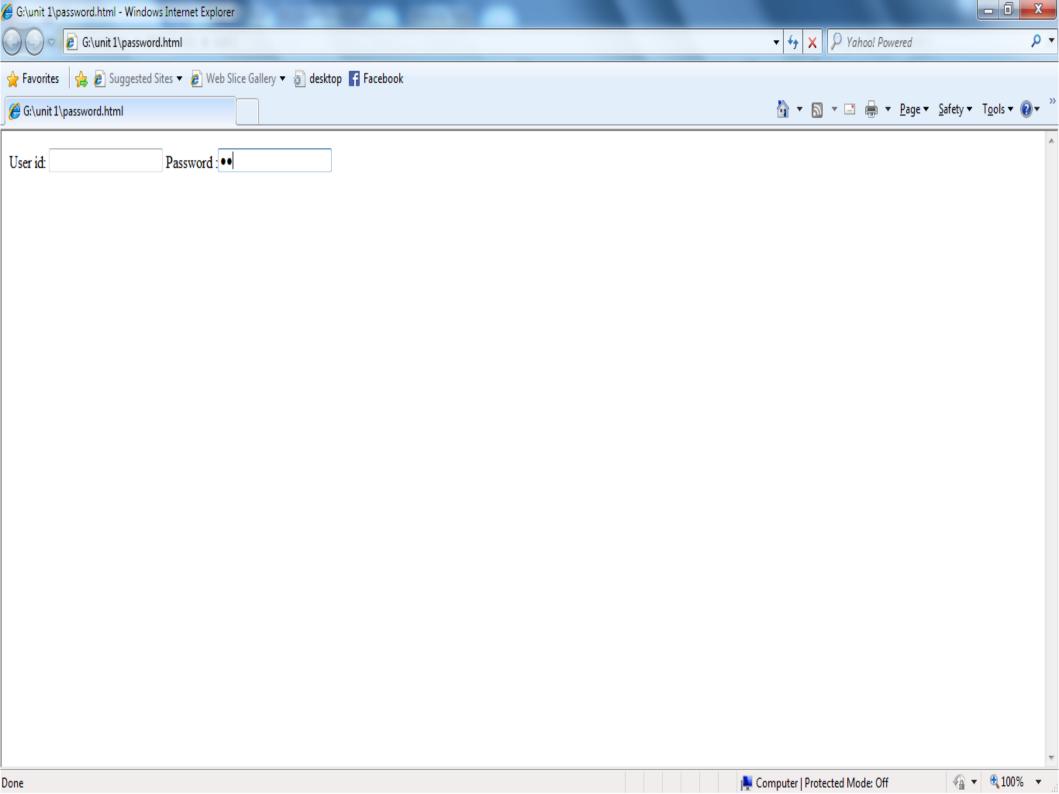


- □ The attributes of <textarea> are,
  - Name: used to give a name to the control which is sent to the server to be recognized and get the value.
  - Rows: Indicates the number of rows of text area box.
  - Cols: Indicates the number of columns of text area box.

### Password Control:

This is also a single-line text input but it masks the character as soon as a user enters it. They are also created using HTML <input> tag but type attribute is set to password.

```
Cform>
User id: cinput type="text" name="userid"/>
Password :cinput type="password" name="password"
/>
c/form>
```



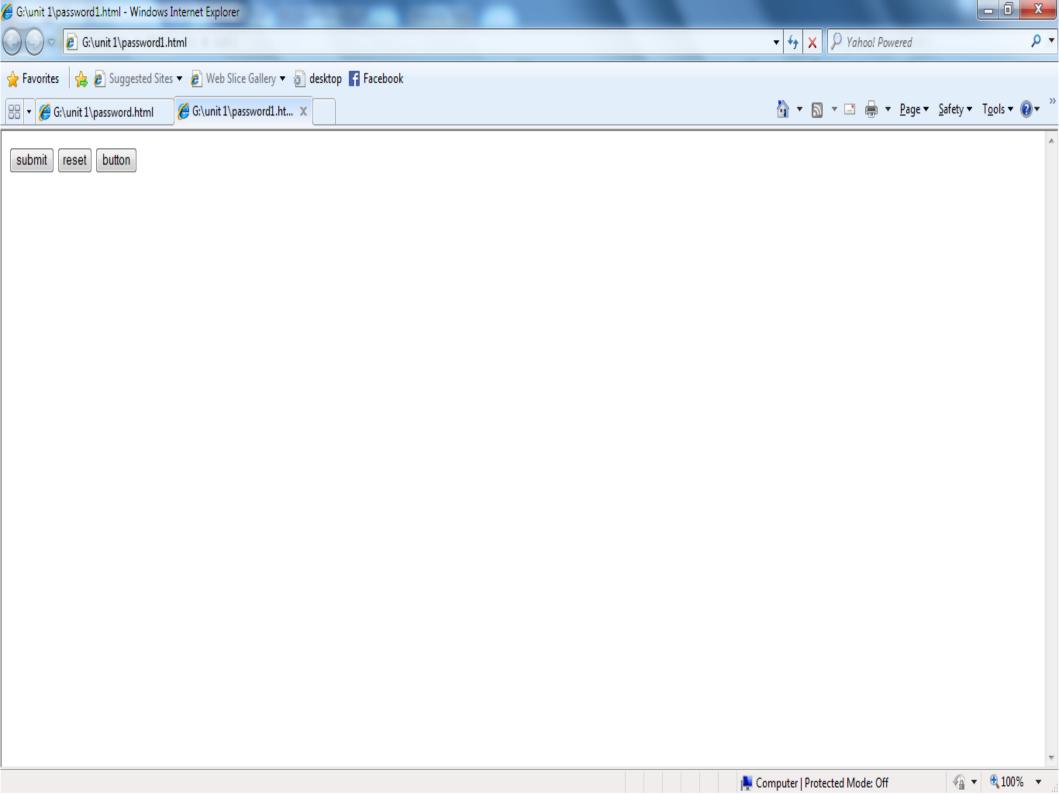
- □ The important attributes are:
  - Type: set to password
  - Name: used to give a name to the control which is sent to the server to be recognized and get the value.

