Liew Voon Kiong

HTML & CSS Made Easy

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Chapter 1: Introduction to HTML

1.1 What is HTML

HTML stands for Hypertext Markup Language that is used to design web pages and build Websites. It has the ability to bring together text, pictures, sounds, video and links all in one place! HTML files are plain-text files, so they can be edited using standard editors such as Notepad and WordPad. They are stored with the extensions .html, .htm or .shtml. A webpage written in Hypertext Markup Language can be viewed using browsers such as Mozilla Firefox, Google's Chrome, Safari, Opera, IE and more. Hypertext Markup Language is the standard formatting tool for WWW because it is cross platforms, meaning that it can be viewed through different types of computers and mobile devices with different operating system such as the Mainframes, Apple computers, the UNIX system, the popular IBM compatible PCs, smart phones and tablets running on Android OS, Apple IOS, Microsoft's windows phone and more. It is sort of a common Internet language. The newest version is HTML5.

1.2 HTML Structure

An HTML document is divided into two parts, the head and the body. The head of the document contains the document's title and other information, and the body contains the contents and everything else. The body is the larger part of the document, as the body of a letter you would write to a friend would be. Elements are used to describe and format an HTML document, each element describes different document content. An example of an element is <head>, which comprises and open tag written as <head>, its content and an end tag written as </head>. An HTML document must always begin with a <!DOCTYPE html> . DOCTYPE is a declaration that defines the document type. We will discuss tags in more details in coming chapters.

Example 1.1

```
<!DOCTYPE html>
<html> <head><title>HyperText Markup Language Tutorial</title>
<meta http-equiv=”Content-Language” content=”en-us“>
<meta name=”description” content=”Welcome to HyperText Markup Language Tutorial”>
<meta name=”Author” content=”Dr.Liew Voon Kiong“>
<meta name=”GENERATOR” content=”Microsoft FrontPage 6.0“>
<link rel=”stylesheet” type=”text/css” href=”styles_vb6.css“/>
</head>
<body><h1>Introduction to HyperText Markup Language</h1>
HyperText Markup Language, is the language of the World Wide Web. Web sites and web pages are written in ……..
…….
</body> </html>
```

Chapter 2: HTML Elements

In order to create an HTML document, we can use GUI-based editor such as Microsoft FrontPage, Adobe Dreamweaver or other editors, but the best way to learn HTML is to use a plain text editor. Here we recommend Microsoft’s Notepad.

2.1 Basic HTML Elements

HTML uses elements to specify a document's structure, to provide information and to format its contents. An HTML element consists of a start tag <**element name>**, its contents and an end tag**</element name>.** Element and tag can be used interchangeably. Some elements only consist of a start tag. The structure of an HTML element is

<element name>element content</element name>

For example: <H1>Heading 1</H1>, where <H1> is the open tag and </H1> is an end tag. However, some of the tags such as <IMG> do not required a closing tag.

The basic elements are summarised in Table 2.1

Element	Description
<html></html>	Element that creates the HTML document
<head></head>	Element that denotes the first part of the HTML document. It provides descriptions and information pertaining to the webpage.
<title></title>	Element that defines the title of the web page.
<body></body>	Element that defines the main contents of the HTML document.
	Element that indicates the headings. There are 6 headings, from h1 to h6.
	Element that displays **bold** text.
	Element that displays *italic* text.
<u></u>	Element that underlines the text.
 	Element that indicates a line break. No closing tag is required for this element.

Table 2.1: Summary of Basic HTML Elements

Example 2.1

Now, open the notepad in windows and type the following codes:

```
<html>
<head>
<title>My sample HTML document</title>
</head>
<body bgcolor=”#ffff99″>
<h1><u>My sample HTML document</u></h1>
<h1>This is heading 1</h1>
<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>
<b> Bold text</b>
<br>
<i>Italic text</i>
<br>
<u>Underlined text</u>
<b><i>Bold and italic text</i></b>
<b><i><u>Bold, italic and underlined text</u></i></b>
<h1><i>Italic heading</i></h1>
<h3><u>Underlined heading</u></h3>
</body>
</html>
```

To save the file, click on the file menu and select **Save As**, change file type to **All files**, save the file as **example1.html** in My document. (You can also use a different file name and folder; just make sure that the file type is .html)

To view the web page, start Firefox, Google Chrome, IE or any web browser and open the above file. Alternatively, you can open the web page by right-clicking on the file then click **Open with…** and select your desired web browser.

The output

My sample HTML document

This is heading 1

This is heading 2

This is heading 3

This is heading 4

This is heading 5

This is heading 6

Bold text

Italic text

Underlined text

Bold and italic text

Bold, italic and underlined text

Italic heading

Underlined heading

2.2 Properties

HTML elements have properties or attributes. For example, the **header** element contains attributes such as **id** and **align** that specify the header location and position. Take a look at the following examples:

Example 3.1

The **align=center** attribute will align the heading to the centre position. The HTML code is:

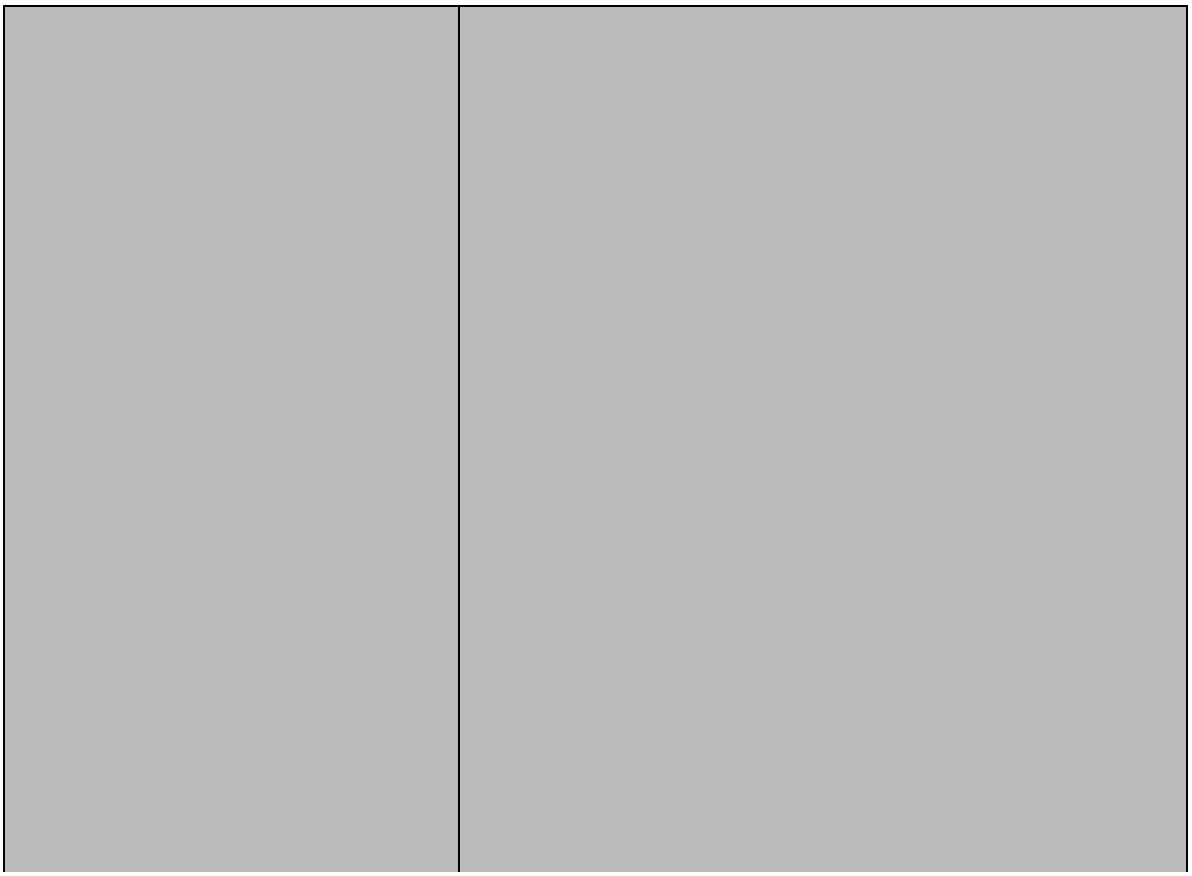
<h1 align=center>Welcome to HTML Tutorial</h1>

Example 2.2

The img element comprises height and width attributes that define an image's size and the src attribute that links to the location of the image file. The attribute alt is to display the description of an image if the browser cannot render the image.

<img src="html.jpg" height="138″ width="200″ alt="HTML banner">

Table 2.2 shows some common elements and some of their attributes:



Element	Description
<h1 align=position> </h1>	Element that aligns the heading to the left, right and the centre
	Element that strongly emphasizes the bold format.
	Element that gives more emphasis to the italic text.
<pre></pre>	Element that preserves the original text.
	Element that formats text as subscript.
	Element that formats text as superscript.
<hr>	Element that inserts a horizontal ruler. Closing tag is not required here.
<hr width=n%>	Element that sets the width of a horizontal ruler.
<hr size=m>	Element that sets the height of a horizontal ruler.
<hr nonshade>	Element that creates a ruler without the shadow.
	Element that defines a paragraph.
	Element that aligns the paragraph to the left, right or centre.

Table 2.2: Attributes of HTML Elements

Example 2.3

Now, copy the following paragraph and paste it into your Notepad or any suitable text editor. Save the file as bean.html.

```
<html>
<head>
<title>Mr Bean</title>
</head>
<body>
<h1 align=center><u>All about  Mr. Bean</u></h1>
<hr>
<h2 align=right>Date: Nov 30,2000</h2>
<hr width=50% size=10>
<p> <strong>Mr. Bean</strong>is a 50 years old boy, currently studying at
<em>Cambridge</em>. His lecturer is <b>Mr. Mike Tyson</b>. There are 33 students
in his class.</p>
<p align=center> Here are some facts about Bean</p>
<pre>
Date of Birth  :01011900
Height           : 100 cm
Weight          : 100 kg
Marital Status : Single
Address          : 1, Wall street, London,UK.
</pre>
<hr nonshade>
<P align=center> If you wish to match make for Mr. Bean, please contact him through
the following phone number:<b>911<b></p>
<hr>
</body>
</html>
```

The output

All about Mr. Bean

Date: Nov 30,2000

Mr. Bean is a 50 years old boy, currently studying at *Cambridge*. His lecturer is **Mr. Mike Tyson**. There are 33 students in his class.

Here are some facts about Bean

Date of Birth	:01011900
Height	: 100 cm
Weight	: 100 kg
Marital Status	: Single
Address	: 1, Wall street, London,UK.

If you wish to match make for Mr. Bean, please contact him through the following phone number:**911**

Chapter 3: Types of Lists

In HTML, if you wish to list out a number of items, you can use the unordered list and the ordered list. The element for the unordered list is **ul** and the element for the ordered list is **ol**. The element for each item in the list is **li**. Besides, if you wish to display a list of definitions, you can use the **dl** element together with the **dt** and **dd** elements.

3.1 Unordered List

The unordered list is also called unnumbered list or bulleted list. The HTML structure for the unordered list is shown as follows

```
<ul>
 <li>item 1</li>
<li>item 2 </li>
<li>item 3</li>
</ul>
```

Example 3.1

```
<html>
<head><title>Unordered List</title></head>
<body>
<h2> Fruits</h2>
<hr>
<ul>
<li> Apple</li>
<li> Grape</li>
<li> Orange</li>
<li> Pear</li>
<li> Pineapple</li>
<li> Water Melon</li>
</ul>
</body>
</html>
```

Copy and paste the html codes in Example 3.1 to your notepad and save the file as uorlist.html.

The output is as shown below:

Fruits

- Apple
- Grape
- Orange
- Pear
- Pineapple
- Water Melon

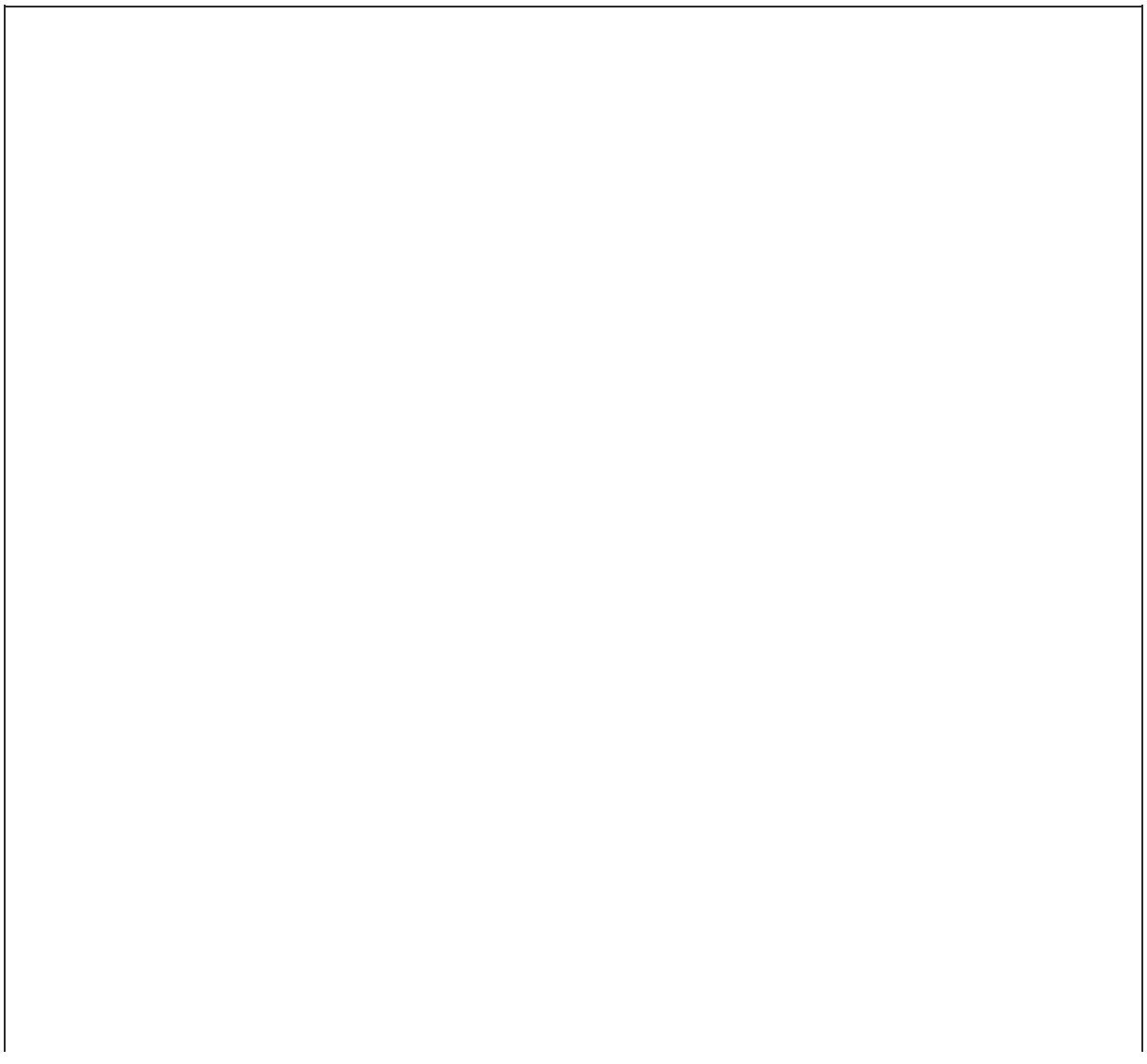
3.2 Ordered List

Also known as the Numbered List. It is very similar in structure to the unordered list, except each list item has a number in front of it, instead of a bullet. Also, the opening tag for the list is <ol> instead of <ul>, and the closing tag is instead of . Modify the code in section 4.1 by changing the tags <ul> to <ol> and to and change the title to ordered list. Save the file as orlist.html.

Example 3.2

```
<html>
<head><title>Ordered List</title></head>
<body>
<h2> Fruits</h2>
<hr>
<ol>
<li> Apple</li>
<li> Grape</li>
<li> Orange</li>
<li> Pear</li>
<li> Pineapple</li>
<li> Water Melon</li>
</ol>
</body>
</html>
```

The output is as shown below:



Fruits

1. Apple
2. Grape
3. Orange
4. Pear
5. Pineapple
6. Water Melon

3.3 Nested List

This nested list contains lists within lists. The structure of a nested list is as follows:

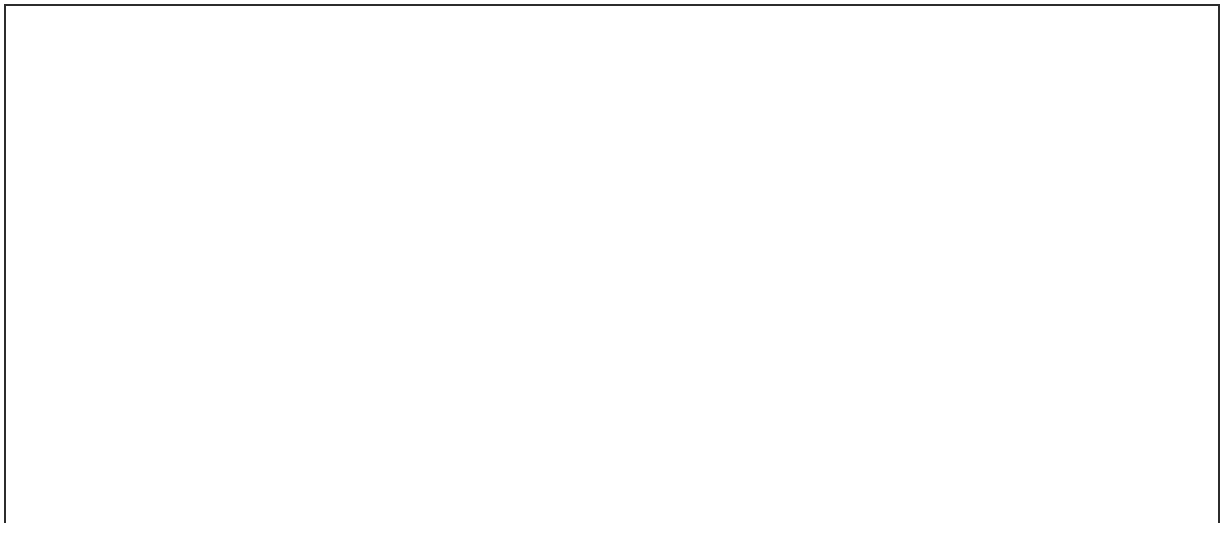
```
<ol>
    <li>
        <ul>
            <li></li>
            <li></li>
            <li></li>
        </ul>
</li>
<li>
        <ul>
            <li></li>
            <li></li>
            <li></li>
        </ul>
    </li>
</ol>
```

Example 3.3

```
<html>
<head><title>Nested List</title></head>
<body>
<h1 align=center><u> Internet Club</u></h1>
<ol>
      <li>Advisers
           <ul>
                <li> Mr. Liew</li>
                <li> Mrs James</li>
                <li>Miss Irene</li>
           </ul>
   </li>
     <li>Committee Members
          <ul>
               <li>Nick</li>
               <li>George</li>
               <li>Francis</li>
   </ul>
   </li>
</ol>
<body>
</html>
```

Copy the code above and paste them to your notepad. Save the file as nested.html

The output is as shown below:



Internet Club

1. Advisers
   - Mr. Liew
   - Mrs James
   - Miss Irene
2. Committee Members
   - Nick
   - George
   - Francis

3.4 Definition List

Definition list comprises a list of definitions or terms and their descriptions. The elements are:

dl- The element for creating a definition list

dt- The element for creating a definition or term

dd- The element for displaying the description of a term

The structure can be illustrated in the Example 3.4.

Example 3.4

```
<dl>
<dt><b>Internet</b>
<dd>A network of millions of computers connected together to share information.
<dt><b>HTML</b>
<dd>Hypertext Markup Language
<dt><b>JavaScript</b>
<dd>A scripting language that works with HTML to enhance web pages
</dl>
```

* The dt and dd elements do not require the closing tags

The output:

Internet

A network of millions of computers connected together to share information.

HTML

Hypertext Markup Language

JavaScript

A scripting language that works with HTML to enhance web pages

Chapter 4: Adding Colours

Adding colours to your web pages could achieve certain visual effect and make them more appealing. However, you should select colours carefully and do not overuse them. You can add colour to your web page background and the text as well.

