

# WEB TECHNOLOGY

## UNIT - 1

### INTRODUCTION TO HTML

HTML is a simple language used to define and describe the layout of a Web page. It also supports multimedia and document links. HTML consists of special codes which when embedded in text, adds formatting. The special characters that separate HTML from ordinary text are the left and right brackets (<....>). These brackets contain instructions known as TAGS that are not case sensitive.

### BASIC TAGS :

<HTML> </HTML>

- It is used to identify a HTML document. The entire document should be written inside <HTML> .... </HTML> tags.

<HEAD> </HEAD>

- Contains descriptions of the HTML page. This meta information is not displayed as part of the web page.

<TITLE> .... </TITLE>

- The Title of the document can be included in these tags.
- This description is usually displayed by the browser as the title of the window in which the web page is displayed.
- This information is also used by some search engines to compile an index of web pages.

<BODY> </BODY>

- In the body is the text to be displayed as well as HTML markup tags to hint at the format of the text.
- Almost 80 % of HTML tags will occur within a document's body.
- To add images, links (to link other Web pages) to our Web pages we can use <IMG> and <A> tags well within the document's body.

### FORMATTING TAGS

<B> </B>

- Displays the enclosed text in a bold typeface.

<I></I>

- Displays the enclosed text in a Italic typeface.

<U></U>

- Displays the enclosed text in a Underline.

<FONT>...</FONT>

- We can change face and size of fonts using <FONT>...</FONT> tags. FONT tag has a few parameters which specify the font face, size, color etc.

<FONT FACE="Font Name Here">...</FONT>

- We can specify different font types by specifying their short name in <FONT> tag.
- If your font name is more than one word, you should enclose it in double quotes.

<p>First paragraph</p>

<p>Second paragraph</p>

- It is possible to divide text in a page into paragraphs. A paragraph starts on a new line with a single blank line before it.
- You are allowed to nest other tags inside paragraph tag. For example font tag can be used inside paragraphs.

<BR>

- Break Tag.

## **EXTRA SPACES.**

<BODY>

Here we insert 5 &nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp; extra spaces.

</BODY>

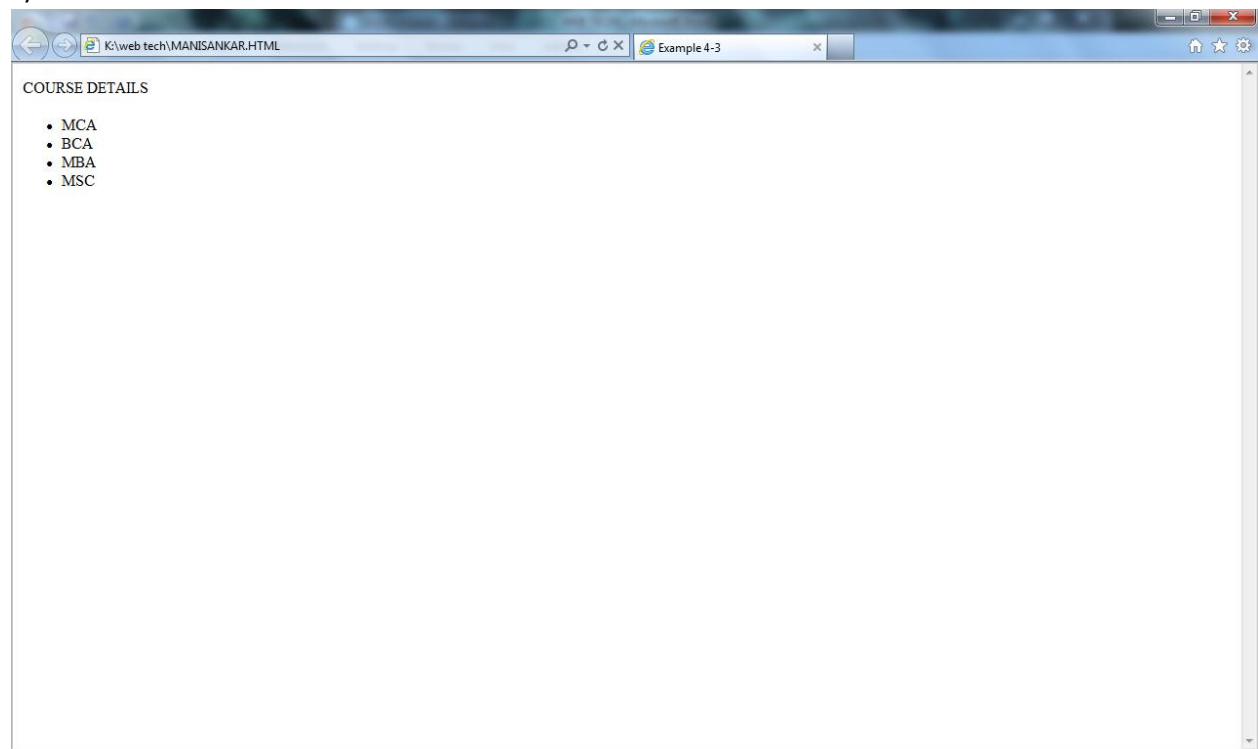
- Browser will not show more than one space between two words even if you have entered a hundred spaces between them in html code.
- If you want to enter more than one blank character between two words you will need to use a specific code for this purpose.
- "&nbsp;" without the quotes will appear as spaces in browser.