#### □ HTML Button controls:

There are various ways in HTML to create clickable buttons. You can also create a clickable button using <input> tag by setting its type attribute to button. The type attribute can take the following values:

Type	<u>Description</u>
Submit	This creates a button that automatically
	submits a form.
Reset	This creates a button that automatically resets form controls to their initial values.
Button	This creates a button that is used to trigger a client-side script when the user clicks that button.

# □ Eg: <form> <input type="submit" name="submit"</pre> value="submit"/> <input type="reset" value="reset"/> <input type="button" value="button"/> </form>

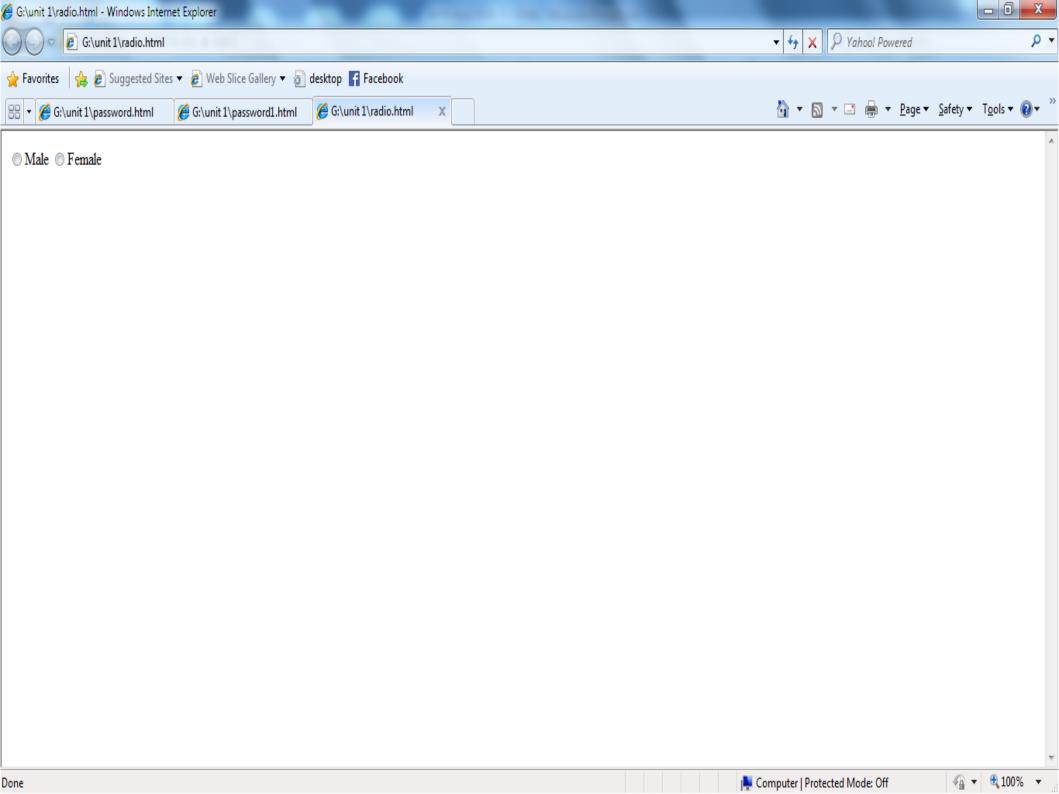


#### 5. Radio Button:

Radio buttons are used when out of many options one option is required to be selected. They are also created using HTML <input> tag but type attribute is set to radio. The important attributes of radio buttons are,