4.1 Adding Colour to the Background

You can specify the colour of the page's background using the bgcolor attribute of the body element, as shown below:

<body bgcolor=color>

The colour attribute can be specified using normal words like red, yellow, blue etc. or by using hexadecimal codes. Hexadecimal is a base 16 number system. Hexadecimal uses A for decimal 10, B for decimal 11, C for decimal 12, D for decimal 13, E for decimal 14 and F for decimal 15. Every colour code in HTML is made up of 6 hexadecimal digits, from 000000 to ffffff. The hexadecimal codes might seem very complex, however, they actually make up of combination of three primary colours, i.e. red, green and blue (rgb). The last two digits specify the amount of red colour, the middle two digits specify the amount of green colour and the first two digits specify the amount of blue colour.

For example:

0000ff=maximum red 00ff00=maximum green ff0000=maximum blue.

The Colour Codes are shown in Table 4.1

Color	Code	Color	Code	Color	Code	Color	Code	Color	Code
.	eeeeee	.	ffffcc	.	ffccff	.	ff99ff	.	ff66ff
.	dddddd	.	ffff99	.	ffcccc	.	ff99cc	.	ff66cc
.	cccccc	.	ffff66	.	ffcc99	.	ff9999	.	ff6666
.	bbbbbb	.	ffff33	.	ffcc66	.	ff9966	.	ff6633
.	aaaaaa	.	ffff00	.	ffcc33	.	ff9933	.	ff6633
.	999999	.	ccffff	.	ffcc00	.	ff9900	.	ff6600
.	888888	.	ccffcc	.	ccccff	.	cc99ff	.	cc66ff
.	777777	.	ccff99	.	cccccc	.	cc99cc	.	cc66cc
.	666666	.	ccff66	.	cccc99	.	cc9999	.	cc6699
.	555555	.	ccff33	.	cccc66	.	cc9966	.	cc6666
.	444444	.	ccff00	.	cccc33	.	cc9933	.	cc6633
.	333333	.	99ffff	.	cccc00	.	cc9900	.	cc6600
.	222222	.	99ffcc	.	99ccff	.	9999ff	.	9966ff
.	111111	.	99ff99	.	99cccc	.	9999cc	.	9966cc
.	ff0000	.	99ff66	.	99cc99	.	999966	.	996699
.	ee0000	.	99ff33	.	99cc33	.	999933	.	996633
.	cc0000	.	66ffff	.	66ccff	.	6699ff	.	6666ff
.	33ffff	.	00ffff	.	00ccff	.	3399ff	.	3366ff
.	ff00ff	.	cc00ff	.	00ee00	.	0000ff	.	6600ff

Table 4.1 List of HTML RGB Colour Codes

Example 4.1

```
<html>
<head>
<title>Background Color</title>
</head>
<body bgcolor=cyan>
The background colour of this web page is cyan. You can change the background colour anytime by changing the colour attribute specified by the bgcolor code. Try using the hexadecimal codes like bgcolor=”#ff00cc”.
</body>
</html>
```

Copy and paste the above codes to your notepad and save as bgcolor.html.

The Output is as shown overleaf.

The background colour of this web page is cyan. You can change the background colour anytime by changing the colour attribute specified by the bgcolor code. Try using the hexadecimal codes like bgcolor=”ff00cc”.

4.2 Adding colour to the text.

4.2.1 Specifying the colour of the normal text

You can specify the colour of the normal text (the default text is black) using the text attribute of the body element, as shown below:

<body bgcolor=”blue” text=”white”>

You may use normal words for the colour attribute or use hexadecimal notation.

Now, try the following example

Example 4.2

```
<html> <head>
<title>Text colour</title>
</head>
<body bgcolor=”blue” text=”#ffffcc”>
The text colour can be formatted using the text=”#color code”. It is important that the colour of the text is not the same as the background colour; otherwise you won’t be able to see the words.
</body>
</html>
```

Copy and paste the above codes to your notepad and save the file as txtcolor.html

The output is as shown below:

The text colour can be formatted using the text=”#color code”. It is important that the colour of the text is not the same as the background colour; otherwise you won’t be able to see the words.

4.2.2 Formatting Individual Font Colour with the Font Tag

If you wish to add colour to an individual character, word, sentence or paragraph, you may use the font tag. Font tag can also control font size and typeface of fonts.

The codes are as follows:

Red colour text
Blue text with font size 1
Text in Time News Roman

Now, copy the following codes and paste them into your notepad and save the file as font.html.

Example 4.3

```
<html>
<head>
<title>Manipulation of Fonts</title>
</head>
```

```
<body bgcolor=”#ccffff”  text=”blue”>
<font color=”red “size=”4″>Manipulation of </font><font color=”brown”
size=4>Fonts</font>
<hr>
<p>
<font color=”green” face=”Arial”  size=2>You can manipulate font colour , size and font
type using
the font tags</font>.<font color=”#aaaa00″ size=”2″ face=”Times New Roman”>It can
be done fairly
easily by anybody. Most important you must try it out yourself and dare to experiment
with
anything.</font>
</p>
<hr>
This part of the text will appear blue.
</body>
</html>
```

The output is show below:

Manipulation of Fonts

You can manipulate font colour, size and font type using
the font tags . It can be done fairly
easily by anybody. Most important you must try it out yourself and dare to experiment
with
anything.

This part of the text will appear blue.

Chapter 5: Inserting Images into a Web Page

The element for inserting an image in a web page is **img** and the tag is written as follows:

<img src=”image filename”>

* src is the attribute that points to the source of the image file.

The web browsers support several types of image files, but the usual ones are the graphic interchange format file(with extension **gif**) and **jpeg** file(with extension **jpg**). Besides, they also support **png** file. You can also create your own images using scanner and graphics tools like PC Paint Brush, Corel Draw, Adobe Photoshop and more. Besides, there are countless image files that you might copy from the World Wide Web but it is better to get consent from the images creators.

You can specify the alignment and size of the image using the align, width and height attributes of the img element respectively as follows:

<img src=”image.jpg” align=position width=100 height=100 alt=image label>

* The alt attribute is to show the label of the image.

Images can also be used as background for your web pages using the body element as follows:

<body background=”image.jpg”></body>

Now type the text in Example 5.1 below and save the file as images.htm. You also need to create four images using any graphic tool and save them as image1.jpg, image2.jpg and image3.jpg. The image files must be in the same folder as the images.htm file.

Example 5.1

```
<html>
<head>
<title>Inserting Images</title>
</head>
<body background=“back.jpg ”>
<h1 align=”center”><font color=“red”>Inserting Images in Web Page</font></h1>
<hr>
<img src=” image1.jpg”>
```

```
<br>
<img src=“image2.jpg “ width=100 height=100 >
<br>
<img src=“image3.jpg” width=30% height=50% align=right alt=“image3”>
</body>
</html>
```

Inserting Images in Web Page

Chapter 6: Building Links

Links allow us to browse to another section of a webpage, to view an in-line image, another page within a web site, or another web site in the Internet. In this lesson, we will show you how to build links in a webpage**.**

6.1 Text Link

The element for creating a text link is the anchor element **a** and the attribute that specifies the linked source is **href**. The syntax for linking to a local file is

text

The syntax for linking to another website is

Web site URL .

6.2 Graphical Link

The element is the same, but use an image in the place of text.

The syntax for linking to a local file is

<img src=”image.jpg”>

The syntax for linking to another website is

<img src=”image.jpg”>

6.3 Email Link

This link allows the user to email the person whose email address is specified in the link. The syntax is Email Me.

Now, copy and paste the codes in Example 6.1 into your notepad and save the file as link.html.

Example 6.1

```
<html>
<head>
<title>Links </title>
</head>
<h1>This page contains various types of link</h1> <hr>
<body link=blue alink=green vlink=red>
<a href=”image1.gif”>Click to view image</a> <br>
<a href=”graphic.html”>Click to view this web page</a> <br>
<a href=”http://www.yahoo.com”>Yahoo!, the search engine</a> <br>
<a href=”http://www.vbtutor.net”>Visual Basic Tutorial</a> <br>
<a href=”image3.jpg”><img src=”image2.gif”></a><br>
<a href=”http://www.htmltutor.org/”><img src=”image1.gif”></a>
<hr> <center> <a href=”mailto:admin@htmltutor.org”>Email Me</a> </body>
</html>
```

Note: link=blue specified within the tag means the link text will appear blue and vlink=red means the link text will appear red after a user has clicked on it(vlink actually means visited link). This is yet another attribute called alink which means active link that show the colour of the link text when a user is clicking on it. The title attribute provides the screen tip for the user when the mouse pointer is placed over the link.

**The Output is shown overleaf*

This page contains various types of link

Click to view image
Click to view this web page
Yahoo!, the search engine
Visual Basic Tutorial

Email Me

6.4 Linking to a Section of a Webpage

HTML supports linking within a document which enables readers to go to a particular section of the document easily, instead of having to scroll up and down all the time. We can use the **name** attribute to serve as identification or bookmark of a particular section. The syntax to create a target location within a document is as follows:

<a NAME= “section name”></A> tag

To create the link to the above section from elsewhere in the document, we use the href property of the anchor element and reference the section name using the # symbol, as follows:

<A HREF= “#section name”></A>

Chapter 7: Creating Tables

Most of the times when you need to present your data in a table form; you can do it easily in other software such as Microsoft Excel. But when it comes to HTML, you need to use the table elements to define your table in order to display it on a web page.

7.1 Basic Table Elements

A table can be created using the **table** element, the row element **tr** and the column element **td**. The structure is as follows :

```
<!DOCTYPE html>
<html>
<head>
<title>Table</title>
</head>
<body>
<h1 align=center>Table</h1> <hr>
<table> <tr> <td>Apple</td> <td>Fruit</td></tr>
<tr> <td>Cabbage</td> <td>Vegetable</td> </tr>
<tr> <td>Whale</td> <td>Mammal </td> </tr>
<tr> <td>Horse</td> <td>Mammal</td> </tr>
<tr> <td>Shark</td> <td>Fish</td> </tr>
<tr> <td>Mars</td> <td>Planet</td> </tr>
<tr> <td>Sun</td> <td>Star</td> </tr> </table>
</body></html>
```

Copy the codes above and paste them into your notepad. Save the file as table1.html.

The output is shown in Table 7.1

Apple	Fruit
Cabbage	Vegetable
Whale	Mammal
Horse	Mammal
Shark	Fish
Mars	Planet
Sun	Star

Table 7.1

7.2 The Border Attributes

To further customize a table in HTML, you can add attributes to the table elements. One of the attributes is the border attribute. The border attribute simply specifies it has no border using the value 0 or having a border of size n. The syntax is as follows:

<table border=”0”> The table has no border

<table border=”n”> The table has a border with size=n

7.3 The Colour Attributes

The syntax to specify the table’s background colour is

<table bgcolor=”colour”>

The syntax to specify the table’s border colour is

<table bordercolor=”colour”>

You can use hexadecimal code and colour’s name for the color attributes.

Colour Attribute	Description
<table bgcolor=”blue”>	The table has blue background.
<tr bgcolor=”green”>	The row has green background.
<td bgcolor=”yellow”>	The cell has yellow background.
<table bordercolor=”magenta”>	The table a magenta border
<tr bordercolor=”pink”>	The row has pink border.
<td bordercolor=”brown”>	The cell has brown border.

7.4 The Height and Width Attributes

The height and width attributes of the table element specify the height and the width of a table. You can use pixel (px) or percentage to specify the height and the width of the table

Examples:

<table width=”40%” height=”20%”>

<table width=”200px” height=”20px”>

7.5 The Table Spacing Attributes

The attributes for table spacing are cellspadding and cellspacing. Cellspadding specifies the amount of space between a cell’s border and its contents. Cellspacing specifies the amount of space between the cells. The syntaxes are as follows:

<table cellspadding=”value”>

<table cellspacing=”value”>

Examples:

<table cellspadding=”2px”>

<table cellspacing=”1px”>

7.6 The Text Alignment Attributes

The text alignment attributes of a table are align and valign, the syntaxes are as follows:

Alignment	Description
<tr align=position>	Aligns the text in a row to the left, center or right
<tr valign=position>	Aligns the text in a row vertically (top bottom or middle)
<td align=position>	Aligns the text in a cell to the left, center or right.
<td valign=position>	Aligns the text in a cell vertically(top bottom or middle)

7.7 The Rowspan and Colspan Attributes

<td rowspan=3> The cell spans over 3 rows

< td colspan-2> The cell spans over 2 columns .

7.8 The Colgroup and the Col Elements

The element colgroup groups and formats columns of a table. The col element uses the align attribute to determine the text alignment in a column. Besides, the col element also consists of the span attribute that determines the number of columns it will create. The structure is as follows:

<colgroup>

<col align=”center” span=”2”>

</cologroup>

Example 7.3

```
<html>
<head>
<title>Advance Table Tags</title>
<body>
<table border=”5″  cellspacing=”0″ cellspadding=”2″ bgcolor=”blue”width=”70%” height=”90%”>
<caption align=top><h2>This is a colourful table</h2></caption><col group><col align=”left” span=”2″></colgroup>
<tr bgcolor=”cyan” bordercolor=”green”>
<td></td>
<td align=”center” valign=”middle”>Monday</td>
<td align=”right” valign=”middle”>Tuesday</td>
<td align=”center” valign=”middle”>Wednesday</td>
<td align=”right” valign=”middle”> Thursday</td></tr>
<tr> <td rowspan=”3″  bgcolor=”pink”>Subject</td>
<td bgcolor=”cc33ff”>Management</td>
</tr>
<tr>
<td bgcolor=”cc88bb”>Finance</td>
<td bgcolor=”bbffee”>Business Law</td>
</tr>
<tr>
<td colspan=”2″></td>
<td bgcolor=”9966cc”>Economics</td>
<td bgcolor=”88ccaa”>HRM</td>
</tr>

</table>

</body>

</html>
```

The Output

This is a Colourful Table

Monday	Tuesday	Wednesday	Thursday
Subject	Management		
	Finance	Business Law	
			Economics

7.9 The caption, thead, tbody, tfoot and th Elements.

You can use the <caption></caption> element to add a title to the table. Usually we place the <caption></caption> tags after the <table></table> tags, like this:

```
<table>
<caption><b>Monthly Sales Report</b></caption>
</table>
```

The thead element defines the header section of the table. It is used together with the th element The th element defines the columns in the header section and it is used to add columns' titles. The th element display text in bold and align it in the centre. They have to be enclosed within the <tr></tr> tags, as follows:

```
<table border=1 cellspacing=1 width=50%>
<caption><b>First Quarter Sales Report</b></caption>
<tr>
<th>Month</th>
<th> Desktop</th>
<th>Laptop</th>
</tr>
</table>
```

The actual table is shown below:

Month	Desktop	Laptop

*Notice that the column titles are centred and in bold face.

The **tbody** element defines the table body or the main part of the table. The <tbody> open tag and </tbody> end tag are placed after the header section, as follows:

```
<table border=1 cellspacing=1 width=50%>
```

```
<caption><b>First Quarter Sales Report</b></caption>
<tr>
<th>Month</th>
<th> Desktop</th>
<th>Laptop</th>
<tbody>
<tr>
<td>January</td>
<td>1000</td>
<td>2000</td>
</tr>
<tr>
<td>February</td>
<td>1200</td>
<td>1700</td>
</tr>
<tr>
<td>March</td>
<td>1500</td>
<td>1900</td>
</tr>
<tr>
<td>April</td>
<td>2200</td>
<td>2300</td>
</tr>
</tbody>
</table>
```

The resulting table is displayed below:

First Quarter Sales Report

Month	Desktop	Laptop
January	1000	2000
February	1200	1700
March	1500	1900
April	2200	2300

Finally, we need to calculate the monthly sales volumes and sum them up by adding another row to the table. We can do this by using the <tfoot></tfoot> tags which define the footer section of the table, as shown below:

```
<table border=1 cellspacing=1 width=50%>
<caption><b>First Quarter Sales Report</b></caption>
<tr>
<th>Month</th>
<th> Desktop</th>
<th>Laptop</th>
<tbody>
<tr>
<td>January</td>
<td>1000</td>
<td>2000</td>
</tr>
<tr>
<td>February</td>
<td>1200</td>
<td>1700</td>
</tr>
<tr>
<td>March</td>
<td>1500</td>
<td>1900</td>
</tr>
<tr>
<td>April</td>
<td>2200</td>
<td>2300</td>
</tr>
<tfoot>
<tr>
<th>Total</th>
<th>5900</th>
<th>7900</th>
</tr>
</tfoot>
</tbody>
</table>
```

The resulting table is displayed below:

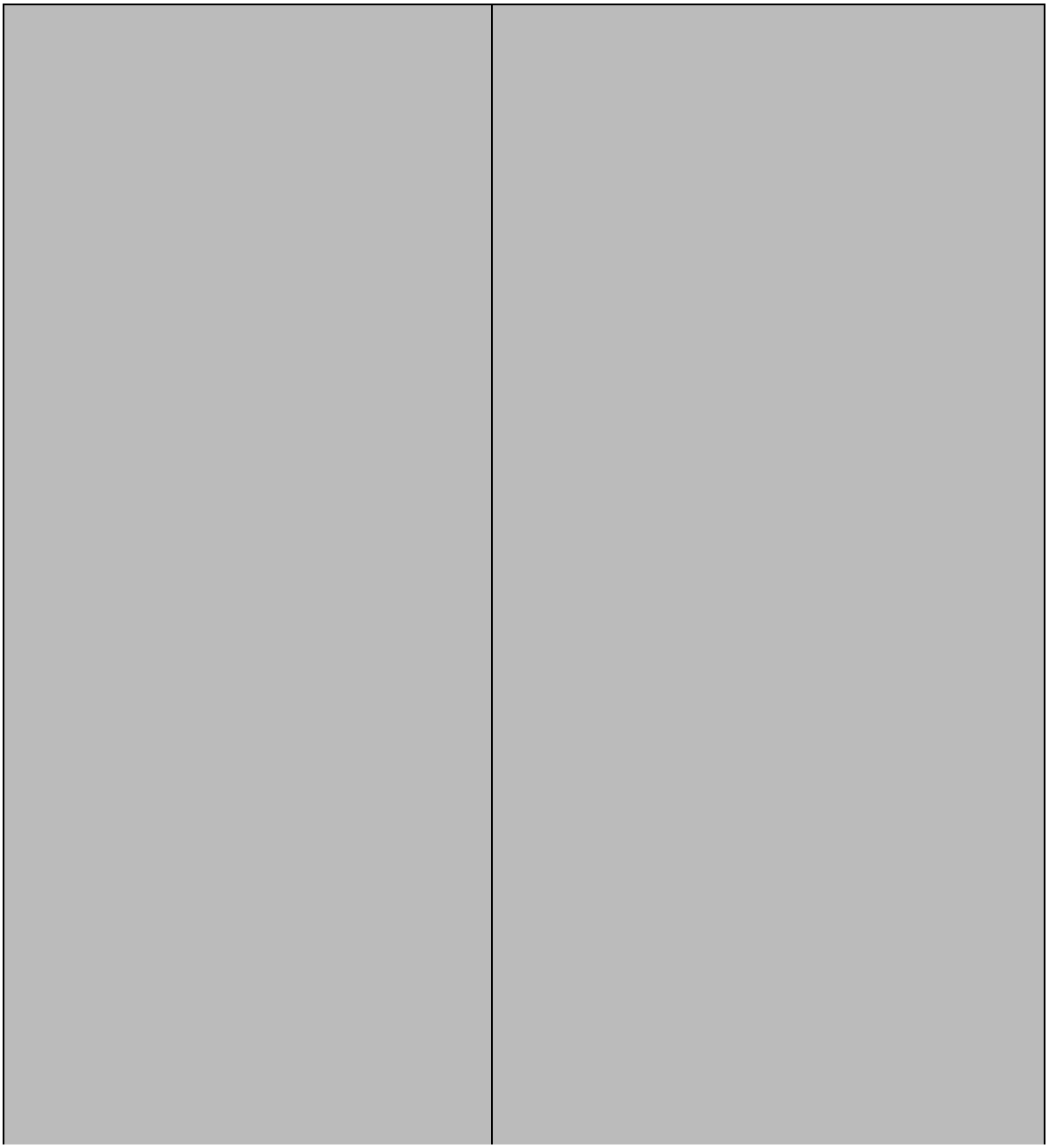
First Quarter Sales Report

Month	Desktop	Laptop
January	1000	2000
February	1200	1700
March	1500	1900
April	2200	2300
Total	**5900**	**7900**

Chapter 8: Using Character Entity References

A webpage basically can be created using the HTML elements. However, certain characters cannot be typed directly into an HTML document because these characters are reserved for use as HTML elements. The most obvious examples are the > and < signs, they are reserved for the start tags and end tags of the HTML elements. To overcome the issue, HTML provides character entity reference in the form of **&code;** .For example, to show the > sign on the webpage, we use **&lt** and for the & sign, we use **&**

The following table shows a list of characters and the respective HTML encoding.



