

# HTML and XHTML

## 2.1 Introduction

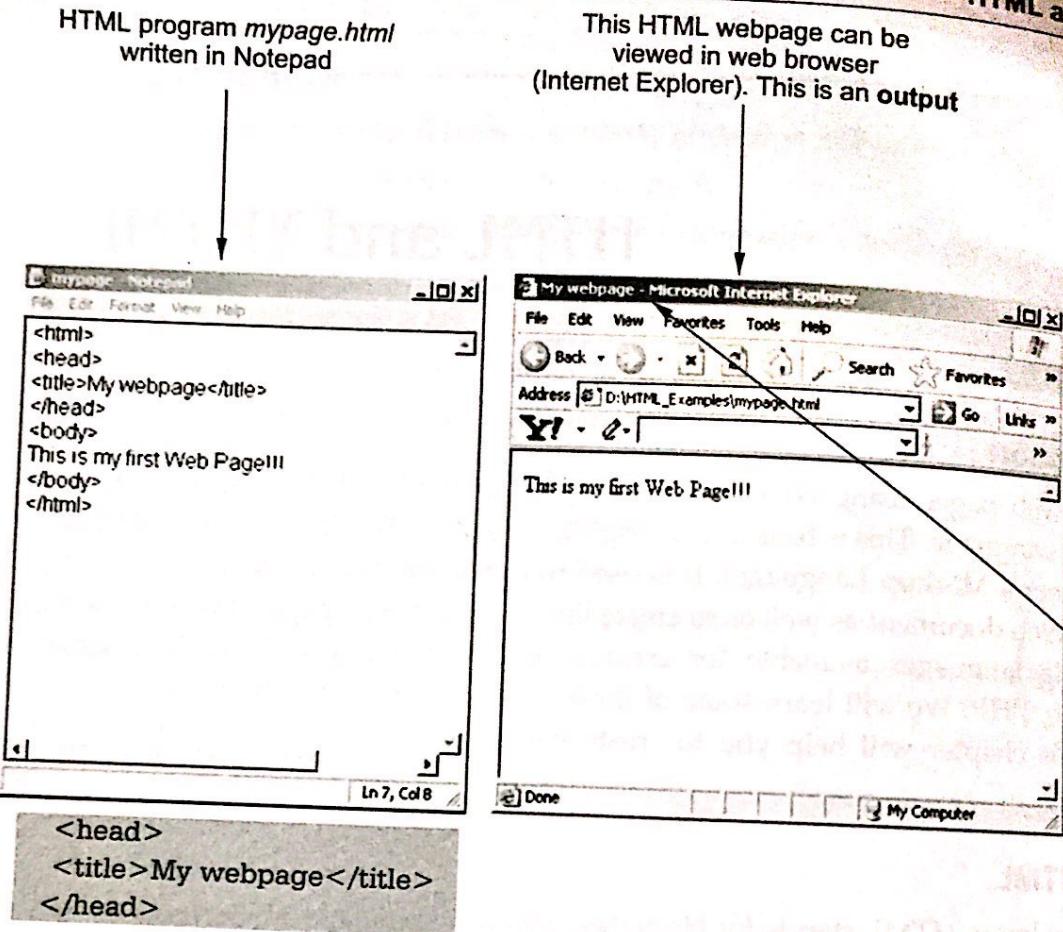
Creating web pages using HTML is the simplest method. HTML stands for Hyper Text Markup Language. This is basically a scripting language. HTML is a subset of SGML (Standard General Markup Language). It is used to define the layout and attributes of a World Wide Web document as well as to create links between web pages. There are some other scripting languages available for creating the web pages such as Java script, DHTML, XML, PHP. We will learn some of these scripting languages in the later part of this book. This chapter will help you to create your own web pages with the help of HTML.

## 2.2 Basic HTML

- As we know HTML stands for Hypertext Markup Language. **Hypertext** is simply a piece of text that works as a link.
- **Markup Language** is language of writing layout information within documents.

Basically an HTML document is a plain text file. It contains rich text. The rich text means text with tags. Any HTML program can be written in simple Notepad or WordPad text editors. The extension to this program should be either **html** or **htm**. This program then can be opened in some web browser and the corresponding web page can be viewed. Let us create our first web page using HTML.

Note that the program consists of some strings enclosed within angular brackets. Such strings are called **tags**. The HTML program should be written within **<html>** and **</html>**. The **<html>** indicates the start of html program and **</html>** denotes end of html program. Use of slash (/) in the angular bracket indicates end of that particular tag. Any HTML program has two prominent parts: head and body. The head part acts as a header of a file and contains some information like setting the title of web page. In following example we have done the same thing. In the head part of HTML program we have added a **title** tag which sets the title to our web page as "My webpage" (Just refer the output shown next page.)



The body part of HTML program will help us to create a look and feel of the web page. Above given HTML program is the simplest one in which the web page contains the text "*This is my first Web Page*".

```
<body>
This is my first Web Page!!!
</body>
```

One more thing, HTML is not a case sensitive language. You can write the program in any case it will be acceptable.

### Comments in HTML

The comment in HTML can be denoted as follows –

```
<!--It is a comment statement -->
```

There should not be a space between angular bracket and exclamation mark. This comment is beginning with `<!--` and ending with `-->`. Also note one thing that there should not be any `--` inside the comment.

**Key Point :** Generally code for any scripting language is written in some text editor like Notepad. While saving html document written in Notepad, save it using the extension .html, while doing so for the file type select the option All Files otherwise your file may get saved as "FirstPg.html.txt".

## 2.2.1 Document Structure

An HTML document consists of three main parts :

1. DOCTYPE declaration
2. <head> section
3. <body> section.

The basic document structure is :

```
<!DOCTYPE ...>
<html>
  <head>
    <title>... </title>
  </head>
  <body>
    ...
    ...
    ...
  </body>
</html>
```

The DOCTYPE declaration should be as given below -

```
<!DOCTYPE html PUBLIC "-//W3C//DTD XHTML 1.0 Transitional//EN"
"http://www.w3.org/TR/xhtml1/DTD/xhtml11.dtd">
```

The DOCTYPE specifies the document Type. The Document type is specified by the Document Type Definition(DTD). The HTML syntax rules are specified by the file xhtml11.dtd file. Hence we are specifying the name of this file at the beginning.

There are three types of html DTDs and those along with their uses are as given below -

1. **HTML 1.0 Strict :** When we want a clean markup code then this type of dtd is used.
2. **HTML 1.0 Transitional :** When we want to use some html features in the existing HTML document.
3. **HTML 1.0 Frameset :** When we want to make use of frames in the HTML document.

## 2.3 Formatting and Fonts

### 2.3.1 Displaying Header

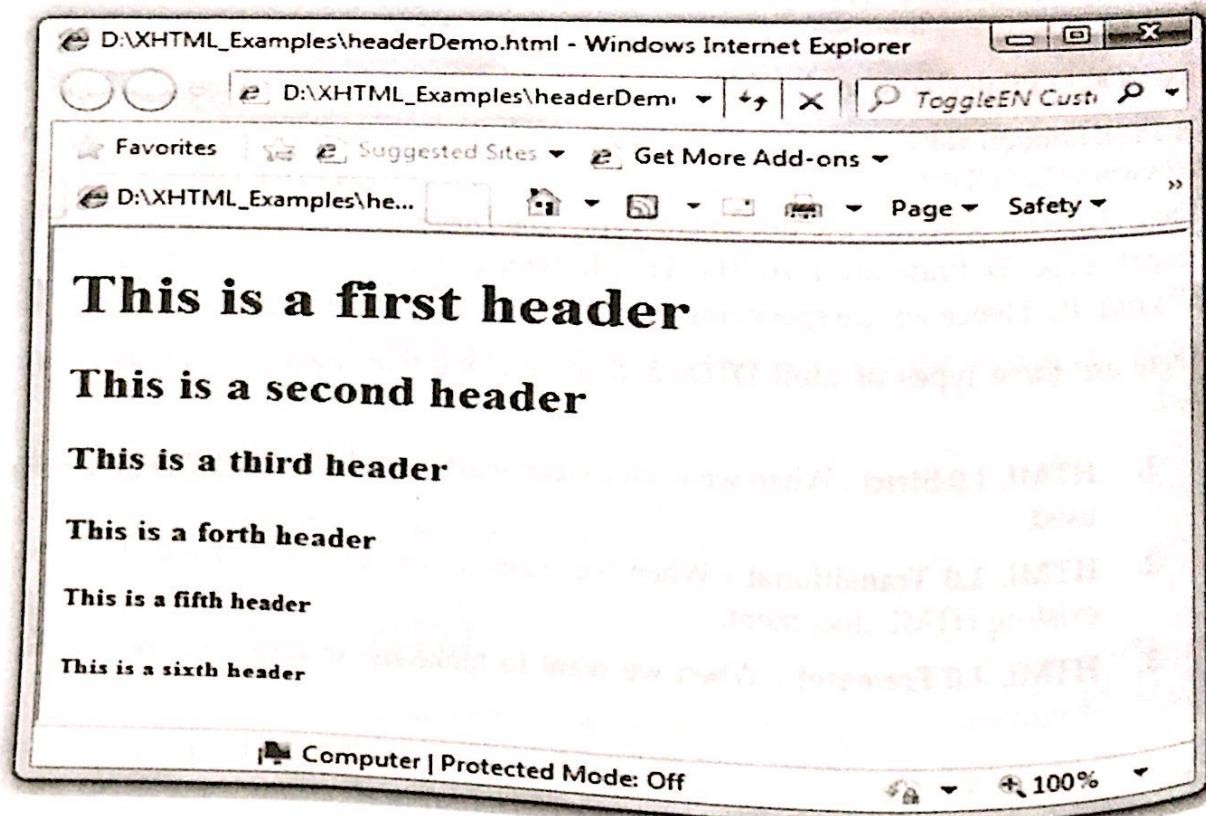
There are header tags which help to display the text as some header. The header tag is denoted by h1, h2 and so on upto h6. Following HTML document along with its output is itself self explanatory.

