Unit 6

Cascading Style Sheets

Introduction

Cascading Style Sheets, referred to as CSS, is a simple design language intended to simplify the process of making web pages presentable. Used to control the color of the text, the style of fonts, the spacing between paragraphs, how columns are sized and laid out, what background images or colors are used, as well as a variety of other effects. CSS is easy to learn and understand but it provides powerful control over the presentation of an HTML document. Whereas the HTML is the meaning *or* content, the style sheet is the presentation of that document. CSS code can be reuse in multiple HTML pages. . To make a global change, simply change the style, and all elements in all the web pages will be updated automatically. You can define a style for each HTML element and apply it to as many Web pages as you want.

Lesson 6.1

Overview of Cascading Style Sheets

Upon completion of this unit you will be able to:

Explain why CSS.

Describe CSS.

Outcomes

Write syntax of CSS.

Why CSS

HTML was intended to define the content of a document, like:

<H1>This is heading1</H1>

<P>This is a paragraph</P>

CSS has a much wider array of attributes than HTML so you can give far better look to your HTML page in comparison of HTML attributes.

What is CSS?

Cascading Style Sheets is a way to style and present HTML. Using CSS, you can control the color of the text, the style of fonts, the spacing between paragraphs, how columns are sized and laid out, what
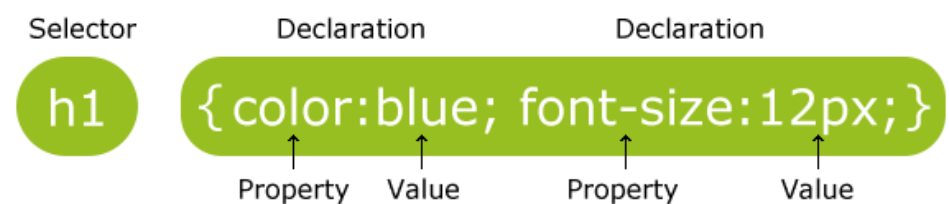
background images or colors are used, as well as a variety of other effects.CSS is easy to learn and understand but it provides powerful control over the presentation of an HTML document. Most commonly, CSS is combined with the markup languages HTML. You can write CSS once and then reuse same sheet in multiple HTML pages. You can define a style for each HTML element and apply it to as many Web pages as you want. To make a global change, simply change the style, and all elements in all the web pages will be updated automatically.

CSS Syntax

CSS has two main parts

one is selector,

and the other one is declarations (may be one or more)

Where usually the selector is the HTML element you want to style,

- Declaration consists of a property and a value. The property is the style attribute you want to change. Each property has a value and

- Declaration always ends with a semicolon, and declaration groups are surrounded by curly brackets

Example

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

You can also write one declaration on each line, like this:

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

Note it!

Before you begin the CSS you should know the basic understanding of HTML.

Id and class Selectors

To setting a style for a HTML element, CSS allows you to specify your own selectors called "id" and "class".

id Selector

The id selector is used to specify a style for a single, unique element. The id selector uses the id attribute of the HTML element, and is defined with a "#".

The style rule below will be applied to the element with id="para1":

Example
```
#para1
{
text-align:center;
color:red;
}
```

Class Selectors

Using classes is very simple. Let's try this with example of making paragraphs that perform differently. First, we begin with the CSS code; ~~make a note of the strike through text.~~
CSS Code1
```
p.first{ color: blue; }
p.second{ color: red; }
```
HTML Code
```
<html>
<body>
<p>This is a normal paragraph.</p>
<p class="first">This paragraph uses the p.first CSS code. </p>
<p class="second">This paragraph uses the p.second CSS code. </p>
```
CSS Code2
```
p{ color: red; font-size: 20px; }
p.test1{ color: blue; }
p.test2{ font-size: 12px; }
```
HTML Code
```
<html>
<body>
<p>This is a normal paragraph.</p>
<p class="test1">This paragraph uses the p.test1 CSS code. </p>
<p class="test2">This paragraph uses the p.test2 CSS code. </p>
```
This is a normal paragraph.

This is paragraph uses the p.test1 CSS code. The p.test1 paragraph remained the same size, but its color changed.

This is paragraph uses the p.test2 CSS code. The p.test2 paragraph remained the same color, but its size changed.
```
<html>
<head>
<style>
```
~~p.first~~{ background-color: gray; }
~~p.second~~{ background-color: red; }
~~p.third~~ {

```
            background: purple;
            color: white;
}
</style>
</head>
<body>
<h2>CSS Classes</h2>
<p class="first">This is the p.first paragraph</p>
<p class="second">This is the p.second paragraph</p>
<p class="third">This is the p.third paragraph</p>
</body>
</html>
```

Inline styles

Inline style is the style attached to one specific element. The style is specified directly in the start tag as a value of the STYLE attribute and will apply exclusively to this specific element occurrence. The example shows how to change the color and the left margin of a paragraph

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

Internal styles

Embedded, or internal, styles are used for the whole page, you can define internal styles inside the head section of an HTML page, and the style tags surround all of the styles for the page.

Example 1

```
<head>
<style>
hr {color:sienna;}
p {margin-left:20px;}
body {background-image:url("imgcss.jpg ");}
</style>
</head>
```

Example 2

```
<html>
<head>
<title>CSS Example</title>
<style>
p.para1 {
color: red;
   }
p.para2{
color: blue;
   }
</style>
```

The example 2 will make the paragraphs1 in the page as red and the paragraph2 as76gffhgddscfdr blue.

External styles

External styles are used for the whole, multiple-page website. There is a separate CSS file, which will simply look something like:

```
p{
color: red; }
a{
color: blue;}
```

If this file is saved as "style.css" in the same directory as your HTML page then it can be linked to in the HTML like this:

```
<html>
<head>
<title>CSS Example</title>
<link rel="stylesheet"href="style.css">
```

External style sheets enable you to change the appearance and layout of all the pages in a Web site, just by editing one single file.

Activity

1. Read the following code and Mention the style that it belongs? Write short notes on it.

```
<html>
<head>
<title>CSS Example</title>
<style>
p.para1 {
color: red;   }
p.para2{
color: blue;    }
</style>
```

Assessment

Fill in the blanks

1. CSS provides powerful control over the presentation of _____ document.

2. _____ styles are used for the whole page.

State whether the following statements are true or false

1. CSS are case sensitive.

Multiple Choice questions

1. What does CSS stand for?
a) Creative Style Sheets.
b) Colorful Style Sheets
c) Cascading Style Sheets
d) Computer Style Sheets.

2. Which styles have the separate CSS file?
a) Inline.
b) Internal.
c) External.
d) None of the above.

3. Which of the following are used to change the appearance and layout of all the pages in a Web site, just by editing one single file?
a) External styles.
b) Inline styles
c) Internal styles
d) All of the above.