## **LISTS**

Sometimes you want to organize items related to a subject in list form in your web page. HTML provides you with tags to do this. <UL></UL> tags are first choice of these tags. Two types :

1. Unorder List <UL>----- </UL>
2. Order List <OL> ----- </OL>

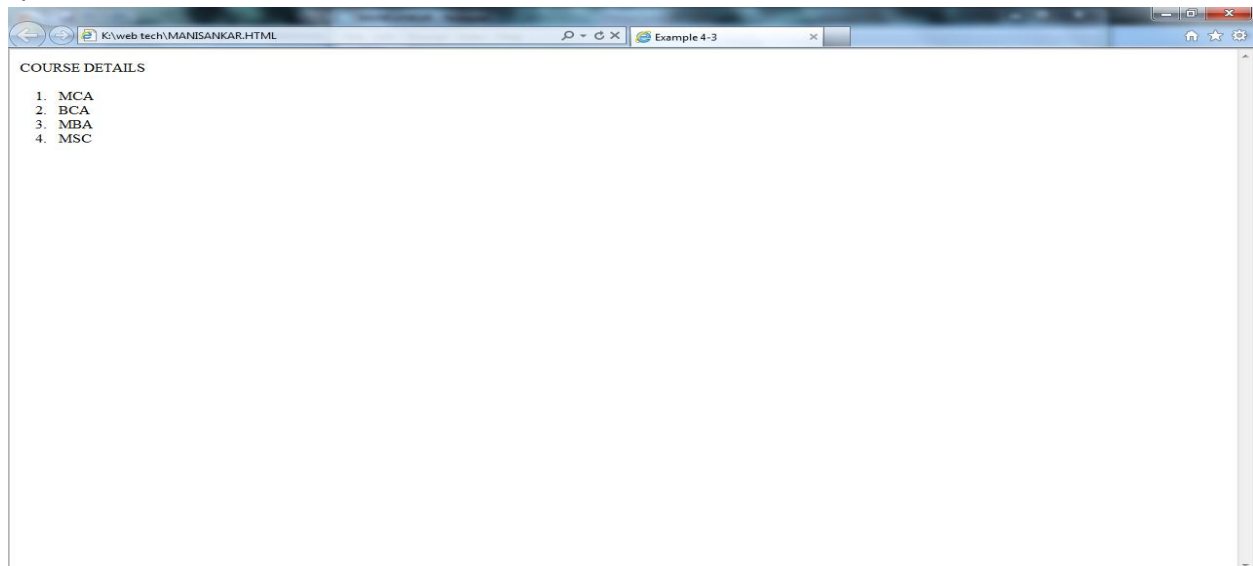
```
<HTML>
<HEAD>
<TITLE>UNORDER LIST</TITLE>
</HEAD>
<BODY>
COURSE DETAILS
<UL>
<LI>MCA
<LI>BCA
<LI>MBA
<LI>MSC
</UL>
</BODY>
</HTML>
```