#### HTML Document [headerDemo.html]

```
<!DOCTYPE html PUBLIC "-//W3C//DTD XHTML 1.0 Transitional//EN"  
"http://www.w3.org/TR/xhtml1/DTD/xhtml11.dtd">  
<html xmlns="http://www.w3.org/1999/xhtml">  
    <head>  
    </head>  
    <body>  
        <h1> This is a first header </h1>  
        <h2> This is a second header </h2>  
        <h3> This is a third header </h3>  
        <h4> This is a forth header </h4>  
        <h5> This is a fifth header </h5>  
        <h6> This is a sixth header </h6>  
    </body>  
</html>
```

This part can  
be optional

#### Output



Following are some commonly used tags for formatting the text

| Tag   | Meaning  |
|-------|--|
| <p>   | This tag is should be put at the end of every paragraph.   |
| <br>  | This tag causes a single line break. Generally it is kept at the end of every line. If we want more three blank lines to be inserted after some text then we can put <br><br><br>. We get the line break automatically if the text appearing on the web browser is too long. If we do not want such break then <nobr> tag can be used for such text. |
| <pre> | This tag is used to preserve the white spaces and lines in the text.   |
| <div> | This tag is used to make division of sections in the XHTML document.   |

### HTML Document[TextFormat.html]

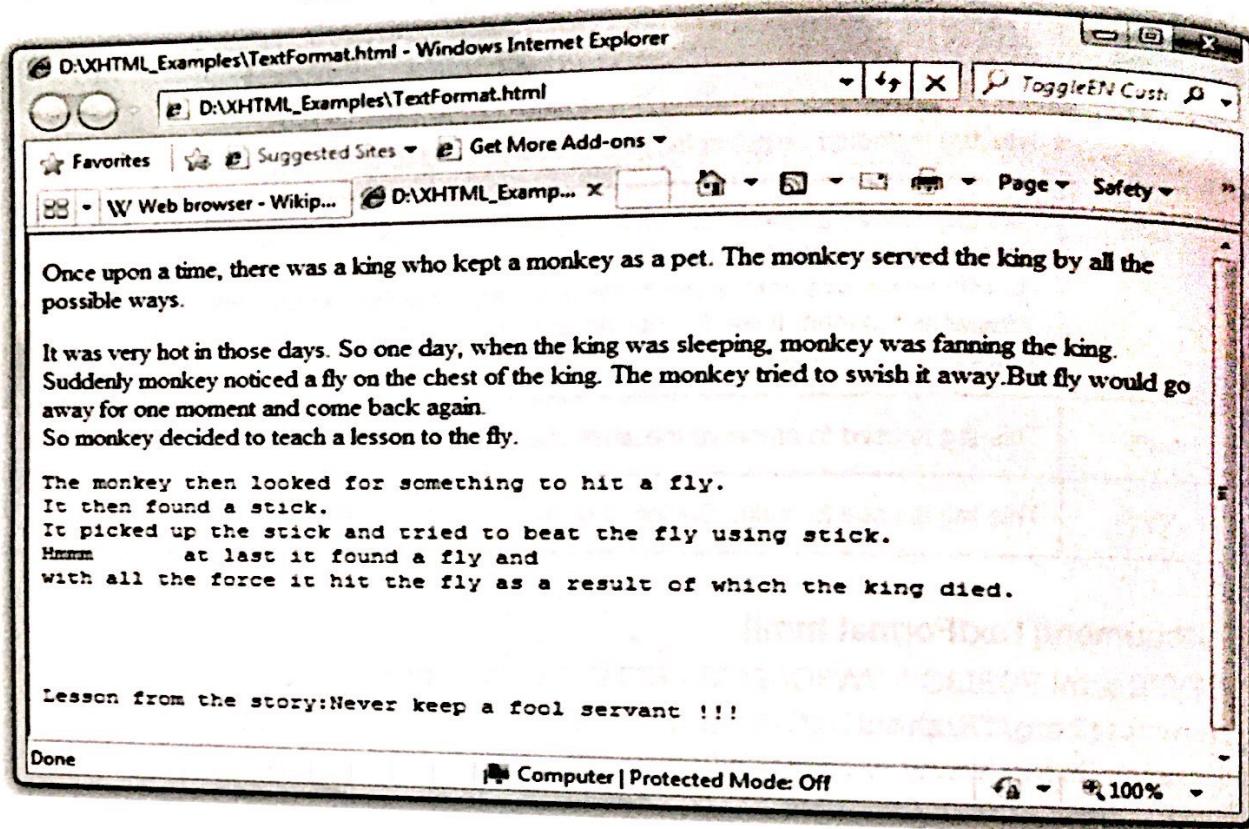
```

<!DOCTYPE html PUBLIC "-//W3C//DTD XHTML 1.0 Transitional//EN"
"http://www.w3.org/TR/xhtml1/DTD/xhtml11.dtd">
<html xmlns="http://www.w3.org/1999/xhtml">
    <head>
    </head>
    <body>
        <p>
            Once upon a time, there was a king who kept a monkey as a pet.
            The monkey served the king by all the possible ways.
        </p>
        <div>
            It was very hot in those days. So one day, when the king was sleeping,
            monkey was fanning the king. Suddenly monkey noticed a fly on the chest of the
            king. The monkey tried to swish it away. But fly would go away for one moment
            and come back again.
        </div>
        <div> So monkey decided to teach a lesson to the fly.</div>
<pre>
The monkey then looked for something to hit a fly.
It then found a stick.
It picked up the stick and tried to beat the fly using stick.
Hmmm at last it found a fly and
with all the force it hit the fly as a result of which the king died.

Lesson from the story:Never keep a fool servant !!!
</pre>
    </body>
</html>

```

## Output



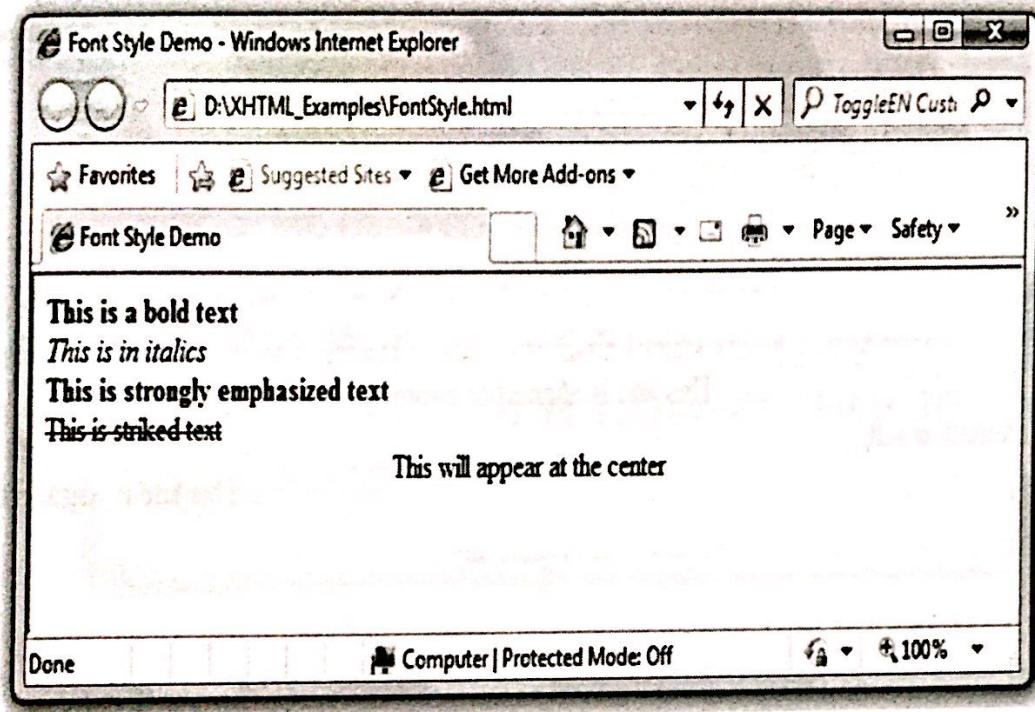
### 2.3.2 Setting Font Style

We can set the text in boldface or in italics. Similarly a strike through text can be displayed using various tags. Following HTML document illustrates the same.

#### HTML Document [FontStyle.html]

```
<!DOCTYPE html PUBLIC "-//W3C//DTD XHTML 1.0 Transitional//EN"
"http://www.w3.org/TR/xhtml1/DTD/xhtml11.dtd">
<html xmlns="http://www.w3.org/1999/xhtml">
  <head>
    <title>Font Style Demo</title>
  </head>
  <body>
    <b> This is a bold text </b> <br/>
    <i> This is in italics</i> <br/>
    <strong> This is strongly emphasized text</strong> <br/>
    <strike> This is striked text </strike>
    <center> This will appear at the center</center> <br/>
  </body>
</html>
```

## Output



### 2.3.3 Text Alignment

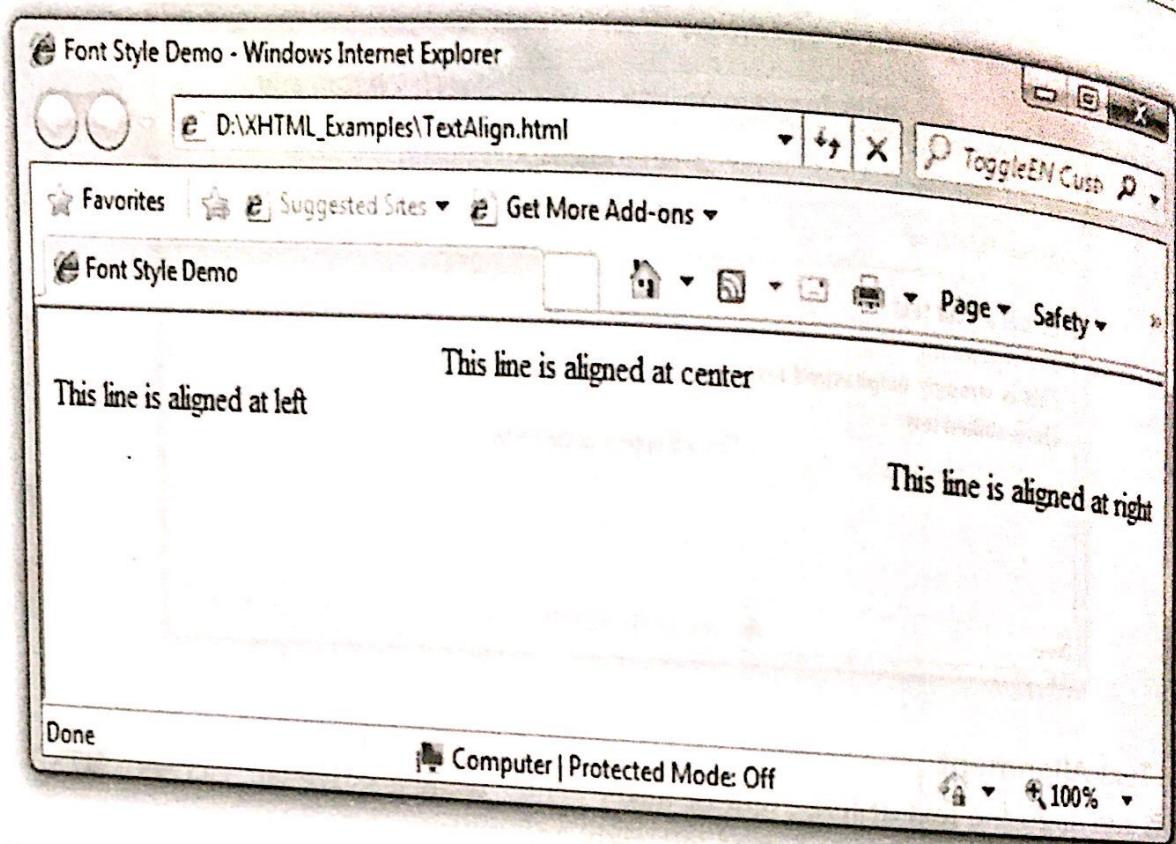
We can align the text at left, right or at the center using a `<div>` tag. Here is a HTML program which shows the text aligned left, right and centre.

