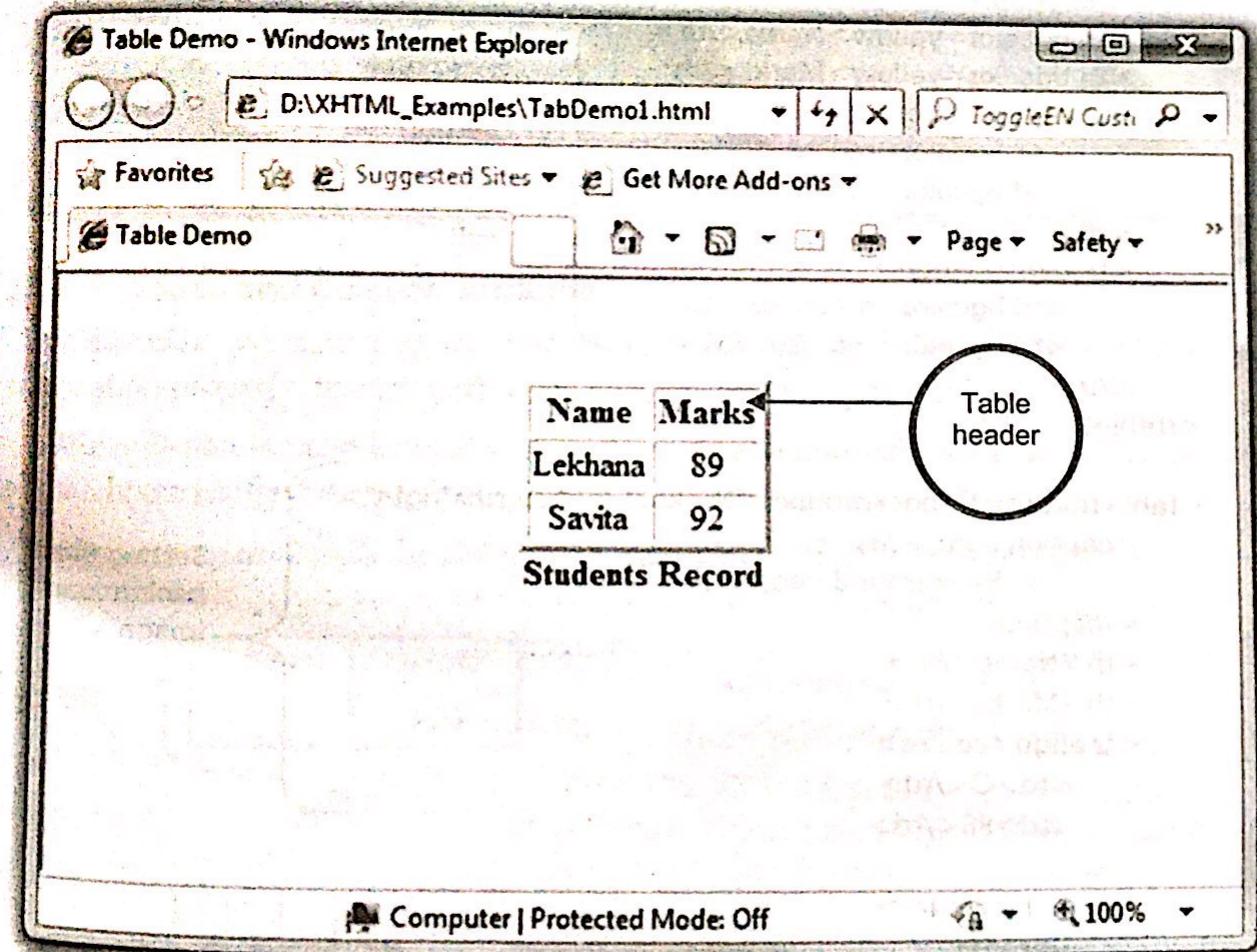


```
<body>
<br/><br/>
<center>
<table border="3">
<caption align="bottom">
    <b> Students Record </b>
</caption>
<thead>
    <tr align="center">
        <th>Name</th>
        <th>Marks</th>
    </tr>
</thead>
<tbody>
    <tr>
        <td>Lekhana</td>
        <td>89</td>
    </tr>
    <tr align="center">
        <td>Savita</td>
        <td>92</td>
    </tr>
</tbody>
</table>
</center>
</html>
```

Output

The data in each row can be aligned centrally by using `<tr align=center>`. Other types of alignment can be left or right by `<tr align=left>` or `<tr align=right>` respectively.

2.7.2 Background of Table

We can decorate our tables by setting the background of the table. Either some color can be set as table background or some image can be set as a table background. Here is an illustration –

XHTML Document[TabDemoBack.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 Decoration </title>  
  </head>  
  <body>  
    <table border="2">  
      <caption align="top">  
        <b>Background color</b>  
      </caption>  
      <th bgcolor=yellow>Name</th>  
      <th bgcolor=yellow>Marks</th>  
      <tr align=center>  
        <td bgcolor=red>A</td>  
        <td bgcolor=green>92</td>  
      </tr>  
      <tr align=center>  
        <td bgcolor=green>B</td>  
        <td bgcolor=red>90</td>  
      </tr>  
    </table>  
  
    <table border="5" background="backgr1.jpg" align="right">  
      <caption align="top">  
        <b>Background image</b>  
      </caption>  
      <th>Name</th>  
      <th>Marks</th>  
      <tr align=center>  
        <td>C</td>  
        <td>88</td>  
      </tr>  
      <tr align=center>  
        <td>D</td>  
        <td>77</td>  
      </tr>
```

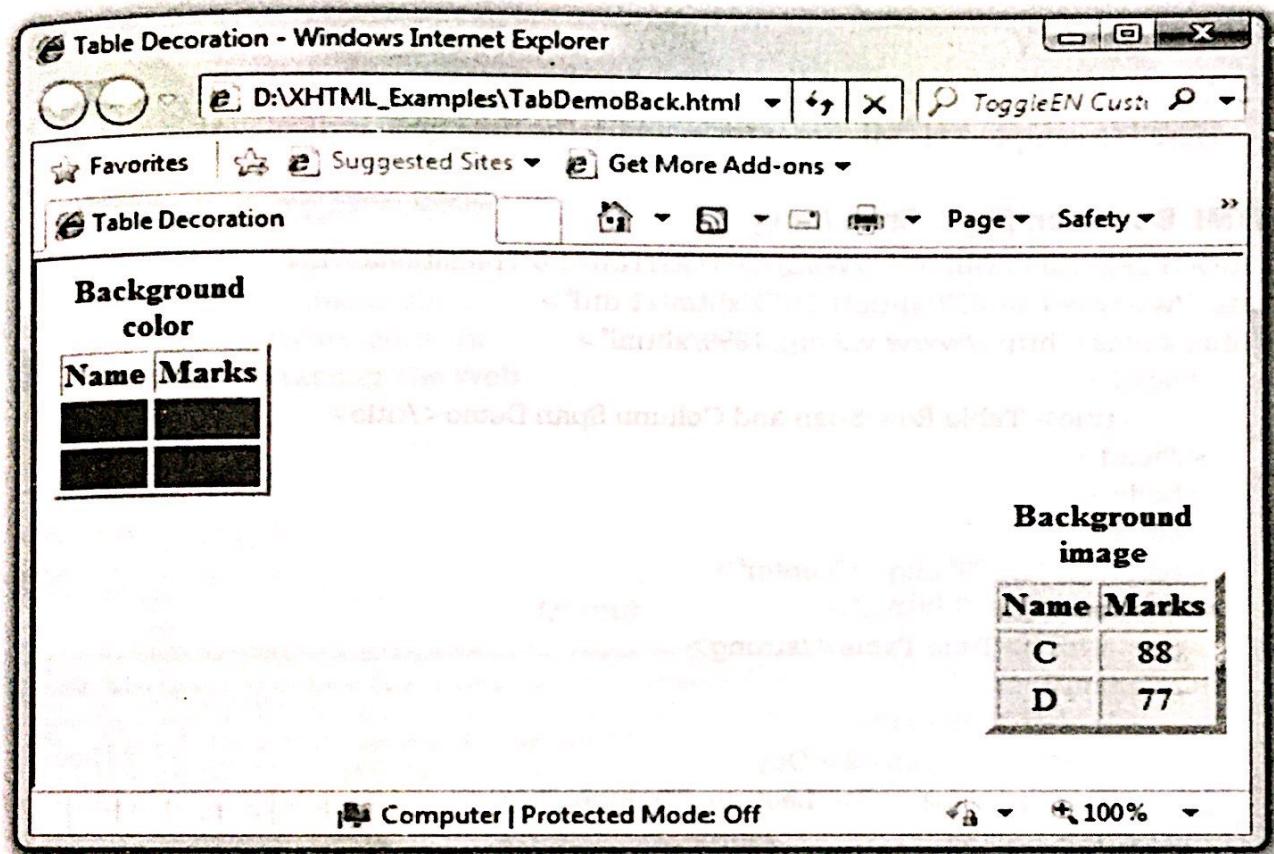
Setting the background color to each cell

Setting the background image