Character	HTML code
>	>
<	<
≤	≤
≥	≥
&	&
spacing	
½	½
¼	¼
©	©
®	®
»	»
Ç	Ç
À	À
™	™
È	È
â	â
ß	ß
Ģ	Ģ

÷	&#247;

Example

HTML document

```
Buy more if the volume &gt; 100,000 and price &lt; $50,000. However, if volume &le;50,000, then stop trading. The earnings at volume=100000 is &frac14; of the total sales. HTML Tutorial &#174;is a registered trademark. The above article is &#169; Dr.Liew &amp; Associates
```

The resulting webpage:

Buy more if the volume > 100,000 and price < $50,000. However, if volume ≤50,000, then stop trading. The earnings at volume=100000 is ¼ of the total sales. HTML Tutorial® is a registered trademark.

The above article is © Dr.Liew & Associates

Chapter 9: The Meta Element

One of the most important jobs for a website developer is to ensure the website is ranked high in search engines. Using computer jargon, it means the website needs to occupy top position in search engine results page (SERP) for a certain keyword. Ranking high in SERP is crucial to the success of a website, especially for commercial websites. According to recent surveys, as many as 68% of Internet visitors only look for first few results or the first page of search engine results. Therefore, many developers are trying to optimize their websites so that they achieve high position in SERP, using search engine optimization (SEO) tools and by employing SEO experts. The cost of SEO can be very expensive. However, do you know that you can achieve a basic SEO without spending a lot of money? The answer is using the **meta** element in HTML.

The **meta** element is used by the search engines to catalogue web sites. It is placed within the **head** tags. The **meta** element comprises a number of attributes, but the most important ones are **name** and **content**. The **name** attribute uses its **keywords** property and the **content** attribute to provide search engines with a list of keywords that describe a page. These keywords are being used to compare words in search requests. Therefore, by including meta elements and their content information, your site has the potential to rank high in SERP. Besides, the name attribute uses its description property so that search engines use this description to catalogue the website and display the description as part of the search results.

Example 9.1

```
<!DOCTYPE html><html<head><meta name="keywords" content="webpage, html, hypertext, website, Internet"/><meta name="description" contents=" This is the one-stop HTML tutorial and resource centre. We present our tutorial in a straight forward manner to help everyone master HTML effortlessly."/>
```

The Author property of the name attribute allows the webmaster to include his or her name in the webpage. For example

<meta name="Author" content="John">

The Generator property of the name attribute displays the software used to generate the webpage. For example

<meta name="generator" content="WordPress 4.0, fitted with the WordPress Mobile Pack 1.2.4" />

The meta element also uses the **http-equiv** attribute to specify language and content type of the webpage, as follows:

<meta http-equiv="Content-Language" content="en-us">

<meta http-equiv="Content-Type" content="text/html; charset=gb2312"/>

Chapter 10: The Frameset Element

Generally a webpage can only display one page at a time though it has the ability to link to other pages. However, we can allow the visitor to view two or more pages at a time by creating frames in a webpage. To create frames in a webpage, we use the **frameset** element.

The **frameset** element uses the **cols** attribute to specify the number of columns and size of each column and the **rows** attribute to specify the number of rows and size of each row. Besides, it uses the name attribute to identify a frame. A link can be used to open up a webpage in the target frame. When we use the frameset element, we can omit the use of the body element.

The structure for a frameset is illustrated as follows:

<frameset cols=“300,”*>

It means it creates a webpage with two columns where the left frame is 300 pixels from the left edge of the webpage and the second column occupies the remaining space. We can also use % instead pixel, like this

<frameset cols=“30 %,”*>

It means the left column take up 30% of the webpage’s width and the other column occupies 70% of the webpage’s width.

You can use similar structure for the rows attribute, like this

<frameset rows=“300,”*>

<frameset rows=“30%,”*>

You can also create a three or more columns or rows using the frameset elements though it is not adviser to do so as it may make the webpage looks congested. For example, you can create a three columns webpage using the following syntax

<frameset cols=“20%, 30 %,*”>

The left column occupies 20% of the page’s width, the middle column occupies 30% of the page’s width and the right column occupies 50% of the page’s width.

To load the webpages into respective frames, we can use the **frame** element together with its **name** attribute. Let’s illustrate how to create a two-column webpage in the following example:

<!DOCTYPE html>

<html>
<head>
<title>HTML Tutorial</title>
</head>
<frameset cols=“20%,*”>

<frame name=“menu” src=“menu.html”>
<frame name=“main” src=“http://htmltutor.org/”>
</frameset>
</html>

The above document creates two columns, the first loads the menu.html webpage and the second column loads the webpage with URL http://htmltutor.org/. Save the above document as htmltutorial.html

Now, create the menu.html page as follows:

```
<!DOCTYPE HTML>
<html>
<head>
<title>Menu</title>
</head>
<body>
<h1>HTML Tutorial</h1>
<hr>
<h2>Contents</h2>
<hr>
<ul>
<li><a href=“http://htmltutor.org/index.php/html-tutorial-lesson-1/”
target=“main”>Lesson 1: Introduction to HTML</a></li>
<li><a href=“http://htmltutor.org/index.php/html-tutorial-lesson-2/”
target=“main”>lesson 2: HTML Elements Part 1</a></li>
<li><a href=“http://htmltutor.org/index.php/html-tutorial-lesson-3/”
target=“main”>Lesson 3: HTML Elements Part 2</a></li>
<li><a href=“http://htmltutor.org/index.php/html-tutorial-lesson-4/”
target=“main”>Lesson 4: Types of Lists</a></li>
<li><a href=“http://htmltutor.org/index.php/html-tutorial-lesson-5/”
target=“main”>Lesson 5: Adding Colours to a Webpage</a></li>
<li><a href=“http://htmltutor.org/index.php/html-tutorial-lesson-6/”
target=“main”>Lesson 6: Inserting Graphics in a Web Page</a></li>
<li><a href=“http://htmltutor.org/index.php/html-tutorial-lesson-7/”
target=“main”>Lesson 7: Building Links</a></li>
<li><a href=“http://htmltutor.org/index.php/html-tutorial-lesson-8/”
target=“main”>Lesson 8: More on Links</a></li>
<li><a href=“http://htmltutor.org/index.php/html-tutorial-lesson-9/”
target=“main”>Lesson 9: Creating Tables</a></li>
<li><a href=“http://htmltutor.org/index.php/html-tutorial-lesson-10/”
target=“main”>Lesson 10: Advanced Table Elements and Attributes</a></li>
<li><a href=“http://htmltutor.org/index.php/html-tutorial-lesson-11/”
target=“main”>Lesson 11: More advanced Table Elements and Attributes</a></li>
<li><a title=“Lesson 12” href=“http://htmltutor.org/index.php/html-lesson-12-using-
special-characters-in-html/” target=“main”>Lesson 12: Using Character Entity
References in HTML</a></li>
<li><a title=“Lesson 13” href=“http://htmltutor.org/index.php/html-lesson-13-meta-
```

element/” target=“main”>Lesson 13: Meta element

</body>
</html>

The **target** attribute of the anchor tag is to load the webpage specified by the link in the right column which is identified by the name **main**.

To view the resulting webpages, click on [htmltutorial.html]

The output is shown in Figure 10.1

Figure 10.1

You can also create columns and rows together using nested framesets, as illustrated in the following example

<!DOCTYPE html>
<html>
<head>
<title>Nested Frames</title>
</head>
<frameset cols=“20%,*”>
<frame name=“menu” src=“menu.html”>
<frameset rows=“30%,*”>
<frame name=“banner” src=“http://htmltutor.org/wp/wp-content/uploads/2010/12/html_banner.jpg”>
<frame name=“main” src=“http://htmltutor.org/”>
<noframes>
This page uses frames, but unfortunately your browser does not support it.
Get Google Chrome Version 38.0.2125.104 m or IE10.
</noframes>
</frameset>
</frameset>
</html>

```
</noframes>
</frameset>
</frameset>
</html>
```

Save the above example as nestedframe.html and click nestedframe.html to view the output. The output is shown in Figure 10.2

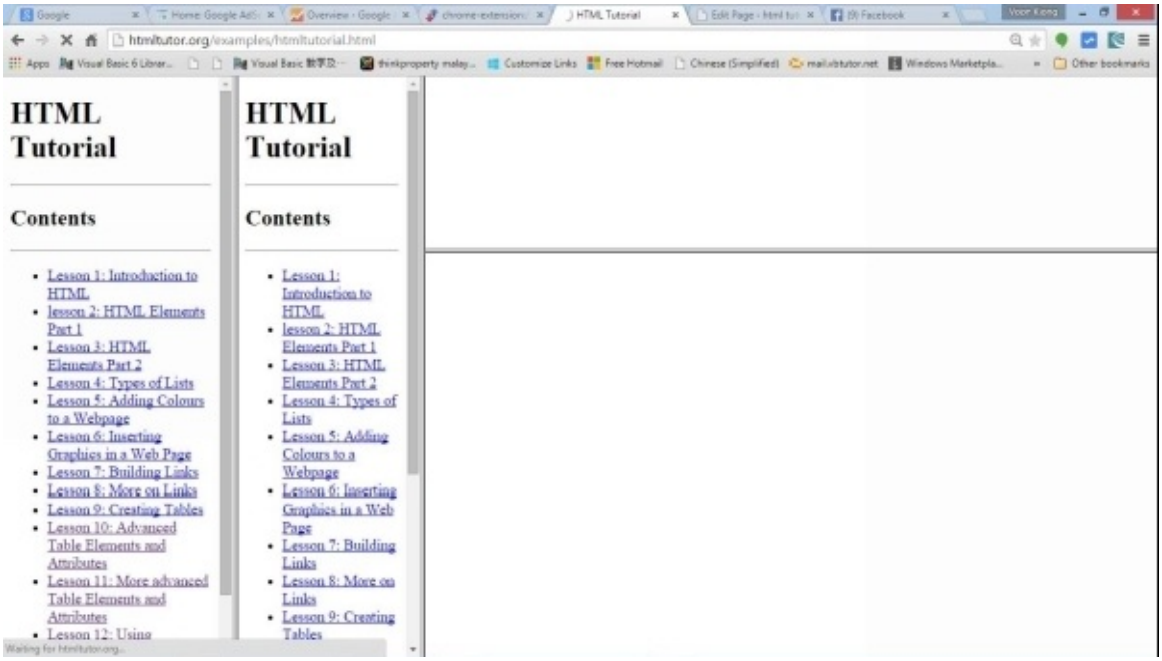


Figure 10.2

In the above example, the first frameset creates two columns and the second frameset creates two rows in the second column. The **noframes** element is to inform the user that his or her browser does not support frameset and need to download newer version of browsers. This is actually not necessary as all present browsers support frameset.

Finally you may want to add other frame's attributes like **scrolling="no"** to disable the scroll bar and **noresize** to disable image resizing,

Chapter 11: Setting Up Forms

Collecting information via the website has become an important task for any organization. The purposes may be to provide better services for the users, to get feedbacks, to carry out marketing campaign and more. In order to collect information from the user, you need to set up forms on your webpage. The information collected from the webpage will be processed by the client and server programs. Data collected by the webpage is sent to the server by the client program using the protocol called HTTP (Hypertext Transfer Protocol) and processed by the server side program. The data sent by HTTP can be in the form of HTML documents, images or other media. It could be a request from the user such as a search keyword for certain information, the server program will then process the data and returns the requested information to the user.

The program that processes data sent by HTTP is usually a kind of scripting language known as Common Gateway Interface (CGI) written in Perl, C language, Java, ASP.net, PHP, Cold Fusion or some other languages. The Common Gateway Interface (CGI) is a standard for interacting through a Web server with a client running on a Web browser. These programs allow a Web developer to deliver dynamic information (usually in the form of HTML) via the browser. CGI programs are commonly used to for search engines, user’s registration, online forums, and other interactive applications on the web.

11.1 The Basic Form

In HTML, you can set up forms easily using the **form** element. The form element comprises the **method** attribute that specifies the method with which the data is submitted to the gateway script in the server. There are two possible values associated with the method attribute, **post** and **get**. In the get submission, the data in the form is encoded into the URL while the post submission is passed directly to the gateway script. On top of that, the form element also comprises the action attribute that specifies the URL of the script that processes the data input from the form.

The basic HTML structure of the form element is as follows:

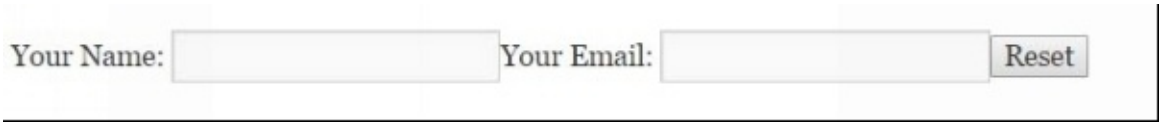
<form action=“Myform.asp” method=“post”>
Your Name: <input type=“text” name=“name”>
Your Email: <input type=“text” name=“email”>
<input type=“submit” value=“Submit”>
</form>

Below is the actual form that will send email to a mail server.

You can also add a reset button for the user to clear all the entries, using the syntax as follows:

<input type=”reset” value=”Reset” />

The following is a workable example:



11.2 The Input Element

The input element comprises attributes that include **type, name, value, size**, **maxlength, checked** and **src.**

The **name** attribute is identification for the input element. The **value** attribute specifies the initial value of the object created by the input element. The **size** attribute specifies the number of characters visible in a text box and the **maxlength** limits the number of characters input into a text box.

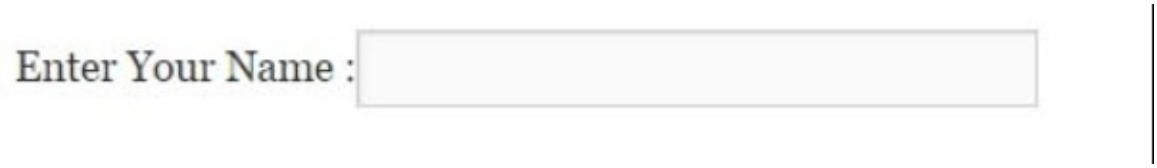
The input element can create different kinds of objects on the webpage like a submit button, a text box, a check box, a radio button, a reset button and a password entry box defined by the value of the **type** attribute. The following examples show how the aforementioned objects are created.

11.2.1Text Box

To create a text box with certain size, use the following html syntax:

<input name=”Username” type=”text” size=”30″ >

The resulting text box:



If the type value is hidden, the text box will not be visible to the user but the value will still be sent to the server. The html syntax is:

<input name=”Username” type=”hidden”>

Enter Your Name:

11.2.2 Password Box

To present the user with a password box, change the value of type to password. When you enter text into this field it is masked with either asterisks or dots (depending on your browser) so as to hide sensitive information like bank login password, credit card number and more.

The html syntax is:

<input name=”password” type=”password” size=”10″>

The resulting password box:

 Enter your password:

11.2 3 Reset Button

The reset button allows the user to clear all the data into text boxes and retype the information. To create the reset button, change the value of the type attribute to reset. The html syntax is:

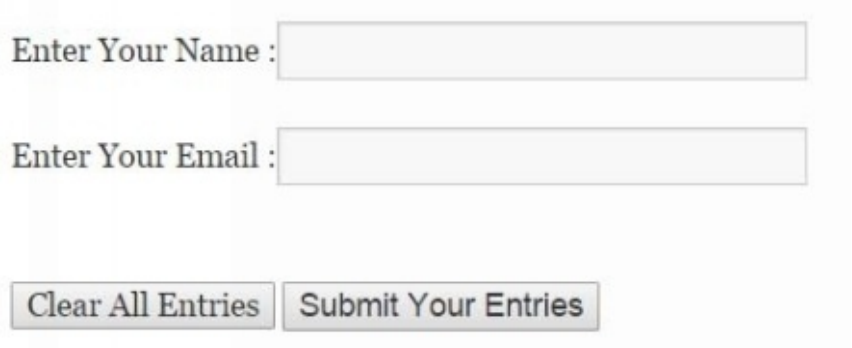
<input name=”reset” type=”reset” value=”Clear All Entries”>

The resulting Form:

11.2.4 Submit Button

The submit button allows the user to send the data entered into various fields to the server. The html syntax is

<input name=”submit” type=”Submit” value=”Submit Your Entries”>



11.3 Textarea Element

The Textarea element creates a multiline text box into a form that allows the user to enter multiline text. The number of lines is specified with the **rows** attribute and the number of columns is specified with the **cols** attribute.

The following example is a form with text area 10 lines and 40 characters wide. The HTML code is

<form action=”/index.php/contact-us/” method=”post”>

<label>Please provide your feedback in the box below:</label>

<textarea cols=”40″ name=”feedback” rows=”10″></textarea>

<input type=”Submit” value=”Submit Your Feedback” />

<input type=”reset” value=”Clear Entries” />

</form>

The resulting form is shown below:

11.4 Radio Button

Radio buttons are object on a web page that allows the user to select only one option. The value of the **type** attribute is **radio**, the name attribute is the value of the option the user selects, the value attribute is the value for the selected item and the checked attribute indicates the default item selected when a web page is loaded. A sample HTML code for creating radio buttons is shown below:

```
<form  action=”/index.php/contact-us/” method=”post”>
<p> Please select one T-shirt size below :</p>
<input type=”radio” value=”S” checked=”checked”> S
<input type=”radio” value=”M” >M
<input type=”radio” value=”L” >L
<input type=”radio” value=”XL” >XL
<input type=”radio” value=”XXL” >XXL
</form>
```

The Output

Please select one T-shirt size below:

11.5 The Checkbox

Unlike the radio buttons, checkboxes allow the user to select more than one option from a given list of items. The value of the **type** attribute is **checkbox**, the **name** attribute is the value of the option the user selects, the **value** attribute is the value for the selected item and the **checked** attribute indicates the default items selected when a web page is loaded. A sample HTML code for creating checkboxes is shown below:

<p>Please select the fruits you wish to order :< /p>

<form action=”/index.php/contact-us/” method=”post”>

<input checked=”checked” name=”fruits” type=”checkbox” value=”apple” /> Apple

<input name=”fruits” type=”checkbox” value=”orange” />Orange

<input name=”fruits” type=”checkbox” value=”banana” />Banana

<input name=”fruits” type=”checkbox” value=”grape” />Grape

<input type=”Submit” value=”Add to Cart” />

</form>

The output Please select the fruits you wish to order:

11.6 The Drop-down Box

A drop-down box on a web page allows the user to select one item from a drop-down list. The HTML elements to create a drop-down box are **select** and **option**. The HTML for creating a drop-down box starts with an open tag **<select>** and a close tag **</select>.** The option tags are inserted between the select tag for displaying the options. A sample HTML code is illustrated below:

```
<p>Please select one item from the list:</p>

<form  action=”/index.php/contact-us/” method=”post”><select name=”myList”>
<option value=”Science Fiction”>Science Fiction</option>
<option value=”Thriller”>Thriller</option>
<option value=”Love Story”>Love Story</option>
<option value=”Biography”>Biography</option>
</select>

</form>
```

Please select one item from the list:

If we want to display more than one item in the drop-down list, we use the **size** attribute. A sample HTML code is shown below:

11.7 The Image Submit Button

We have learned how to send data entered by the user to the server using the submit button. In this lesson, we shall learn how to use an image button to replace a simple submit button. For example, you are selling something on the web and you want the user finish with a buy or order button instead of a simple submit button. Below is an example:

```
<form  action=”/index.php/contact-us/” method=”post”>

<input checked=”checked” name=”fruits” type=”checkbox” value=”apple”/> Apple
<input name=”fruits” type=”checkbox” value=”orange” />Orange
<input name=”fruits” type=”checkbox” value=”banana” />Banana
<input name=”fruits” type=”checkbox” value=”grape” />Grape
<input type=”image” src=”http://www.vbtutor.net/vb_book/images/order1.jpg”
alt=”Submit”>
</form>
```

Please select the items below and then place your order:

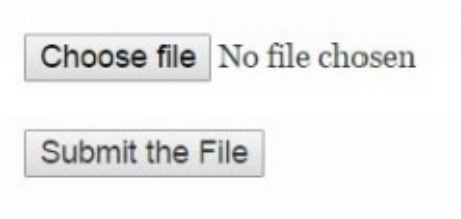
11.8 The File Upload button

The file upload button allows the user to select a file from the folder of his local drive to upload to the server. The attribute is **type** and its value is **file**. The sample code is shown below:

Select a file and upload:
<form action=”/index.php/contact-us/” method=”post”>

<input type=”file” name=”MyFile”/>
<input type=”submit” Value=”submit the File”/>
</form>

Select a file and upload:



Chapter 12: Other HTML Elements

12.1: The id Attribute

The function of the **id** attribute is to identify a particular element uniquely. The value of an id should starts with a letter or an underscore, not any other characters. No two elements should have the same id value. The structure is shown in the following example:

<html>

<h1 id=”Myheading”> Other Elements in HTML</h1>

 The ship is more than the Crews

</html>

The id is used by css in creating unique style for the text enclosed between the tags. Please use a text editor such as notepad to enter the following html codes that incorporate some css code.