Exercises

1.
   a) What is CCS?
   b) Write the syntax of CSS and give one example.
2. Compare CSS with HTML.
2. What does the "Cascading" in "Cascading Style Sheets" mean?
3. What is the difference between 'class' and 'id'? Briefly explain with example.
4. What is inline style? How to link?
5. What are styles are available in CSS. Explain them with suitable example

Lesson 6.2

Cascading Style Sheets- 2

Upon completion of this unit you will be able to:

Change Background color with CSS.

Outcomes

CSS Background

The background of your website is very important, CSS background properties are used to define the background effects of an element. CSS properties used for background effects:

❑ background-color
❑ background-image
❑ background-repeat
❑ background-attachment
❑ background-position

Tip

Use a light background with dark text for better looking.

Background Color

The background-color property specifies the background color of an element. The background color of a page is defined in the body selector:
Example
body {background-color:#b0c4de;}
With CSS, a color is most often specified by:

❑ Color name - like "red"
❑ RGB value - like "rgb(255,0,0)"
❑ HEX value - like "#ff0000"

Note it!

Color and background-color must be the American English "color" and not "colour".

The following values, all produce the same result:

- ❑ red
- ❑ rgb(255,0,0)
- ❑ rgb(100%,0%,0%)
- ❑ #ff0000
- ❑ #f00

Predefined color include aqua, black, blue, fuchsia, gray, green, lime, maroon, navy, olive, orange, purple, red, silver, sienna, teal, white, and yellow.

RGB defines the individual values for Red, Green, and Blue. Example form: rgb (Red, Green, Blue); with the range of 0-255 for each value. These values can also be a percentage.

Hexadecimal is a base-16 number system. We are generally used to the decimal number system (base-10, from 0 to 9), but hexadecimal has 16 digits, from 0-9, A to F. The hex number is prefixed with a hash sign (#) and can be three or six digits in length. Basically, the three-digit version is a compressed version of the six-digit (#ff0000 becomes #f00,#cc9966 becomes #c96, etc.). The three-digit version is easier to decipher (the first digit, like the first value in RGB, is red, the second green and the third blue) but the six-digit version gives you more control over the exact color.

Example
<HTML>
<HEAD> <STYLE>
BODY {BACKGROUND-COLOR: MAROON ;}
</STYLE>
<TITLE>
MY FIRST CSS EXAMPLE
</TITLE> </HEAD>
<BODY>
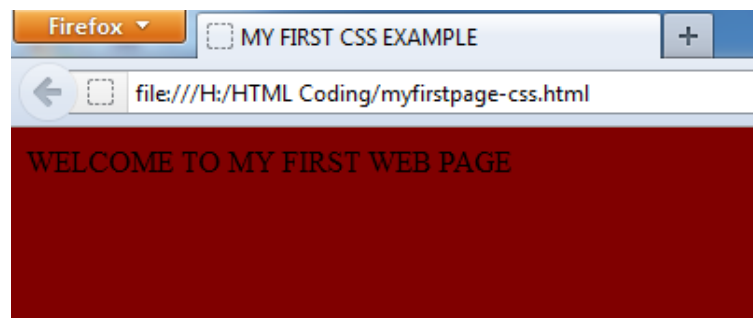WELCOME TO MY FIRST WEB PAGE
</BODY>
</HTML>

Figure 2.1 background color

Background Image

The background-image property specifies an image to use as the background of an element. By default, the image is repeated so it covers the entire element.

CSS Code

p { background-image: url(shahidminar.jpg); }

Example

```
<HTML>
<HEAD>
<STYLE>
BODY{BACKGROUND-IMAGE: URL(SHAHIDMINAR.JPG);}
</STYLE>
<TITLE>
CSS EXAMPLE-IMAGE BACKGOUND
</TITLE>
</HEAD>
<BODY>
WELCOME TO MY FIRST WEB PAGE
</BODY>
</HTML>
```
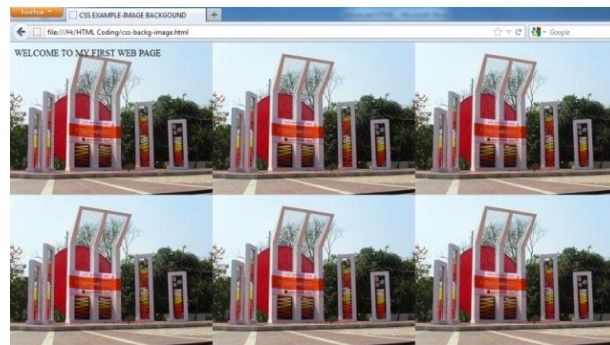

Figure 2.2 background image

CSS Background Image Positioning

If you would like to define where exactly an image appears within an HTML element, you may use CSS's background-position. Please take note that there are three different ways of defining position: length, percentages, and keywords.

CSS Code

```
p {

        background-image: url(shahidminar.jpg);

        background-position: 20px 10px;

}
```

```
h4

{

        background-image: url(shahidminar.jpg);

        background-position: 30% 30%;

}

ol

{

        background-image: url(shahidminar.jpg);

        background-position: top center;

}
```

Activity

1. Choose the correct CSS syntax from the following?

   I. body {color: black}
   II. body:color=black
   III. {body:color=black(body}
   IV. {body;color:black}

Assessment

Assessment

Fill in the blanks

1. RGB defines the individual values for _____,_____, and_____.

State whether the following statements are true or false

1. For better looking Use a light background with dark text

Multiple Choice questions

1. Which property is used to change the background color?

a) background-color:
b) bgcolor:
c) bg-color
d) color:

2. How do you add a background color for all "<h1>" elements?

a) all.h1 {background-color:#FFFFFF}

b) h1 {background-color:#FFFFFF}
c) h1.all {background-color:#FFFFFF}
d) all of the above.

Exercises

1. How can you specify background images?

Lesson 6.3

Cascading Style Sheets- 3

Upon completion of this unit you will be able to:

Specify FONT

Outcomes

CSS Font

CSS font properties define the font family, boldness, size, and the style of a text.

Font Family

The font family of a text is set with the font-family property. The font-family property should hold several font names as a "fallback" system. If the browser does not support the first font, it tries the next font. Start with the font you want, and end with a generic family, to let the browser pick a similar font in the generic family, if no other fonts are available.

Note it!

If the name of a font family is more than one word, it must be in quotation marks, like: "Times New Roman".

More than one font family is specified in a comma-separated list:
Example
P {font-family:"Times New Roman", Times, serif;}

Font Style

The font-style property is mostly used to specify italic text. This property has three values:
- ❑ **normal -** The text is shown normally.
- ❑ **italic -** The text is shown in italics.
- ❑ **oblique -** The text is "leaning" (oblique is very similar to italic, but less supported).

Example

p{font-style:normal;}

p {font-style:italic;}

p{font-style:oblique;}

Font Size

The font-size property sets the size of the Font. Being able to manage the Font size is important in web design. However, you should not use font size adjustments to make paragraphs look like headings, or headings look like paragraphs.