#### HTML Document[TextAlign.html]

```
<!DOCTYPE html PUBLIC "-//W3C//DTD XHTML 1.0 Transitional//EN"  
"http://www.w3.org/TR/xhtml1/DTD/xhtml11.dtd">  
<html xmlns="http://www.w3.org/1999/xhtml">  
  <head>  
    <title>Font Style Demo</title>  
  </head>  
  <body>  
    <div align="center">This line is aligned at center</div>  
    <div align="left">This line is aligned at left</div>  
    <div align="right">This line is aligned at right</div>  
  </body>  
</html>
```

div align="center"

## Output

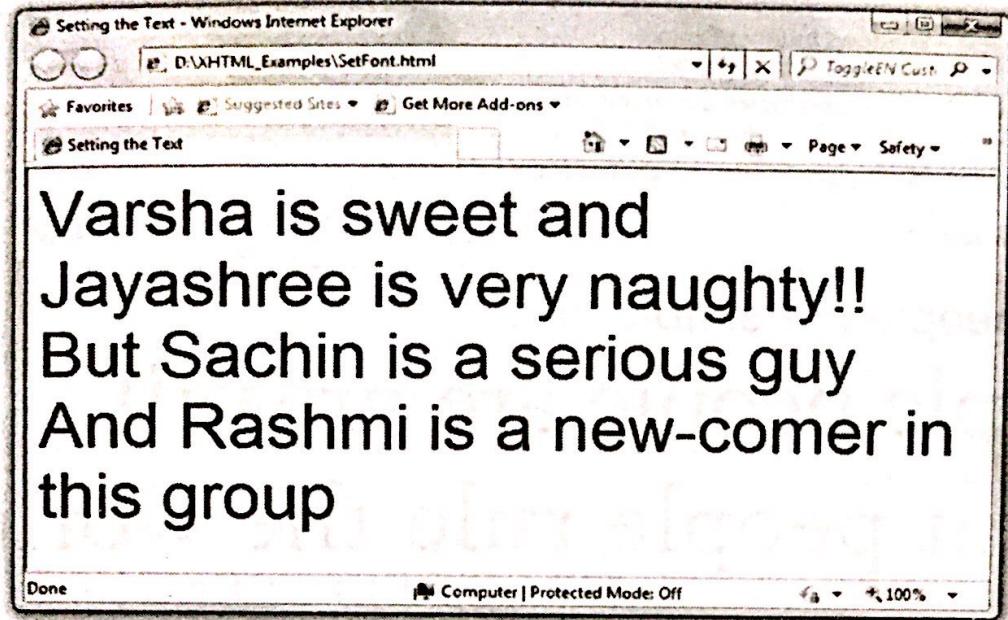


### 2.3.4 Setting the Font

We can set the font, size and color of the text in the web page. The tag `<basefont>` is used for this purpose which is as shown below-

#### HTML Document[SetFont.html]

```
<!DOCTYPE html PUBLIC "-//W3C//DTD XHTML 1.0 Transitional//EN"
"http://www.w3.org/TR/xhtml1/DTD/xhtml11.dtd">
<html xmlns="http://www.w3.org/1999/xhtml">
  <head>
    <title>Setting the Text </title>
  </head>
  <body>
    <basefont face="arial" size="10">
      Varsha is sweet and <br/>
      Jayashree is very naughty!!<br/>
      But Sachin is a serious guy<br/>
      And Rashmi is a new-comer in this group
  </body>
</html>
```



The basefont tag supports face, color and size where face represents the font family, color denotes the color for the text in the document and size represents the size of the text. The color can be specified by using color name.

Note that the **<basefont>** tag is specified by the Internet Explorer browser only and not by Firefox Mozilla browser.

### 2.3.5 Colors

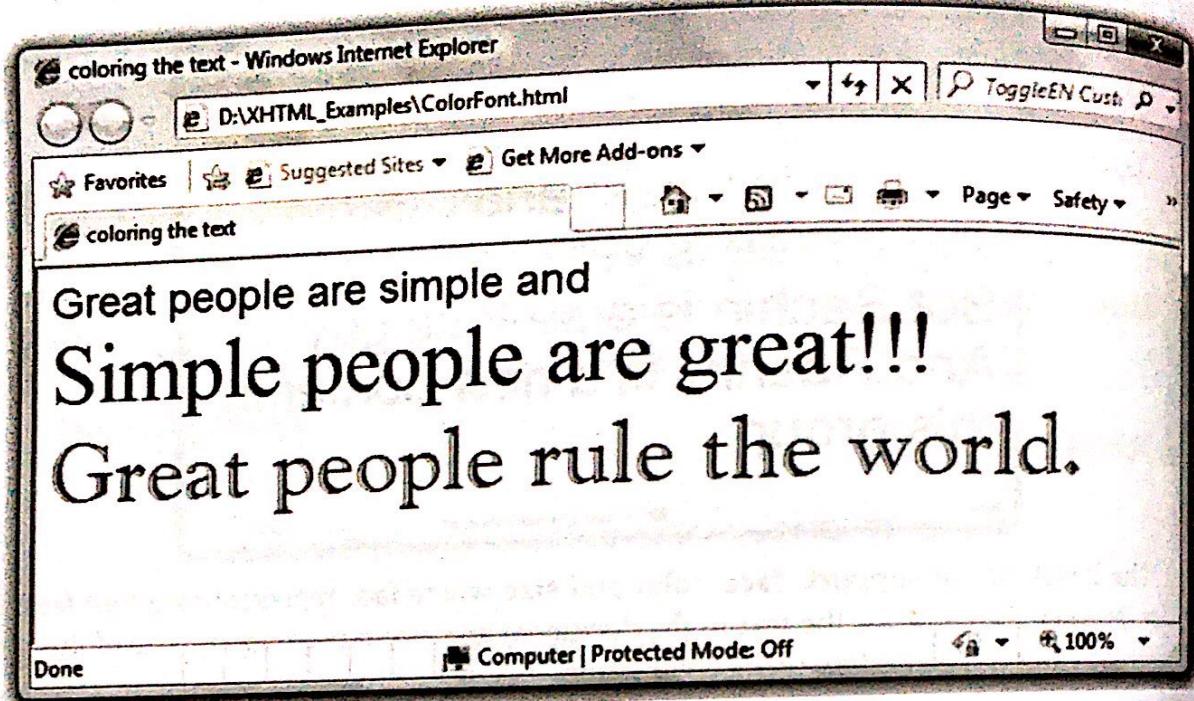
Most of the web designers prefer to have their web pages white in color. But there are situations wherein we want to create colourful web pages. First of all we will learn how to display a text colourful on the webpage.

#### HTML Document[ColorFont.html]

```
<!DOCTYPE html PUBLIC "-//W3C//DTD XHTML 1.0 Transitional//EN"  
"http://www.w3.org/TR/xhtml1/DTD/xhtml11.dtd">  
<html xmlns="http://www.w3.org/1999/xhtml">  
<html>  
  <head>  
    <title>coloring the text</title>  
  </head>  
  <body>  
    <basefont face="arial" size="5" color="blue">  
    Great people are simple and <br>  
    <font face="Times new roman" color="red" size="8">  
    Simple people are great!!!<br>  
    <font face="GoudyHandtooled BT" color="green" size="14">  
    Great people rule the world.  
  </body>  
</html>
```

font face =

## Output



In the above HTML document, we have used **font face** tag to set the font. Using the attributes color and size we can specify values color and size in double quotes.

We can set the **background color** of the web page using the attribute **bgcolor**.

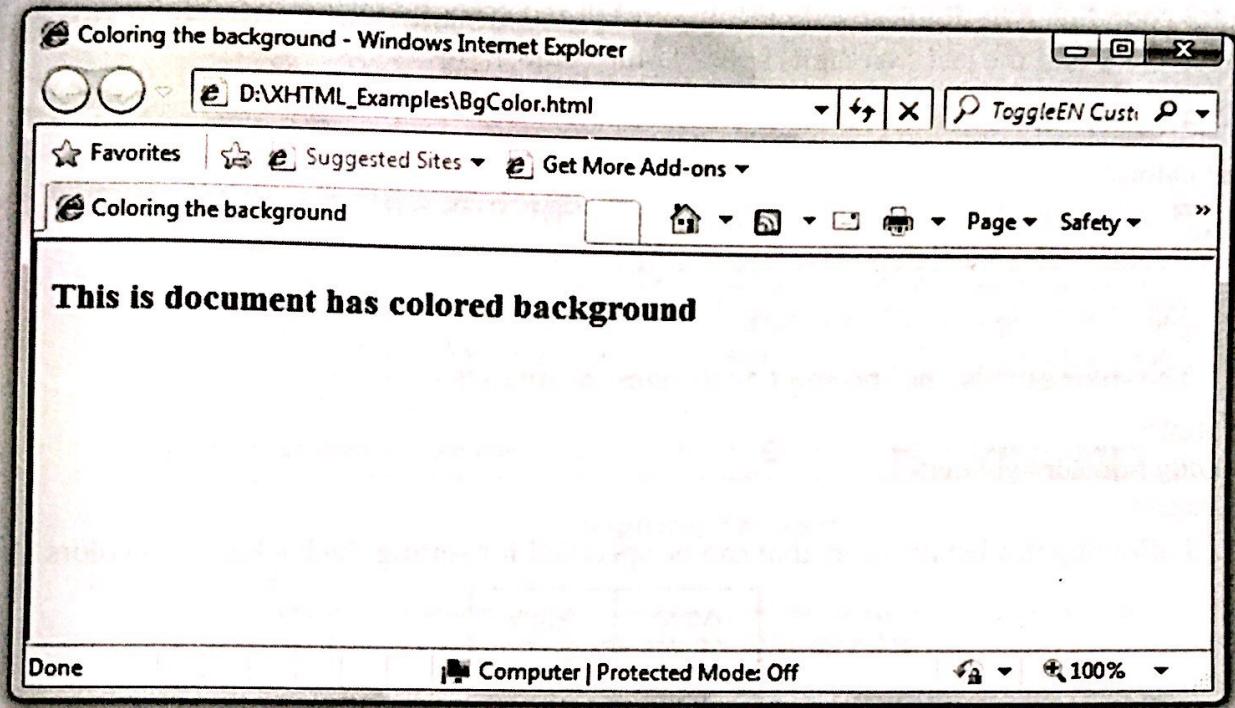
Following program sets the background color of the web page to red.

**HTML Document[BgColor.html]**

```
<!DOCTYPE html PUBLIC "-//W3C//DTD XHTML 1.0 Transitional//EN"  
"http://www.w3.org/TR/xhtml1/DTD/xhtml11.dtd">  
<html xmlns="http://www.w3.org/1999/xhtml">  
<html>  
  <head>  
    <title>Coloring the background</title>  
  </head>  
  <body bgcolor="#FFFF00">  
    <h3>This is document has colored background</h3>  
  </body>  
</html>
```

In above document we have specified background color using the **bgcolor** attribute. The color can be specified by either using the color name in double quotes or using the hex.code as given in above document. The first two digits of Hex code represents the Red value, then next two digits specify the green value and final two digits specify the blue value. Hence the corresponding output will be as follows –

## Output



Note that the background color is specified by the hexadecimal value. Following table shows the hex. and corresponding decimal values -

| Decimal value | Hexadecimal value |
|---------------|-------------------|
| 1             | 1                 |
| 2             | 2                 |
| 3             | 3                 |
| 4             | 4                 |
| 5             | 5                 |
| 6             | 6                 |
| 7             | 7                 |
| 8             | 8                 |
| 9             | 9                 |
| 10            | A                 |
| 11            | B                 |
| 12            | C                 |
| 13            | D                 |
| 14            | E                 |
| 15            | F                 |

In HTML, the colors are specified by beginning with # and the FF denotes 255. In this color code first two digits specify the amount of red color then next two digits specify the green color and the last two digits specify blue color

# FF 00 00

#### red colour

Hence is used to set the background color red. Each pair of digits specifies 0 to 255 color values. Thus hexadecimal color coding helps us to specify.

$$256 * 256 * 256 = 16777216 \text{ colors.}$$

The color can also be specified by its name as follows -

```
<html>
<body bgcolor=yellow>
</html>
```

Following is a list of colors that can be specified for setting the background colors

|         |        |
|---------|--------|
| Aqua    | Navy   |
| Black   | Olive  |
| Blue    | Purple |
| Fuchsia | Red    |
| Gray    | Silver |
| Green   | Teal   |
| Lime    | White  |
| Maroon  | Yellow |

#### 2.3.6 Horizontal Rules

For defining the horizontal rule we use `<hr>` tag. As an effect of this tag we can see the horizontal line on the web browser. These lines are called the horizontal rules.