Example 12.1

```
<!DOCTYPE html>

<html>
<head>
<style type=”text/css”>
#myheading {
color= white;
background-color: blue;
text-transform: uppercase;}
#quotation{
color:red;
font-size:15pt}

</style>
<head>
<body>

<h1 id=”Myheading”> Other Elements in HTML</h1>

<p id=”quotation”> The ship is more than the Crews</p>
</body>
</html>
```

The resulting webpage

OTHER ELEMENTS IN HTML

The ship is more than the Crews

12.2 The class Attribute

The class attribute is also a kind of identifier in HTML but instead of uniquely identifying one single element, it identifies several elements together. It can be used with any html element. Its usage is demonstrated in Example 19.2

Example 12.2

```
<!DOCTYPE html>
<head>
<title> The Class Attribute</title>
<style type=”text/css”>
.redBold{ color:red;
font-weight: bold}
.blueText{color:blue}

</style>
<body>
<h2 class=”redBold”> The Class attribute</h2>
<p class=”blueText”>The class attribute is also a kind of identifier in HTML but instead of uniquely identifying one single element, it identifies several elements together. It can be used with any html element. Its usage is demonstrated in Example 12.2
</p>
</body>
</html>
```

The resulting webpage:

The Class attribute

The class attribute is also a kind of identifier in HTML but instead of uniquely identifying one single element, it identifies several elements together. It can be used with any html element. Its usage is demonstrated in Example 12.2

12.3 The div Element

The div element is used to group a set of elements together. It will create a new section on the web page defined by the tag, as shown in Example 12.3.

Example 12.3

```
<!DOCTYPE html>
<html>
<head>
<title>The div element</title>
</head>
<body>
<div id=”intro”>
<p>This is the one-stop HTML tutorial and resource centre. We present our tutorial in a straight forward manner to help everyone master HTML effortlessly.
Besides, you can learn how to build a website by learning HTML. On top of that, We publish articles from time to time to update knowledge on Hypertext Mark-up Language. The tutorial topics are:
</p>
</div>
<div>
<ol>
<li>Introduction</li>
<li>HTML Elements</li>
<li>Creating Listson</li>
<li>Creating Tables</li>
<li>Creating Frames</li>
<li>Building Links</li>
</ol>
</div>
</body>
</html>
```

The resulting webpage:

This is the one-stop HTML tutorial and resource centre. We present our tutorial in a straight forward manner to help everyone master HTML effortlessly. Besides, you can learn how to build a website by learning HTML. On top of that, We publish articles from time to time to update knowledge on Hypertext Mark-up Language. The tutorial topics are:

1. Introduction
2. HTML Elements
3. Creating Listson
4. Creating Tables

5. Creating Frames
6. Building Links

12.4 The span Element

The span element allows us to format or create style a part of the paragraph so that it can be differentiated with the surrounding text. It is usually used together with the class attribute in CSS, as shown in Example 19.4

Example 12.4

```
<!DOCTYPE html>
<html>
<head>
<title>The Span element</title>
<Style type=”text/css”>
.BoldRed{font-weight: bold;
color:red}
.ItalicBlue{ font-style: italic;
color:blue}
.UnderlineBoldGreen{font-weight: bold;
color:green;
font-style: italic;
font-size:1.2em }
</style>
</head>
<body>
<h1>The Span Element</h1>
<p><span class=”BoldRed”>The span element</span> allows us to format or create style for a part of the paragraph
<span class=”ItalicBlue”>so that it can be differentiated with the surrounding text.</span> It is usually used together with the class attribute in CSS, <span class=”UnderlineBoldGreen”>as shown in Example 19.4</span>
</body>
</html>
```

The resulting webpage:

The Span Element

The span element allows us to format or create style for a part of the paragraph *so that it can be differentiated with the surrounding text.* It is usually used together with the class attribute in CSS, ***as shown in Example 19.4***

12.5 The Iframe Element

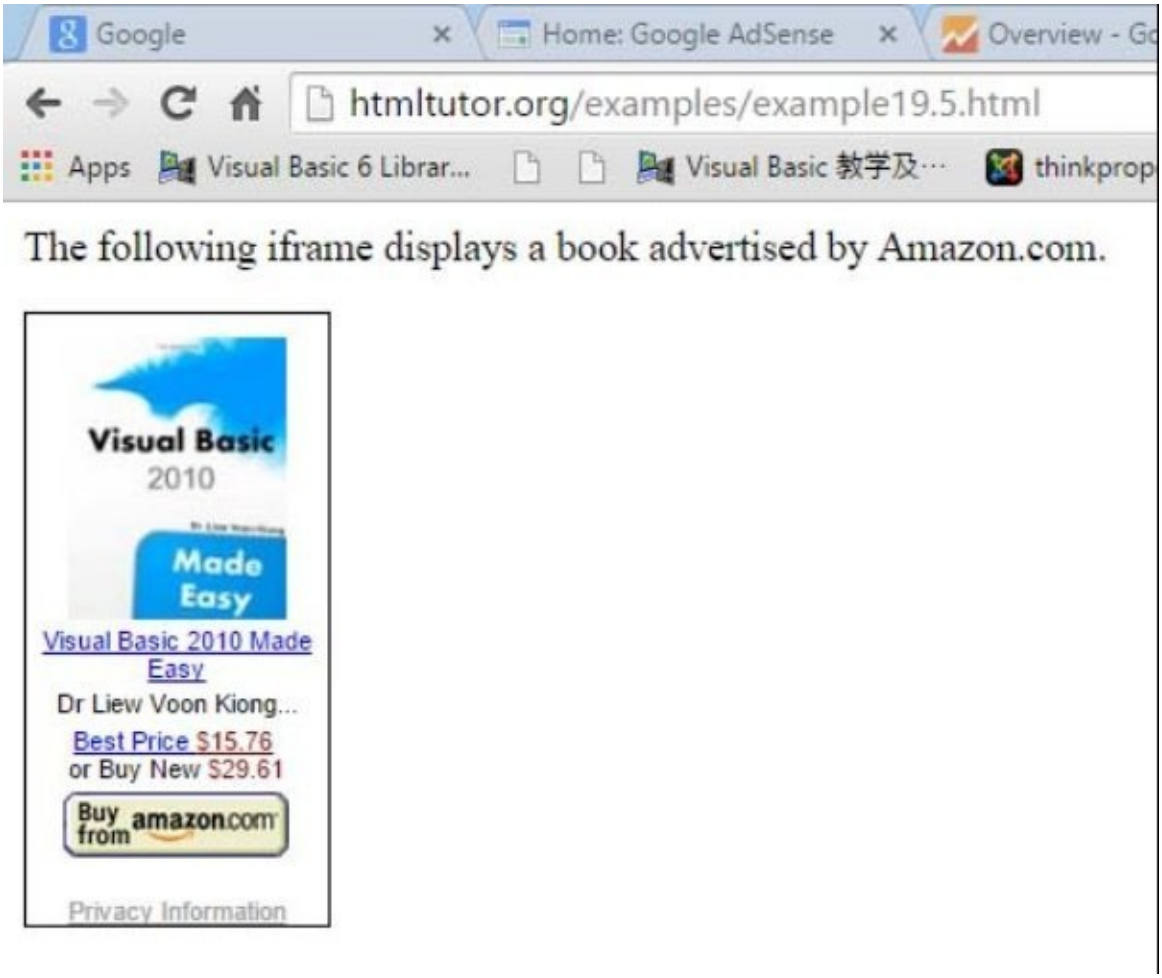
The iframe element creates a small window on a web page. It is often used to show an advertisement, image, google map and more as shown in Example 19.5

Example 12.5

<!DOCTYPE html>
<head>
<title> The Iframe Element</title>
</head>
<body>
The following iframe displays a book advertised by Amazon.com.

<iframe style="width: 120px; height: 240px;" src="http://rcm-na.amazon-adsystem.com/e/cm?t=liewvoonkiong&o=1&p=8&l=as1&asins=1467975192&ref=qf_ height="240" width="320" frameborder="0" marginwidth="0" marginheight="0" scrolling="no"></iframe>

The resulting webpage:

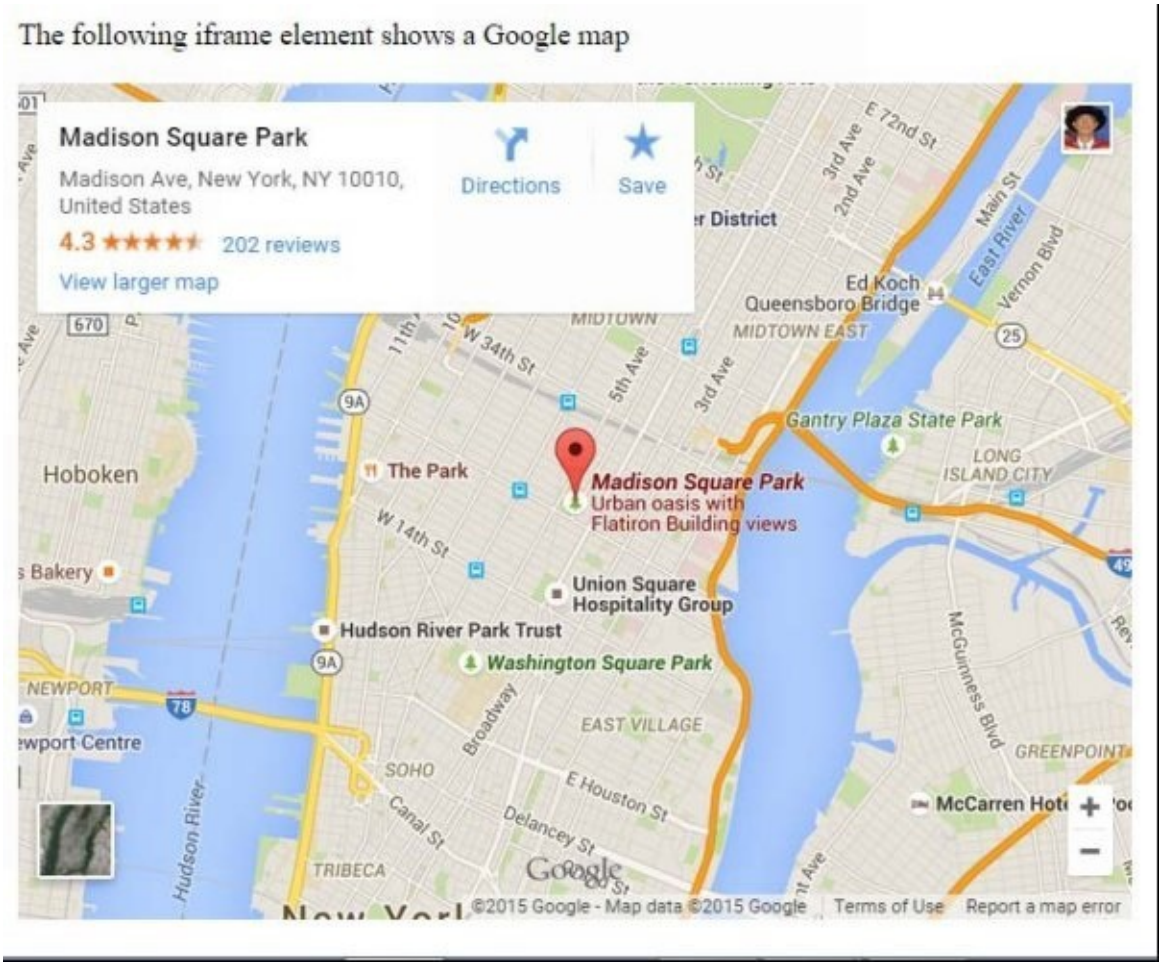


The following iframe element shows a Google map

<iframe src="https://www.google.com/maps/embed?

pb=!1m18!1m12!1m3!1d24180.66877716423!2d-73.985816723370 55!3d40.74918724635399!2m3!1f0!2f0!3f0!3m2!1i1024!2i768!4f13.1!3m3!1m2!1s0x0000000000000000%3A0x79997d3983197d7c!2sMadison+Square+Park!5e0!3m2!1s width=”600″ height=”450″ frameborder=”0″ style=”border:0″></iframe></p>
</body>
</html>

The following iframe element shows a Google map

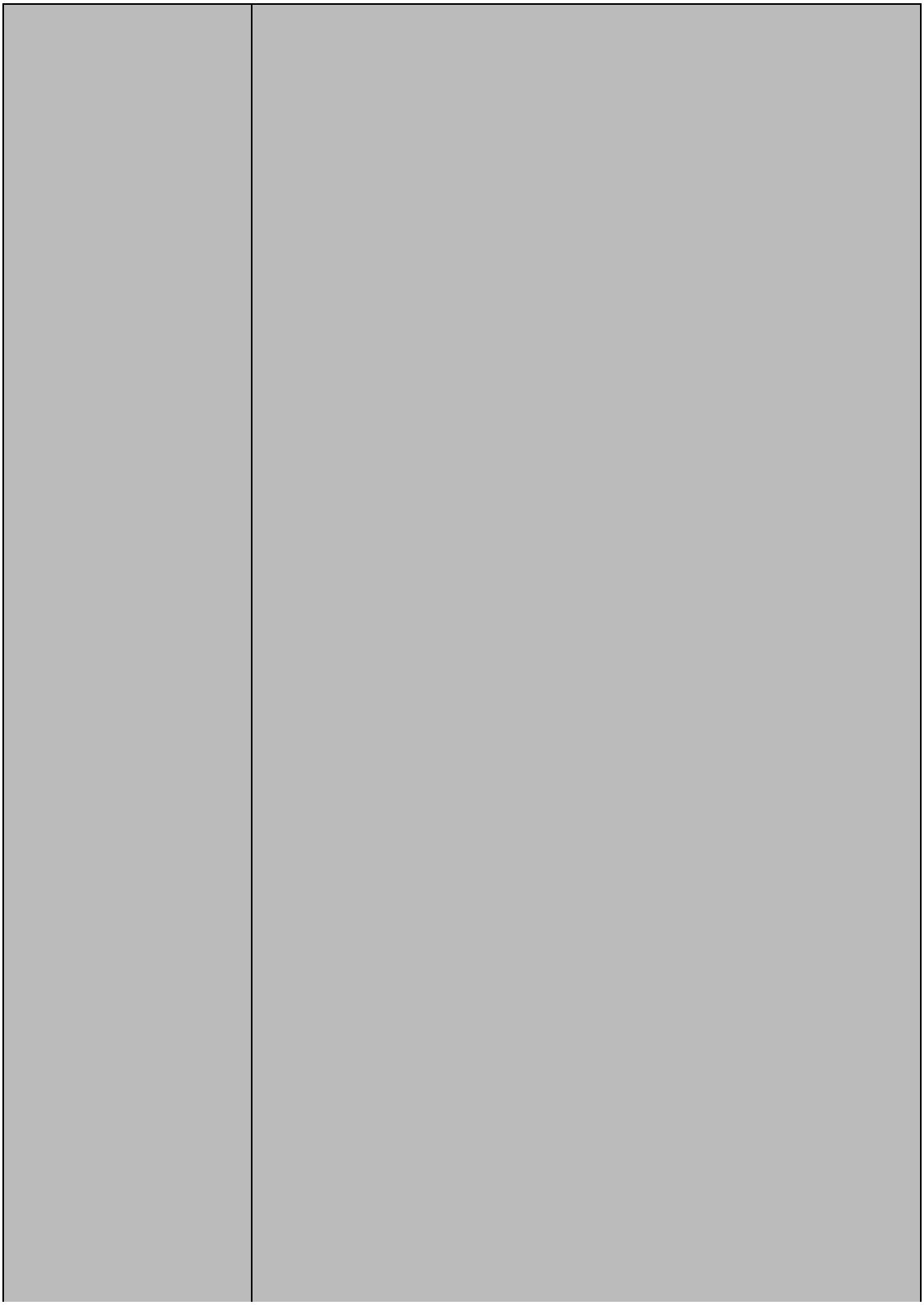


Chapter 13: Adding Audio and Video

Adding multimedia contents that include audio, video and animations to your websites can improve attractiveness, enable interactivity and increase their overall values. It benefits different kinds of websites in different ways. For example, using multimedia contents can help e-commerce sites to promote products and services, educational websites can use them to provide interactive learning environment, entertainment websites can use them to offer in-house entertainments, sports websites can use them to provide live telecast of sports events and more. In this chapter, we shall only focus on embedding video and audio in your web page.

13.1 Embedding Video into Your Web Page

Adding video to your web pages can be a challenge as videos come in many different formats. The formats include mp4, WebM, ogg, QuickTime, avi, flv, H264, Flash video and more. We may need to convert some of the video formats into formats that can be supported by major browsers. One of the methods is to use the **video** element. The video element only supports only mp4, WebM and ogg. Besides, some of the browsers may not support the aforementioned video formats. The video element comprises several attributes, they are src, width, height, poster, controls, autoplay, preload, none, auto and metadata. We shall examine the meaning of the aforementioned attributes.



Attribute	Descriptions
src	specifies the source (path)of the video
width	specifies the width of the video player
height	specifies the height of the video player
poster	specifies an image to be displayed while waiting video to load
controls	Enable the browser to provide controls for playback
autoplay	specifies that the video starts to play automatically once loaded
preload	Instructs the browser what to do with the video file when the page loads. It has three values, none, auto and metadata. The value none means the video is not loaded until the user presses the play button. The value auto means the video file is downloaded automatically. The value metadata means the browser just gather the video file information
loop	specifies that the video will be replay once ended

To embed a video file in a web page, use the following html structure:

<video width=”320″ height=”240″ preload

controls
loop>
<source src=”video.mp4″>

Your browser does not support the video tag.
</video>

You can add more attributes as listed in the table.

Example 13.1

<!DOCTYPE html>

```
<html>
<head>
<title>Embedding Video in HTML</title>
</head>
<body>
<video width=”320″ height=”240″ preload
controls
loop>
<source src=”slot2.mp4″>
Your browser does not support the video tag.
</video>
</body>
</html>
```

13.2 Embedding Audio into Your Web Page

To embed an audio file in your web page, you can use the **audio** element. The audio element comprises attributes similar to the attributes of the video element. The audio element only supports the mp3 and the ogg format.

The HTML structure of embedding an audio file is
<audio preload controls autoplay>

<source src=”audio.mp3″>

Your browser does not support the video tag.
</audio>

Example 13.2

```
<!DOCTYPE html>
<html>
<head>
<title>Embedding Audio in HTML</title>
</head>
<body>
<audio preload
controls
autoplay>

<source src=”audio.mp3″>

Your browser does not support the audio tag.
</audio>
</body>
</html>
```

Chapter 14: Introducing HTML5

14.1 Introduction to HTML5

HTML5 introduces many new elements that are used to separate a webpage into different sections. In the old html, we use the tag to divide a webpage into different sections, such as the header, the navigation section, the content, the article section and the footer. However, in HTML5, we will know the kind of content from the names of its elements. For examples, <header> indicate the header section, <nav> indicate the navigation section, <article> indicate the article section, <footer> indicated the footer section and more. A typical HTML5 document looks like likes:

Example 14.1

```
<html>
<head><title>Unordered List</title></head>
<body>
<header>
<h1> Fruits</h1>
<nav>
<ul>
<li><a href="">Link1</a></li>
<li><a href="">Link2</a></li>
<li><a href="">Link3</a></li>
</ul>
</nav>
</header>
<article>
HTML5 introduces many new elements that are used to separate a webpage into different sections. In the old html, we use the <div> tag to divide a webpage into different sections such as the header, the navigation section, the content, the article section and the footer
</article><article>
However in HTML5, we will know the kind of content from the names of its elements. For examples, <header> indicates the header section, <nav> indicates the navigation section, <article> indicates the article section, <footer> indicates the footer section and more.
</article><footer>
Copyright © 2009 htmltutor.org
</footer>
</body>
</HTML>
```

The resulting webpage

Fruits

- Link1
- Link2
- Link3
- Link4
- Link5

HTML5 introduces many new elements that are used to separate a webpage into different sections. In the old html, we use the tag to divide a webpage into different sections, such as the header, the navigation section, the content, the article section and the footer. However, in HTML5, we will know the kind of content from the names of its elements. For examples, header indicates the header section,
<nav>indicates the navigation section,
<article>indicates the article section,
<footer>indicates the footer section and more. Copyright © 2009 htmltutor.org

14,2 The <aside> element

The <aside> element is used to define some content that is related to the surrounding content.