- Result page will display list items in separate lines started with a small bullet.
- You see that we have entered list items started with a <LI> tag between <UL></UL> tags. <UL> tag is a part of list tags.
- If you want the items to be identified by numbers, you should use <OL></OL> tags instead of <UL></UL> tags.

## ORDER LIST :

```
<HTML>
<HEAD>
<TITLE>ORDER LIST</TITLE>
</HEAD>
<BODY>
COURSE DETAILS
<OL>
<LI>MCA
<LI>BCA
<LI>MBA
<LI>MSC
</OL>
</HEAD>
</HTML>
```



- Result page will display list items in separate lines started with a numbers.
- You see that we have entered list items started with a <LI> tag between <OL></OL> tags. <OL> tag is a part of list tags.

## **TABLES :**

- To draw a table we use <TABLE> tag. <TABLE> tag needs to related tags for its rows and columns.
- <TR></TR> tag is used to create a row in table. Each <TR></TR> tag nested in <TABLE>
- </TABLE> tag will create a new row in the table.
- In addition one or more <TD></TD> tags are used to create columns in each row.

- Following example produces a table with two rows.<TABLE> tag will by default create a table with border size of 0.
- You must use a “border” parameter to specify a border size for your table.

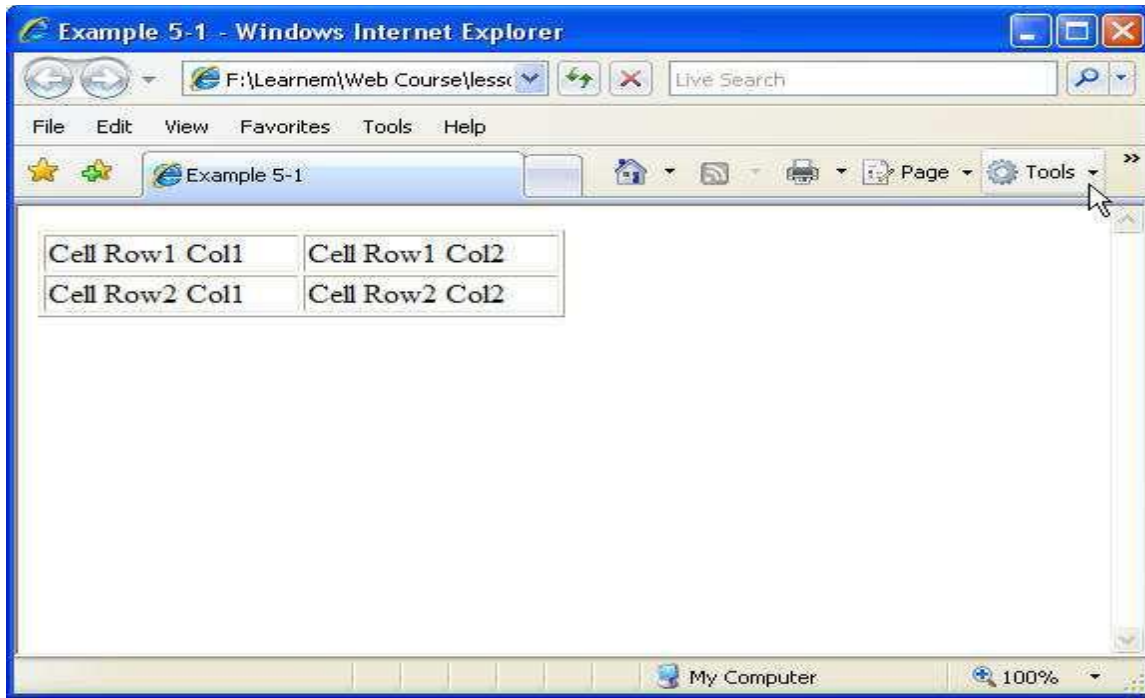
```
<TABLE BORDER=1>
<TR>
<TD>First Row</TD>
</TR>
<TR>
<TD>Second Row</TD>
</TR>
</TABLE>
```