```

</tr>
</table>
</html>

```

Output

2.7.3 Rowspan and Colspan Attribute

Sometimes we may require adding sub-columns or sub-rows to categorize the information properly. In such a situation colspan and rowspan can be used.

The rowspan is used to extend the row vertically and colspan is used to extend the column horizontally. For example -

When rowspan=2 then the row can be extended vertically by two cells.

rowspan	{	
	First	Second
		Third

```

<td rowspan=2>First
<td>Second<td>Third

```

When colspan=2 then the column can be extended horizontally by two cells.

First	Second
Third	

colspan

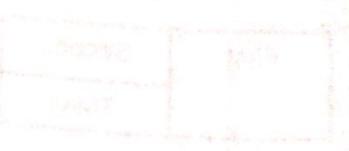
```
<td>First <td>Second  
<td colspan=2>Third
```

Here is a sample XHTML program in which the time table is displayed.

HTML Document[R_C_Span.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 Row Span and Column Span Demo</title>  
  </head>  
  <body>  
    <center>  
      <table border="3" align="center">  
        <caption align="bottom">  
          <strong>Time Table</strong>  
        </caption>  
        <tr align="center">  
          <th rowspan=2> Day  
          <th colspan=3> Lecture Timings  
        </tr>  
        <tr>  
          <th>9.00 to 11.00  
          <th>11.00 to 1.00  
          <th>2.00 to 4.00  
        </tr>  
        <tr align=center>  
          <td> Monday  
          <td> Data Structures  
          <td> Software Engineering  
          <td> Programming The Web  
        </tr>  
        <tr align=center>  
          <td> Tuesday  
          <td> Operating System  
          <td> Computer network  
          <td> Computer organisation  
        </tr>  
        <tr align=center>  
          <td> Wednesday  
        </tr>  
      </table>  
    </center>  
  </body>  
</html>
```

Filling up the table rowwise



```

<td>Software Engineering
<td>Computer network
<td>Data Structures
</tr>
<tr align=center>
<td>Thursday
<td>Programing The Web
<td>Computer organisation
<td>Data Structures
</tr>
<tr align=center>
<td>Friday
<td>Operating System
<td>Computer network
<td>Programing The Web
</tr>
</table>
</center>
</body>
</html>

```

Output

Table Row Span and Column Span Demo - Windows Internet Explorer

D:\XHTML_Examples\R_C_Span.html

Favorites Suggested Sites Get More Add-ons

Table Row Span and Column Sp...

Lecture Timings

Day	9.00 to 11.00	11.00 to 1.00	2.00 to 4.00
Monday	Data Structures	Software Engineering	Programming The Web
Tuesday	Operating System	Computer network	Computer organisation
Wednesday	Software Engineering	Computer network	Data Structures
Thursday	Programing The Web	Computer organisation	Data Structures
Friday	Operating System	Computer network	Programing The Web

Time Table

row

Computer | Protected Mode: Off 100%

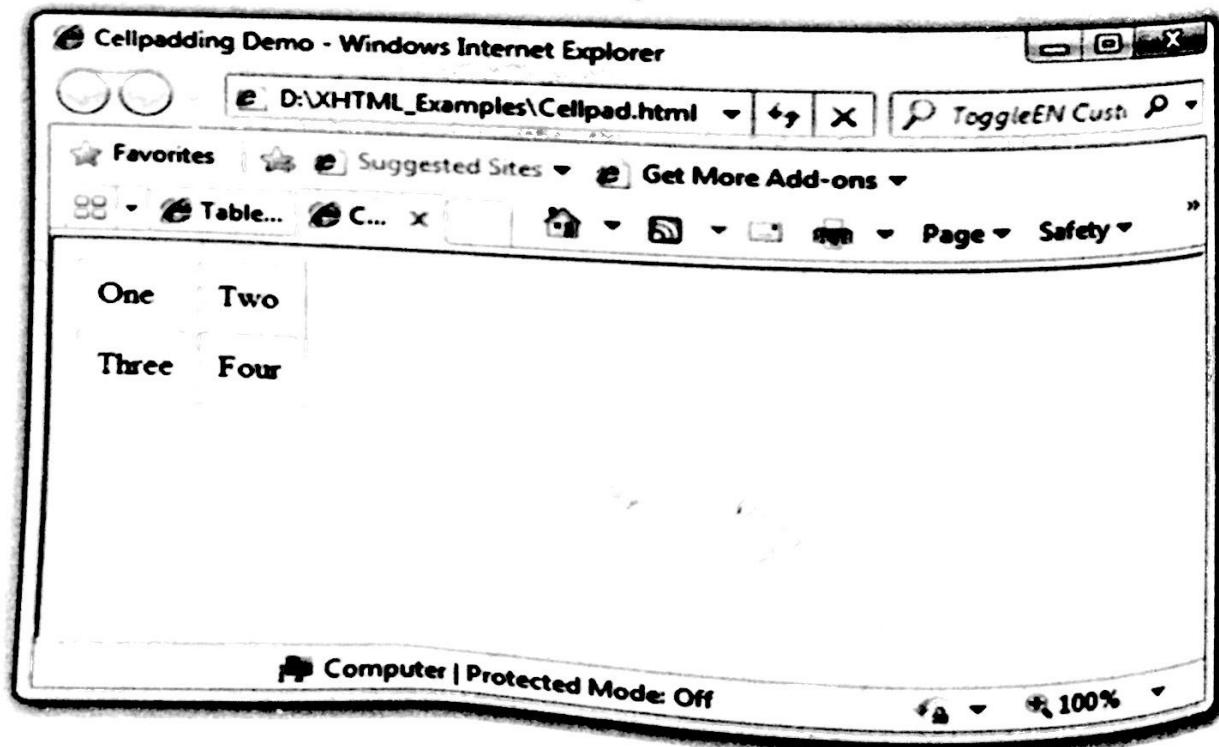
2.7.4 Cellpadding and Cellspacing Attribute