Example 14.2

```
<!Doctype html>
<html>
<head>
<title> HTML Tutorial</title>
</head>
<body>
<article>
<p>
This is the one-stop HTML and HTML5 tutorial and resource centre. Besides that, we also offer CSS Tutorial and JavaScript Tutorial.
</p>
<aside>
<p<p style=”font-size:x-small>HTML stands for HyperText Markup Language, the language of the World Wide Web</p>
</aside>
</article>
</body>
</html>
```

The Output

This is the one-stop HTML and HTML5 tutorial and resource centre. Besides that, we also offer CSS Tutorial and JavaScript Tutorial.

HTML stands for HyperText Markup Language, the language of the World Wide Web

14.3 The <section> element

The <section> element is used to group related content in a webpage together. A webpage may have many different sections like latest articles, about us, product information, newsletter and more, we can use the <section> element to group them into separate section.

Example 14.2

```
<!Doctype html>
<html>
<head>
<title> Books</title>
</head>
<body>
<section ><h3>Best sellers</h3>
<ul>
<li>Love You Forever</li>
<li>Orphan Train</li>
<li>The Amber Treasure</li>
<li>Unbroken</li>
</ul>
</section>
<section>
<h3>Horror and Thriller</h3>
<ul>
<li>Pure Evil</li>
<li>Dark Places</li>
<li>Dracula Rising</li>
<li>Witch Hunt</li>
</ul>
<section>
</body>
</html>
```

The Output

Best sellers

- Love You Forever
- Orphan Train
- The Amber Treasure
- Unbroken

Horror and Thriller

- Pure Evil

- Dark Places
- Dracula Rising
- Witch Hunt

14.4 The <hgroup>Element

The <hgroup> element is used to group the headings <h1>, <h2>, <h3>,<h4>, <h5> and <h6> together so that they are treated as one single heading.

Example 14.3

```
<!Doctype html>
<html>
<head>
<title> Books</title>
</head>
<body>
<hgroup>
<h1>Best sellers</h1>
<h2>Science Fiction</h2>
<h3>Thriller</h3>
<h4>Romance</h4>
</hgroup>
</body>
</html>
```

The Output

Best sellers

Science Fiction

Thriller

Romance

14.5 The <figure> and <figcaption> Elements

The <figure> element is usually used to reference an image. However, it can also reference videos, graphs, diagrams and more. The <figcaption> is used to provide description for the contents defined by the <figure>element.

Example 14.4

```
<!Doctype html>
<html>
<head>
<title> figure and figcaption elements</title>
</head>
<body>
<figure>
<img src=”http://javascript-tutor.net/wp/wp-content/uploads/2011/12/javascriptcover2-256×300.jpg”>
<figcaption>This is a JavaScript Textbook</figcaption>
</figure>
</body>
</html>
```

Chapter 15: Introduction to CSS

What is Cascading Style Sheet (CSS)? HTML was the earliest mark-up language for the world wide web that presents text and multimedia contents to the Internet users, a mark improvement on the earlier text-only navigators or data distribution systems such as Gopher, FTP and WAIS.

HTML has now evolved into more recent and more powerful HTML5 and CSS (Cascading Style Sheet). CSS has made formatting and presenting web documents easier and more systematic. CSS is a W3C technology that allows webmaster to specify the presentation of elements on a webpage separately from the structure of the documents. The separation of structure from presentation makes creation and maintenance of web pages easier. Instead of formatting a website page by page, CSS allows web developers to create a style for all the pages using an external CSS file. Besides, you can create a unique style for an individual page or a section of a page.

CSS works together with HTML elements using a set of rules to control the look of a webpage such as background colour, font typeface, font-size, line spacing and more. The rule of CSS comprises two parts, the selector part and the declaration part. The selector is an HTML element and the declaration specifies rules to be adhered by the HTML element defined by the selector. The selector can define more than one HTML elements, separated by commas. You can also have more than one declaration, each separated by semicolons. A declaration consists of two parts, the property and its value.

The structure of a CSS rule is

selector { declaration1; declaration2, declaration 3;…}

For example

p{ font-family: verdana; font-size:12px; line-height:10%;}

A declaration consists of:

property: value

For example

font-size: 14 px

Table 1.1 shows some examples of CSS.

Table 1.1 List of CSS examples

Example	Explanation
p { font-size: 14px; color: blue;}	Indicates that all text in the paragraph must have font size 14px and blue in colour

h1{font-family:arial}	Indicates that the text specified by heading 1 shown be displayed as arial typeface
th{background-color:cyan}	Indicates the header row of the table will display a cyan background
em{text-decoration: underline;font-weight:bold}	Indicates that any text defined by em element is bold and underlined
h2,h3{font-family: verdana, font-weight:bold}	Indicates that text defined by h2 and h3 headings are of verdana typeface and is bold

Chapter 16: Inline Style

In chapter 15, we have learned the concepts of CSS and its basic structure. In this lesson, we shall learn how to incorporate CSS in a webpage.

There are basically three ways to apply CSS in a webpage namely **inline style**, **embedded style sheet** and **external style sheet**. In this chapter, we shall examine only the inline style method first. We shall explore other ways in coming chapters.

Inline style means that we apply CSS styles to individual elements in an HTML document; it will only change the style of the parts of the document specified by those elements.

The structure to apply inline CSS is by using the attribute **style** as shown below:

< element style=" property1:value1; property1:value2;…"}

Example

<h1 style="font-family: Arial; color:blue; font-size: 14px;}

Example 16.1

```
<!Doctype html>
<html>
<head>
<title> Inline CSS Style</title>
</head>
<body style=”background-color: #ffffcc;”>
<h1 style=”font-family: verdana; color: blue; font-size: 18px”> Inline CSS Style</h1>
<h2 style=”font-family: arial; color: red; font-weight: bold; font-size: 18px”>What is CSS</h2>
<p style=”font-family:  “Times New Roman”, Times, serif;”>
What is Cascading Style Sheet (CSS)? HTML was the earliest mark-up language for the world wide web that presents text and multimedia contents to the Internet users, a mark improvement on the earlier text-only navigators or data distribution systems such as Gopher, FTP and WAIS.</p>
<h3 style=”font-family: “Comic Sans MS”, cursive, sans-serif;font-size:14px; text-decoration: underline; color: #cc00ff”>HTML vs CSS</h3>
< p style=” font-family: “”Courier New”, Courier, monospace ; color: rgb(255,153,204)”> HTML has now evolved into more recent and more powerful HTML5 and CSS(Cascading Style Sheet). CSS has made formatting and presenting web documents easier and more systematic. CSS is a W3C technology that allows webmaster to specify the presentation of elements on a webpage separately from the structure of the documents. The separation of structure from presentation makes creation and maintenance of web pages easier. Instead of formatting a website page by page, CSS allows web developers to create a style for all the pages using an external CSS file. Besides, you can create a unique style for an individual page or a section of a page.</p>
</body>
</html>
```

The resulting webpage is shown on next page

Inline CSS Style

What is CSS

What is Cascading Style Sheet (CSS)? HTML was the earliest mark-up language for the world wide web that presents text and multimedia contents to the Internet users, a mark improvement on the earlier text-only navigators or data distribution systems such as Gopher, FTP and WAIS.

HTML vs CSS

HTML has now evolved into more recent and more powerful HTML5 and CSS(Cascading Style Sheet). CSS has made formatting and presenting web documents easier and more systematic. CSS is a W3C technology that allows webmaster to specify the presentation of elements on a webpage separately from the structure of the documents. The separation of structure from presentation makes creation and maintenance of web pages easier. Instead of formatting a website page by page, CSS allows web developers to create a style for all the pages using an external CSS file. Besides, you can create a unique style for an individual page or a section of a page.

Chapter 17: Embedded Style Sheet

In previous chapter, we have learned how to create inline style for a section of an HTML document using the **Style** attribute of the CSS. In this chapter, we shall learn how to create style for an HTML document using the embedded style sheet.

Embedded Style Sheet means we embed an entire style sheet into an HTML document's head section.

The style sheet section always starts by defining the style's types, or rather MIME type. For text document, we always start with

<style type="text/css">

The body of the style sheet goes within **<style type="text/css">** and **</style>**

The body of the style sheet declares rules for the HTML elements. For example,

p {font-size:16pt} declares that the font size of the p element in the entire HTML document. This means that when we use the p element in our HTML document, the font size of the text enclosed within the <p> tag will be 16.

You can add other attributes (or properties) to the p element, such as

p {color:green; line-height:14px; text-decoration: underline;}

This means that within the <p> tags, the text color is green, line spacing is 14 pixel and text is underlined.

Here is a sample embedded style sheet:

```
<html>
<head>
<meta http-equiv="Content-Type" content="text/html; charset=windows-1252″>
<title>New Page 1</title>
<style type="text/css">
body{background-color:yellow}
h1{font-size:20;color:blue}
p {font-size:14pt; color:red}
</style>
</head>
```

<body>

<h1>Embedded Style Sheet Example 1</h1>

The entire HTML document can be formatted using embedded Cascading Style Sheet, it makes formatting a web page much easier

</body>

The resulting webpage

Embedded Style Sheet Example 1

The entire HTML document can be formatted using embedded Cascading Style Sheet, it makes formatting a web page much easier

Chapter 18: External Style Sheet

If you wish to create a website with a uniform look, you can apply uniform formatting for all its webpages using an external style sheet. The procedure is to create a stand-alone CSS file and then link all the webpages to this file. In this way, you do not need to create a style for every webpage. If you need to make any changes in style for all the webpages, you just need to edit the external CSS file instead of editing all the webpages, thus saving a great deal of time.

To create a stand-alone CSS file, you can use any text editor such as notepad.

For example, you can create a style sheet such as this in notepad:

```
p  { font-size: 14 pt; color: red}
li { color: blue}
ul{ text-decoration: green}
```

Click save as and select All file types and save the document as **style.css.** (*A CSS file must end with extension css.)

Now, you can create an html document to link to the above CSS file. To link to the external CSS file, we use the **link** element together with the attributes **href, type** and **rel.** The attribute href is to specify the path of the CSS file, the type attribute is to specify the type of document it is linking to and rel is to specify the relationship between the CSS file and an HTML document. An HTML document can link to more than one external CSS files.

Please turn to next page to view an example.

Example 18.1

```
<html>
<head>
<link rel=”stylesheet”, type=”text/css” href=”style.css”>
</head>
<body>

<p> I have written and published a few books for the past two years, the books are listed below</p>
<ul>
<li>Visual Basic 6 Made Easy</li>
<li>Excel VBA Made Easy</li>
<li>Visual Basic 2008 Made Easy</li>
<li>Online Business Made Easy</li>
</ul>
</body>
</html>
```

Save this document as **exstyle.htm**.

The resulting webpage

I have written and published a few books for the past two years, the books are listed below

- Visual Basic 6 Made Easy
- Excel VBA Made Easy
- Visual Basic 2008 Made Easy
- Online Business Made Easy

Chapter 19: Types of CSS Selectors

In precedent chapters, you have learned that the basic structure of a CSS comprises selectors and their attributes. Besides that, you have also learned how to use various types of selectors to create styles for webpages. In this chapter, we shall examine the selectors in more details. We shall also introduce some new selectors which we have not learned before.

19.1 Universal Selector

A universal selector matches all elements on a webpage. Usually the asterisk symbol * is used to denote a universal selector.

Example

*{ font-family: verdana;}

The typeface verdana will be applied to the text of the whole document

19.2 Type Selector

A type selector matches every element type that appears in the document. Here are two examples

a) p { color:blue; font-family:arial;}

The CSS rules applied to all elements that appear in the document where the text enclosed between and tags will be displayed in blue color and in arial font.

b) h1,h2,h3{ font-weight: bold;}

Since the elements are sharing the same declarations, they can also be written as

h1{ font-weight: bold;}
h2{ font-weight: bold;}
h3{ font-weight: bold;}

The CSS rule applied to <h1>, <h2> and <h3> elements. All text enclosed between <h1> </h1>, <h2></h2> and <h3></h3> tags will be displayed as bold text.

19.3 ID Selector

An ID selector is used to uniquely identify an element in a document. A CSS ID selector contains a “#” followed by the ID value, which is an identifier. It matches an HTML element with an ID attribute that has a value that matches the one specified by CSS ID selector. For example:

CSS:

#section1 { font-size:14px}

The text include between the follow tag will have font size 14 pixel

HTML:

19.4 Class Selector

The class selector is similar to the ID attribute because is it also used to specify an element that matches the value of the class attribute. We create a class attribute using a period or dot like the following example:

CSS:

.intro{color:blue; font-family: verdana;font-size: 120%}

HTML:

<p class=”intro”><p>

All text enclosed between the above tags will be in blue, having typeface verdana and font size 120% bigger than the default font

Chapter 20: Child and Descendent Selectors

You have learned that there are four types of CSS selectors in previous chapter. In this lesson, we shall examine a group of selectors that resemble family members that are known as **child** and **descendant** selectors. You can differentiate them from one another by examining how the elements are related.

20.1 Child Selector

The child selector comprises two elements separated by the greater than sign “>”, the syntax is as follows:

element1>element2{css}

It means that element1 selects or matches element2 if and only if element2 is the direct child of element1. In another words, it only selects one level down the html structure.

Example 20.1

```
<!DOCTYPE html>
<html lang=”en”>
<head>
<title> Child Selector</title>
<style type=”text/css”>
ul>li{background-color:green;color:yellow; font-decoration:underline;}
</style>
</head>
<body>
<p>There are many types of selectors in CSS, as follows:
<ul>
<li>Universal Selector</li>
<ol>
<li>Example 1</li>
<li>Example 2</li>
</ol>
</li>
<li>Type Selector</li>
<ol>
<li>Example 1</li>
<li>Example 2</li>
</ol>
</li>
<li>ID Selector</li>
<ol>
<li>Example 1</li>
<li>Example 2</li>
</ol>
</li>
<li>Class Selector</li>
<ol>
<li>Example 1</li>
<li>Example 2</li>
</ol>
</li>
```

The resulting webpage:

There are many types of selectors in CSS, as follows:

- Universal Selector
    1. Example 1
    2. Example 2
- Type Selector
    1. Example 1
    2. Example 2
- ID Selector
    1. Example 1
    2. Example 2
- Class Selector
    1. Example 1
    2. Example 2

20.2 Descendent Selector

The descendent selector comprises two elements written side by side, the syntax is as follows:

element1 element2{css}

It means that element1 selects or matches element2 if element2 is a descendent of element1, where element2 includes direct and non-direct children, or you can say they are grandchildren, great grandchildren and more of element 1. In another words, it selects more than one level down the html structure.

Example 20.2

```
<!DOCTYPE html>
<html lang=”en”>
<head>
<title> Child Selector</title>
<style type=”text/css”>
ul li{background-color:green;color:yellow; font-decoration:underline;}
</style>
</head>
<body>
<p>There are many types of selectors in CSS, as follows:
<ul>
<li>Universal Selector</li>
<ol>
<li>Example 1</li>
<li>Example 2</li>
</ol>
</li>
<li>Type Selector</li>
<ol>
<li>Example 1</li>
<li>Example 2</li>
</ol>
</li>
<li>ID Selector</li>
<ol>
<li>Example 1</li>
<li>Example 2</li>
</ol>
</li>
<li>Class Selector</li>
<ol>
<li>Example 1</li>
<li>Example 2</li>
</ol>
</li>
```

The resulting webpage:

There are many types of selectors in CSS, as follows:

- Universal Selector
    1. Universal Selector>Example 1
    2. Universal Selector>Example 2
- Type Selector
    1. Universal Selector>Example 1
    2. Universal Selector>Example 2
- ID Selector
    1. Universal Selector>Example 1
    2. Universal Selector>Example 2
- Class Selector
    1. Universal Selector>Example 1
    2. Universal Selector>Example 2

Chapter 21: Sibling Selectors

We have learned about child and descendent selectors in previous lesson. In this lesson, we shall learn about another type of selector which also resembles members of a family, it is called sibling selector.

There are two types of sibling selectors; they are **adjacent sibling selector** and **general sibling selector.**

21.1 Adjacent Sibling Selector

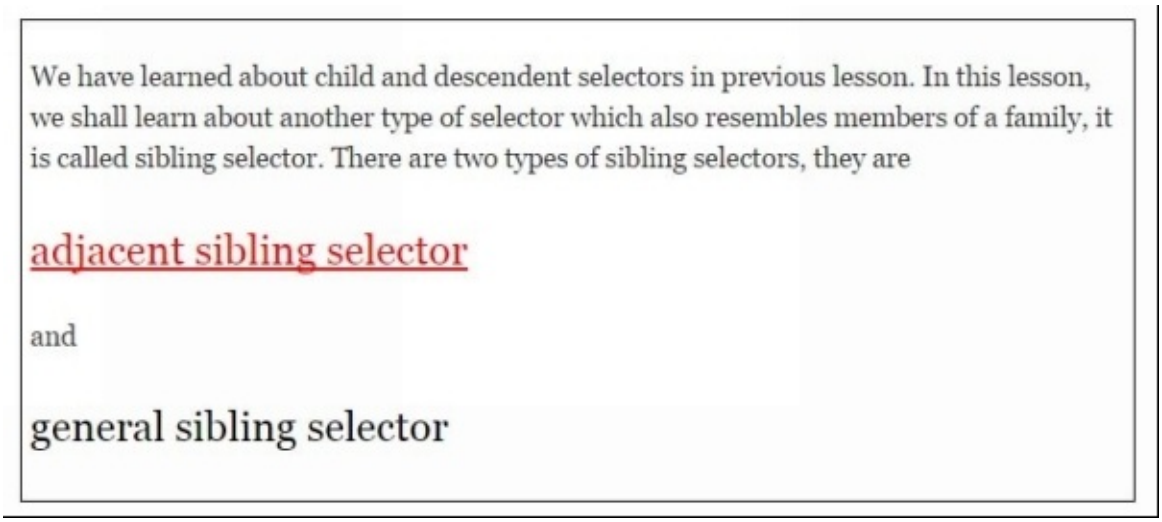
An adjacent sibling selector only selects or matches an element that is directly after another specific element. It uses the plus sign + to join the two elements together. The syntax is

element1+element2 { }

It means the selector targets the first element2 after any element1.

Example 21.1

```
<!Doctype html>
<html>
<head>
<title> Sibling Selector in CSS</title>
<style type=”text/css”>
p+h2{ text-decoration:underline;color:red}
</style>
</head>
<body>
<p>We have learned about child and descendent selectors in previous lesson. In this lesson, we shall learn about another type of selector which also resembles members of a family, it is called sibling selector.
There are two types of sibling selectors, they are <h2>adjacent sibling selector </h2> and <h2>general sibling selector</h2></p>
</body>
</html>
```



Notice that only the first h2 element was affected by p css styling, but the second h2 element is not affected.