### **Specifying table sizes :**

- You can specify width for a table both in percents of page width and in pixels.
- This means if user resizes browser window, browser will maintain a width of 50% of its window for the table.

### **Example**

```
<HTML>
<HEAD>
<TITLE>Example 5-1</TITLE>
</HEAD>
<BODY>
<TABLE WIDTH=50% BORDER=1>
<TR>
<TD>Cell Row1 Col1</TD>
<TD>Cell Row1 Col2</TD>
</TR>
<TR>
<TD>Cell Row2 Col1</TD>
<TD>Cell Row2 Col2</TD>
</TR>
</TABLE>
</BODY>
</HTML>
```



If you want you can determine table width in pixels. In this way width of the table will be fixed and resizing the browser window will not have any effect on the table size.

```
<TABLE WIDTH=250 BORDER=1>
<TR>
<TD>Cell Row1 Col1</TD>
<TD>Cell Row1 Col2</TD>
</TR>
<TR>
<TD>Cell Row2 Col1</TD>
<TD>Cell Row2 Col2</TD>
</TR> </TABLE>
```

You can specify a height for your table too. Width and height of the table will be divided between cells in rows and columns so if table width is 100 pixels and there are 2 columns then width of each cell will be 50 pixels. Just pay attention that if you put a long text in a cell which is longer than the cell itself, cell will be expanded to fit the text in it.

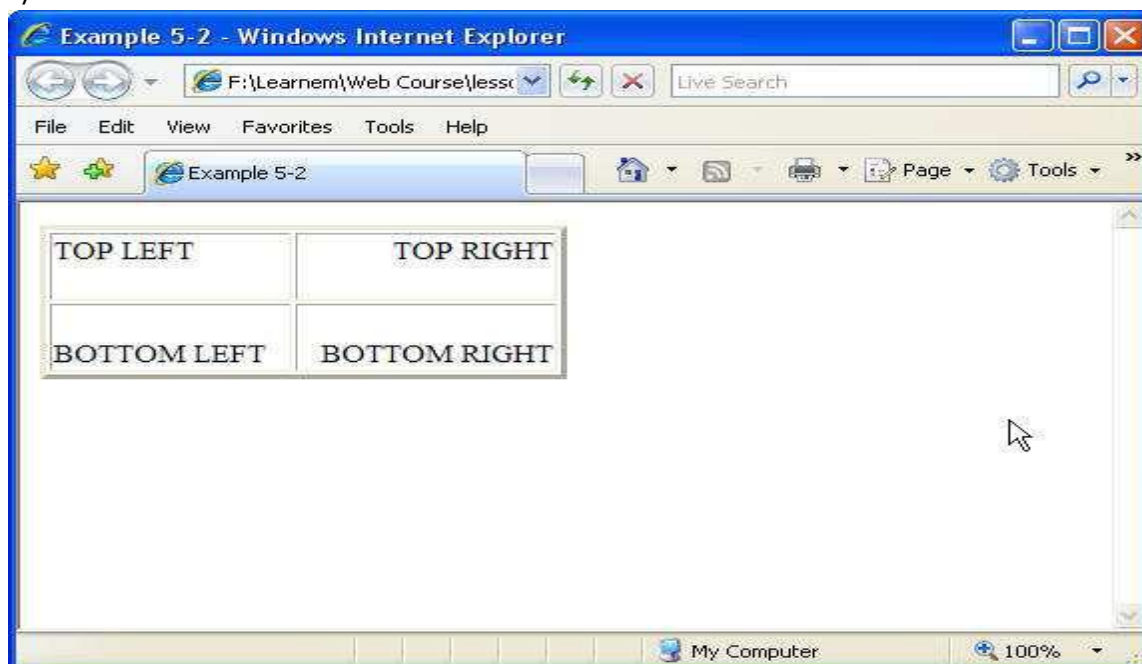
### **Text alignment in table cells :**

By default text entered in a cell will appear at the left side of the cell. You can add either of below options to <TD> tag to specify horizontal alignment of text inside the cell.