Cell padding allows to have some space between contents of each cell and its borders (or inner edges)

HTML Document[Cellpad.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> Cellpadding Demo </title>
</head>
<body>
    <table border="1" cellpadding="8">
        <tr>
            <td>One</td>
            <td>Two</td>
        </tr>
        <tr>
            <td>Three</td>
            <td>Four</td>
        </tr>
    </table>
</body>
</html>
```

Output

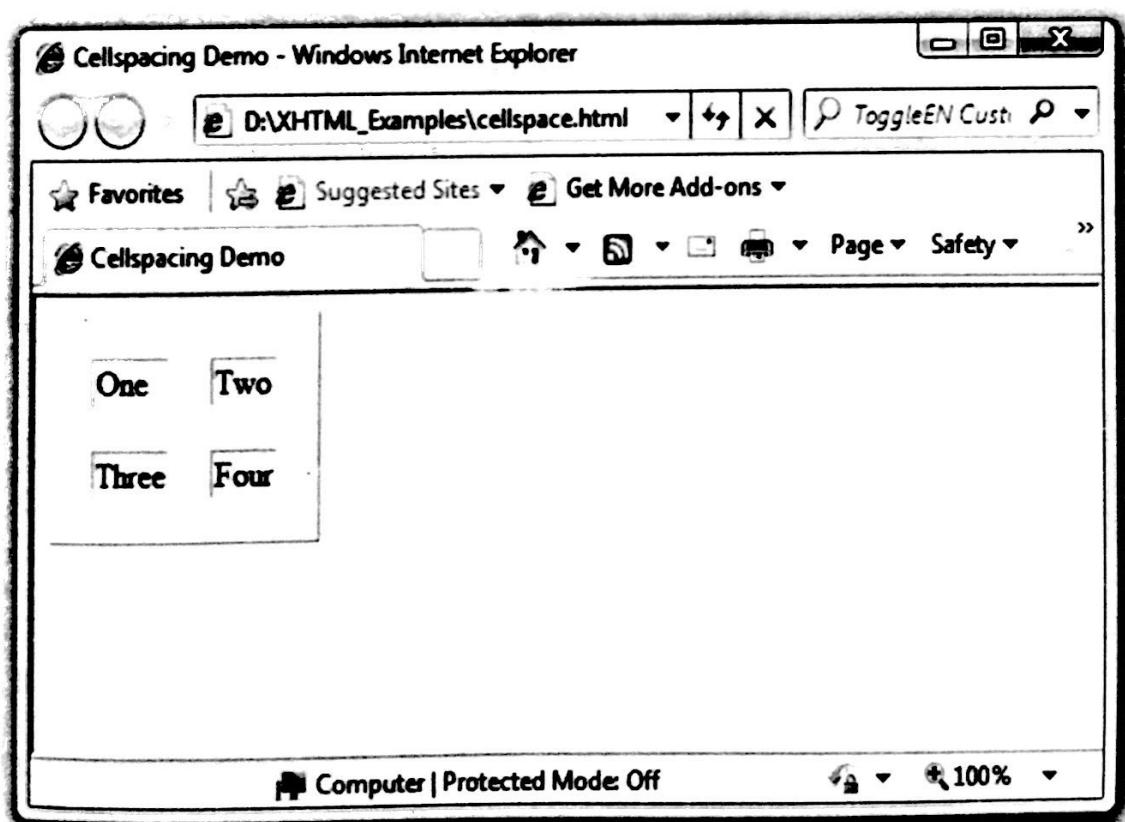


The distance between each cell can be increased by using cell spacing.

HTML Document[cellspace.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> Cellspacing Demo </title>
</head>
<body>
<table border="1" cellspacing="20">
<tr>
    <td>One</td>
    <td>Two</td>
</tr>
<tr>
    <td>Three</td>
    <td>Four</td>
</tr>
</table>
</body>
</html>
```

Output



2.8 Simple HTML Forms

Form is a typical layout on the web page by which a user can interact with the web page. Typical component of forms are text , text area, checkboxes, radio buttons and push buttons. HTML allows us to place these form components on the web page and send the desired information to the destination server.

All these form contents appear in the `<form>` tag. The form has an attribute `action` which gets executed when user clicks a button on the form.

Let us learn various form components with the help of simple HTML documents.

2.8.1 Text

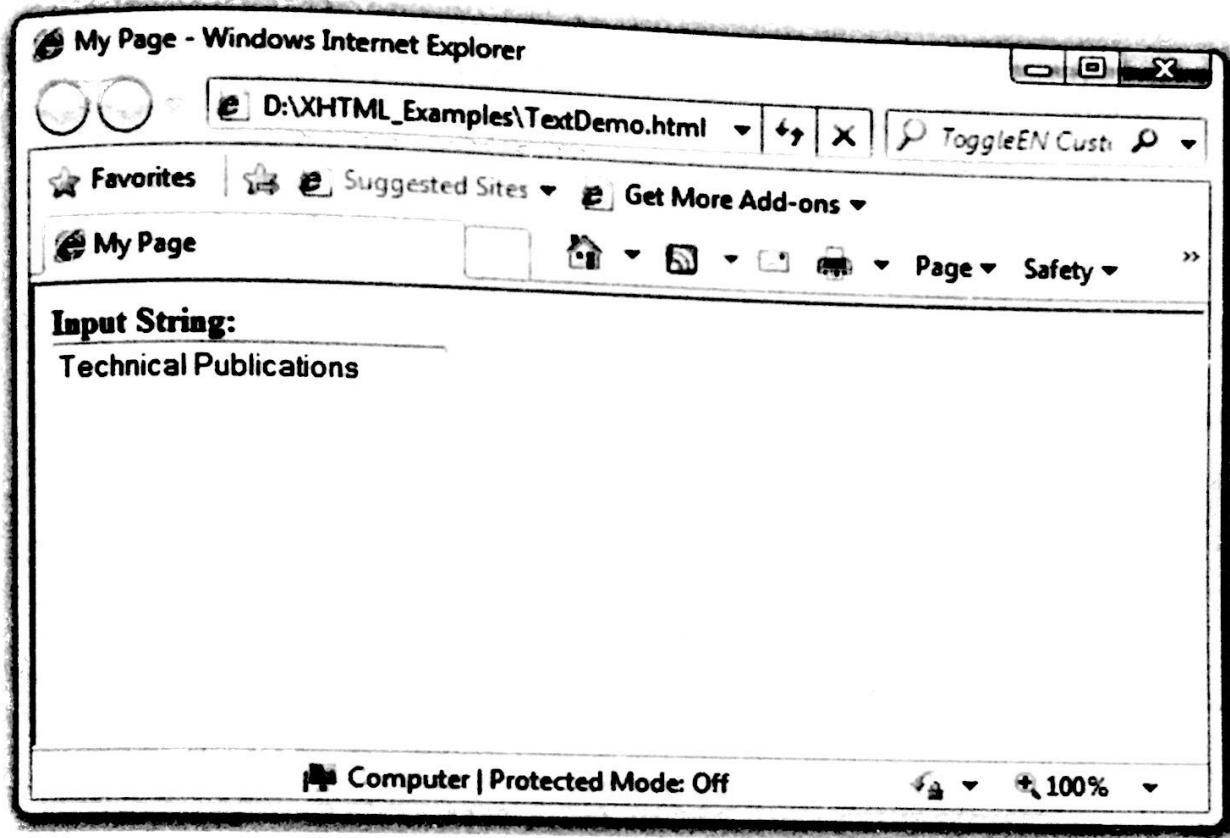
Text is typically required to place one line text. For example if you want to enter some name then it is always preferred to have Text field on the form. The text field can be set using

```
<input type="text" size="30" value=" ">
```