21.2 General Sibling Selector

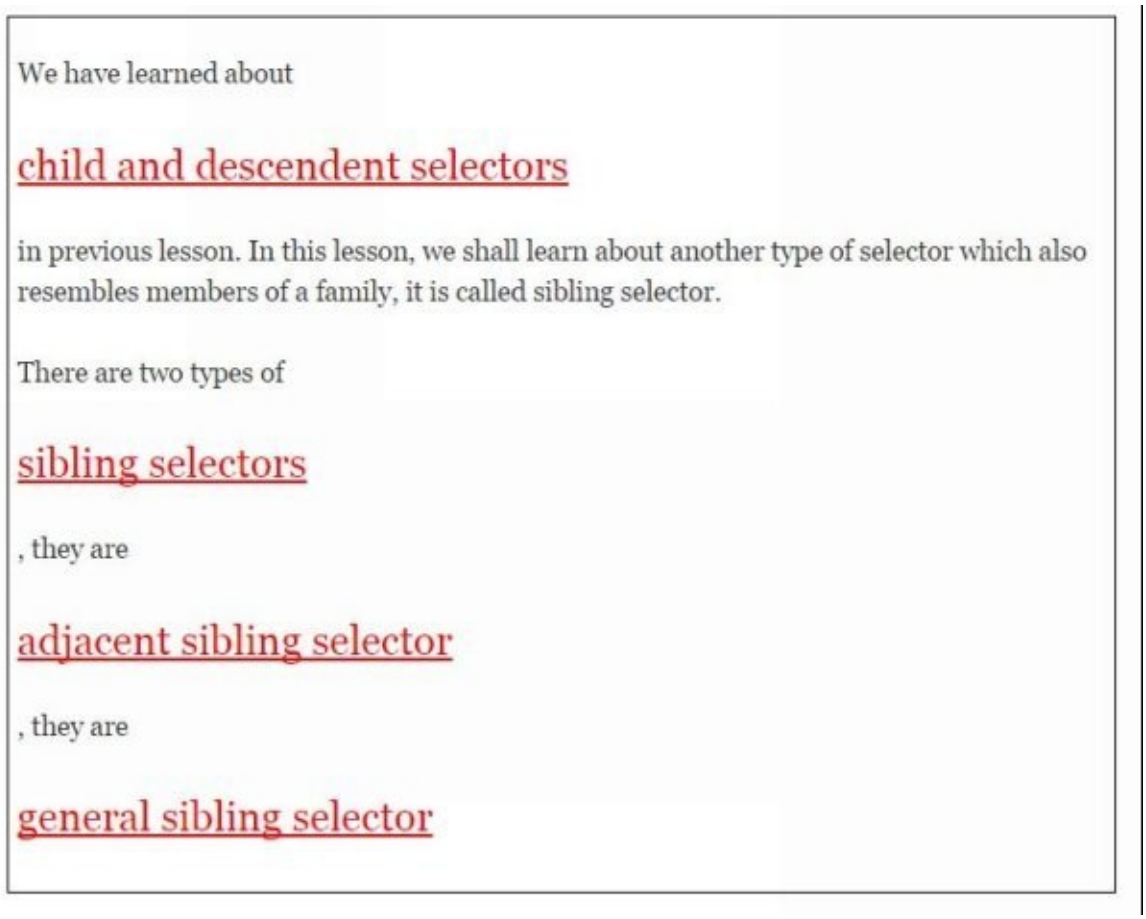
A general sibling selector selects or matches an element which maybe directly or not directly after another specific element. It uses the tilde sign ~ to join the two elements together. The syntax is

element1~element2 { }

Example 21.2

```
<!Doctype html>
<html>
<head>
<title> Sibling Selector in CSS</title>
<style type=”text/css”>
p~h2{ text-decoration:underline;color:red}
</style>
</head>
<body>
<p>We have learned about <h2>child and descendent selectors </h2>in previous lesson. In this lesson, we shall learn about another type of selector which also resembles members of a family, it is called sibling selector.There are two types of <h2>sibling selectors</h2>, they are <h2>adjacent sibling selector</h2> and <h2>general sibling selector</h2></p>
</body>
</html>
```

The resulting webpage:



*Notice that only the first and all subsequent h2 elements were affected by p css styling.

Chapter 22: The Precedence Rules

You have learned that there are various types of selectors in preceding chapters, now we shall examine the precedence rules that govern the selectors. It is important to understand which rule will be given precedence if two or more rules govern the same element. Based on these rules, the browser will determine what styles to apply to a given HTML element. Basically there are three rules, the sequential rule, the specificity rule and the important rule.

22.1 Sequential Rule

The rule applies when two identical elements are having different set of CSS properties, the latter will take precedent over the first. Let’s examine the following example:

Example 22.1

```
<!Doctype html>
<html>
<head>
<title> Sibling Selector in CSS</title>
<style type=”text/css”>

h2{ text-decoration:underline;color:red}
h2{text-decoration:none;color:blue;}
</style>
</head>
<body>
<p>You have learned about child and descendent selectors in previous lesson. In this lesson, we shall learn about another type of selector which also resembles members of a family, it is called sibling selector.

There are two types of sibling selectors, they are <h2>adjacent sibling selector </h2> and <h2>general sibling selector</h2></p>
</body>
</html>
```

The resulting webpage:

You have learned about child and descendent selectors in previous lesson. In this lesson, we shall learn about another type of selector which also resembles members of a family, it is called sibling selector.

There are two types of sibling selectors, they are

adjacent sibling selector

and

general sibling selector

*Notice that the CSS rules of the second selector h2 applies.

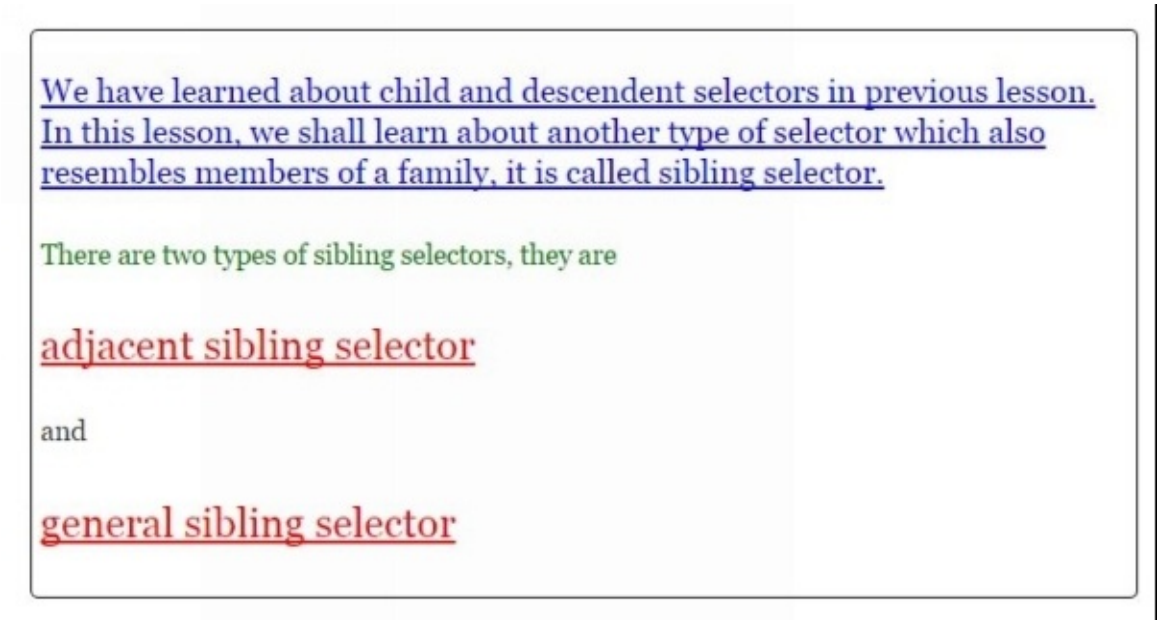
22.2 Specificity Rule

Among the CSS selectors, some are more specific than others. If one particular selector is more specific than the other selectors, the CSS style rules of the more specific selector shall applies. Let’s examine the following example:

Example 22.2

```
<!Doctype html>
<html>
<head>
<title> Sibling Selector in CSS</title>
<style type=”text/css”>

p {color: green; font-size:100%}

p ~h2{ text-decoration:underline;color:red;}
p#section{text-decoration:underline;color:blue;}
</style>
</head>
<body>
<p id=”section”>We have learned about child and descendent selectors in previous lesson. In this lesson, we shall learn about another type of selector which also resembles members of a family, it is called sibling selector.</p>

<p>There are two types of sibling selectors, they are <h2>adjacent sibling selector </h2> and <h2>general sibling selector</h2></p>
</body>
</html>
```

The resulting webpage:



* In our example, P~h2 and P#section are more specific than p.

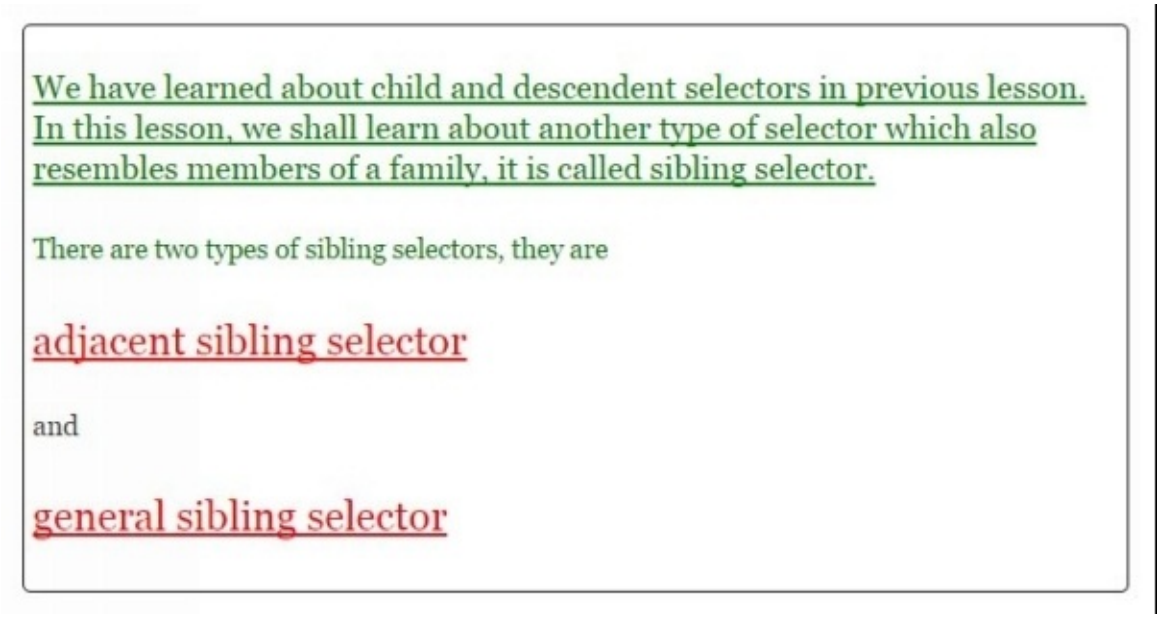
22.3 Important Rule

The important rule applies when you add **!important** after a property value. The !important keyword indicates that this selector should be given the top precedence over the other selectors. Let’s examine the Example 21.3 on next page:

Example 22.3

```
 <!Doctype html>
<html>
<head>
<title> Sibling Selector in CSS</title>
<style type=”text/css”>

p {color: green!important; font-size:100%}

p~h2{text-decoration:underline;color:red;}
p#section{text-decoration:underline;color:blue;font-size:120%;}
</style>
</head>
<body>
<p id=”section”>We have learned about child and descendent selectors in previous lesson. In this lesson, we shall learn about another type of selector which also resembles members of a family, it is called sibling selector.</p>

<p>There are two types of sibling selectors, they are <h2>adjacent sibling selector </h2> and <h2>general sibling selector</h2></p>
</body>
</html>
```

The resulting webpage:



* Notice that after adding the keyword !important to green under the p selector, it is given preference over the blue colour.

Chapter 23: Inheritance

To save time from having to design CSS styles for each and every element, we can use the inherit property to apply the styles from the parent element to the child elements. Child elements are elements contained inside a element which is called the parent element.

For example,

  I am the child element of div and I am the child element of p and also a child element of div .

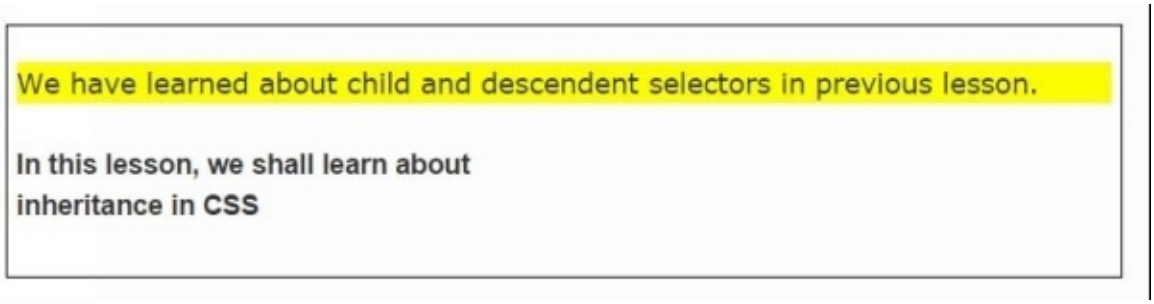
In the above example, p is the child element of div and b is the child element of both p and div.

Let’s examine the following example:

Example 23.1

```
<!Doctype html>
<html>
<head>
<title> Inheritancein CSS</title>
<style type=”text/css”>
body{font-family:Arial;font-weight:bold;}
.section{font-family:inherit;font-weight:inherit;}
</style>
</head>
<body>
<div style=”font-family:verdana;background-color:yellow;border:1 px solid black;font-weight:normal;”>
<p style=”inherit;”>
We have learned about child and descendent selectors in previous lesson. </p>
</div>
<div class=”section”><p>In this lesson, we shall learn about
inheritance in CSS</p>
</div>
</body>
</html>
```

The resulting webpage:



* Notice that the first p element inherits the css styles of the div element and the second p element inherits css styles from the body element.

Chapter 24: Adding Colours

We have learned how to add colours to a webpage using HTML colour codes in HTML Tutorial. In this lesson, we shall learn how to add colours to a webpage using CSS. In CSS; we can use the following ways to specify the colour:

- RGB Codes
- HEX Codes
- Colour Names

24.1 RGB Codes

RGB codes use a combination of red, green and blue colours to specify a colour. Each colour is 8 bits and has values ranging from 0 to 255. Therefore, they can create a total of 256x256x256=16,777,216 colours. The syntax for RGB codes in CSS is rgb(a,b,c) where a, b, c are integers range from 0 to 255. Some of the RGB codes and colours and are listed in Table 23.1

Table 24.1: RGB Codes and Colours

RGB Code	Colour
(255,0,0)	
(0,255,0)	
(0,0,255)	
(255,255,0)	
(255,0,255)	
(0,255,255)	
(255,165,0)	
(128,0,128)	
(255,255,255)	
(0,0,0)	

24.2 HEX Codes

The HEX codes are six-digit, three-byte hexadecimal numbers to represent the red, green and blue components of the colour. One byte represents a number in the range 00 to FF in hexadecimal number system. The syntax for HEX code in CSS is #aabbcc, where aabbcc is a combination of six-digit hexadecimal number. Table 23.2 shows some of the HEX Codes and the corresponding colours.

Table 24.2: HEX Codes and Colours

HEX Code	Colour
#ff0000	
#00ff00	
#0000ff	
#ffff00	
#ff00ff	
#00ffff	
#ffa500	
#800080	
#ffffff	
#000000	

24.3 Colour Names

CSS allocates 147 predefined colour names such as red, green, blue, cyan, magenta and more. Table 23.3 displays some basic colour names.

Table 24.3: Colour Names

Colour Name	Colour
red	
green	
blue	
yellow	
purple	
cyan	
orange	
magenta	
white	
black	

In CSS, we use color to specify text colour and background-color to specify background colour, as illustrated in Example 23.1

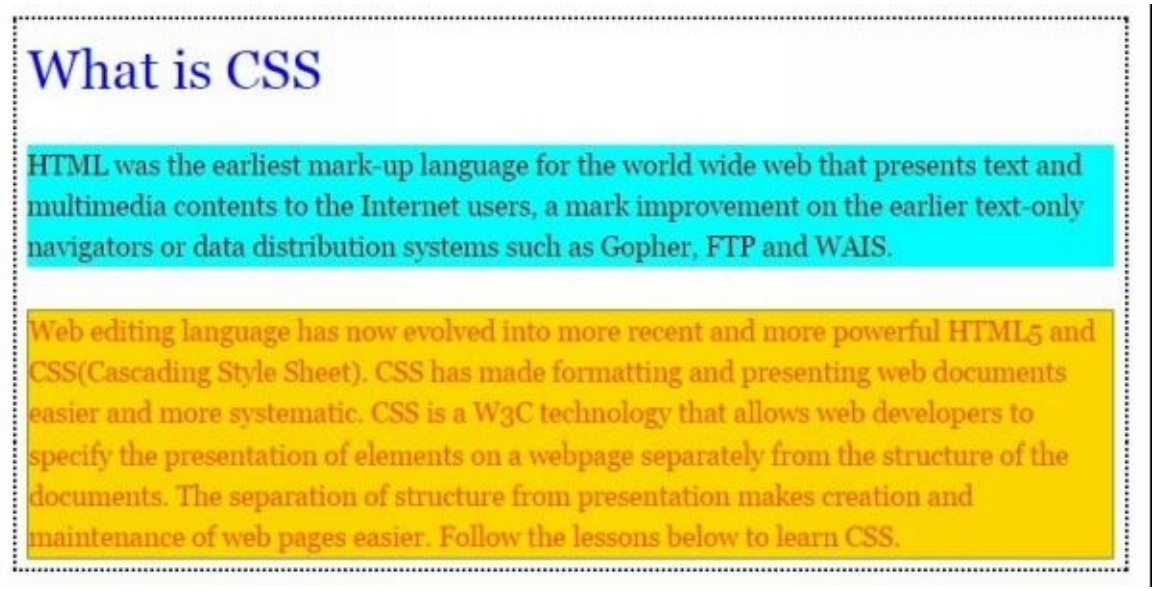
Example 24.1

<h1 style=”color:rgb(0,0,255)”>What is CSS</h1>

<p style=”background-color: #00ffff; color: maroon;”>HTML was the earliest mark-up language for the world wide web that presents text and multimedia contents to the Internet users, a mark improvement on the earlier text-only navigators or data distribution systems such as Gopher, FTP and WAIS. </p>

<div style=”border:1px solid olive; color:#ff4500;background-color: rgb((255,215,0);”>Web editing language has now evolved into more recent and more powerful HTML5 and CSS(Cascading Style Sheet). CSS has made formatting and presenting web documents easier and more systematic. CSS is a W3C technology that allows web developers to specify the presentation of elements on a webpage separately from the structure of the documents. The separation of structure from presentation makes creation and maintenance of web pages easier. Follow the lessons below to learn CSS.

The resulting webpage:



Chapter 25: Opacity

We have learned how to add colours to a webpage using RGB codes, HEX codes and colour names. However, using the aforementioned colour systems only create solid colours for an element, in other words, they have 100% percent opacity. In this lesson, we shall learn how to control the opacity of a colour so that the colour displayed by an element can have a certain degree of transparency. There are two ways we can specify the opacity of an element, first is by using opacity property and the other one is by using the RGBA codes

25.1 The Opacity Property

In CSS, opacity is expressed in terms of decimal values ranging from 0 to 1, where 0 is 100% transparent, 0.5 is 50% opaque(or 50% transparent) and 1 is 100% opaque(or zero transparency).

The syntax of opacity is **opacity:n**; where n has values ranging from 0 to 1.

For example,

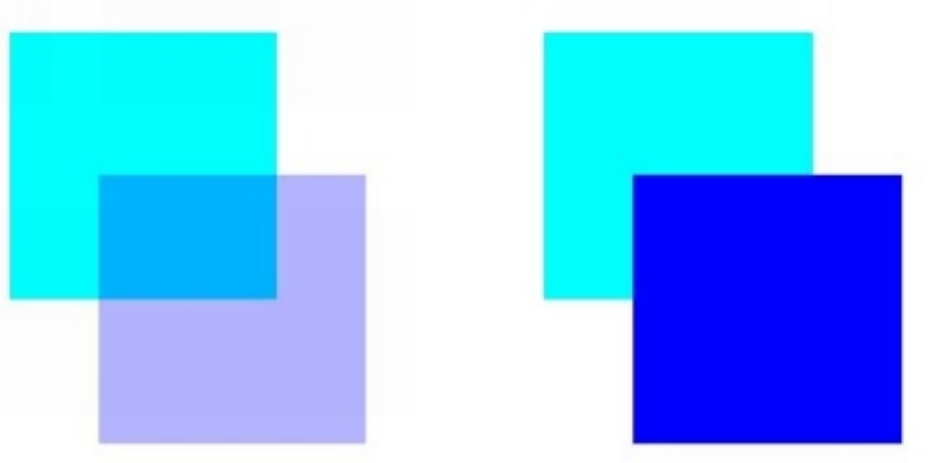
<div style=”background-color: red; opacity: 0.5;position: static; width: 50px; height:50px;left:400px;top:1150px;”>

creates a box with red background of 50% opacity.

<div style=”background-color: red; opacity: 0.7; position: static; width: 50px; height: 50px; left: 400px; top: 1300px;”>

creates a box with red background of 70% opacity.

The following example shows two sets of overlapping boxes, the cyan box on left has 100% opacity while the blue box has 0.3 opacity. Boxes on right both have solid colours.



25.2 The RGBA Codes

RGBA codes uses an a value to sepcify the opacity of a colour. The syntax is rgba(r,g,b,a), where a indicates degree of opacity with values ranging from 0 to 1. For example:

<div style=”background-color: rgba(255,0,0,0.5);position: static; width: 50px; height:50px;left:400px;top:2000px;”>

creates a box with red background of 50% opacity.

<div style=”background-color: rgba(255,0,0,0.7);position: absolute; width: 50px; height:50px;left:400px;top:2100px;”>

creates a box with red background of 70% opacity.