Set Font Size with Pixels

Setting the text size with pixels gives you full control over the text size:

Example

h1 {font-size:40px;}

h2 {font-size:30px;}

p {font-size:14px;}

The example above allows Internet Explorer 9, Firefox, Chrome, Opera, and Safari to resize the text.

Set Font Size with Em

To avoid the resizing problem with older versions of Internet Explorer, many developers use em instead of pixels.1em is equal to the current font size. The default text size in browsers is 16px. So, the default size of 1em is 16px.

Example

h1 {font-size:2.5em;} /* 40px/16=2.5em */

h2 {font-size:1.875em;} /* 30px/16=1.875em */

p {font-size:0.875em;} /* 14px/16=0.875em */

In the example above, the text size in em is the same as the previous example in pixels. However, with the em size, it is possible to adjust the text size in all browsers.

Example
```
<HTML>
<HEAD>
<STYLE>
BODY
{
BACKGROUND-COLOR: MAROON ;
}
H1
{
FONT-SIZE:40PX;
COLOR:FUCHSIA;
TEXT-ALIGN:CENTER;
BACKGROUND-COLOR:GRAY;
}
P.PARA1
```

```
{
FONT-SIZE:40PX;
}
P.PARA2
{
FONT-SIZE:2.5EM;
FONT-STYLE:ITALIC;
}
</STYLE>
<TITLE>
CSS EXAMPLE-FONT
</TITLE> </HEAD>
<BODY>
<H1> WELCOME TO MY FIRST WEB PAGE </H1>
WE ARE THE STUDENT OF DCSA PROGRAM
<P CLASS=PARA1>WE LOVE BANGLADESH</P>
<P CLASS=PARA2>WE LOVE BANGLADESH</P>
</BODY>
</HTML>
```
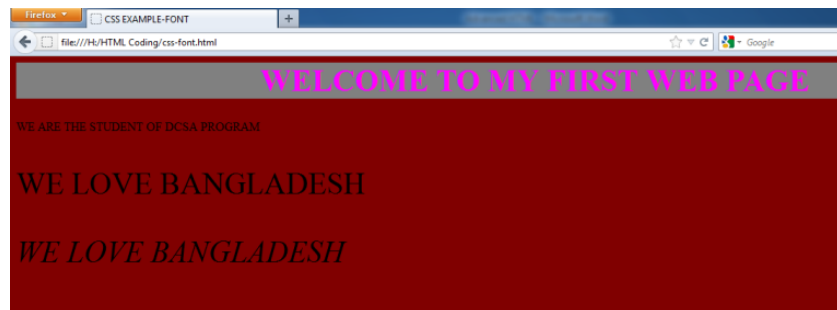

Figure 3.1 Color Font Para

1. Read the example-1 and example-2 and write the difference between them.

    example-1: h1 {font-size:40px;}

    example-2:h1 {font-size:2.5em;}

Activity

Assessment

Assessment

Fill in the blanks

1. The font-style property is mostly used to specify _____ text.

State whether the following statements are true or false

1. The font-size property sets the size of the Font

Multiple Choice questions

1. Which CSS property controls the Font size?
a) font-style
b) text-style
c) font-size
d) font:size

2. What is the correct CSS syntax for making all the <p> elements bold?

a) p {text-size:bold}
b) p {font-weight:bold}
c) style:bold
d) p{font:bold}

Exercises

1. Describe font-style.

Lesson 6.4

Cascading Style Sheets- 4

Upon completion of this unit you will be able to:

Set the color of a TXET.

Align the text of a document.

Specify the text-indent property.

Specify the text-decoration property.

Outcomes

Text Color

The color property is used to set the color of the text. With CSS, a color is most often specified by – as same as what we see in the previous section Background color:

❑ Color name - like "red"

❑ RGB value - like "rgb(255,0,0)"

❑ HEX value - like "#ff0000"

Example

```
<HTML>
<HEAD>
<STYLE>
BODY {BACKGROUND-COLOR: MAROON ;}
p.para1{COLOR: green ;}
p.para2{COLOR: rgb(0,255,220) ;}
</STYLE>
<TITLE>
CSS EXAMPLE-TEXT
</TITLE>
</HEAD>
<BODY>
WELCOME TO MY FIRST WEB PAGE <BR><BR>
<p class= para1 >WE ARE THE STUDENT OF DCSA
PROGRAM<p><br>
<p class= para2 >WE LOVE OUR COUNTRY<p>
</BODY>
</HTML>
```
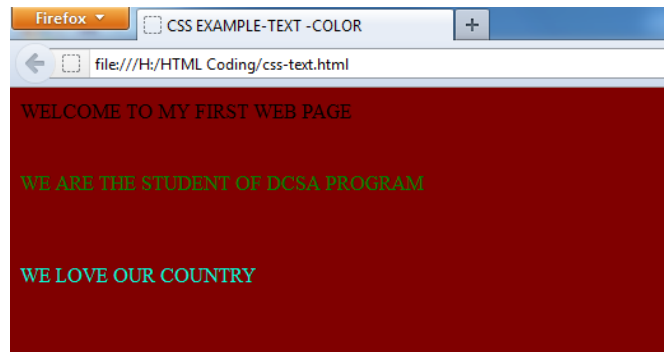
Figure 4.1 Text color

Text Alignment

The text-align property is used to set the horizontal alignment of a text. Text can be centered, or aligned to the left or right, or justified. When text-align is set to "justify", each line is stretched so that every line has equal width, and the left and right margins are straight (like in magazines and newspapers).

Following is the example which demonstrates how to align a text.
Possible values are left, right, center, justify.
<p style="text-align:right;">
This is right aligned text.
</p>
<p style="text-align:center;">
This is center aligned text.
</p>
<p style="text-align:left;">
This is left aligned text.
</p>

Example
<HEAD>
<STYLE>
BODY {BACKGROUND-COLOR: MAROON ;}
BODY {COLOR: WHITE ;}
P{FONT-SIZE:30PX;}
</STYLE>
<TITLE>
CSS EXAMPLE-TEXT
</TITLE>
</HEAD>
<BODY>
WELCOME TO MY FIRST WEB PAGE </BR></BR>
WE ARE THE STUDENT OF DCSA PROGRAM
<P STYLE="TEXT-ALIGN:CENTER;">
WE LOVE BANGLADESH -THIS IS CENTER ALIGNED TEXT.
</P>
<P STYLE="TEXT-ALIGN:LEFT;">
WE LOVE BANGLADESH -THIS IS LEFT ALIGNED TEXT.
</P>

```
<P STYLE="TEXT-ALIGN:RIGHT;">
WE LOVE BANGLADESH -THIS IS RIGHT ALIGNED TEXT.
</P>
</BODY>
</HTML>
```

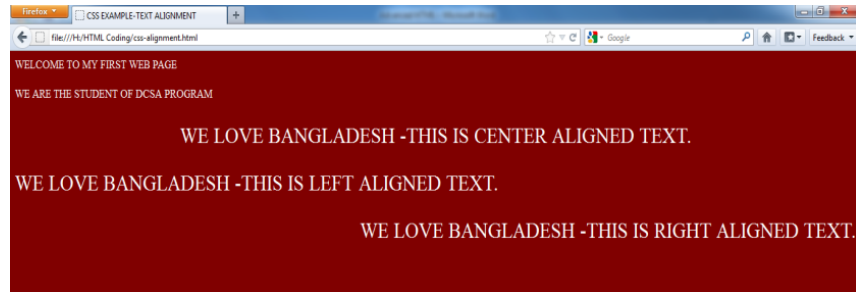This will produce following result:

Figure 4.2 Alignment

Text Indentation

The text-indent property is used to specify the indentation of the first line of a text.