Here is the demo of `<hr>` tag.

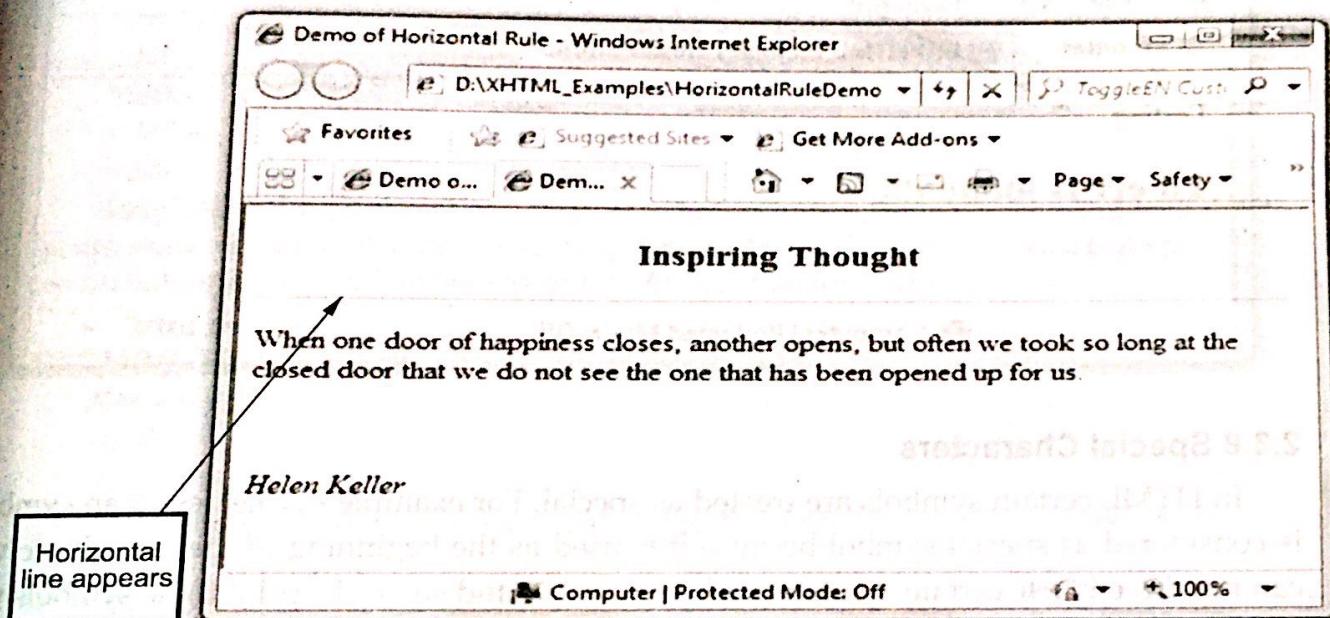
#### HTML Document[HorizontalRuleDemo.html]

```
<!DOCTYPE html PUBLIC "-//W3C//DTD XHTML 1.0 Transitional//EN"
"http://www.w3.org/TR/xhtml1/DTD/xhtml11.dtd">
<html xmlns="http://www.w3.org/1999/xhtml">
<head>
  <title>Demo of Horizontal Rule</title>
</head>
<body>
  <center>
    <h3>Inspiring Thought</h3>
  </center>
```

```

<hr/>
<p>When one door of happiness closes, another opens, but often we took so long at the
closed door that we do not see the one that has been opened up for us.</p>
<br/><br/>
<em>Helen Keller</em>
</body>
</html>

```

**Output**

### 2.3.7 Unrecognized Elements and Attributes

Eventhough web authors type some element or attribute that the browser does not recognize, it does not complain. This is a unique feature as compared to any programming language. Because if we make any typographical mistakes in a Java program then definitely compiler will raise error message. However, the web browsers simply displays the contents eventhough the element is not surrounded by any tag. Following script illustrates this idea.

#### HTML Document[mistake.html]

```

<!DOCTYPE html PUBLIC "-//W3C//DTD XHTML 1.0 Transitional//EN"
"http://www.w3.org/TR/xhtml1/DTD/xhtml11.dtd">
<html xmlns="http://www.w3.org/1999/xhtml">
  <head>
    <ttitle>Testing...
  </ttitle>
  </head>
  <body>

```

Made a spelling mistake while defining the tag <ttitle>

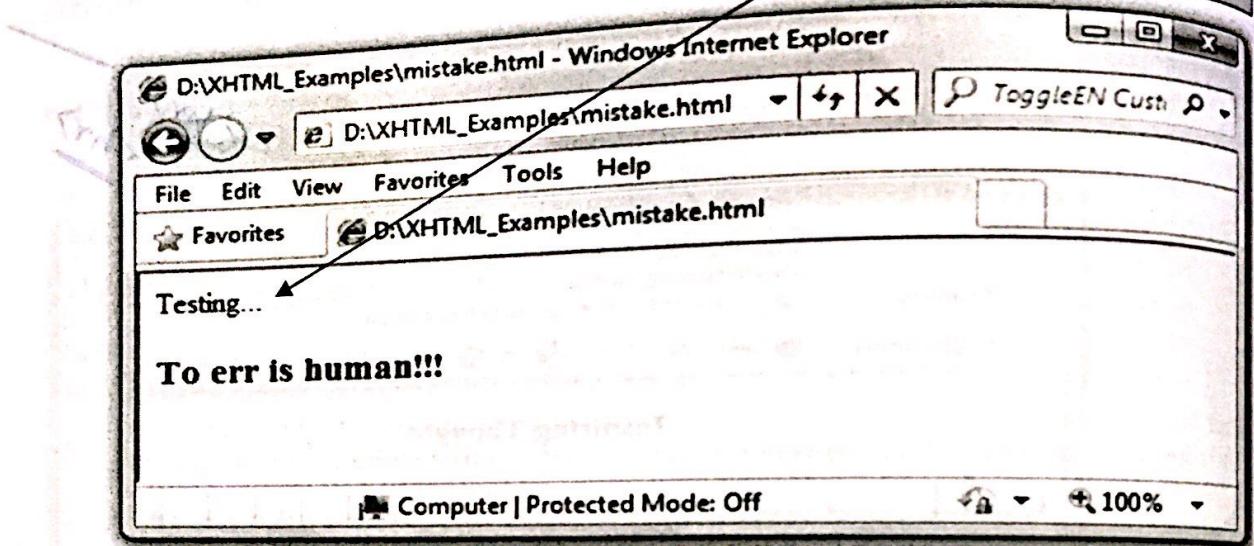
```

<h3> To err is human!!!</h3>
</body>
</html>

```

## Output

Hence title appears in the client area of web browser just like a normal text.



### 2.3.8 Special Characters

In HTML certain symbols are treated as special. For example - < i.e. less than symbol is considered as special symbol because it is used as the beginning of the tag. Hence we can not directly use certain symbols such as <, >, ", © and so on. To print these symbols we use the units which are called as reference. This reference always begins with ampersand (&) sign. Such reference is called as **entity reference**. Following table enlists some characters and entity references -

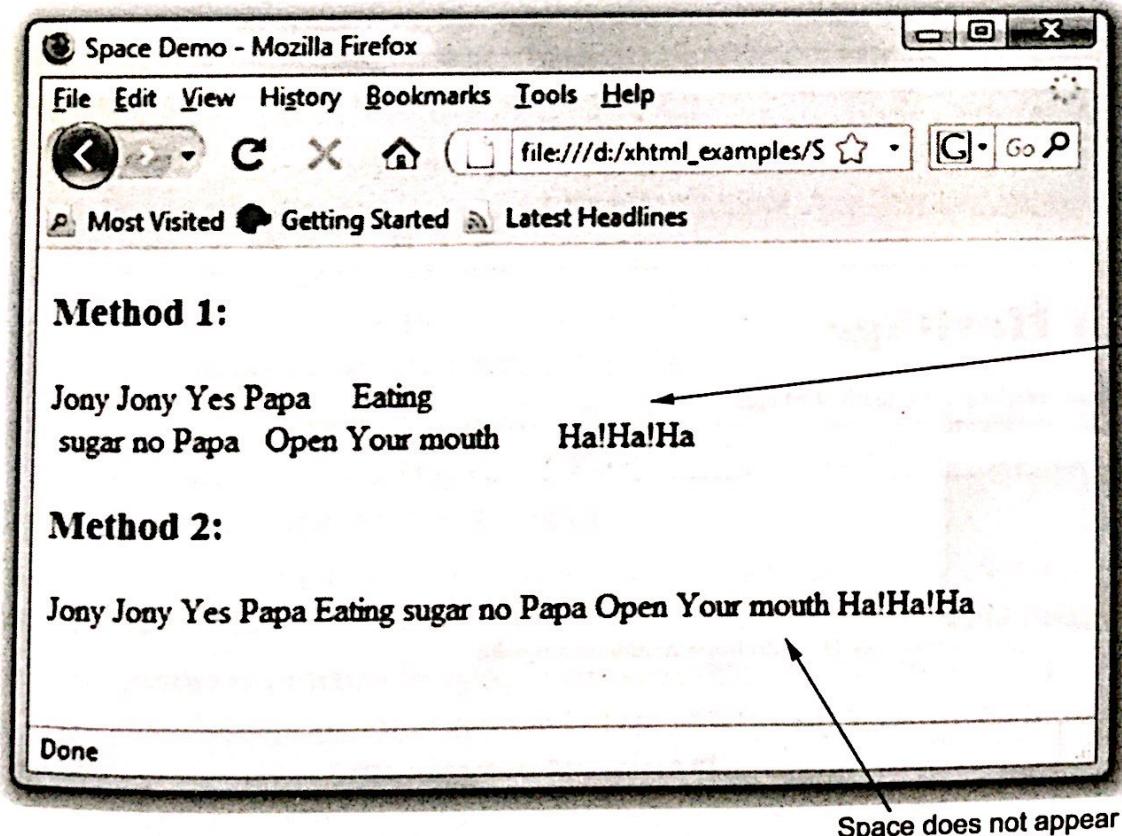
| Character | Meaning      | Entity Reference |
|-----------|--------------|------------------|
| <         | less than    | &lt;             |
| >         | greater than | &gt;             |
| &         | ampersand    | &amp;            |
| "         | double quote | &quot;           |
| '         | apostrophes  | &apos;           |
| ©         | copyright    | &copy;           |

Another type of entity reference that is used frequently is &nbsp; that is non breaking space character. This entity reference is useful for defining the space between two strings and informing browser for not performing the word wrapper between the strings. Following is a sample script that makes use of &nbsp;.