<TD ALIGN=CENTER> or  
<TD ALIGN=RIGHT> or  
<TD ALIGN=LEFT> (this option is the default if you do not specify)

You can also determine vertical alignment of text in a cell by adding VALIGN option to <TD> tag. There are three values for VALIGN option : TOP, BOTTOM and MIDDLE. MIDDLE is defaultvalue if you do not use this parameter.

```
<HTML>
<HEAD>
<TITLE>Example 5-2</TITLE>
</HEAD>
<BODY>
<TABLE WIDTH=50% HEIGHT=100 BORDER=3>
<TR>
<TD ALIGN=LEFT VALIGN=TOP>TOP LEFT</TD>
<TD ALIGN=RIGHT VALIGN=TOP>TOP RIGHT</TD>
</TR>
<TR>
<TD ALIGN=LEFT VALIGN=BOTTOM>BOTTOM LEFT</TD>
<TD ALIGN=RIGHT VALIGN=BOTTOM>BOTTOM RIGHT</TD>
</TR>
</TABLE>
</BODY>
</HTML>
```



## INTRODUCTION TO FRAMES

HTML frames allow authors to present documents in multiple views, which may be independent windows or sub windows. Multiple views offer designers a way to keep certain information visible, while other views are scrolled or replaced.

For example, within the same window, one frame might display a static banner, a second a navigation menu, and a third the main document that can be scrolled through or replaced by navigating in the second frame.

### Attribute Definitions

#### **rows = *multi-length-list* [CN]**

- This attribute specifies the layout of horizontal frames. It is a comma-separated list of pixels, percentages, and relative lengths. The default value is 100%, meaning one row.

#### **cols = *multi-length-list* [CN]**

- This attribute specifies the layout of vertical frames. It is a comma-separated list of pixels, percentages, and relative lengths. The default value is 100%, meaning one column.

### Here is a simple frame document:

```
<HTML>
<HEAD>
<TITLE>A simple frameset document</TITLE>
</HEAD>
<FRAMESET cols="20%, 80%">
<FRAMESET rows="100, 200">
<FRAME src="contents_of_frame1.html">
<FRAME src="contents_of_frame2.gif">
</FRAMESET>
<FRAME src="contents_of_frame3.html">
<NOFRAMES>
<P>This frameset document contains:
<UL>
<LI><A href="contents_of_frame1.html">Some neat contents</A>
<LI><IMG src="contents_of_frame2.gif" alt="A neat image">
<LI><A href="contents_of_frame3.html">
Some other neat contents</A>
```



```
</UL>  
</NOFRAMES>  
</FRAMESET>  
</HTML>
```

**That might create a frame layout something like this:**

<b>FRAME 1</b>	<b>FRAME 3</b>
<b>FRAME 2</b>	

### **Layout of Frames**

- An HTML document that describes frame layout (called a *frameset document*) has a different makeup than an HTML document without frames.
- A standard document has one HEAD section and one BODY. A frameset document has a HEAD, and a FRAMESET in place of the BODY.
- The FRAMESET section of a document specifies the layout of views in the main user agent window.