<p style="text-indent:1cm;"> This text will have first line indented by 1cm </p>

Example

```
<HEAD>
<STYLE>
BODY {BACKGROUND-COLOR: MAROON ;}
BODY {COLOR: WHITE ;}
P{FONT-SIZE:20PX;}
</STYLE>
<TITLE>
CSS EXAMPLE-TEXT INDENTATION
</TITLE>
</HEAD>
<BODY>
WELCOME TO MY FIRST WEB PAGE </BR></BR>
WE ARE THE STUDENT OF DCSA PROGRAM
<p style="text-indent:1cm;">
WE LOVE BANGLADESH -This text have first line indented by 1cm
</p>
<p style="text-indent:2cm;">
WE LOVE BANGLADESH -This text have first line indented by 2cm
</p>
</BODY>
</HTML>
```
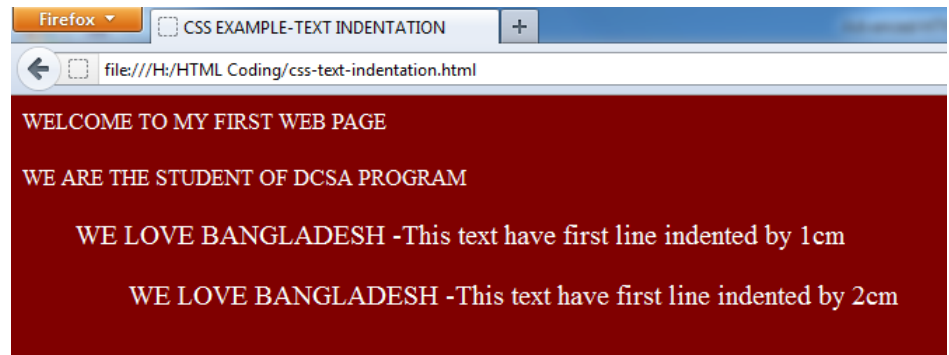
This will produce following result:

Figure 4.3 Text Indentation

Text Decoration

The text-decoration property is used to set or remove decorations from text. The text-decoration property is mostly used to remove underlines from links for design purposes: Following is the example which demonstrates how to decorate a text. Possible values are none, underline, overline, line-through, blink.

```
<p style="text-decoration:underline;">
This is underlined text
</p>
<p style="text-decoration:line-through;">
This is striked through text.
</p>
<p style="text-decoration:overline;">
This is over line text.
</p>
<p style="text-decoration:blink;">
This is have blinking effect text
</p>
```

Example

	Using class
<HEAD> <STYLE> BODY {BACKGROUND-COLOR: MAROON;} BODY {COLOR: WHITE ;} P{FONT-SIZE:40PX;} </STYLE> <TITLE> CSS EXAMPLE-TEXT-DECORATION </TITLE> </HEAD> <BODY> WELCOME TO MY FIRST WEB PAGE </BR> </BR> WE ARE THE STUDENT OF	<HEAD> <STYLE> BODY {BACKGROUND-COLOR: MAROON ;} BODY {COLOR: WHITE ;} P{FONT-SIZE:40PX;} p.first{COLOR: BLUE; TEXT-DECORATION:UNDERLINE;} p.second{COLOR: GREEN; TEXT-DECORATION:LINE-THROUGH;} p.third{COLOR: OLIVE; TEXT-DECORATION:OVERLINE;} </STYLE> <TITLE> CSS EXAMPLE-TEXT-DECORATION USING CLASS

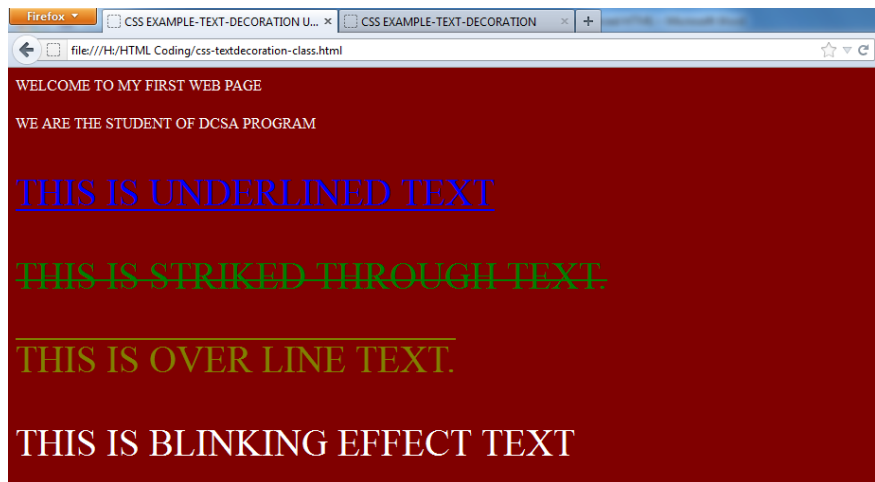|	
DCSA PROGRAM <P STYLE="TEXT-DECORATION:UNDERLINE; COLOR: BLUE;" > THIS IS UNDERLINED TEXT </P> <P STYLE="TEXT-DECORATION:LINE-THROUGH; COLOR: GREEN;"> THIS IS STRIKED THROUGH TEXT. </P> <P STYLE="TEXT-DECORATION:OVERLINE; COLOR: OLIVE; "> THIS IS OVER LINE TEXT. </P> <P STYLE="TEXT-DECORATION:BLINK;"> THIS IS BLINKING EFFECT TEXT </P> </BODY> </HTML>	</TITLE> </HEAD> <BODY> WELCOME TO MY FIRST WEB PAGE </BR> </BR> WE ARE THE STUDENT OF DCSA PROGRAM <P class=first> THIS IS UNDERLINED TEXT </P> <P class=second> THIS IS STRIKED THROUGH TEXT. </P> <P class=third> THIS IS OVER LINE TEXT. </P> <P STYLE="TEXT-DECORATION:BLINK;"> THIS IS BLINKING EFFECT TEXT </P> </BODY> </HTML>

This will produce following result

Figure 4.4 Text Decoration

Activity

1. Study the following sentences, think yourself and answer the questions 1 and questions 2.

Dhaka is the capital of Bangladesh.