- □ Type: indicates the type of input control and for checkbox input control it will be set to radio.
- Name: used to give a name to the control which is sent to the server to be recognized and get the value.
- Ualue: the value that will be used if the radio box is selected.
- Checked: set to checked if user wants to select it by default.

```
□ Example:
<html>
<body>
<form>
<input type="radio" name="gender" value="Male"/>Male
<input type="radio" name="gender" value="Female"/>
 Female
</form>
</body>
</html>
```



- 6. Checkbox: Checkboxes are used when more than one option is required to be selected. They are also created using HTML <input> tag but type attribute is set to checkbox. The important attributes of radio buttons are:
- Type: Indicates the type of input control and for checkbox input control it will be set to checkbox.
- Name: Used to give a name to the control which is sent to the server to be recognized and get the value.
- Checked: set to checked if user wants to select it by default.

```
□ Example:
<html>
<body>
<form>
the interesting subject are :
<input type="checkbox" name="maths" value="on"> Maths
<input type="checkbox" name="Physics" value="on">Physics
</form>
</body>
</html>
```

### 7. Select and option controls:

A select box, also called dropdown box which provides option to list down various options in the form of dropdown list, from where a user can select one or more options. The <select> and <option> tags are used to create these type of dropdown list in basic HTML.

- □ The important attribute for <select> are,
  - Name: used to give a name to the control which is sent to the server to be recognized and get the value.
  - Size: this can be used to present a scrolling list box.
  - Multiple: If set to "multiple" then allows a user to select multiple items from the menu.
- □ The important attribute for <option> are,
  - Ualue: the value that will be used if an option in the select box item is selected.
  - Selected: specifies that this option should be the initially selected value when the page loads.

```
<html>
<body>
<form>
<select name="dropdown">
<option value="maths" selected>Maths
<option value="physics">physics</option>
<option value="biology">biology</option>
<option value="zoology">zooology</option>
<option value="chemistry">chemistry</option>
</select>
</form>
</body>
                     selectoption.html
</html>
```

### 8. File upload control:

File upload control allow a user to upload a file to website, user will need to use a file upload box, also known as a file select box. This is also created using the <input> element but type attribute is set to file.

- □ The attributes are,
  - Name: Used to give a name to the control which is sent to the server to be recognized and get the value.
  - Accept: specifies the types of files that the server accepts.

```
<html>
<body>
<form>
<input type="file" name="fileupload" accept="</pre>
 image">
</form>
</body>
</html> fileupload.html
```

#### 9. Hidden Control:

Hidden form controls are used to hide data inside the page which later on can be pushed to the server. This control hides inside the code and does not appear on the actual page. This is done by setting input type="hidden".

```
<html>
<body>
<form>
 this is page 10
<input type="hidden" name="pagename" value="10"/>
<input type="submit" name="submit" value="submit"/>
<input type="reset" name="reset" value="reset"/>
</form>
</body>
</html>
            hidden.html
```

### 10. IMAGE control:

- This allows you to designate a graphic as selectable item in a form.
- This indicates an image users can click much as they would submit button.
- Example:

<input type='image' src='G:\web development-unitl\images(10)' width='400' name='submit'>

```
<html>
<head>
<title>checkbox
</title>
</head>
<body>
<form>
<input type='image' src='G:\web development--unitl\images.jpg'</pre>
 width='400' name='submit'>
</form>
</body>
               imagecontrol.html
</html>
```

- cscript> tag: The script is a small piece of program that can add interactivity to webpage.
- For example, a script could generate a popup alert box message, or provide a dropdown menu. This script could be written using javascript.

### Methods for form elements

Form elements	Methods	Description
Textbox/textarea/ password	onFocus()	Call the function when form cursor enter into object
	onBlur()	Call the function when cursor move away from form control
	onSelect()	Calls when text is selected in object
	onChanged()	Calls when text changed in object
Button/radio/ checkbox/ submit/reset	onClick()	Calls when the object is clicked on

### Cascading Style Sheets

#### ■ What is CSS ?

- Cascading Style Sheets(CSS) are a way to control the look and feel of your HTML documents in an organized and efficient manner.
- CSS is a simple design language intended to simplify the process of making web pages presentable with CSS you will be able to:
  - Add new looks to your old HTML
  - Completely restyle a website with only a few changes to your CSS code.
  - ■Use the "style" you create on any webpage you wish!.
  - ■CSS describes how HTML elements are to be displayed on screen, paper, or in other media.
  - ■CSS saves a lot of work. It can control the layout of multiple webpages all at once.