## HTML Document[SpaceDemo.html]

```
<!DOCTYPE html PUBLIC "-//W3C//DTD XHTML 1.0 Transitional//EN"  
"http://www.w3.org/TR/xhtml1/DTD/xhtml11.dtd">  
<html xmlns="http://www.w3.org/1999/xhtml">  
  <head>  
    <title>Space Demo</title>  
  </head>  
  <body>  
    <h3>  
      Method 1:  
    </h3>  
    <p>  
      Jony&nbsp;Jony&nbsp;Yes&nbsp;Papa&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;Eating  
&nbsp;sugar&nbsp;no&nbsp;Papa&nbsp;&nbsp;&nbsp;Open&nbsp;Your&nbsp;  
      mouth&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;Ha!Ha!Ha  
    </p>  
    <h3>  
      Method 2:  
    </h3>  
    <p>  
      Jony Jony Yes Papa   Eating sugar no Papa  Open Your mouth   Ha!Ha!Ha  
    </p>  
  </body>  
</html>
```

## Output



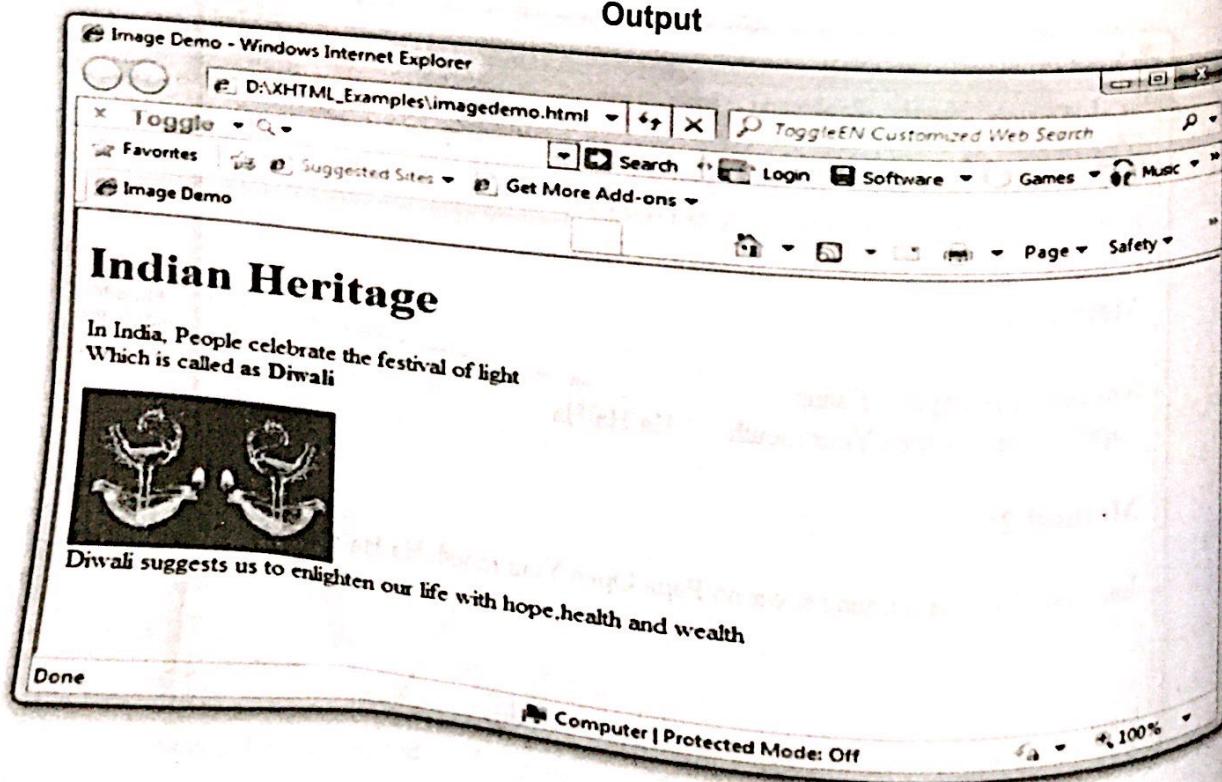
## 2.4 Images

We can display images as a link. We have to use the `<img src = " " >` tag for this purpose. Within the double quotes image file should be mentioned. Normally .gif or .jpg files are used to display the images on the web browser. Following HTML Script shows how to insert an image in the web page.

### HTML Document [imagedemo.html]

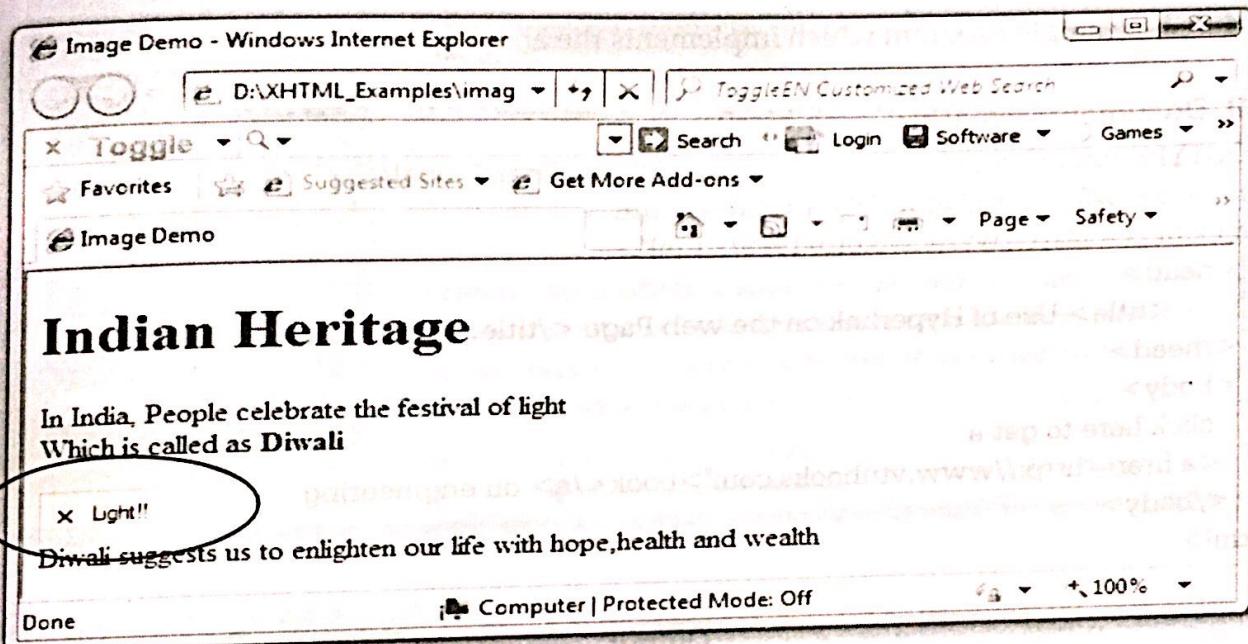
```
<!DOCTYPE html PUBLIC "-//W3C//DTD XHTML 1.0 Transitional//EN"
"http://www.w3.org/TR/xhtml1/DTD/xhtml11.dtd">
<html xmlns="http://www.w3.org/1999/xhtml">
    <head>
        <title> Image Demo </title>
    </head>
    <body>
        <h1> Indian Heritage </h1>
        <p>
            In India, People celebrate the festival of light <br/>
            Which is called as <strong>Diwali</strong>
        </p>
        <img src= "lamp1.jpg" alt= "Light!!" />
        <br/>
        Diwali suggests us to enlighten our life with hope, health and wealth
        <br/>
    </body>
</html>
```

### Output



In above script we have used `<img />` tag in order to display an image. The image tag has two attributes -

- The `src` suggests us to give the image file name. If the desired image is not present in the current directory of web page then the complete path where the image is located must be given.
- The `alt` attribute displays the text when it is not possible to display the image. For instance - in above given `imagedemo.html` script if, the `lamp1.jpg` is not present then we will get following output.



There are two types of images that are more commonly used -

- **Graphic Interchange Format (GIF)** : It uses 8-bit color representation for pixels. Hence a single pixel can have 256 different colors. This file have the extension .gif.
- **Joint Photographic Expert Group (JPEG)** : This format uses 24-bit color representation for pixel. Hence a JPEG can have 16 million different colors. The file have the extension .jpg or .jpeg.

The JPEG image have more color information than a GIF image. Secondly JPEG can be smaller than GIF image. Hence normally JPEG image is preferred. But the drawback of JPEG is that it does not support transparency.

## 2.5 Hyperlinks

There is a common practice to specify the web link in the web page. The link acts as a pointer to some web page or some resource. Use of hyperlink in the web page allows that page to link logically with other page.

We can use hyperlinks by using a tag `<a>` and by specifying the URL for `href`. The value assigned to `href` specifies the target of the link. The `<a>` means beginning of the web link and `</a>` means end of the web link. Following are the steps to be followed to specify web link in the web page.