The input type is **text** and the **value** of this text field is “ ” That means the blank text field is displayed initially and we can enter the text of our choice into it. There is **size** parameter which allows us to enter some size of the text field.

HTML Document [TextDemo.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>My Page</title>  
  </head>  
  <body>  
    <form>  
      <b>Input String:</b> <br/> <input type="text" size="25" value="">  
    </form>  
  </body>  
</html>
```

Output

Some other parameters can be

- **maxlength** that allows us to enter the text of some maximum length.
- **name** indicates name of the text field.
- **align** denotes the alignment of the text in the text field. The alignment can be left, right, bottom and top.

In above document we have the label "Input String" just before the `<input>` tag. We can also specify the label by using the `<label>` tag as follows -

```
<label>Input String: <br/><input type="text" size="25" value=""></label>
```

Thus the label gets bound to the text box. This aspect is always beneficial for a web programmer because using label control we can focus on the corresponding text box contents.

2.8.2 Text Area

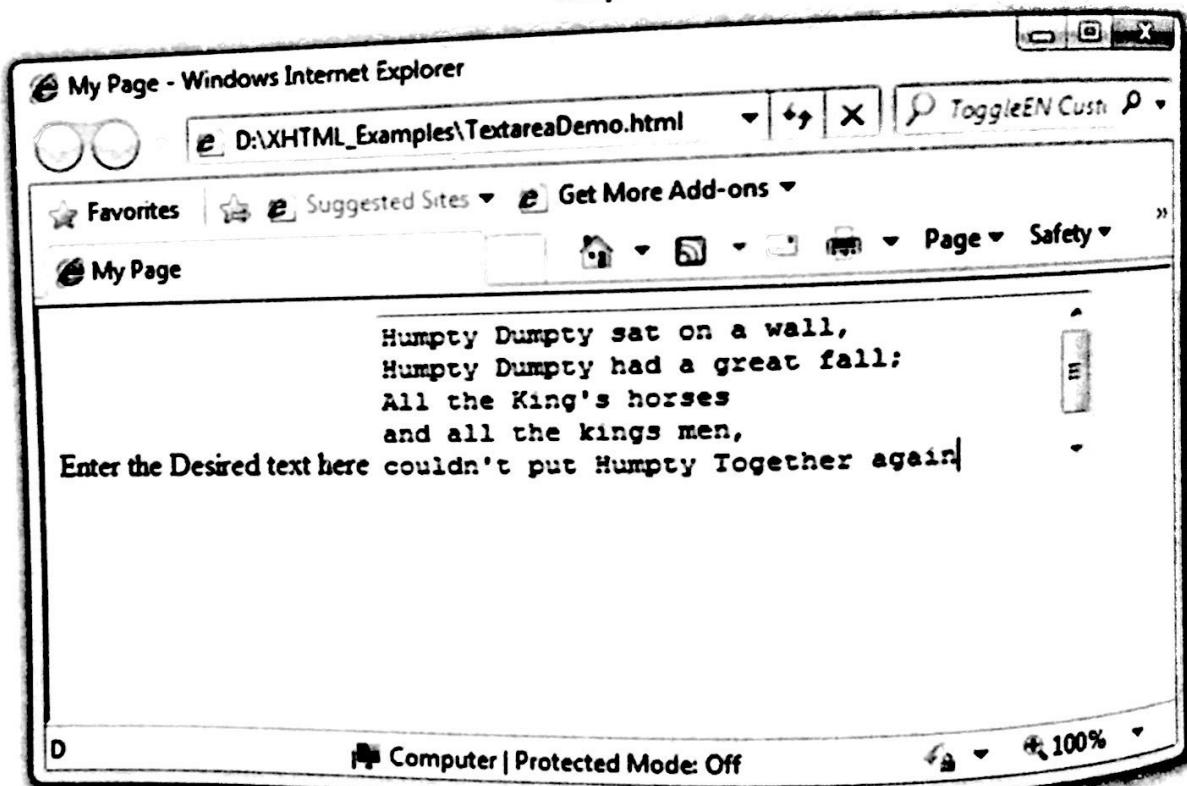
Text field is a form component which allows us to enter single line text, what if we want to have multiple line text? Then you must use textarea component.

HTML Document [TextareaDemo.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>My Page</title>
  </head>
  <body>
    <form>
      Enter the Desired text here
      <textarea cols="40" rows="5" name="myname">
      </textarea>
    </form>
  </body>
</html>
```

Output



Various parameters that can be set for the text area can be

- **row** denotes total number of rows in the text area.
- **col** specifies total number of columns in the text area.
- **name** denotes the name of the text area which can be utilised for handling that component for some specific purpose.
- **wrap** can be **virtual** or **physical**. If the **wrap** is **virtual** then the line breaks get disappeared when the text is actually submitted to the server. But if the **wrap** is assigned to the **physical** then the line breaks (if any) appear as it is in the text.