Dhaka is the capital of Bangladesh.

Dhaka is the capital of Bangladesh.

Questions 1: Which property is appropriate for that?

Questions 2: Write the syntax.

Assessment

Assessment

Fill in the blanks

1. The color property is used to set the _____ of the text.

State whether the following statements are true or false

1. The text-align property is used to set the horizontal alignment of a text.

Multiple Choice questions

1. Which of the following ways below is correct to write a CSS?
a) p {color:red;text-align:center};
b) p {color:red;text-align:center}
c) p {color:red;text-align:center;}
d) p (color:red;text-align:center;).

2. The text-decoration property is used to set or remove
a) underline
b) overline
c) line-through
d) All of the above.

Exercises

1. Describe the text alignment property with example.
2. Write the use of text indentation. Give one example.
3. Explain text decoration property with example.

Lesson 6.5

Cascading Style Sheets- 5

Upon completion of this unit you will be able to:

Outcomes

Convert text to uppercase or lowercase letters.

Add or subtract space between the letters that make up a word.

Add or subtract space between the words of a sentence.

Set the text shadow around a text.

Text conversion

The text-conversion property is used to specify uppercase and lowercase letters in a text. It can be used to turn everything into uppercase or lowercase letters, or capitalize the first letter of each word.

Example
```
<p style="text-transform:capitalize;">
This is capitalized text
</p>
<p style="text-transform:uppercase;">
This is uppercase text
</p>
<p style="text-transform:lowercase;">
This is lowercase text
</p>
```
Following is the example which demonstrates how to set the cases for a text. Possible values are none, capitalize, uppercase, lowercase.

```
<HEAD>
<STYLE>
BODY {BACKGROUND-COLOR: MAROON ;}
BODY {COLOR: WHITE ;}
P{FONT-SIZE:30PX;}
</STYLE>
<TITLE>
CSS EXAMPLE-TEXT-CONVERSION
</TITLE>
</HEAD>
<BODY>
WELCOME TO MY FIRST WEB PAGE </BR></BR>
WE ARE THE STUDENT OF DCSA PROGRAM
<P STYLE="TEXT-TRANSFORM:CAPITALIZE;">
WE LOVE BANGLADESH. - THIS IS CAPITALIZED TEXT
</P>
<P STYLE="TEXT-TRANSFORM:UPPERCASE;">
```

WE LOVE BANGLADESH. - THIS IS UPPERCASE TEXT
</P>
<P STYLE="TEXT-TRANSFORM:LOWERCASE;">
WE LOVE BANGLADESH. - THIS IS LOWERCASE TEXT
</P>
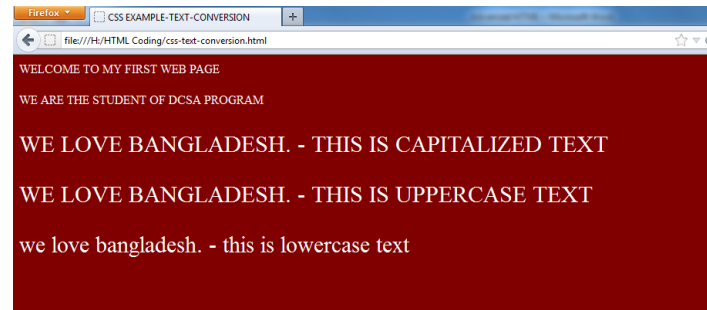</BODY>
</HTML>
This will produce following result:

Figure 5.1 Text Conversion

Space between characters

Following is the example which demonstrates how to set the space between characters. Possible values are normal or a number specifying space.
<p style="letter-spacing:5px;">
This text is having space between characters.
</p>
Set the space between words
Following is the example which demonstrates how to set the space between words. Possible values are normal or a number specifying space..
<p style="word-spacing:5px;">
This text is having space between words.
</p>
Following is the example which demonstrates how to set the space between characters and words.
<HEAD>
<STYLE>
BODY {BACKGROUND-COLOR: MAROON ;}
BODY {COLOR: WHITE ;}
P{FONT-SIZE:20PX;}
</STYLE>
<TITLE>
CSS EXAMPLE-TEXT SPACING
</TITLE>

```
</HEAD>
<BODY>
WELCOME TO MY FIRST WEB PAGE </BR></BR>
WE ARE THE STUDENT OF DCSA PROGRAM
<p style="letter-spacing:10px;">
WE LOVE BANGLADESH-This text is having space between letters.
</p>
<p style="word-spacing:10px;">
WE LOVE BANGLADESH -This text is having space between words.
</p>
</BODY>
</HTML>
```


Figure 5.2 Space

Following is the example which demonstrates how to set the space between characters and words using class.

```
<HEAD>
<STYLE>
BODY {BACKGROUND-COLOR: MAROON ;}
BODY {COLOR: WHITE ;}
P{FONT-SIZE:25PX;}
p.first{ color: blue; LETTER-SPACING:10PX;}
p.second{ color: green; FONT-SIZE:30PX;WORD-SPACING:10PX;}
</STYLE>
<TITLE>
CSS EXAMPLE-TEXT SPACING USING CLASS
</TITLE>
</HEAD>
<BODY>
WELCOME TO MY FIRST WEB PAGE </BR></BR>
WE ARE THE STUDENT OF DCSA PROGRAM
<P >
WE LOVE BANGLADESH
</P>
```

```
<P class=first>
WE LOVE BANGLADESH-THIS TEXT IS HAVING SPACE
BETWEEN
LETTERS AND FONT SIZE IS SAME AS P (25).
</P>
<P  class=second>
WE LOVE BANGLADESH -THIS TEXT IS HAVING SPACE
BETWEEN
WORDS AND FONT SIZE IS (30) WHICH IS DEFINED IN CLASS
SECOND.
</P>
</BODY>
</HTML>
```
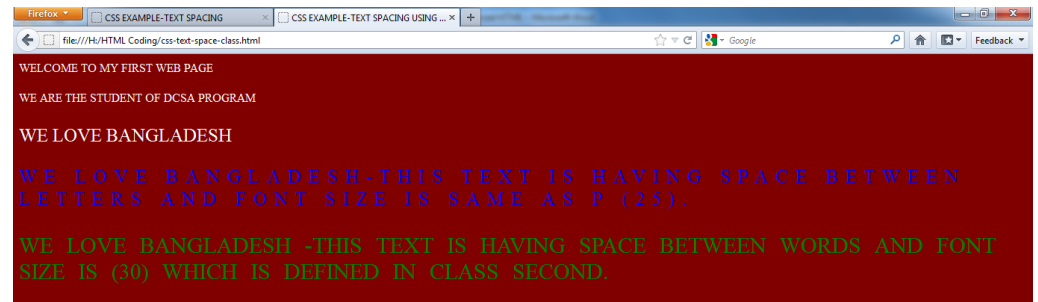
This will produce following result:

Figure 5.3 Space using class

Activity

1. Compare space between characters and space between words.

Assessment

Assessment

Fill in the blanks

1. _____property is used to specify uppercase and lowercase letters in a text.