**Step 1 :** The beginning of web link can be specified by the tag

`<a href = " " .Inside the double quotes mention the URL of desired link.`

**Step 2 :** Write some text that should act as a hyperlink.

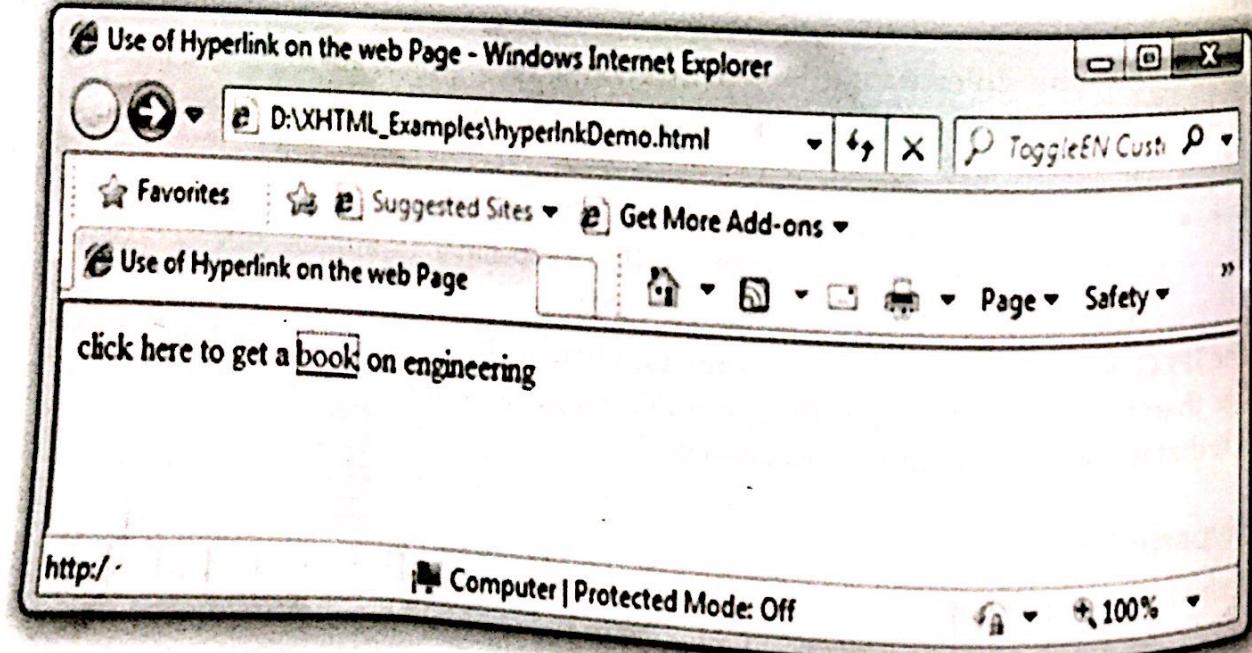
**Step 3 :** End the web link `</a>`

Here is a sample program which implements the above given idea -

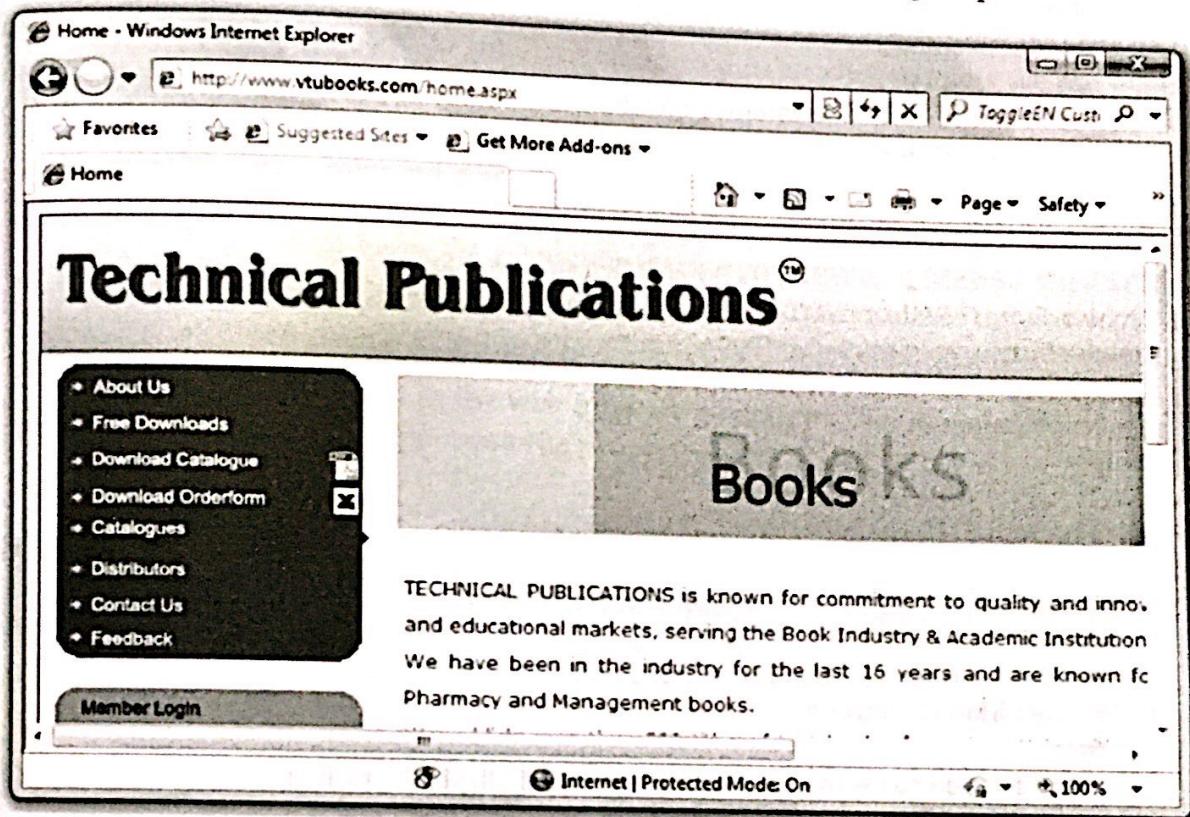
#### HTML Document [HyperLinkDemo.html]

```
<!DOCTYPE html PUBLIC "-//W3C//DTD XHTML 1.0 Transitional//EN"  
"http://www.w3.org/TR/xhtml1/DTD/xhtml11.dtd">  
<html xmlns="http://www.w3.org/1999/xhtml">  
  <head>  
    <title> Use of Hyperlink on the web Page </title>  
  </head>  
  <body>  
    click here to get a  
    <a href="http://www.vtubooks.com">book</a> on engineering  
  </body>  
</html>
```

#### Output



If you click on the hyperlink book then you will get the following output.



## 2.5.1 Use of Image as a Link

Similar to a text we can set an image itself as a link. Following HTML document illustrates this idea.

**Step 1:** Write the HTML document containing an hyperlink to an image. When we click on the image the html page refered by the `<a href>` tag must get opened.

### HTML Document[ImgLink.html]

```
<!DOCTYPE html PUBLIC "-//W3C//DTD XHTML 1.0 Transitional//EN"
"http://www.w3.org/TR/xhtml1/DTD/xhtml11.dtd">
<html xmlns="http://www.w3.org/1999/xhtml">
<head>
    <title> Image Demo </title>
</head>
<body>
    <h1> Indian Heritage </h1>
    <p>
        <a href="TajMahal.html" target ="_blank">
            <img src= "TajMahal.jpg" alt= "Taj Mahal!!" />
        </a>
    </p>
</body>
</html>
```

```

<br/>History of Taj Mahal
<br/>
</body>
</html>

```

**Step 2 :** Write the HTML document(TajMahal.html) mentioned by the [tag](#) in Step 1 as follows -

### HTML Document[TajMahal.html]

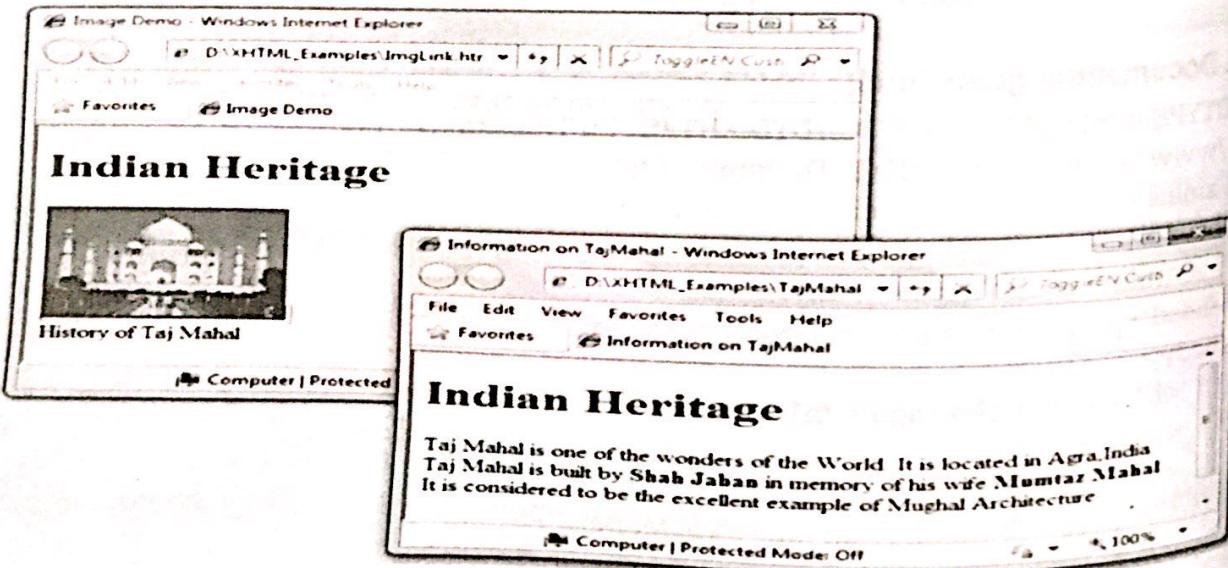
```

<!DOCTYPE html PUBLIC "-//W3C//DTD XHTML 1.0 Transitional//EN"
"http://www.w3.org/TR/xhtml1/DTD/xhtml11.dtd">
<html xmlns="http://www.w3.org/1999/xhtml">
    <head>
        <title> Information on TajMahal </title>
    </head>
    <body>
        <h1> Indian Heritage </h1>
        <p>
            Taj Mahal is one of the wonders of the World. It is located in Agra, India.
            <br/>
            Taj Mahal is built by <strong>Shah Jahan</strong> in memory of his wife
            <strong>Mumtaz Mahal</strong>
            <br/>
            It is considered to be the excellent example of Mughal Architecture
        </p>
        <br/>
    </body>
</html>

```

**Step 3 :** Open some web browser and specify the file name ImgLink.html in the address bar and you will get following output.

### Output



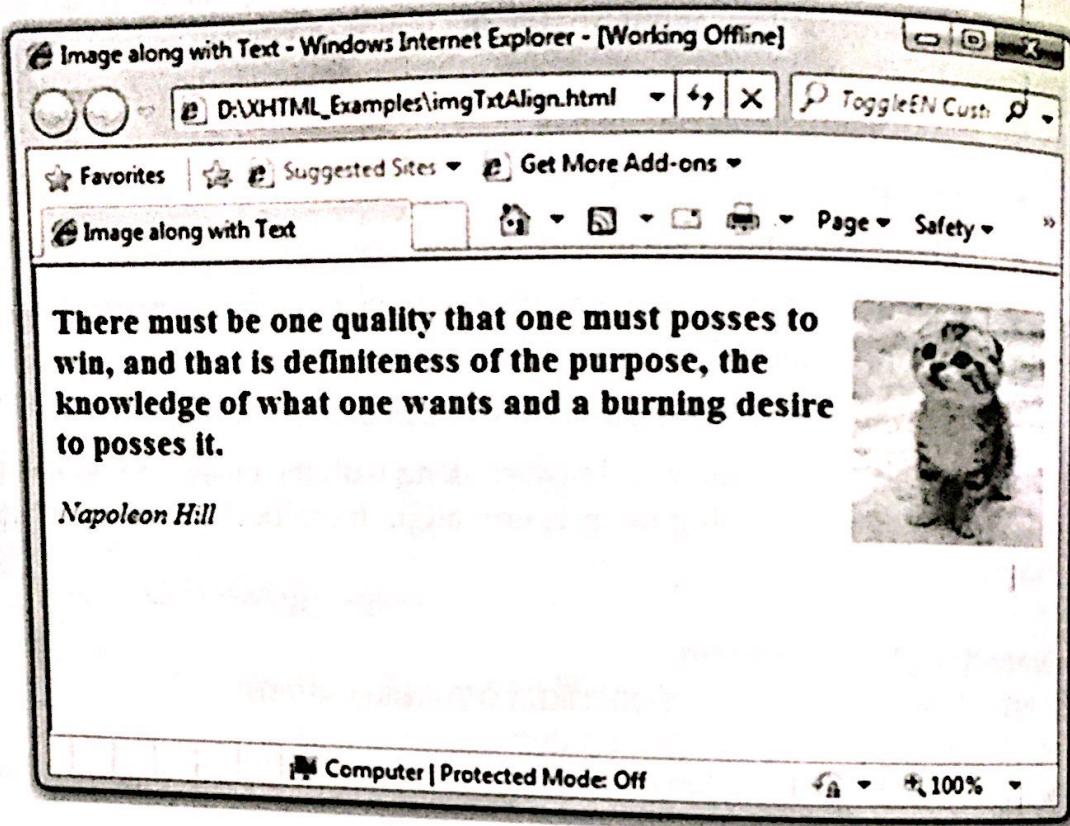
In the ImgLink.html document, if we click on the image of Taj Mahal we get the web page displaying the information about it. By default this page gets opened in the browser's window. If we want to get that link opened in another window we can mention \_target property. Various targets can be -

- \_self loads the page into the current window.
- \_blank loads the page into a new separate browser window.
- \_parent loads the page into the frame that is superior to the frame the residing hyperlink.
- \_top cancels all frames, and loads in full browser window.