2.8.3 Checkbox

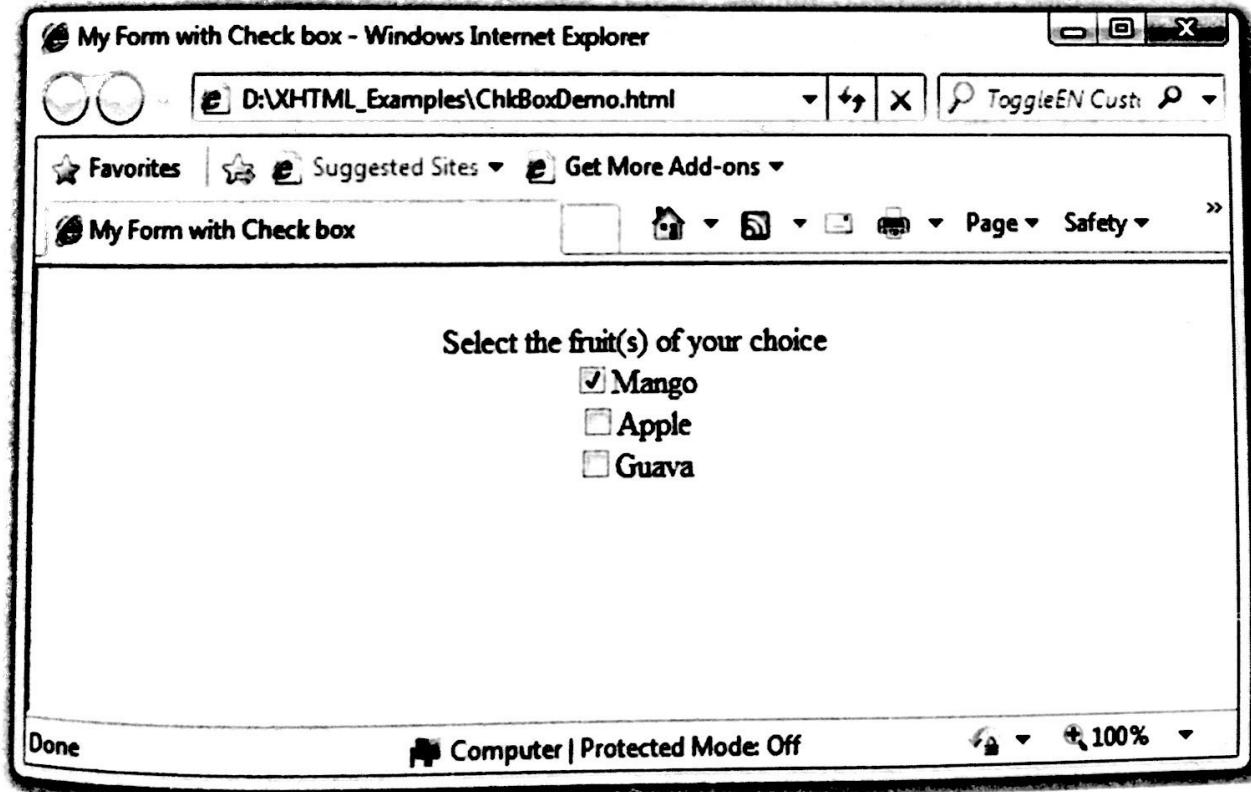
It is the simplest component which is used particularly when we want to make some selection from several options.

HTML Document[ChkBoxDemo.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>My Form with Check box</title>
    </head>
    <body>
        <form name = "checkboxForm">
            <div align="center"><br>
                Select the fruit(s) of your choice<br/>
                <input type="checkbox" name="option1" value="mango"
checked="checked">Mango<br/>
                <input type="checkbox" name="option2" value="apple">Apple<br/>
                <input type="checkbox" name="option3" value="guava">Guava<br/>
            </div>
        </form>
    </body>
</html>
```

checkbox form

Output



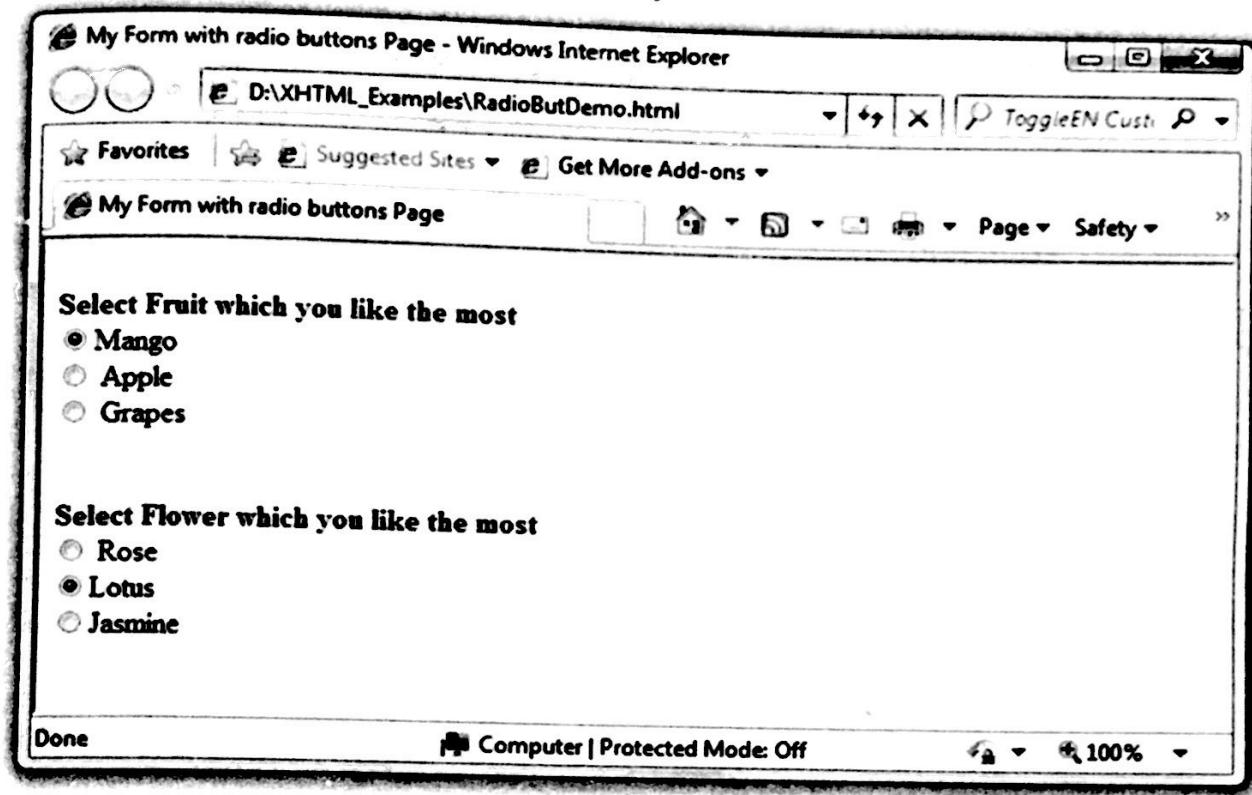
In the above program to set some checkbox in checked state we can mention the attribute **checked** as **checked**. We can set the **value** attribute as " " but this then the checkbox will not get associated with any value. The **Mango**, **Apple** and **Guava** are the labels of the checkboxes.

2.8.4 Radio Button

This form component is also used to indicate the selection from several choices. Using **input type="radio"** we can place radio button on the web page. This component allows us to make only one selection at a time. We can create a group of some radio button component. Following HTML document displays the radio buttons for two different groups.

HTML Document[RadioButDemo.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>My Form with radio buttons Page</title>
  </head>
  <body>
    <form name="myform">
      <div align="left"><br>
      <b>Select Fruit which you like the most</b> <br/>
      <input type="radio" name="group1" value="Mango"> Mango <br/>
      <input type="radio" name="group1" value="Apple" checked> Apple <br/>
      <input type="radio" name="group1" value="Grapes"> Grapes
      <br/><br/><br/>
      <b>Select Flower which you like the most</b> <br/>
      <input type="radio" name="group2" value="Rose"> Rose <br/>
      <input type="radio" name="group2" value="Lotus"> Lotus <br/>
      <input type="radio" name="group2" value="Jasmine" checked> Jasmine <br/>
    </form>
  </body>
</html>
```