### **Rows and Columns**

- Setting the rows attribute defines the number of horizontal subspaces in a frameset. Setting the cols attribute defines the number of vertical subspaces.
- Both attributes may be set simultaneously to create a grid. If the rows attribute is not set, each column extends the entire length of the page.
- If the cols attribute is not set, each row extends the entire width of the page.
- If neither attribute is set, the frame takes up exactly the size of the page. Frames are created left-to-right for columns and top-to-bottom for rows.
- When both attributes are specified, views are created left-to-right in the top row, left-to-right in the second row, etc.

```
<FRAMESET rows="50%, 50%">
...the rest of the definition...
</FRAMESET>
```

- The next example creates three columns: the second has a fixed width of 250 pixels (useful, for example, to hold an image with a known size).
- The first receives 25% of the remaining space and the third 75% of the remaining space.

```
<FRAMESET cols="1*,250,3*">
...the rest of the definition...
</FRAMESET>
```

The next example creates a 2x3 grid of subspaces.

```
<FRAMESET rows="30%,70%" cols="33%,34%,33%">
...the rest of the definition...
</FRAMESET>
```

### Frame Links

- When many links in the same document designate the same target, it is possible to specify the target once and dispense with the target attribute of each element.
- This is done by setting the target attribute of the BASE element.

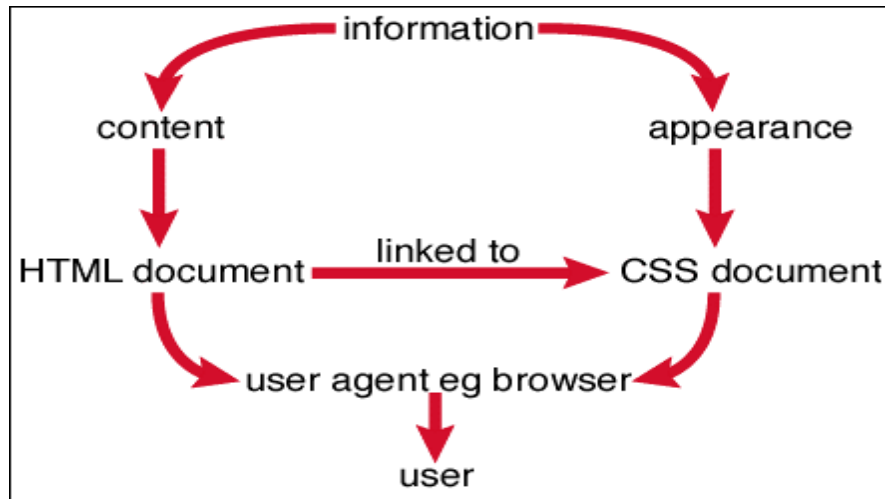
```
<HTML>
<HEAD>
<TITLE>A document with BASE with a specific target</TITLE>
<BASE href="http://www.mycom.com/Slides" target="dynamic">
</HEAD>
<BODY>
...beginning of the document...
<P>Now you may advance to <A href="slide2.html">slide 2.</A>
<P>You're doing great. Now on to
<A href="slide3.html">slide 3.</A>
</BODY>
</HTML>
```

- HTML frames allow authors to present documents in multiple views, which may be
- independent windows or subwindows.
- Frames can be used to control the layout of the Browser Window.
- Nested Frames enable combining rows and columns.

## GRAPHICS TO HTML DOCUMENT:

### STYLE SHEET :

- **Style sheet is new** & emerging technology that has evolved to meet the increasing demand for eye-catching & mind-catching web sites.
- Think of a style sheet as a set of instructions, suggesting to a web browser how to draw a page.
- CSS does not *force* a browser to display a page in particular way, it merely *suggests* to the browser how the page should be displayed. This is an important distinction.



**Figure 1: using style sheets to separate content from appearance**

### STYLE SHEET BASICS :

When a browser reads a style sheet, it will format the document according to it. There are three ways of inserting a style sheet:

- 1.EXTERNAL STYLE SHEET
- 2.INTERNAL STYLE SHHET
- 3.INLINE STYLE SHEET

### EXTERNAL STYLE SHEET

- An external style sheet is ideal when the style is applied to many pages. With an external stylesheet, you can change the look of an entire Web site by changing one file.
- Each page must link to the style sheet using the <link> tag. The <link> tag goes inside the head section.

```
<head>
<link rel="stylesheet" type="text/css" href="mystyle.css" />
</head>
```

- The browser will read the style definitions from the file mystyle.css, and format the document according to it.