Chapter 26: HSL and HSLA Colour Codes

We have learned how to use the opacity property and RGBA codes to specify colours in CSS. Now we shall learn the newest ways to specify colours in CSS, i.e. HSL and HSLA colour codes.

26.1 HSL

HSL stands for Hue, Saturation and Lightness. Hue means a rainbow ring of colours, as shown below:

Hue in CSS is expressed in terms of angle, the values range from 0 to 360 degrees. 0 or 360 is red, 120 is green and 240 is blue.

Saturation means the amount of grey in a colour. It uses percentage to denote the amount of grey, where 0% means a shade of grey and 100% means full colour.

Lightness (or brightness) is the amount of white or black in a colour. It also uses percentage to denote the amount of lightness, 0% means black and 100% means white.

The syntax of HSL in CSS is **hsl(h, s%,l%)** where h represent hue, s% represent saturation and l% represent lightness.

Example 26.1

<div style=”background-color: hsl(120,30%,60%); width: 100px; height: 50px; margin-left: 50px;”>

produces the following colour

<div style=”background-color: hsl(270,100%,20%); width: 100px; height: 50px; margin-left: 50px;”>

produces the following colour

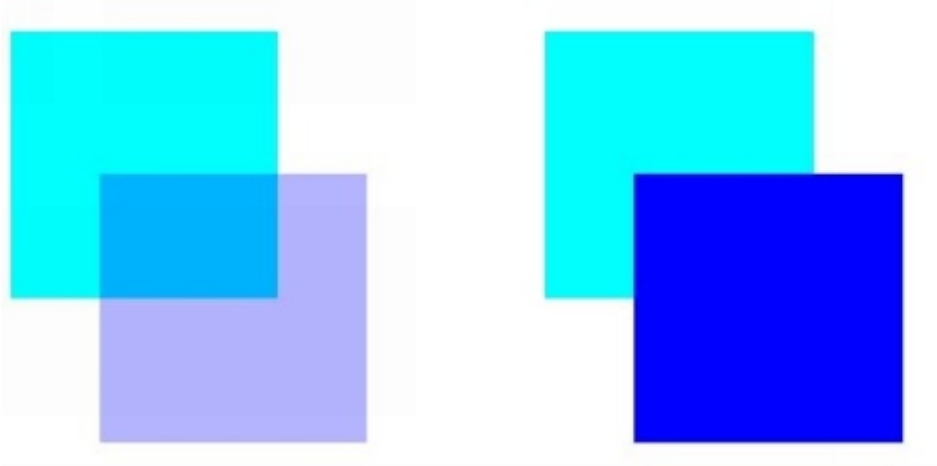
26.2 HSLA

HSLA adds another value known as Alpha which represents transparency. The syntax of HSLA is hsla(h,s%,l%,a) where a has values range from 0 to 1. The value of 1 means fully opaque and 0 means fully transparent.

Example 26.2

<div style=”background-color: hsla(180, 100%, 50%,1); position: static; margin-left: 100px; margin-top: 100px; width: 150px; height: 150px; z-index: 2;”>
<div style=”background-color: hsla(240, 100%, 50%,0.5); position: static; margin-left: 150px; margin-top: -70px; width: 150px; height: 150px; z-index: 2;”>
<div style=”background-color: hsla(180, 100%, 50%,1); position: static; margin-left: 400px; margin-top: -230px; width: 150px; height: 150px; z-index: 2;”>
<div style=”background-color: hsla(240, 100%, 50%,1); position: static; margin-left: 450px; margin-top: -70px; width: 150px; height: 150px; z-index: 2;”>

Produces the following boxes, the blue box on the left has an alpha value of 0.5 which means 50% transparent while the blue box on the right has an alpha value of 1 which means it is fully opaque.



Chapter 27: Typeface and Font-Size

In this chapter, we shall learn how to format the text of your webpage by choosing various typefaces and manipulate their appearances such as font-size, bold and italic

27.1 Typeface

In CSS, we use the the *font-family* property to specify the typeface of the text inside any HTML element. Some of the common typefaces are Serif , Arial , Sans-serif, Monospace , TimesNew Roman , Verdana , Courier , Comic Sans MS and more.

Example 27.1

<h1 style=”font-family:Comic Sans MS;”>Fomatting Text in CSS</h1>

<h2 style=”font-family:Verdana;”>Typefaces in CSS</h2>

<h3 style=”font-family:Monospacce;”>Font-family in CSS</h1>

In this lesson, we shall learn how to format the text of your webpage by choosing various typefaces and manipulate their appearances such as font-size, bold and italic

The resulting webpage:

Fomatting Text in CSS

Typefaces in CSS

Font-family in CSS

In this lesson, we shall learn how to format the text of your webpage by choosing various typefaces and manipulate their appearances such as font-size, bold and italic

27.2 Font-size

We use the font-size property to specify the font size for text. In CSS, there are a few ways to define the size of the font we will examine three most common ways, as follows:

a) Using Pixels

This is the most common way to specify the font size. The syntax is illustrated in the following example;

P{font-size:12px;}

The default size of text in a browser is 16px.

b) Using Percentage

Another way to specify the font size is using percentage. It is expressed in terms of the percentage of the default font-size of the browsers, which is 16px. For example,

H1{font-size: 125 %}

will specifies the size of the font within the H1 elements to be 20px.

However, if we specify the font size of the text inside the <body> tags to be 125%, which is equivalent to 20px, and then specify the font size of the text within an element inside the <body> tags to be 60%, then its font size is 20px multiple by 60% which give us a font size of 12px.

c) Using EMS

The last method of specifying font size is by using EMS, the width of the letter m. The conversion scale is 1em=16px

Example 27.1

<h1 style=”font-size:20px;>What is CSS ?</h1>

<p style=” font-size:120%”>CSS works together with HTML elements using a set of rules to control the look of a webpage such as background colour, font typeface, font-size, line spacing and more . The rule of CSS comprises two parts, the **selector** part and the **declaration** part.</p>

<p style=” font-size:0.8em”>The selector is an HTML element and the declaration specify rules to be adhered by the HTML element defined by the selector. The selector can define more than one HTML elements, separated by commas. You can also have more than one declaration, each separated by semicolons. A declaration consists of two parts, the property and its value.</p>

The resulting webpage

What is CSS ?

CSS works together with HTML elements using a set of rules to control the look of a webpage such as background colour, font typeface, font-size, line spacing and more. The rule of CSS comprises two parts, the selector part and the declaration part.

The selector is an HTML element and the declaration specifies rules to be adhered by the HTML element defined by the selector. The selector can define more than one HTML elements, separated by commas. You can also have more than one declaration, each separated by semicolons. A declaration consists of two parts, the property and its value.

Chapter 28: Text Transformation

In previous chapter, we have learned how to format text by specify font typeface and font size. In this lesson, we shall learn how to change case of text. Changing case is called text transformation in CSS.

We can transform text into uppercase, lowercase and capitalized text. The property to transform text is *text-transform* and the values are *uppercase, lowercase and* capitalize. Capitalize means the first letter of each word appears as capital letter. The syntaxes are illustrated in the following example:

```
p { text-transform: lowercase}

h2{text-transform: uppercase}

#section{text-transform: capitalize}
```

Example 28.1

```
<html>
<head>
<style type=”text/css”>
p { text-transform: lowercase}

h2{text-transform: uppercase}

#section{text-transform: capitalize}
</style>
</head>
<body>
<h2>What is CSS ?</h2>

<p>CSS works together with HTML elements using a set of rules to control the look of a webpage
such as background colour, font typeface, font-size, line spacing and more .
The rule of CSS comprises two parts, the SELECTOR part and the DECLARATION part.
</p>

<span id=”section”>The selector is an HTML element and the declaration specify rules to be adhered by the HTML element
defined by the selector. The selector can define more than one HTML elements, separated by commas.
You can also have more than one declaration, each separated by semicolons.
A declaration consists of two parts, the property and its value.</span>
</body>
</html>
```

The resulting webpage:

WHAT IS CSS?

css works together with html elements using a set of rules to control the look of a webpage
such as background colour, font typeface, font-size, line spacing and more .
the rule of css comprises two parts, the selector part and the declaration part.

The Selector Is An HTML Element And The Declaration Specify Rules To Be Adhered By The HTML Element
Defined By The Selector. The Selector Can Define More Than One HTML Elements, Separated By Commas.
You Can Also Have More Than One Declaration, Each Separated By Semicolons.
A Declaration Consists Of Two Parts, The Property And Its Value.

Notice that the heading has been changed to uppercase, the first paragraph has been changed to lowercase and the first letter of each word in last paragraph has been capitalized.

Chapter 29: Text Decoration

In previous chapter, we have learned how to change case of text using text-transform property. In this lesson, we shall learn how to add lines to text using *text-decoration* property in CSS. The text-decoration property has four values, namely *none*, *underline*, *overline* and *line-through*.

29.1 None

The none value of text-decoration property removes any lines added to the text. It is commonly used to remove underlines placed by the browsers for hyperlinks. The syntax is as shown in the following example:

```
h1{text-decoration:none;}
```

29.2 Underline

The underline value of text-decoration is to place a line under the text, The syntax is shown in the following example:

```
p{text-decoration:underline;}
```

29.3 Overline

The overline value of text-decoration is to place a line on top of the text. The syntax is :

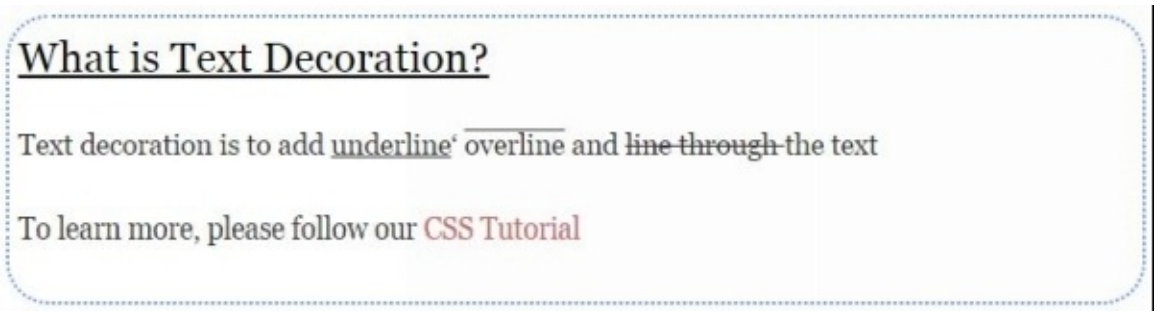
span{text-decoration:overline;”}

29.4 Line-Through

The line-through value of text-decoration is to draw a line through the text. The syntax is h3{text-decoration:line-through;”}

Example 29.1

```
<html>
<head>
<style type=”text/css”>
.under{text-decoration: underline;}

.over{text-decoration:overline;}

.lineth{text-decoration: line-through;}

a{text-decoration:none}

</style>

</head>
<body>
<h2 class=”under”>What is Text Decoration?</h2>

<p>Text decoration is to add <span class=”underline”>underline</span>’ <span class=”over”>overline</span> and <span class=”lineth”>line through </span>the text </p>

<p> To learn more, please follow our <a href=”http://htmltutor.org/index.php/css-tutorial/”> CSS Tutorial</a></p>

</body>
</html>
```



Chapter 30: Font-Weight and Font-Style

In HTML, we use the tag or <b> tag to create bold text and <i> tag to create italicised text. In CSS, we use the font-weight property and font-style property to create bold text and italic text respectively.

30.1 Font-Weight

We use **font-weight** property to specify whether the text is normal or bold. The syntaxes are illustrated by the following examples

p{font-weight:normal;}

h3{font-weight: bold;}

By default, text appears as normal without having to specify with the normal weight property's value. However, in certain cases, you may want to specify a paragraph as bold but you want a section of the paragraph appears as normal text, as shown in the following example:

Example 30.1

CSS works together with HTML elements using a set of rules to control the look of a webpage such as background colour, font typeface, font-size, line spacing and more . The rule of CSS comprises two parts, the **selector** part and the **declaration** part. The selector is an HTML element and the declaration specifies rules to be adhered by the HTML element defined by the selector. . The selector can define more than one HTML elements, separated by commas. You can also have more than one declaration, each separated by semicolons. A declaration consists of two parts, the property and its value.

The resulting webpage

CSS works together with HTML elements using a set of rules to control the look of a webpage such as background colour, font typeface, font-size, line spacing and more. The rule of CSS comprises two parts, the selector part and the declaration part. The selector is an HTML element and the declaration specifies rules to be adhered by the HTML element defined by the selector. **The selector can define more than one HTML elements, separated by commas. You can also have more than one declaration, each separated by semicolons. A declaration consists of two parts, the property and its value.**

30.2 Font-Style

We use *font-style* property to specify whether the text is normal or italic. The values are normal, italic and oblique. Though both italic and oblique produce slanted text, there is a slight difference between the two. Italic fonts are special fonts based on caligraphy whereas the oblique fonts are normal fonts slanted at an angle. The syntaxes are illustrated by the following examples:

p{font-style:normal;}

h1{font-style: italic;}

em{font-style: oblique}

It is difficult to see the difference between an italic text and an oblique text, as shown in the example below:

<p style=”font-style: italic;”>I am italic font</p>
<p style=”font-style: oblique;”>I am oblique font</p>

The resulting webpage

I am italic font

I am oblique font

Chapter 31: Creating Drop Shadow

We can make our text looks fancier by creating drop shadow. To create drop shadow for a text, we use the **text-shadow** property. The syntax to create a drop shadow is

text-shadow: x, y, z, color

x , y, z are values in pixels where

x represents the distance of the shadow to the left or right of the text. Positive value indicates the shadow is to the right and negative value indicates the shadow is on the left.

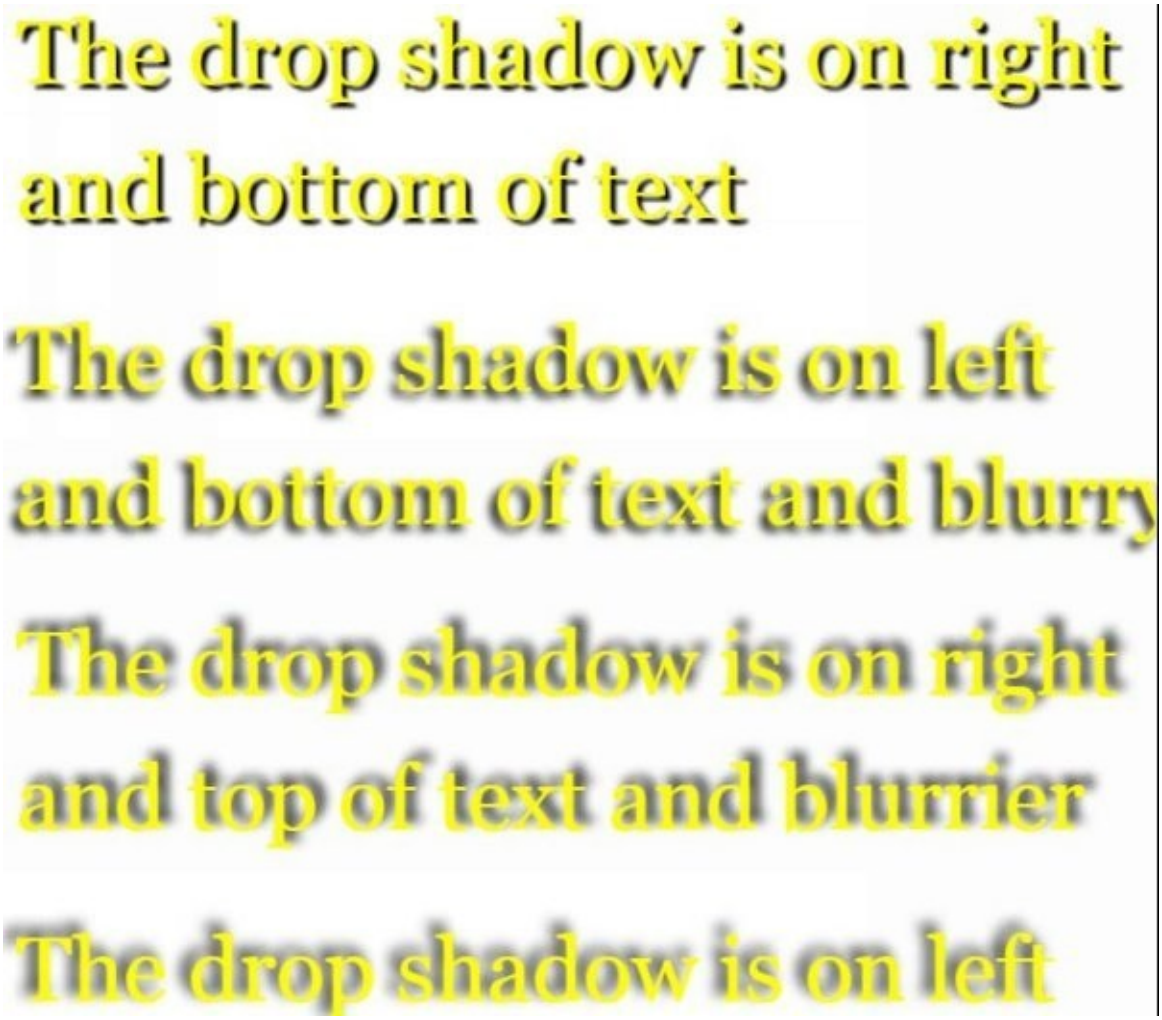
y represents the distance of the shadow to the top or bottom of the shadow. Positive value indicates the shadow at bottom of the text and negative value indicates the shadow is on top of the text.

z indicates how much blur it is added to the shadow. It is an optional value.

Example 31.1

```
<!Doctype html>
<html>
<head>
</head>
<body>
<h1 style=”font-size:48px;color:yellow;text-shadow:3px 3px 2px black”>
The drop shadow is on right and bottom of text</h1>
<h1 style=”font-size:48px;color:yellow;text-shadow:-4px 4px 6px black”>
The drop shadow is on left and bottom of text and blurry</h1>
<h1 style=”font-size:48px;color:yellow;text-shadow:5px -5px 8px black”>
The drop shadow is on right and top of text and blurrier</h1>
<h1 style=”font-size:48px;color:yellow;text-shadow:-5px -5px 10px black”>
The drop shadow is on left and top of text and blurriest</h1>
</body>

</html>
```

The resulting webpage



Chapter 32: Text Positioning

In CSS, we can manipulate text positioning by changing its alignment and indentation. There are three kinds of text positioning, horizontal alignment, vertical alignment and indentation.

32.1 Horizontal Alignment

We use the text-align property to align text horizontally. There are four types of horizontal alignments, left, right, centre and justify. The syntaxes are illustrated as follows:

H1{ text-align:left;}

H2{text-align:right;}

p{text-align: center;}

div{text-align: justify;}

Example 32.1

```
<!Doctype html>

<html>
<head>
</head>
<body>
<h1 style=”text-align: left;”>
The text is aligned  left</h1>
<h2 style=”text-align: right;”> The text is aligned right</h2>
<h3 style=”text-align: right;”> The text is  aligned center</h3>
<p style=”text-align: justify;”>In CSS, we can manipulate text positioning by changing its alignment and indentation. In addition, we can also control spacing between letters, spacing between words and spacing between lines of text.</p>
</body>
</html>
```

The resulting webpage

The text is aligned left

The text is aligned right

The text is aligned center

In CSS, we can manipulate text positioning by changing its alignment and indentation. In addition, we can also control spacing between letters, spacing between words and spacing between lines of text.

32.2 Vertical Alignment

In CSS , the **vertical-align** property it is commonly used to align text vertically in cells of table and text alongside an image. There are a couple of values associated with vertical-align property, namely text-top, middle, text-bottom, top, baseline and more.

Example 32.2

```
<!DOCTYPE html>
<html>
<head>
<title>Vertical Alignment</title>
<style type=”text/css”>

.onTop {vertical-align: text-top;}
.AtMiddle {vertical-align: middle;}
.AtBottom{vertical-align: text-bottom;}

</style>
</head>
<body>
<h1>Vertical Alignment in CSS</h1>
<p><img src=”http://htmltutor.org/wp/wp-content/uploads/2015/01/hue2.jpg”
class=”onTop”> Circle</p>
<p><img src=”http://htmltutor.org/wp/wp-content/uploads/2015/01/hue2.jpg”
class=”AtMiddle” /> Circle</p>
<p><img src=”http://htmltutor.org/wp/wp-content/uploads/2015/01/hue2.jpg”
class=”AtBottom” /> Circle</p>
</body>

</html>
```

The resulting webpage:

Circle

Circle

Circle

32.3 Text Indentation

Text indentation means how far back the first line of a paragraph is pushed to the right or left. The property is text-indent and its value is in pixel or ems. The value can be positive or negative. If the value is positive, the text is pushed to the right whereas if the value is negative the text is pushed to the left.