One can specify some text in the web browser along with the image and we can then adjust the position of the image using the property align. It can be done with the help of following document.

#### HTML Document[imgTxtAlign.html]

```
<!DOCTYPE html PUBLIC "-//W3C//DTD XHTML 1.0 Transitional//EN"
"http://www.w3.org/TR/xhtml1/DTD/xhtml11.dtd">
<html xmlns="http://www.w3.org/1999/xhtml">
  <head>
    <title> Image along with Text </title>
  </head>
  <body>
    
    <h3>
      There must be one quality that one must posses to win, and that is definiteness of the
      purpose, the knowledge of what one wants
      and a burning desire to posses it.
    </h3>
    <i>Napoleon Hill</i>
  </body>
</html>
```

**Output**

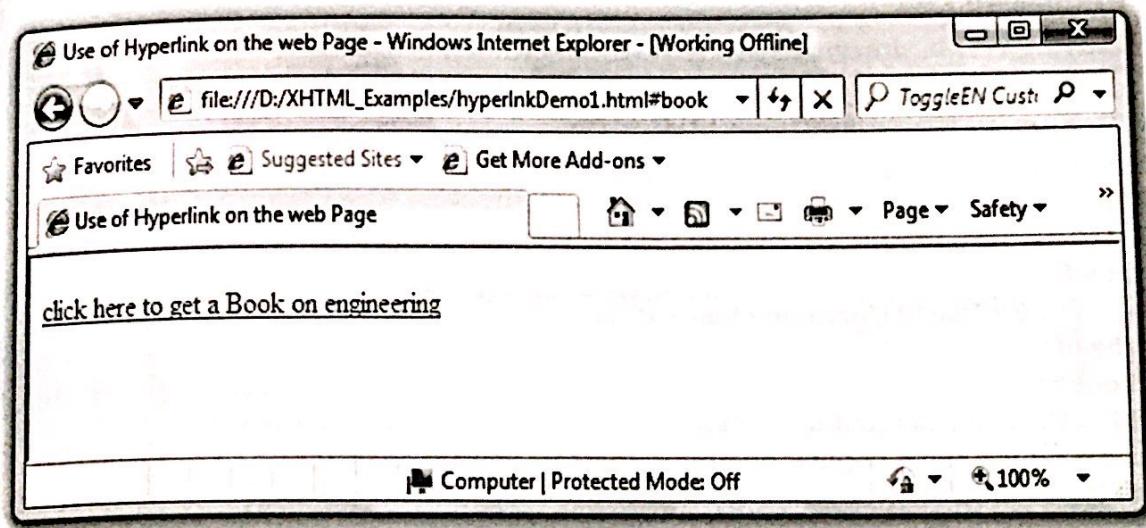
### 2.5.2 Targets within the Same Document

Sometimes we need to open the web page which is a part of some web document then there must be some way to specify it. We can mention the target element by including the id attribute which can be used to identify it in an href attribute. Here is an illustration of using id for href tag -

#### HTML Document [hyperLnkDemo1.html]

```
<!DOCTYPE html PUBLIC "-//W3C//DTD XHTML 1.0 Transitional//EN"  
"http://www.w3.org/TR/xhtml1/DTD/xhtml11.dtd">  
<html xmlns="http://www.w3.org/1999/xhtml">  
  <head>  
    <title> Use of Hyperlink on the web Page </title>  
  </head>  
  <body>  
    <h2 id="book"> </h2>  
    <a href="#book"> click here to get a Book on engineering </a>  
  </body>  
</html>
```

### Output



#### 2.5.3 Uses of Links

Following are the uses of the hyperlinks for a web document -

1. One can link logically related documents together using the links in the web page.
2. Use of link enhances the readability of the web document.
3. User can click on the link and can learn more about a subtopic and then can return to the main topic. This navigation within the web pages is possible due to the links.

#### 2.6 Lists

List is nothing but the collections of items or elements. There are two types of lists – unordered lists and ordered lists.

The unordered list is useful for simply listing the items but if we want the items in some specific sequence then the ordered lists are used. Let us discuss how to use these types lists in the HTML document.

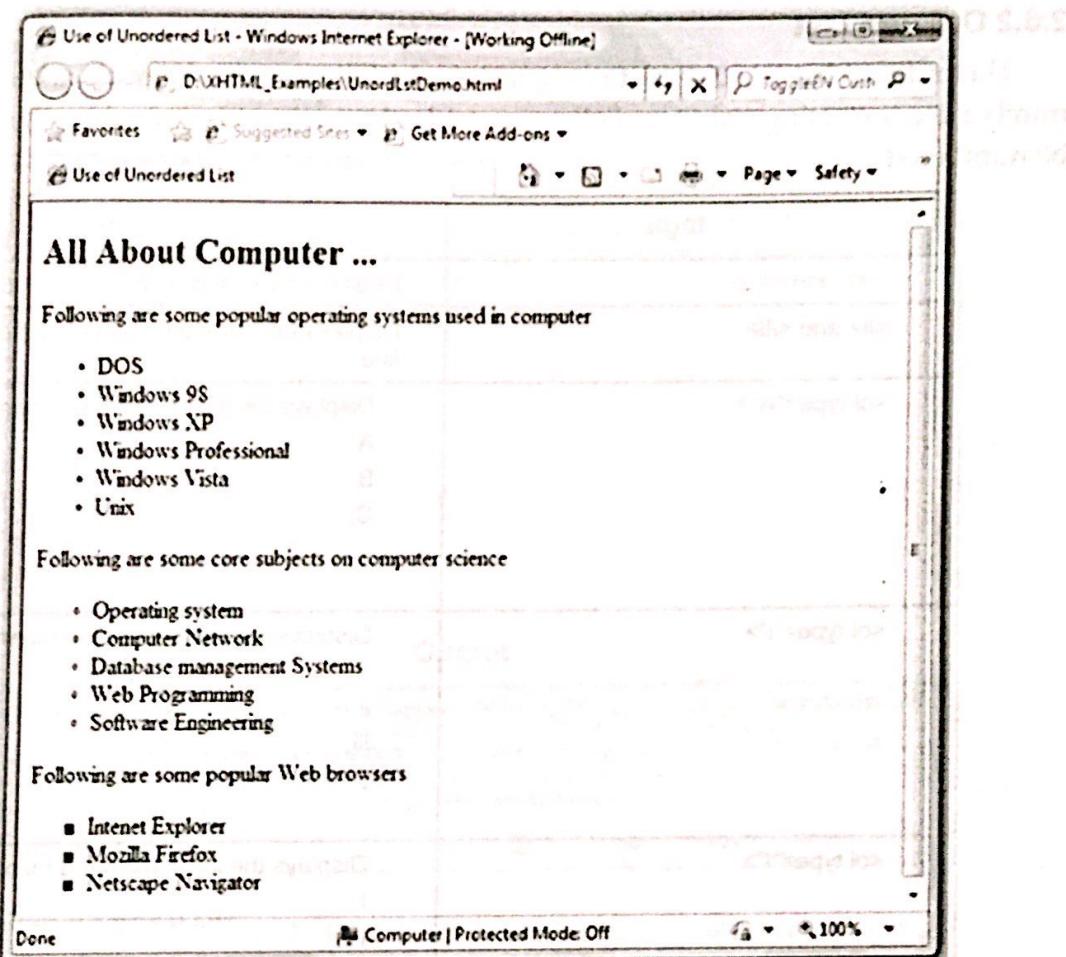
### 2.6.1 Unordered List

Following HTML document makes use of unordered list.

#### HTML Document [UnordLstDemo.html]

```
<!DOCTYPE html PUBLIC "-//W3C//DTD XHTML 1.0 Transitional//EN"
"http://www.w3.org/TR/xhtml1/DTD/xhtml11.dtd">
<html xmlns="http://www.w3.org/1999/xhtml">
<head>
    <title> Use of Unordered List </title>
</head>
<body>
    <h2>All About Computer ...</h2>
    Following are some popular operating systems used in computer
    <ul type="disc">
        <li>DOS</li>
        <li>Windows 98</li>
        <li>Windows XP</li>
        <li>Windows Professional</li>
        <li>Windows Vista</li>
        <li>Unix</li>
    </ul>
    Following are some core subjects on computer science
    <ul type="circle">
        <li>Operating system</li>
        <li>Computer Network</li>
        <li>Database management Systems</li>
        <li>Web Programming</li>
        <li>Software Engineering</li>
    </ul>
    Following are some popular Web browsers
    <ul type="square">
        <li>Intenet Explorer</li>
        <li>Mozilla Firefox</li>
        <li>Netscape Navigator</li>
    </ul>
</body>
</html>
```

## Output



In above script we have used the tag `<ul>` for specifying the unordered list. The list items can be mentioned using the tag `<li>` Due to which the list items can appear in bulleted form. The style of the bullet can be as given below -

| tags   | meaning                                      |
|--|--|
| <code>&lt;ul&gt;</code> and <code>&lt;/ul&gt;</code> | Beginning and end of the bulleted list       |
| <code>&lt;li&gt;</code> and <code>&lt;/li&gt;</code> | Displays the bulleted text on separate line. |
| <code>&lt;ul type="circle"&gt;</code>                | Displays the circular bullets.               |
| <code>&lt;ul type="disc"&gt;</code>                  | Displays the solid round bullets.            |
| <code>&lt;ul type="square"&gt;</code>                | Displays the squared bullets.                |

- type = circle  
 - type = disc  
 - type = square

### 2.6.2 Ordered List

The ordered list is a list of items which must follows some specific sequence. We can number the text using `<ol>` tag. Following table shows various styles by which the list can be numbered.

| tags                                    | meaning   |
|---|---|
| <code>&lt;ol&gt; and &lt;/ol&gt;</code> | Beginning and end of the numbered list                            |
| <code>&lt;li&gt; and &lt;/li&gt;</code> | Displays the numbered text on separate line.                      |
| <code>&lt;ol type="A"&gt;</code>        | Displays the list in following manner<br>A.<br>B.<br>C.<br>...    |
| <code>&lt;ol type="i"&gt;</code>        | Displays the list in following manner<br>i.<br>ii.<br>iii.<br>... |
| <code>&lt;ol type="I"&gt;</code>        | Displays the list in following manner<br>I.<br>II.<br>III.<br>... |
| <code>&lt;ol type="1"&gt;</code>        | Displays the list in following manner<br>1.<br>2.<br>3.<br>...    |