- External style sheets are stored in CSS files
- You can place your CSS on the <head> of an document with an embedded style sheet or attach the separate file that defines your styles with an external style sheet.
- CSS allows you to separate the tags that controls the page structure from those control appearance.
- Since the single CSS rule can be applied across a number of web pages.

## Advantages of using CSS

- CSS saves time you can write CSS once and then reuse same sheet in multiple HTML pages.
- □ Pages load faster if you are using CSS, you do not need to write HTML tag attributes every time. Just write one CSS rule of a tag and apply it to all the occurrences of that tag. So less code means faster download times.
- **Easy maintenance** To make a global change, simply change the style, and all elements in all the web pages will be updated automatically.
- □ Platform Independence The script offer consistent platform independence and can support latest browsers as well.

### CSS Selector:

- They define which HTML elements you are going to manipulate with CSS code. In a typical CSS statement you have the following:
  - SELECTOR { PROPERTY : UALUE }
  - Where the property is the CSS element you wish to manipulate and "UALUE" represents the value of the specified property.

### CSS Selector Name:

- The selector name is a direct relationship to the HTML tag you want to edit. If you wanted to change the way a paragraph tag behaved the CSS code would look like:
  - p{PROPERTY : UALUE}
  - The above example is a template that you can use whenever you are manipulating the paragraph HTML element.

# Three ways to insert CSS

- External style sheet
- □ Internal style sheet
- □ Inline style

### Internal CSS

- In internal CSS, you must add a new tag, <style> inside the <head> tag (in header section of the HTML file).
- If you want to apply style sheet rules to a single document only then you can include those rules in header section using <style>

```
<html>
<head>
<style type="text/css">
p {color:white;}
body {background-color:black;}
</style>
</head>
<body>
white text on a black background!
</body>
</html>
                internalcss.html
```

```
<html>
                                     </head>
<head>
                                     <body>
<style>
body
                                     <hI>My first CSS
                                       example</hl>
background-color: lightblue;
                                     <hl>heading with css</hl>
hl
                                     this is a paragraph
color: white;
                                     </body>
text-align:center;
                                     </html>
font-family:verdana;
font-size:20px;
</style>
                                     internalcss2.html
```

### External CSS:

- External CSS is a file that contains only CSS code and is saved with a ".css" file extension.
- □ This CSS file is then referenced in your HTML using the link> instead of <style>.
- CSS Code :

```
Body {background-color:gray;}
p{color:blue;}
h3{color:white;}
```

Now save the file as a CSS file by giving the extension as . css . Name the file test.css.

Now create a new HTML file:

```
External.html
```

```
<html>
<head>
<link rel="stylesheet" type="text/css" href="test.css"/>
</head>
<body>
<h3> A white Header</h3>
This paragraph has a blue font. The background color of this page
 is gray
because we changed it with CSS!
</body>
            external.html
</html>
```

#### Why Use External CSS?

- It keeps your website design and content separate.
- It's much easier to reuse your CSS code if you have it in a separate file. Instead of typing the same CSS code on every web page you have, simply have many pages refer to a single CSS file with "link" tag.
- You can make drastic changes to your web pages with just a few changes in a single CSS file.

### CSS Inline:

- □ It is possible to place CSS in your HTML code and this method of CSS usage is referred to as inline CSS.
- Inline CSS has the highest priority out of external, internal and inline CSS. This means that you can override styles that are defined in external or internal by using inline CSS.
- CSS is built into every HTML tag. If you want to add a style inside an HTML element all you have to do is specify the desired CSS properties with the style HTML attribute. Let's add some style to a paragraph tag..

```
<html>
<head>
</head>
<body>
 A blue
 background and
white font with inline CSS
</body>
</html>
                  inline.html
```

- The normal rules of CSS apply inside the style attribute.
- Each CSS statement must be separated with a semicolon ";" and colons appear between the CSS property and its value.
- □ When using CSS inline you must be sure not to use quotations within your Inline CSS.
- If you use quotations the browser will interpret this as the end of your style value.

### CSS classes:

- It is possible to give an HTML element multiple looks with CSS. Say for example, sometimes we want the font to be large and white, while other times we prefer the font to be small and black. CSS allows us to do just this with the use of classes.
- Using classes is simple. We just need to add an extension to the CSS code and this extension is specified in the HTML. Let's try this with an example of making two paragraphs that behave differently.

CSS code :

p.First { color :blue;}

p.second{color:red;}

Save the file as class.css

```
<html>
<head>
<link rel="stylesheet" type="text/css" href="class.css"/>
</head>
<body>
This is a normal paragraph
 this is a paragraph that uses the p.first CSS code
 this is a paragraph that uses the p.second CSS
 code
</body>
</html>
class.html
```