State whether the following statements are true or false

1. The text-align property is used to set the horizontal alignment of a text.

Multiple Choice questions

1. Which of the following create space between characters?
a) <p style="letter-spacing:5px;">
b) <p style="letterspacing:5px;">
c) <p style="word-spacing:5px;">
d) <p style="wordspacing:5px;">.

Exercises

1. Describe the text conversion property with example.
2. Briefly explain how set space between words with example.

Lesson 6.6

Cascading Style Sheets- 6

Upon completion of this unit you will be able to:

Specify CSS Borders.

Outcomes

CSS – Border

The border properties allow you to specify how the border of the box representing an element should look. There are three properties of a border.

❑ The **border-color** specifies the color of a border.
❑ The **border-style** Specifies whether a border should be solid, dashed line, double line, or one of the other possible values.
❑ The **border-width** specifies the width of a border.

Now we will see how to use these properties with examples.

Border-color Property

The border-color property allows changing the color of the border surrounding an element. You can individually change the color of the bottom, left, top and right sides of an element's border using the properties:

❑ **border-bottom-color:** changes the color of bottom border.
❑ **border-top-color :**changes the color of top border.
❑ **border-left-color :**changes the color of left border.
❑ **border-right-color :**changes the color of right border.

Here are the examples which show effect of all these properties:

```
p.example1{
  border:1px solid;
  border-bottom-color: Green;
  border-top-color: Red;
  border-left-color: Blue;
  border-right-color: Black;  }
```

```
p.example2{
   border:1px solid;
   border-color: Green}
```
p example1 will show all borders in different colors.

P example2 will show all borders in green color only.

Border-style Property

The border-style property allows you to select one of the following styles of border:

- ❑ **none:** No border. (Equivalent of border-width:0;)
- ❑ **solid:** Border is a single solid line.
- ❑ **dotted:** Border is a series of dots.
- ❑ **dashed:** Border is a series of short lines.
- ❑ **double:** Border is two solid lines.
- ❑ **groove:** Border looks as though it is carved into the page.
- ❑ **ridge:** Border looks the opposite of groove.
- ❑ **inset:** Border makes the box look like it is embedded in the page.
- ❑ **outset:** Border makes the box look like it is coming out of the canvas.
- ❑ **hidden:** Same as none, except in terms of border-conflict resolution for table elements.

You can individually change the style of the bottom, left, top, and right borders of an element using following properties:

- ❑ **border-bottom-style:** changes the style of bottom border.
- ❑ **border-top-style:** changes the style of top border.
- ❑ **border-left-style:** changes the style of left border.
- ❑ **border-right-style:** changes the style of right border.

Border-width Property

The border-width property allows you to set the width of an element borders. The value of this property could be either a length in px, pt or cm or it should be set to thin, medium or thick. You can individually change the width of the bottom, top, left, and right borders of an element using the following properties:

border-bottom-width: changes the width of bottom border.
border-top-width: changes the width of top border.
border-left-width: changes the width of left border.
border-right-width: changes the width of right border.
Following is the example to show all these border styles:
```
<HTML>
<HEAD>
<STYLE>
BODY {BACKGROUND-COLOR: MAROON ;}
H1{FONT-SIZE:40PX;COLOR:fuchsia;TEXT-ALIGN:CENTER;
BACKGROUND-COLOR:gray;
border-width:8px; border-style:solid;border-color:#009900;}
P.para1{FONT-SIZE:20PX;
border-width:4px; border-style:none;border-color:#009900;}
```

```
P.para2{FONT-SIZE:20PX;
border-width:4px; border-style:solid;border-color:#009900;}
P.para3{FONT-SIZE:20PX;
border-width:4px; border-style:dotted;border-color:#009900;}
P.para4{FONT-SIZE:20PX;
border-width:4px; border-style:dashed;border-color:#009900;}
P.para5{FONT-SIZE:20PX;border-width:4px; border-
style:double;border-color:#009900;}
P.para6{FONT-SIZE:20PX;
border-width:4px; border-style:groove;border-color:#009900;}
P.para7{FONT-SIZE:20PX;
border-width:4px; border-style:inset;border-color:#009900;}
P.para8{FONT-SIZE:20PX;
border-width:4px; border-style:outset;border-color:#009900;}
</STYLE>
<TITLE>CSS EXAMPLE-BORDER</TITLE>
</HEAD>
<BODY>
<H1> WELCOME TO MY FIRST WEB PAGE </H1>
WE ARE THE STUDENT OF DCSA PROGRAM
<p class=para1>
WE LOVE BANGLADESH -This is a border with none width.</p>
<p class=para2>
WE LOVE BANGLADESH-This is a solid border.</p>
<p class=para3>
WE LOVE BANGLADESH-This is a dotted border.</p>
<p class=para4>
WE LOVE BANGLADESH-This is a dashed border.</p>
<p class=para5>
WE LOVE BANGLADESH-This is a double border.</p>
<p class=para6>
WE LOVE BANGLADESH-This is a groove border.</p>
<p class=para7>
WE LOVE BANGLADESH-This is inset border.</p>
<p class=para8>
WE LOVE BANGLADESH-This is outset border.</p>
<p style="FONT-SIZE:20PX;
border-color:#009900;
border-top-style:solid;
border-bottom-style:dashed;
border-left-style:double;
border-right-style:groove;
border-top-width:10px;
border-left-width: 6px;
border-right-width:12px;
border-bottom-width:8px;">
WE LOVE BANGLADESH-This is a border with four different styles
and different
width.</p>
</BODY> </HTML>
```
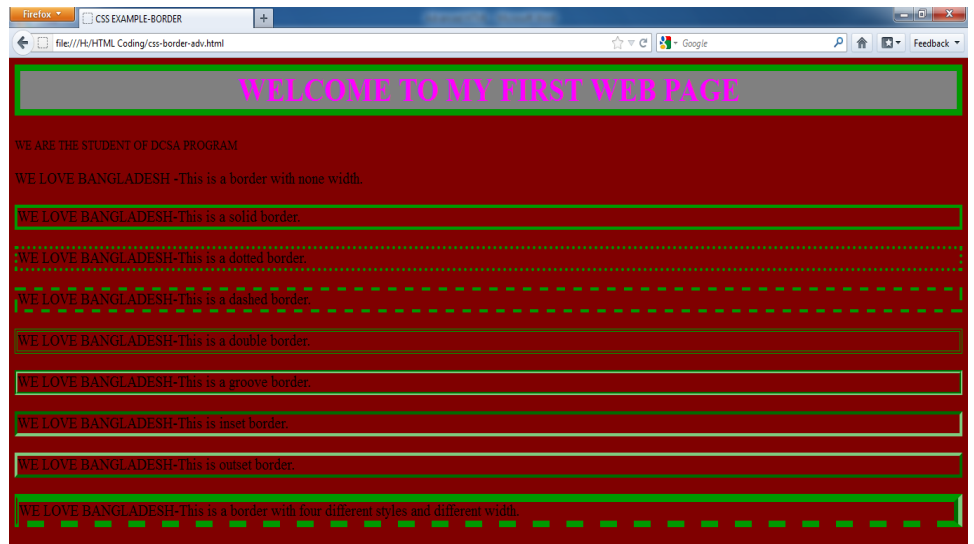
This will produce following result

Figure 6.1 Border

Activity

1. Compare Dotted Border and Dashed Border.

2. p.example1{

   border-bottom-color: Green;

   border-top-color: Red;

   border-left-color: Blue;

   border-right-color: Black; }

Write the effect of all these properties.