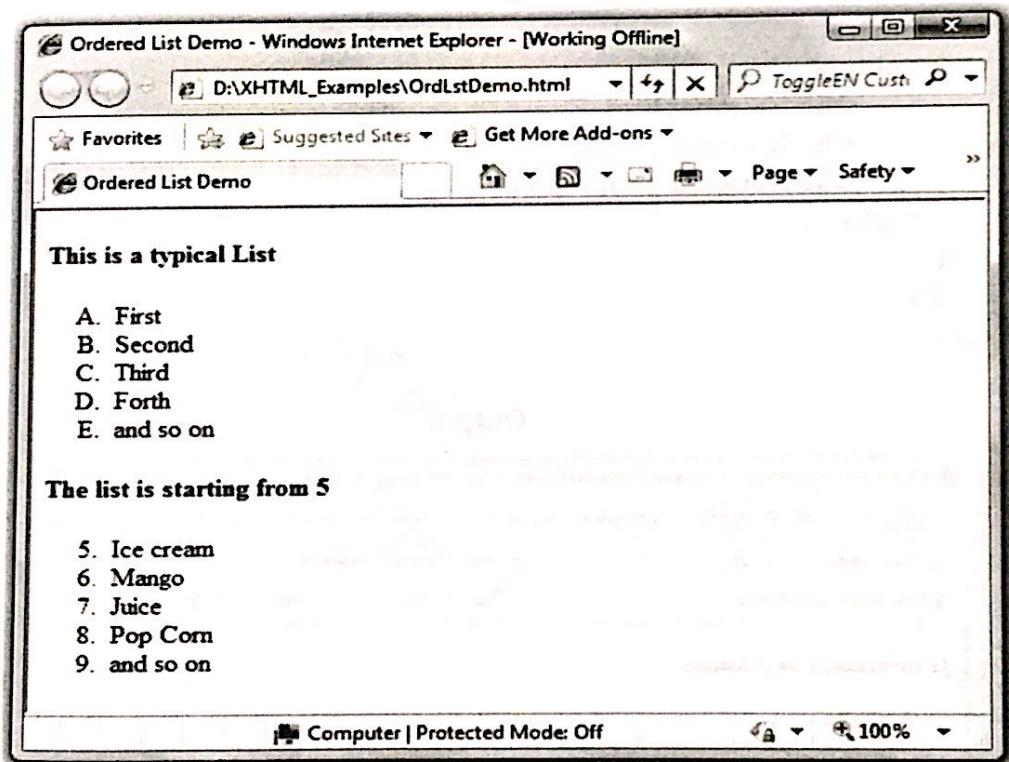
Here is one illustrative program -

#### HTML Document [OrdLstDemo.html]

```
<!DOCTYPE html PUBLIC "-//W3C//DTD XHTML 1.0 Transitional//EN"
"http://www.w3.org/TR/xhtml1/DTD/xhtml11.dtd">
<html xmlns="http://www.w3.org/1999/xhtml">
<head>
    <title> Ordered List Demo </title>
</head>
<body>
```

```
<h4>This is a typical List</h4>
<ol type="A">
<li>First</li>
<li>Second</li>
<li>Third</li>
<li>Forth</li>
<li> and so on</li>
</ol>
<h4>The list is starting from 5</h4>
<ol start="5">
<li>Ice cream</li>
<li>Mango</li>
<li>Juice</li>
<li>Pop Corn</li>
<li> and so on</li>
</ol>
</body>
</html>
```

### Output

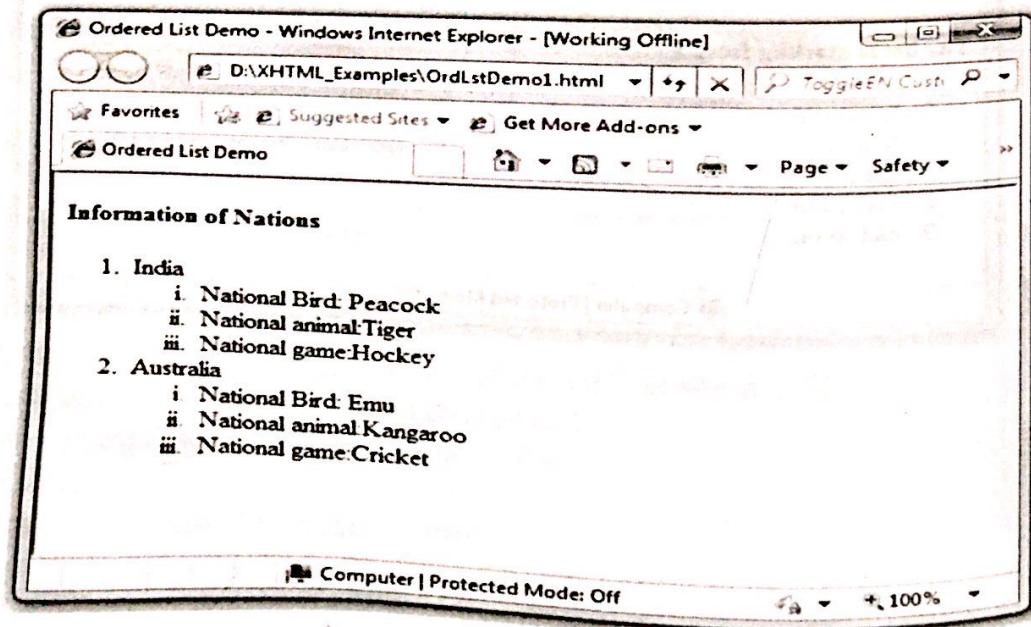


We can have the nested ordered list. Here is an example of it.

### HTML Document [OrdLstDemo1.html]

```
<!DOCTYPE html PUBLIC "-//W3C//DTD XHTML 1.0 Transitional//EN"
"http://www.w3.org/TR/xhtml1/DTD/xhtml11.dtd">
<html xmlns="http://www.w3.org/1999/xhtml">
    <head>
        <title> Ordered List Demo </title>
    </head>
    <body>
        <h4>Information of Nations</h4>
        <ol type="1">
            <li>India
                <ol type="i">
                    <li>National Bird: Peacock</li>
                    <li>National animal:Tiger</li>
                    <li>National game:Hockey</li>
                </ol>
            </li>
            <li>Australia
                <ol type="i">
                    <li>National Bird: Emu</li>
                    <li>National animal:Kangaroo</li>
                    <li>National game:Cricket</li>
                </ol>
            </li>
        </ol>
    </body>
</html>
```

### Output



## 2.7 Tables

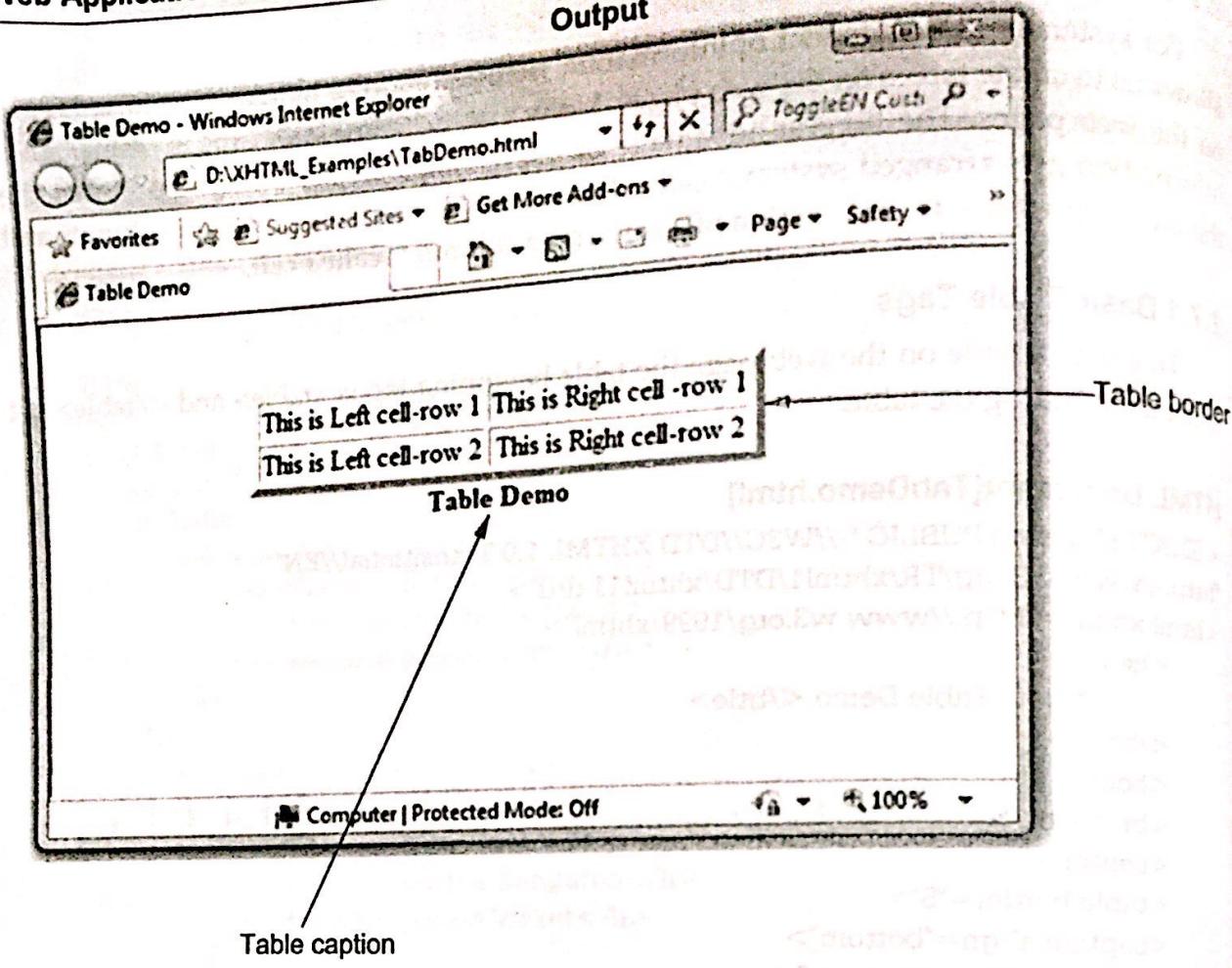
For systematic arrangement of information we often require tabular structure. HTML allows us to create tables on the web pages. Many web designers are using invisible tables on the web pages. The biggest advantage of using tables on the web pages is that the information gets arranged systematically. The table is a matrix of rows and columns and the area formed due to intersection of a row and a column is called cell.

### 2.7.1 Basic Table Tags

To create a table on the web page the table beginning tag is `<table>` and `</table>` tag is used for ending the table.

#### HTML Document[TabDemo.html]

```
<!DOCTYPE html PUBLIC "-//W3C//DTD XHTML 1.0 Transitional//EN"
"http://www.w3.org/TR/xhtml1/DTD/xhtml11.dtd">
<html xmlns="http://www.w3.org/1999/xhtml">
    <head>
        <title> Table Demo </title>
    </head>
    <body>
        <br/><br/>
        <center>
            <table border="5">
                <caption align="bottom">
                    <b> Table Demo </b>
                </caption>
                <tr>
                    <td>This is Left cell-row 1</td>
                    <td>This is Right cell -row 1</td>
                </tr>
                <tr>
                    <td>This is Left cell-row 2</td>
                    <td>This is Right cell-row 2</td>
                </tr>
            </table>
        </center>
    </body>
</html>
```



### Program Explanation

In above program, the parameter `border="5"` is set in order to set the table border. You can give any value to set the desired border. The caption to the table is given by the parameter `caption`, we can set this caption either at the top or at the bottom by using the parameter `align`. Then using the tag `<tr>` the table `row` can be set. The `<td>` tag is used to create `columns` from left to right. Thus in the above program we are filling up the table values from top to bottom and from left to right. Just refer the output provided along with the program for clear understanding of look and feel of the table.

We can set the header to each column of the table by `<th>` tag. Here is a simple HTML program that simply adds the header to each column.

#### HTML Document [TabDemo1.html]

```
<!DOCTYPE html PUBLIC "-//W3C//DTD XHTML 1.0 Transitional//EN"
"http://www.w3.org/TR/xhtml1/DTD/xhtml11.dtd">
<html xmlns="http://www.w3.org/1999/xhtml">
<head>
  <title> Table Demo </title>
</head>
```