### **INTERNAL STYLE SHEET**

- An internal style sheet should be used when a single document has a unique style.
- You define internal styles in the head section by using the <style> tag, like this:

```
<head>
<style type="text/css">
hr {color: sienna}
p {margin-left: 20px}
body {background-image: url("images/back40.gif")}
</style>
</head>
```

### **INLINE STYLE SHEET**

- An inline style loses many of the advantages of style sheets by mixing content with presentation.
- Use this method sparingly, such as when a style is to be applied to a single occurrence of an element.
- To use inline styles you use the style attribute in the relevant tag. The style attribute can contain any CSS property.
- The example shows how to change the color and the left margin of a paragraph:

```
<p style="color: sienna; margin-left: 20px">
This is a paragraph </p>
```

### **ADD STYLE SHEET TO DOCUMENT :**

- Style sheets are powerful mechanism for adding styles to web documents. They enforce standards & uniformity throughout a website & provide numerous attributes to create dynamic effects.
- The advantage of the ability to make global changes to all documents from a single location. Style sheets are said to cascade when they combine to specify the appearance of a page.

## Syntax

- The Style assignment process is accomplished with the <STYLE>....</STYLE> tags.
- The syntax for making the assignment is simple. Between the <STYLE>....</STYLE> tags , specific style attributes are listed.
- The CSS syntax is made up of three parts: a selector, a property and a value:

### ***selector {property: value}***

- The selector is normally the HTML element/tag you wish to define, the property is the attribute you wish to change, and each property can take a value.
- The property and value are separated by a colon and surrounded by curly braces:

### ***body {color: black}***

- If the value is multiple words, put quotes around the value:

### ***p {font-family: "sans serif"}.***

- If you wish to specify more than one property, you should separate each property with a semi-colon.
- The example below shows how to define a center aligned paragraph, with a red text color:

### ***p {text-align:center;color:red}***

- To make the style definitions more readable, you can describe one property on each line, like this:

```
P  
{  
text-align: center;  
color: black;  
font-family: arial  
}
```

## **EXAMPLE PROGRAM**

```
<HTML>  
<HEAD>  
<TITLE> Working with Style sheets using border attributes </TITLE>  
<STYLE Type="text/scc">  
H1  
{  
font-family:arial,Helvetica;  
font-size:26pt;  
text-decoration:blink;  
color:red }
```

```

P
{
font-size:12pt;
font-style:normal;
font-weight:bold;
color:#23238e;
}
H6
{font-size:12pt;
font-style:italic;
font-weight:bold;
color:#23238e;
text-align:justify;
text-indent:.5in}
</STYLE>
</HEAD>
<BODY>
<H1> WELCOME TO ISLAMIAH COLLEGE </H1>
<P> HI THIS IS BCA FINAL YEAR STUDENTS..
</P>
<H6> THIS WEB PAGE DEVELOPED BY ISLAMIAH COLLEGE STUDENTS.. </H>
</BODY>
</HTML>

```

### **CREATING STYLE SHEET RULES :**

- Every statement must have a selector and a declaration. The declaration comes immediately after the selector and is contained by a pair of curly braces.
- The declaration is one or more properties separated by semicolons.
- Each property has a property name followed by a colon and then the value for that property.
- There are many different types of value, but any given property can only take certain values as set down in the specification. This guide tells you the possible values for each property.
- Sometimes a value will have a unit as well as the actual value, as in the font-size. You must not put a space between the value and its unit.
- As with HTML, white space can be used to make your style sheet easier to read and write.

## **STYLE SHEET PROPERTIES:**

### **CSS Background Properties**

- CSS Background properties define the background effects of an element.

#### **CSS Background**

The Background properties allow you to control the background color of an element, set an image as the background, repeat a background image vertically or horizontally, and position an image on a page.