Assessment

Fill in the blanks

1. Dotted border is a _____ of dots.

State whether the following statements are true or false

1. The border-width specifies the width of a border.

Multiple Choice questions

1. Border-style specifies a border should be?
a) solid
b) dashed line
c) double line
d) all of the above.

2. How many properties are there in a border?
a) 3
b) 4
c) 8
d) 10.

Exercises

1. Describe the border color property.

2. Describe the border width property.
2. Describe different types of border style property with example.
3. Explain CSS border with example.

Lesson 6.7

Cascading Style Sheets- 7

Upon completion of this unit you will be able to:

Stipulate CSS List.

Specify CSS Image.

Outcomes

List

Lists are very helpful in conveying a set of either numbered or bulleted points. This tutorial teaches you how to control list type, position, style etc. using CSS There are following five CSS properties which can be used to control lists:

❑ **The list-style-type:** Allows you to control the shape or appearance of the marker.

❑ **The list-style-position:** Specifies whether a long point that wraps to a second line should align with the first line or start underneath the start of the marker.

❑ **The list-style-image:** Specifies an image for the marker rather than a bullet point or number.

❑ **The list-style:** Serves as shorthand for the preceding properties.

❑ **The marker-offset:** Specifies the distance between a marker and the text in the list.

CSS List Style Type

If you want to use something different from the default numbering of ordered lists, or the bullets/discs of unordered lists, then all you have to do is choose a different style for your lists. CSS allows you to select from a wide variety of different list item shapes.

• **Unordered list styles:** square, circle, disc (default), and none

• **Ordered list styles:** upper-alpha, lower-alpha, upper-roman, lower-roman, decimal (default), and none

Now we will see how to use these properties with examples.

CSS Code

ol { list-style-type: upper-roman; }

ul { list-style-type: circle; }

Example

```
<HTML>
<HEAD>
<STYLE>
UL.A {LIST-STYLE-TYPE:SQUARE;}
OL.B {LIST-STYLE-TYPE:LOWER-ALPHA;}
OL.C {LIST-STYLE-TYPE:UPPER-ALPHA;}
</STYLE>
<TITLE> CSS LIST </TITLE>
</HEAD>
<BODY>
<UL CLASS=A>
<LI> FRUITS
<UL>
<LI> APPLE
<LI> ORANGE
<LI> MANGO
</UL>
<LI > VEGETABLE
<UL>
<LI> BRINJAL
<LI> POTATO
<LI> TOMATO
</UL>
</UL>
<OL CLASS=B >
<LI> ITEM 1
<LI> ITEM 2
<LI> ITEM 3
<LI> ITEM 4
</OL>
<OL CLASS=C >
<LI> ITEM 1
<LI> ITEM 2
<LI> ITEM 3
<LI> ITEM 4
</OL>
</BODY>
</HTML>
```
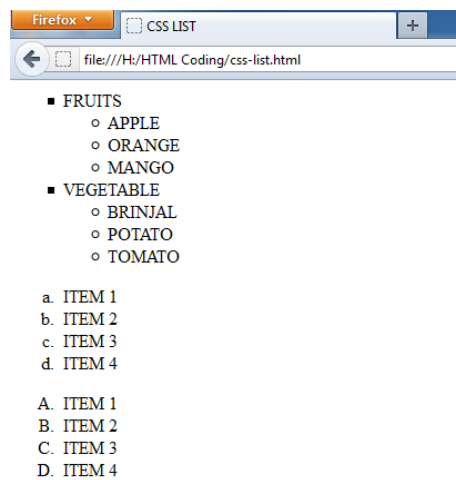
Figure 7.1 Border

CSS – Images

Images are very important part of any Web Page. CSS plays a good role to control image display. You can set following image properties using CSS.

❑ The **border property** is used to set the width of an image border.
❑ The **height property** is used to set the height of an image.
❑ The **width property** is used to set the width of an image.
❑ The -moz-opacity property is used to set the opacity of an image.

Image border Property

The border property of an image is used to set the width of an image border. This property can have a value in length or in %. A width of zero pixels means no border.

Here is the example

<img style="border:0px;" src="imgcss.jpg" >
<img style="border:3px dashed red;" src="imgcss.jpg">

Image height Property

The height property of an image is used to set the height of an image. This property can have a value in length or in %. While giving value in %, it applies it in respect of the box in which an image is available.

Here is the example

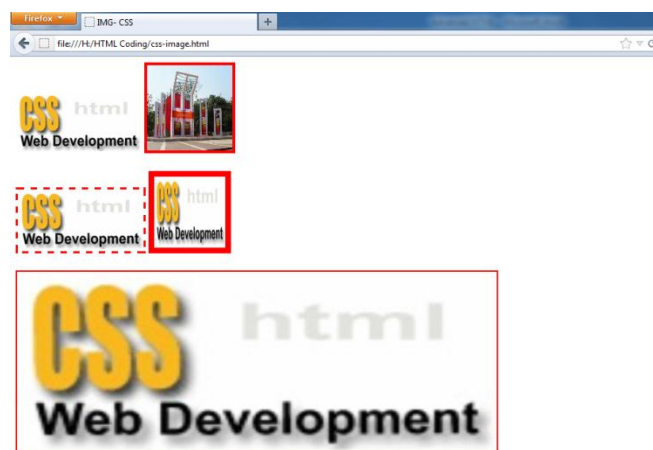<img style="border:1px solid red; height:100px;"
src="imgcss.jpg">
<img style="border:1px solid red; height:50%;"
src="imgcss.jpg" >

Image width Property

The width property of an image is used to set the width of an image. This property can have a value in length or in %. While giving value in %, it applies it in respect of the box in which an image is available.