Output

2.8.5 Button

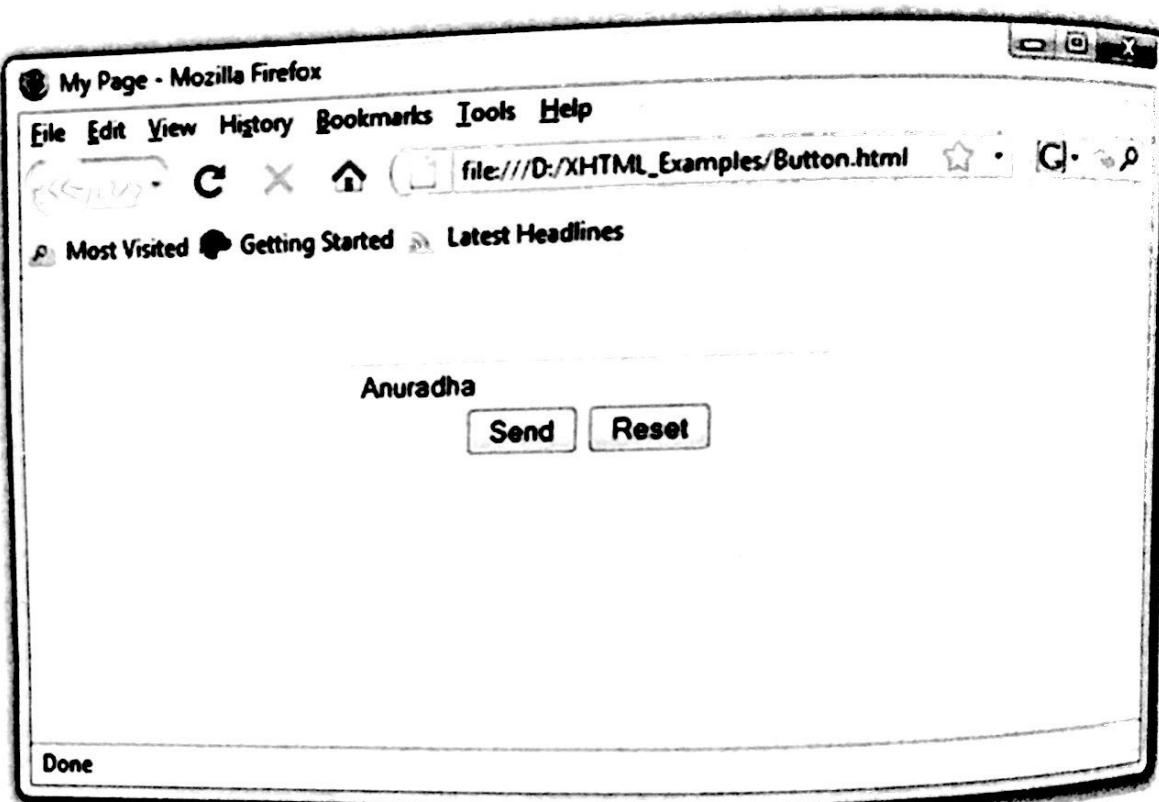
There are two types of buttons that can be created in HTML. One is called **submit** button and the another one is **reset** button. Various parameters of submit button are

- **name** denotes the name of the submit button.
- **value** is for writing some text on the text on the button.
- **align** specifies alignment of the button.

HTML Document[Button.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> My Page </title>  
  </head>  
  <body>  
    <form name="myform" action="http://www.localhost.com/cgi-bin/hello.cgi"  
method="POST">  
      <div align="center">  
        <br/><br/>  
        <input type="text" size="35" value="" >  
        <br><input type="submit" value="Send">
```

```
<input type="reset" value="Reset"><br>
</div>
</form>
</body>
</html>
```

Output**Explanation**

In above HTML document, we have used the form whose name is "myform". There are two attributes associated with the form tag and those are **action** and **method**. The **action** parameter indicates the address and the cgi script where the contents should go and **method** parameter is for the methods for submitting the data. The **method** can be **get** or **post**. Thus by specifying the action and method for a form we can send the desired data at desired location. We will discuss about the cgi script in some later chapter.

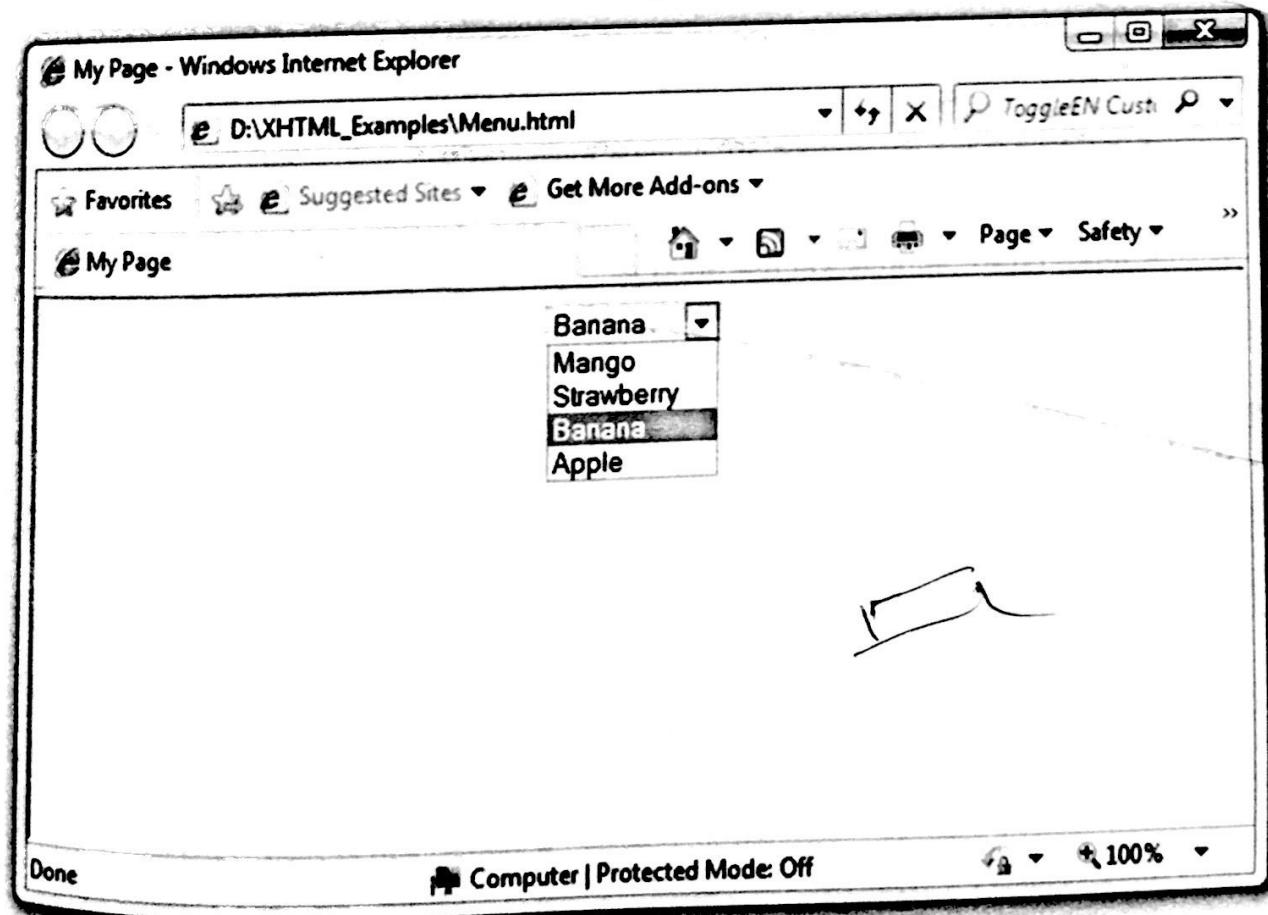
2.8.6 Menus

HTML allows us to have pop down menu on the web page so that the desired selection can be made. The parameter **select** is for the menu component and **option** parameter is for setting the values to the options of drop down menu. We can make some specific option selected by **selected value =**.

In the following HTML document we have created one drop down menu in which various fruits are enlisted. By default "Banana" is set as selected.

HTML Document [Menu.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> My Page </title>
    </head>
    <body>
        <form name="myform">
            <div align="center">
                <select name="My_Menu">
                    <option value="Mango">Mango</option>
                    <option value="Strawberry">Strawberry</option>
                    <option selected value="Banana">Banana </option>
                    <option value="Apple">Apple</option>
                </select>
            </div>
        </form>
    </body>
</html>
```