<b>Property</b>	<b>Description</b>	<b>Values</b>
Background	A shorthand property for setting all background properties in one declaration	<i>background-color</i> <i>background-image</i> <i>background-repeat</i> <i>background-attachment</i> <i>background-position</i>
background-color	Sets the background color of an element	<i>color-rgb</i> <i>color-hex</i> <i>color-name</i> transparent
background-image	Sets an image as the Background	<i>url</i>
background-position	Sets the starting position of a background image	top left, top center top right center left center center right bottom left bottom center bottom right
background-repeat	Sets if/how a background image will be repeated	Repeat, repeat-x, repeat-y no-repeat

#### **Example :**

```
<STYLE Type="text/scc">
H1 {font-family:arial,Helvetica;font-size:26pt;
background-image:url(images/sct-logo.jpg)}
H2 {font-family:arial,Helvetica;font-size:26pt;
background-image:url(images/sct-logo.jpg) ;
background-repeat:no-repeat}
P {font-size:12pt;font-style:italic;font-weight:bold}
</STYLE>
```

## CSS Font Properties

- CSS Font properties define the font in text.

### CSS Fonts

The Font properties allow you to change the font family, boldness, size, and the style of a text.

Font Properties:

Property	Description	Values
Font	A shorthand property for setting all of the properties for a font in one declaration	Font style, <i>font-variant</i> <i>font-weight</i> , <i>font-size/line-height</i> , <i>font-family</i>
font-family	A prioritized list of font family names and/or generic family names for an element	<i>family-name</i> , <i>generic-family</i>
font-size	Sets the size of a font	xx-small, x-small, small, medium, large, x-large
font-style	Sets the style of the font	Normal, italic, oblique
font-variant	Displays text in a smallcaps font or a normal font	normal small-caps
font-weight	Sets the weight of a font	Normal, bold, bolder, lighter

### **EXAMPLE :**

```
<STYLE Type="text/scc">  
H1 {font-family:arial,Helvetica}  
P {font-size:12pt;font-style:italic }  
</STYLE>
```

## CSS Text Properties

- CSS Text properties define the appearance of text.

### CSS Text

Text properties allow you to control the appearance of text. It is possible to change the color of a text, increase or decrease the space between characters in a text, align a text, decorate a text, indent the first line in a text, and more.

Text Properties:

PROPERTY	DESCRIPTION	VALUES
<b>Color</b>	Sets the color of a text	<i>color</i>
text-align	Aligns the text in an Element	Left, right, center, justify
letter-spacing	Increase or decrease the	Normal



	space between characters	<i>length</i>
text-decoration	Adds decoration to text	None, underline, overline line-through blink
text-transform	Controls the letters in an Element	None, capitalize Uppercase,lowercase

**EXAMPLE :**

```
<STYLE Type="text/scc">
H1 {font-family:arial,Helvetica;font-size:26pt;
text-decoration:blink;color:red}
P {font-size:12pt;font-style:normal;font-weight:bold;
color:#23238e;}
H6{font-size:12pt;font-style:italic;font-weight:bold;
color:#23238e;text-align:justify;text-indent:.5in}
</STYLE>
```

**CSS Margin Properties**

- CSS Margin properties define the space around elements.

**CSS Margins**

The Margin properties define the space around elements. It is possible to use negative values to overlap content. The top, right, bottom, and left margin can be changed independently using separate properties. A shorthand margin property can also be used to change all of the margins at once.

Margin Properties:

PROPERTY	DESCRIPTION	VALUES
Margin	A shorthand property for setting the margin properties in one declaration	<i>margin-top</i> <i>margin-right</i> <i>margin-bottom</i> <i>margin-left</i>

```
<STYLE Type="text/css">
BODY {margin-top:10%}
H1 {font-family:arial,Helvetica;font-size:26pt;
color:red}
P {font-size:12pt;font-style:italic;font-weight:bold;
color:#23238e;
margin-left:15%;margin-right:15%}
</STYLE>
```