Here is the example

<img style="border:1px solid red; width:100px;" src="imgcss.jpg">
<img style="border:1px solid red; width:100%;" src="imgcss.jpg"

Example

```
<HTML>
<HEAD>
<TITLE> IMG- CSS</TITLE>
</HEAD>
<BODY>
<img style="border:0px;" src="imgcss.jpg" >
<img style="border:4px solid red;height:120px;width:120px;"
src="SHAHIDMINAR.JPG" >
 <br><br>
<img style="border:3px dashed red;"
src="imgcss.jpg" >
<img style="border:8px solid red; height:100px;width:100px;"
src="imgcss.jpg" >
<br>
<img style="border:2px solid red; height:40%;width:50%;"
src="imgcss.jpg" >
<br><br>
</BODY>
</HTML>
```


Figure 7.2 CSS Image

Activity

1. Compare Dotted Border and Dashed Border.

Assessment

Assessment

State whether the following statements are true or false

1. The list-style-type allows you to control the shape or appearance of the marker.

Multiple Choice questions

1. Which of the following is unordered list?
a) square.
b) circle.
c) decimal.
d) both a and b.

2. Which of the following is used to set the width of an image border?
a) border property
b) height property
c) width property
d) both a and b.

Exercises

1. Describe the CSS list style.
2. Write the purpose of image border property. Write the syntax and give one example.

Lesson 6.8

Cascading Style Sheets- 8

Upon completion of this unit you will be able to:

Specify CSS Table.

Outcomes

Table

Tables are used to display data in Tabular format, containing rows and columns, on the screen. The table element can contain the following:

Table Borders

To specify table borders in CSS, use the border property. The example below specifies a black border for table, th, and td elements:

Example

table, th, td
{
border: 1px solid black;
}

Collapse Borders

The border-collapse property sets whether the table borders are collapsed into a single border or separated. To display a single border for the table, use the border-collapse property

Example
table
{
border-collapse:collapse;
}
table,th, td
{
border: 1px solid black;
}

Table Width and Height

Width and height of a table is defined by the width and height properties. The example below sets the width of the table to 100%, and the height of the elements to 50px:

Example
table
{
width:100%;
}
th
{
height:50px;
}
Table Text Alignment

The text in a table is aligned with the text-align and vertical-align properties. The text-align property sets the horizontal alignment, like left, right, or center:

Example
td
{
text-align:right;
text-align:center;
}

The vertical-align property sets the vertical alignment, like top, bottom, or middle:

Example
td
{
height:50px;
vertical-align:bottom;
}

Table Padding

To control the space between the border and content in a table, use the padding property on td and th elements:

Example
td
{
padding:15px;
}

Example
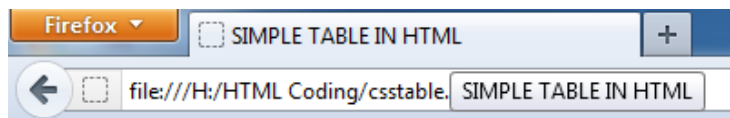
```
<HTML> <HEAD>
<STYLE>
TABLE, TH, TD
{
BORDER: 2PX SOLID BLACK; TEXT-ALIGN:CENTER;
}
</STYLE>
<TITLE> SIMPLE TABLE IN HTML </TITLE>
</HEAD> <BODY>
<TABLE>
<CAPTION> TEST TABLE </CAPTION>
<TR>
<TH> HEADING 1</TH>
<TH> HEADING 2</TH>
<TH> HEADING 3</TH>
</TR>
<TR>
<TD> CELL 1 </TD>
<TD> CELL 2 </TD>
<TD> CELL 3 </TD>
</TR>
<TR>
<TD> CELL 4 </TD>
<TD> CELL 5 </TD>
<TD> CELL 6 </TD>
</TR>
</TABLE> </BODY> <HTML>
```


Figure 8.1Table

Assessment

Assessment

Fill in the blanks

1. Tables are used to display data in _____.

State whether the following statements are true or false

1. The text-align property is used to set the horizontal alignment of a text.

Multiple Choice questions

1. Which property is used to control the space between the border and content in a table?

   a) padding

   b) alignment

   c) height

   d) weight.

Exercises

1. Describe the table border property.
2. Describe table height and width property.
3. Describe the table padding property with example.

Lesson 6.9

Cascading Style Sheets- 9

Upon completion of this unit you will be able to:

Specify CSS Link.

Outcomes

CSS Links

Through this section we will learn how to set different properties of a hyper link using CSS. Links can be styled with any CSS property (e.g. color, font-family, background, etc.) In addition, links can be styled differently depending on what state they are in. You can set following properties of a hyper link

- ❑ **a:link -** a normal, unvisited link
- ❑ **a:visited -** a link the user has visited
- ❑ **a:hover -** a link when the user mouse over it
- ❑ **a:active -** a link the moment it is clicked

When setting the style for several link states, there are some order rules

- a:hover MUST come after a:link and a:visited
- a:active MUST come after a:hover

Text Decoration

The text-decoration property is mostly used to remove underlines from links:

Example
a:link {text-decoration:none;}
a:visited {text-decoration:none;}
a:hover {text-decoration:underline;}
a:active {text-decoration:underline;}

Background Color

The background-color property specifies the background color for links:

Example
a:link {background-color:#B2FF99;}
a:visited {background-color:# FF704D;}
a:hover {background-color:#FF704D;}
a:active {background-color:# FFFF85;}

Color of Visited Links

Following is the example which demonstrates how to set the color of visited links. Possible value could be any color name in any valid format.
<style type="text/css">
a:visited {color: #006600}
</style>
Click this link

Changing color of links

Following is the example which demonstrates how to change the color of links when we bring a mouse pointer over that link. Possible value could be any color name in any valid format.
<style type="text/css">
a:hover {color: #FFCC00}
</style>
Bring Mouse Here
This will produce following link. Now you bring your mouse over this link and you will see that it changes its color to yellow.

Changing color of active links

Following is the example which demonstrates how to change the color of active links. Possible value could be any color name in any valid format.
<style type="text/css">
a:active {color: #FF00CC}
</style>
Click This Link

This will produce following link. This will change it color to pink when user clicks it.
<HTML>
<HEAD>
<TITLE>
Link to a Website
</TITLE>
</HEAD>
<BODY>

Mohammad Mamunur Rashid
School of Science and Technology
Bangladesh Open University
Gazipur-1705
<A HREF ="http://www.bou.edu.bd">
Link to get Website of Bangladesh Open University</A>
<style type="">
a:link {color:#FFCC00;}
</style>
CSS Font Link
<style type="">
a:visited {color:red;background-color:white;}
</style>
CSS Font Link
<style type="">
a:hover {color:red;text-decoration:none;}
</style>
Bring Mouse Here
</BODY>
</BODY>
</HTML>

Figure 9.1 Links

Assessment

Assessment

Fill in the blanks

1. a:hover MUST come after _____ and _____.

State whether the following statements are true or false

1. The text-decoration property is mostly used to remove underlines from links.

Exercises

1. Write the syntax to change the color of a visited link.
2. Explain CSS links.