Example 32.3

<p style=”text-indent: 20px”>Text indentation means how far back the first line of a paragraph is pushed to the right or left. The property is text-indent and its value is in pixel or ems.

<p style=”text-indent: -20px”>The value can be positive or negative. If the value is positive, the text is pushed to the right whereas if the value is negative the text is pushed to the left.</p>

The resulting webpage

Text indentation means how far back the first line of a paragraph is pushed to the right or left. The property is text-indent and its value is in pixel or ems.

The value can be positive or negative. If the value is positive, the text is pushed to the right whereas if the value is negative the text is pushed to the left.

Chapter 33: Text Spacing

Another text formatting in CSS is to manipulate spacing in the text. There are three kinds of text spacing, namely line-height, letter-spacing and word-spacing.

33.1 Line-Height

The line-height property specifies the spacing between lines of text. The value of line-height can be in pixel or em where 1 em=16px. The syntax is as follows:

p{line-height: 1.2 em}

Example 33.1

```
<!DOCTYPE html>
<html>
<head>
<title>Line-height</title>
<style type=”text/css”>

.InPixel {line-height: 18px;}
.InEM {line-height: 2.0em;}
</style>

</head>
<body>
<h1>Line Height</h1>
<p class=”InPixel”>Another text formatting in CSS is to manipulate spacing in the text. There are three kinds of text spacing, namely line-height, letter-spacing and word-spacing.The line-height property specifies the spacing between lines of text. The line-height for this paragraph is 18px.</p>
<p class=”InEM”>Another text formatting in CSS is to manipulate spacing in the text. There are three kinds of text spacing, namely line-height, letter-spacing and word-spacing. The line-height property specifies the spacing between lines of text. The line-height for this paragraph is 2.0em.</p>
</body>

</html>
```

The resulting webpage

Another text formatting in CSS is to manipulate spacing in the text. There are three kinds of text spacing, namely line-height, letter-spacing and word-spacing.The line-height property specifies the spacing between lines of text. The line-height for this paragraph is 18px.

Another text formatting in CSS is to manipulate spacing in the text. There are three kinds of text spacing, namely line-height, letter-spacing and word-spacing.The line-height property specifies the spacing between lines of text. The line-height for this paragraph is 2.0em.

33.2 Letter Spacing

We can manipulate spacing between letters in CSS using the letter-spacing property. The value can be in pixel or em. The syntax is as follows:

```
h1{letter-spacing:0.3em}
```

Example 33.2

```
<h1 style=”letter-spacing: 10px;”>Spacing of 10 px</h1>
<h1 style=”letter-spacing: 0.5em;”>Spacing of 0.5em</h1>
```

The resulting webpage

Spacing of 10 px

Spacing of 0.5em

33.3 Word Spacing

We can also manipulate spacing between words using the word-spacing property. The value can be in pixel or em. The syntax is as follows:

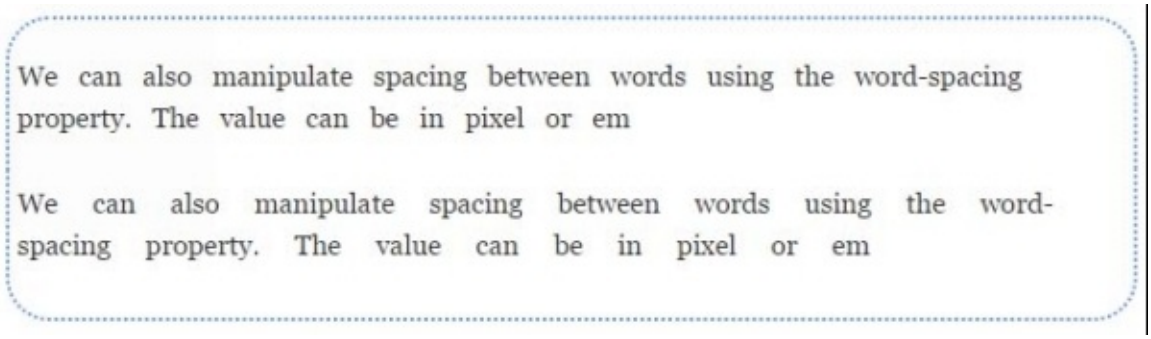
p{word-spacing:0.5 em}

Example 33.3

 We can also manipulate spacing between words using the word-spacing property. The value can be in pixel or em

 We can also manipulate spacing between words using the word-spacing property. The value can be in pixel or em

The resulting webpage:



Chapter 34: Creating Drop Cap and First Line Styling

We can create drop cap for a paragraph in CSS using the pseudo element first-letter. A drop cap is a large capital letter at the beginning of a paragraph. Besides, we can also create CSS styles for the first line of a paragraph using the pseudo element first-line.

34.1 Creating Drop Cap

We use the first-letter pseudo element to create a drop cap of a block of text, normally the first letter of a paragraph. the syntax is illustrated as follows:

 p::first-letter{font-size:20px; color:blue}

The code above will create drop cap for every paragraph, as illustrated in Example 33.1

Example 34.1

```
<!DOCTYPE html>
<html>
<head>
<title>Drop Cap</title>
<style type=”text/css”>p::first-letter{font-size: 30px;color:red;
}
</style>
</head>
<body>
<p>We can create drop cap for a paragraph in CSS using the pseudo element first-letter. A drop cap is a large capital letter at the beginning of a paragraph. Besides, we can also create CSS styles for the first line of a paragraph using the pseudo element first-line.</p>
<p>We use the first-letter pseudo element to create a drop cap of a block of text, normally the first letter of a paragraph. The syntax is illustrated as follows:</p>
</body>
</html>
```

The resulting webpage

We can create drop cap for a paragraph in CSS using the pseudo element first-letter. A drop cap is a large capital letter at the beginning of a paragraph. Besides, we can also create CSS styles for the first line of a paragraph using the pseudo element first-line.

We use the first-letter pseudo element to create a drop cap of a block of text, normally the first letter of a paragraph. The syntax is illustrated as follows:

To avoid creating a drop cap for every single paragraph, we can use class attribute to specify only a certain text block will have a drop cap, as illustrated in Example 33.2

Example 34.2

```
<!DOCTYPE html>
<html>
<head>
<title>Drop Cap</title>

<style type=”text/css”>

P.Fletter:first-letter{font-size: 30px; color:blue;}

</style>

</head>
<body>

<p class=”Fletter”>We can create drop cap for a paragraph in CSS using the pseudo element first-letter. A drop cap is a large capital letter at the beginning of a paragraph. Besides,we can also create CSS styles for the first line of a paragraph using the pseudo element first-line..</p>
<p>We use the first-letter pseudo element to create a drop cap of a block of text, normally the first letter of a paragraph. The syntax is illustrated as follows :</p>
</body>

</html>
```

The resulting webpage

We can create drop cap for a paragraph in CSS using the pseudo element first-letter. A drop cap is a large capital letter at the beginning of a paragraph. Besides, we can also create CSS styles for the first line of a paragraph using the pseudo element first-line.

We use the first-letter pseudo element to create a drop cap of a block of text, normally the first letter of a paragraph. The syntax is illustrated as follows:

34.2 Creating Style for First Line

We can create CSS style for the first line of a block of text using the first-line pseudo element. The syntax is as follows:

p::first-line{font-weight:bold, color:blue;} or

p.Fline:first-line{font-weight:bold, color:blue;}

Example 34.3

```
<!DOCTYPE html>
<html>
<head>
<title>First Line Styling</title>
<style type=”text/css”>

P.Fline:first-line{text-decoration:underline;font-weight:bold;color:blue;}
</style>

</head>
<body>
<p class=”Fline”>We can create drop cap for a paragraph in CSS using the pseudo element first-letter. A drop cap is a large capital letter at the beginning of a paragraph. Besides,we can also create CSS styles for the first line of a paragraph using the pseudo element first-line..</p>

</body>

</html>
```

The resulting webpage

We can create drop cap for a paragraph in CSS using the pseudo element first-letter. A drop cap is a large capital letter at the beginning of a paragraph. Besides, we can also create CSS styles for the first line of a paragraph using the pseudo element first-line.

Chapter 35: Creating Link Styles

In a webpage, links are usually shown in blue colour with an underline by most browsers. However, we can create styles for the links using CSS. Basically we can use the anchor pseudo-classes to customise the link styles. There are four anchor pseudo-classes:

- a:link
- a:visited
- a:hover
- a:active

35.1 a:link

The a:link pseudo class allows us to create styles for unvisited links, as shown in the following example:

```
a:link{

color:cyan;

text-decoration:none;

}
```

35.2 a:visited

The a:visited pseudo class allows us to created styles for visited links(links that have been clicked by users), as show in the following example:

```
a:visited{
 color:pink;
text-decoration:underline;
}
```

35.3 a:hover

The a:hover pseudo class allows us to create styles for a link when the user places his mouse over the link, as show in the following example:

```
a:hover{
 color:red;
text-decoration:underline;
}
```

35.4 a:active

The a:active pseudo class allows us to create styles for link at the moment it is being pressed by the user, as shown in the following example:

```
a:active{

color:blue;

text-decoration:underline;

}
```

Now we shall combine the four pseudo classes to create styles for the following link:

```
<!DOCTYPE html>
<html>
<head>
<title>Pseudo Classes</title>
<style type=”text/css”>

a:link{  color:cyan;

text-decoration:none;

}

a:visited{  color:pink;

text-decoration:underline;

}

a:hover{  color:red;

text-decoration:underline;

}

a:active{  color:blue;

text-decoration:underline;

}

</style>
</head>
<body>
<p>We can create drop cap for a paragraph in CSS using the pseudo element first-letter. A drop cap is a large capital letter at the beginning of a paragraph. Besides,we can also createCSS styles for the first line of a paragraph using the pseudo element first-line.</p>

</body>
</html>
```

Chapter 36: Customising Box

Each element in HTML is considered a box. For example, <p>, , <img> and more are boxes. We can customize the box using css styles by manipulating its various properties like width, height, padding, margin, background-color, border-style, border-width, box-shadow and more.

36.1 Width and Height

You can use width and height properties to set the dimension of a box. Typically we use pixel (px) to specify width and height, but we can also use percentage and ems to control the size.

Example 36.1

<p style=”height:80%;width:90%; background-color:cyan;”>We can customize the box using css styles by manipulating its various properties like width, height, padding, margin ,background-color, border-style, border-width, box-shadow and more.</p>

We can customize the box using css styles by manipulating its various properties like width, height, padding, margin, background-color, border-style, border-width, box-shadow and more.

We can also add the min-width property to specify the smallest size the box can be displayed on the browsers and the max-width property to specify the maximum size the box can be displayed on the browsers. In addition, we can also use min-height and max-height properties to specify the minimum height and maximum height the box can be displayed on the browsers respectively.

Besides, we can also use the overflow property to customize how the content in a box can be displayed if the content within the box is larger than the box. We can add two overflow property values hidden and scroll respectively, the first is to simply hide the extra content and the second is to add a scrollbar to the box

36.2 Border

We can customize the look of the box's border by controlling its width, border style and border colour. To control the border width, we use the border-width property. You can either use three default values thin, medium and thick to specify the border width or you can use pixels to specify the border width. You can also specify different widths for the four borders using border-top-width, border-right-width, border-bottom-width and border-left-width properties. However, you can combine the four properties into one by simply assigning four values to border-width, as illustrated below:

border-width: 3px 2px 1.5 px 4px

To control the border styles, we can use the border-style property. There are several border-style values, solid, dotted, dashed, double, groove, ridge, inset, outset and hidden. The values are explained in the following table:

Value	Border style
solid	solid line
dotted	dotted line
dashed	dashed line
double	double line
groove	line craved into the page
ridge	link stick out from the page
inset	line embedded into the page
outset	line appears coming out of screen
hidden or none	no border

Example 36.2

<p style=”border-width:thin; border-style: solid”>We can customize the look of the box’s border by controlling its width, border style and border color.</p>

<p style=”border-width:medium; border-style: dotted”>We can customize the look of the box’s border by controlling its width, border style and border color.</p>

<p style=”border-width:thick; border-style: dashed”>We can customize the look of the box’s border by controlling its width, border style and border color.</p>

<p style=”border-width:3px 2px 4px 1.5px; border-style: double”>We can customize the look of the box’s border by controlling its width, border style and border color.</p>

<p style=”border-width:thick; border-style: groove”>We can customize the look of the box’s border by controlling its width, border style and border color.</p>

<p style=”border-width:thick; border-style: ridge”>We can customize the look of the box’s border by controlling its width, border style and border color.</p>

<p style=”border-width:thick; border-style: inset”>We can customize the look of the box’s border by controlling its width, border style and border color.</p>

<p style=”border-width:thick; border-style: outset”>We can customize the look of the box’s border by controlling its width, border style and border color.</p>

The resulting webpage

We can customize the look of the box’s border by controlling its width, border style and border color.

We can customize the look of the box’s border by controlling its width, border style and border color.

We can customize the look of the box’s border by controlling its width, border style and border color.

We can customize the look of the box’s border by controlling its width, border style and border color.

We can customize the look of the box’s border by controlling its width, border style and border color.

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We can customize the look of the box’s border by controlling its width, border style and border color.

We can customize the look of the box’s border by controlling its width, border style and border color.

36.3 Border Colour

We can specify the border colour using the border-color property. You can also specify the colours of four borders using border-top-color, border-right-color, border-bottom-color and border-left-color properties. However, you can also specify all four colours at one go using border-color:colour1 colour2 colour3 colour4 . The values of the colours can be RGB values, Hex codes or CSS colour names.

Example 36.3

<p style=”border-width:thick, border-style:solid; border-color: red, darkgreen, blue, darkcyan”>We can specify the border colour using the border-color property. You can also specify the colours of four borders using border-top-color, border-right-color, border-bottom-color and border-left-color properties</p>

We can specify the border colour using the border-color property. You can also specify the colours of four borders using border-top-color, border-right-color, border-bottom-color and border-left-color properties

Last but not least, we can actually specify the border width, border style and border color all in one line using the border property, as illustrate in Example 35.4

Example 36.4

<p style=”border:3px dashed #ff00ff”>Last but not least, we can actually specify the border width, border style and border color all in one line using the border property</p>

Last but not least, we can actually specify the border width, border style and border color all in one line using the border property

Chapter 37: Customising Lists

We have learned how to create ordered list and unordered list in chapter 3, now we shall learn how to add styles to the lists using CSS properties related to lists.

37.1. The list-style-type property

The list-style-type allows us to control the style of the numbering for ordered lists and to control the shape of the bullet points for the unordered lists. For the ordered list, the values of the list-style-type properties are listed in the table below:

Values	Example
lower-roman	i,ii, iii,iv
upper-roman	I,II,III,IV
lower-alpha	a,b,c,d
upper-alpha	A,B,C,D
decimal	1,2,3,4
decimal-leading-zero	01,02,03,04

For the unordered lists, the values are none, disc(•), circle(o) and square(■)

The styles can be applied to <ul>, <ol> and <li> elements

Example 37.1

```
<ul style=”list-style-type:disc”>
<li>Best sellers</li>
<li>Science Fiction</li>
<li style=”list-style-type:cricle”> Thriller</li>
<li style=”list-style-type:square”> Romance</li>
</ul>
```

The Output

- Best sellers
- Science Fiction
- Thriller
- Romance

Example 37.2

```
<ol style=”list-style-type:upper-roman”>
<li>Best sellers</li>
<li>Science Fiction</li>
<li style=”list-style-type:decimal”> Thriller</li>
<li style=”list-style-type:lower-alpha”> Romance</li>
<li style=”list-style-type:lower-roman> Computer & Internet</li>
</ol>
```

The Output

I. Best sellers
II. Science Fiction
3. Thriller
4. Romance
5. Computer & Internet

Notice that the list-style-type value specified by the <li> element will override the list-style-type value specified by the <ul> and the <ol> elements.

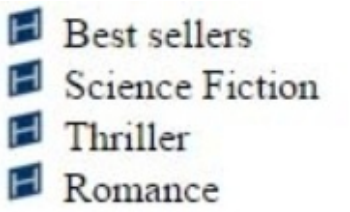
37.2 The list-style-image property

The list-style-image property let us specify an image to replace the bullet points. It is illustrated in the following example:

Example 37.2

```
<html>
<head>
<title>List-style-image</title>
<style type=”text/css”>
ul{list-style-image:url(“http://htmltutor.org/wp/wp-content/uploads/2014/10/html.ico”);}
</style>
</head>
<body>
<ul>
<li>Best sellers</li>
<li>Science Fiction</li>
<li> Thriller</li>
<li> Romance</li>
</ul>
</body>
</html>
```

The output



37.3 The list-style-position property

The list-style-position specifies the position of the numbers or bullets appear on the outside or inside of the list. Its values are **inside** and **outside**. It works for both unordered list and ordered list.

Example 36.3

```
<ul style=”list-style-position:inside;width:200px”>
<li>HTML stands for Hypertext Mark-up Language, the language of the World Wide Web. It is used to create web pages and build websites. </li>
<li>CSS stands for Cascading Style Sheet. CSS allows web developers to specify the presentation of elements on a webpage separately from the structure of the documents. </li>
<li>What is JavaScript?It is a scripting language that works with HTML to enhance web pages and make them more interactive.</li>
</ul>
```

The Output

If you change the unordered to ordered list by replacing ul with ol, you will obtain the following output:

*Notice that the bullets and numbers lie inside the first line of the text. The default position is outside.

Chapter 38: Customising Tables

We can customise a table in CSS using its various properties. For example, we can use the width property to adjust the width of a table. The table properties are listed below:

Property	Description
border	to specify the border of the table, usually in pixel
border-top	to specify the top border of the table headers, usually in pixel
border-bottom	to specify the bottom border of the table headers, usually in pixel
width	to specify the width of the table, can be in pixel or percentage
padding	to specify spacing between the border of each cell and its content
background-color	to specify the background colour of the cells or the background colour of the alternating rows
:hover	to highlight a row when the mouse move on top of it
text-align	to align the text to the left or right of a cell
vertical-align	to align the content of the top position of a cell
tr:nth-child(even)	to specify different style for alternative rows, usually in terms of background colour

Table 38.1: Table Properties

We can also use other properties such as text-transform , color, text-indent , font-weight and more to customise the table further.

Example 38.1

```
<!DOCTYPE html>
<html>
<head>
<style type=”text/css”>
table {width:90%; border: 2px solid blue;}
th, td{ padding: 3px 5px 5px 7px}
th{ font-size:110%; text-transform: uppercase; font-weight:bold; border -top: 2 px solid
 #cc669;
border-bottom: 2 px solid #cc0000;
vertical-align:top;}
tr:nth-child(even){background-color: cyan;}
tr:hover{ background-color: magenta;}
</style>
</head>
<body>

<table>
<tbody>
<tr>
<th>Property</th>
<th>Description</th>
</tr>
<tr>
<td>border</td>
<td>to specify the border of the table, usually in pixel</td>
</tr>
<tr>
<td>border-top</td>
<td>to specify the top border of the table headers, usually in pixel</td>
</tr>
<tr>
<td>border-bottom</td>
<td>to specify the bottom border of the table headers, usually in pixel</td>
</tr>
<tr>
<td>width</td>
<td>to specify the width of the table, can be in pixel or percentage</td>
</tr>
<tr>
<td>padding</td>
<td>to specify spacing between the border of each cell and its content</td>
</tr>
<tr>
<td>background-color</td>
<td>to specify the background colour of the cells or the background colour of the
alternating rows</td>
</tr>
```

```
<tr>
<td>:hover</td>
<td>to highlight a row when the mouse move on top of it</td>
</tr>
<tr>
<td>text-align</td>
<td>to align the text to the left or right of a cell</td>
</tr>
<tr>
<td>vertical-align</td>
<td>to align the content of the top position of a cell</td>
</tr>
</tbody>
</table>

</body>

</html>
```

The resulting table:

PROPERTY	DESCRIPTION
border	to specify the border of the table, usually in pixel
border-top	to specify the top border of the table headers, usually in pixel
border-bottom	to specify the bottom border of the table headers, usually in pixel
width	to specify the width of the table, can be in pixel or percentage
padding	to specify spacing between the border of each cell and its content
background-color	to specify the background colour of the cells or the background colour of the alternating rows

:hover	to highlight a row when the mouse move on top of it
text-align	to align the text to the left or right of a cell
vertical-align	to align the content of the top position of a cell