Output

2.8.7 Sending Form

As we know that by specifying the form **action** and **method** we can send the data at the desired location. In this section, we will see how to send an e-mail using form. For that matter, we will create a form on which the username, subject and message fields are placed. There should be some **send button**, by clicking which we can send the field data as an e-mail. Before running the following program ensure that some e-mail client like outlook is already configured to your e-mail account. Then only the output of this program will be understood. Here is an HTML document -

HTML Document [SendForm.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> My Page </title>
</head>
<body>
    <form action="MAILTO:BillGates@microsoft.com" method="post"
enctype="text/plain">
        <h3>Sending an e-mail to Mr.Bill Gates</h3>
        Name:<br/>
        <input type="text" name="name" value="" size="20">
        <br/>
        Message:<br/>
        <textarea cols="40" rows="10" name="message">
        </textarea>
        <br/>
        <input type="submit" value="Send">
        <input type="reset" value="Reset">
    </form>
</body>
</html>
```

Output

The screenshot shows a Mozilla Firefox browser window titled "My Page - Mozilla Firefox". The address bar displays "file:///D:/XHTML_Examples/SendForm.html". The page content is as follows:

Sending an e-mail to Mr.Bill Gates

Name:

Message:

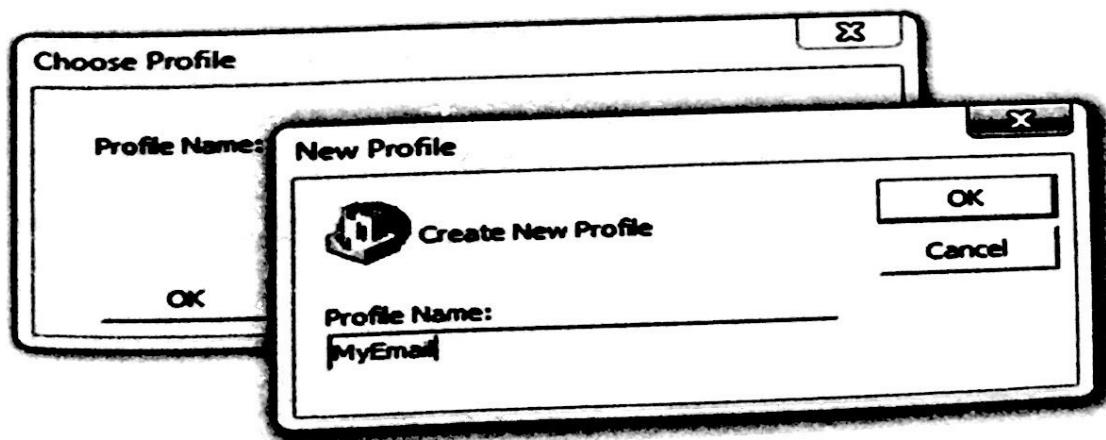
Dear Sir,
Thanks for your offer letter.I am ready
to join Microsoft from Next week.

Send **Reset**

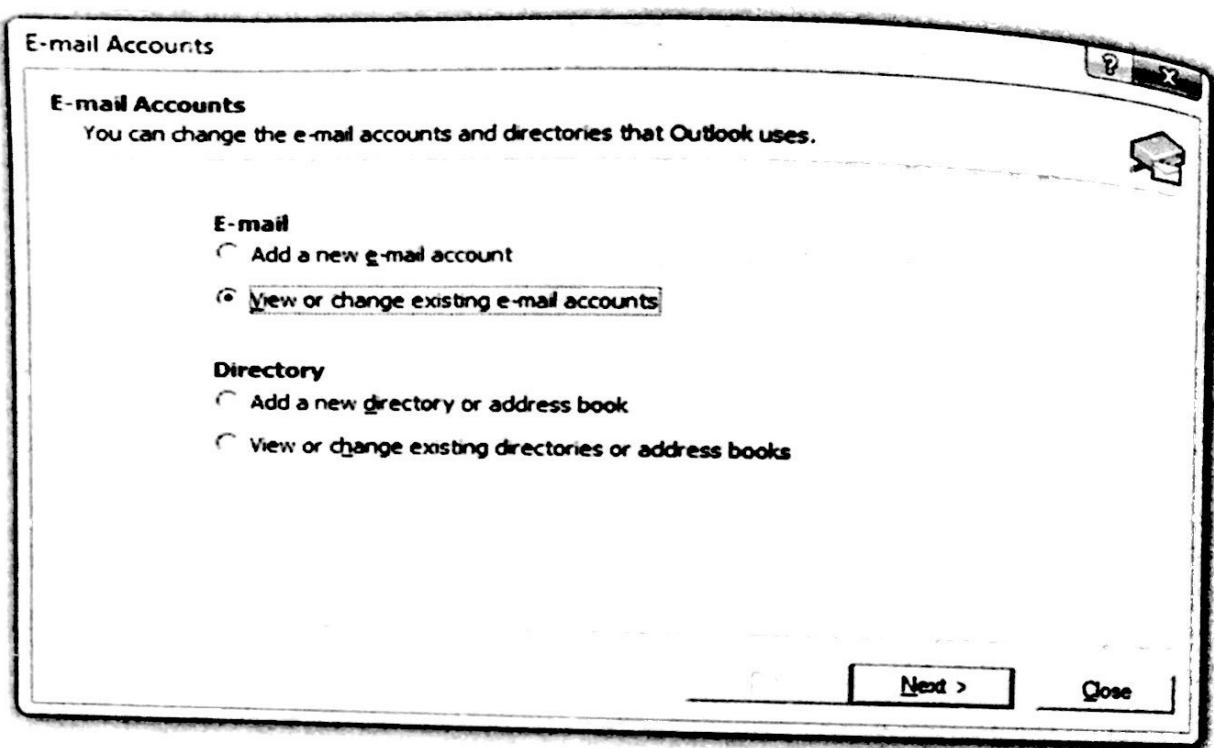
Done

Click the Send button. If the E-mail Client such as Microsoft Outlook Express is not already configured then configure it like this -

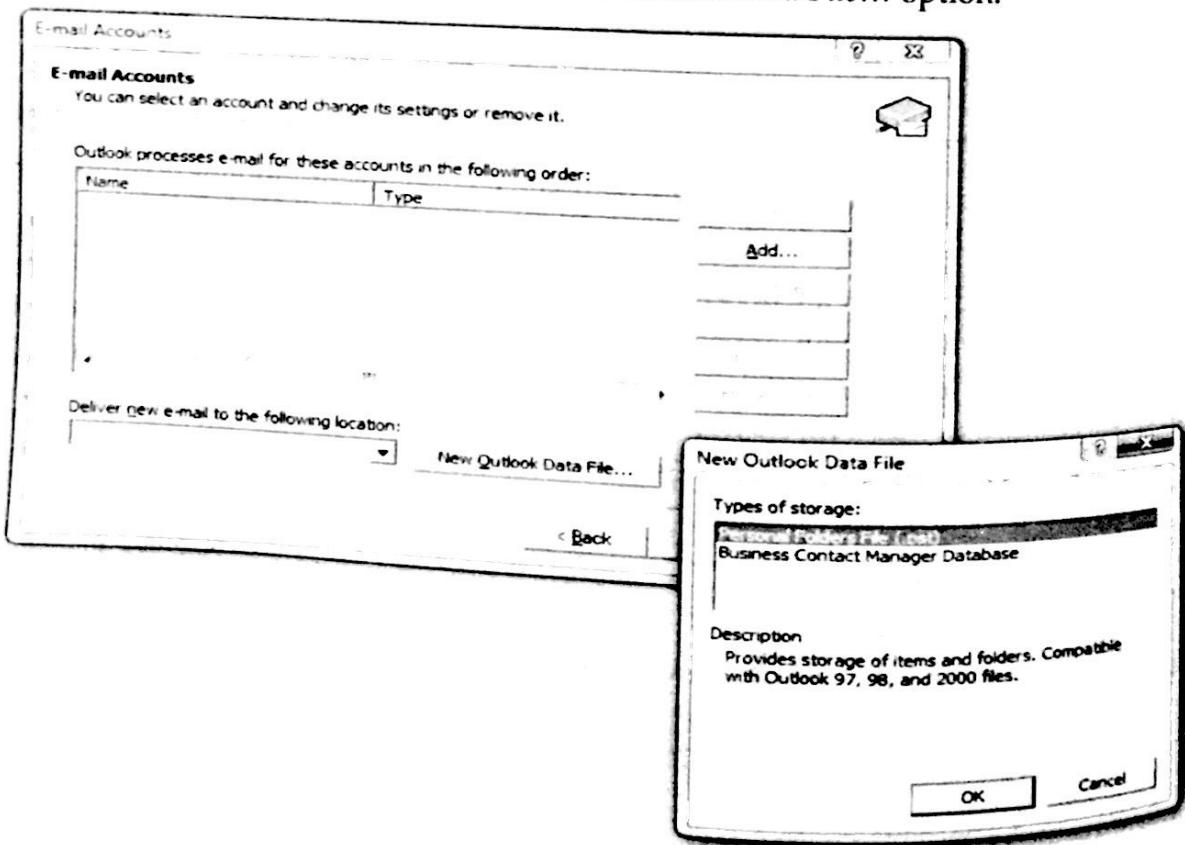
On clicking Send button a Choose Profile window will appear. Click on New button and then another window will appear which allows you to create a New Profile. Give some Profile Name, for instance: I have given the profile name as MyEmail then click OK button.



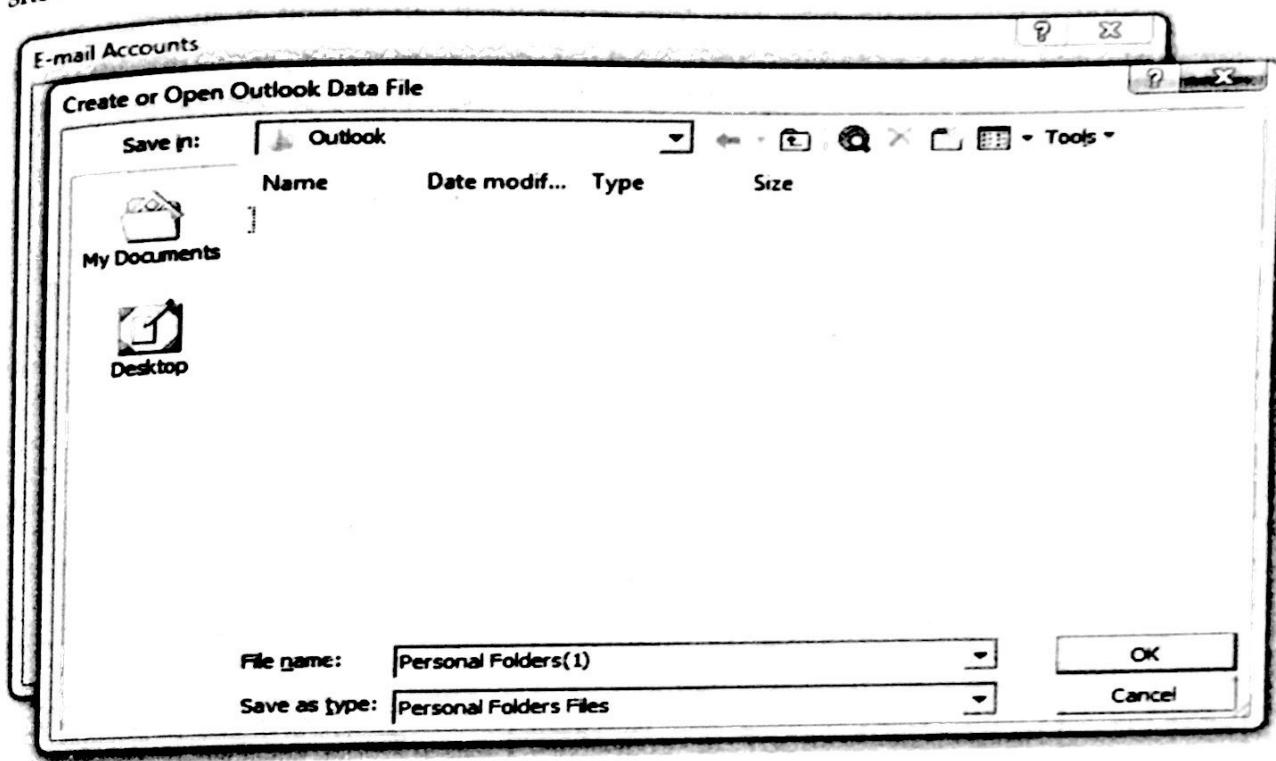
Then once again click OK on subsequent window and you will get following kind of screen -



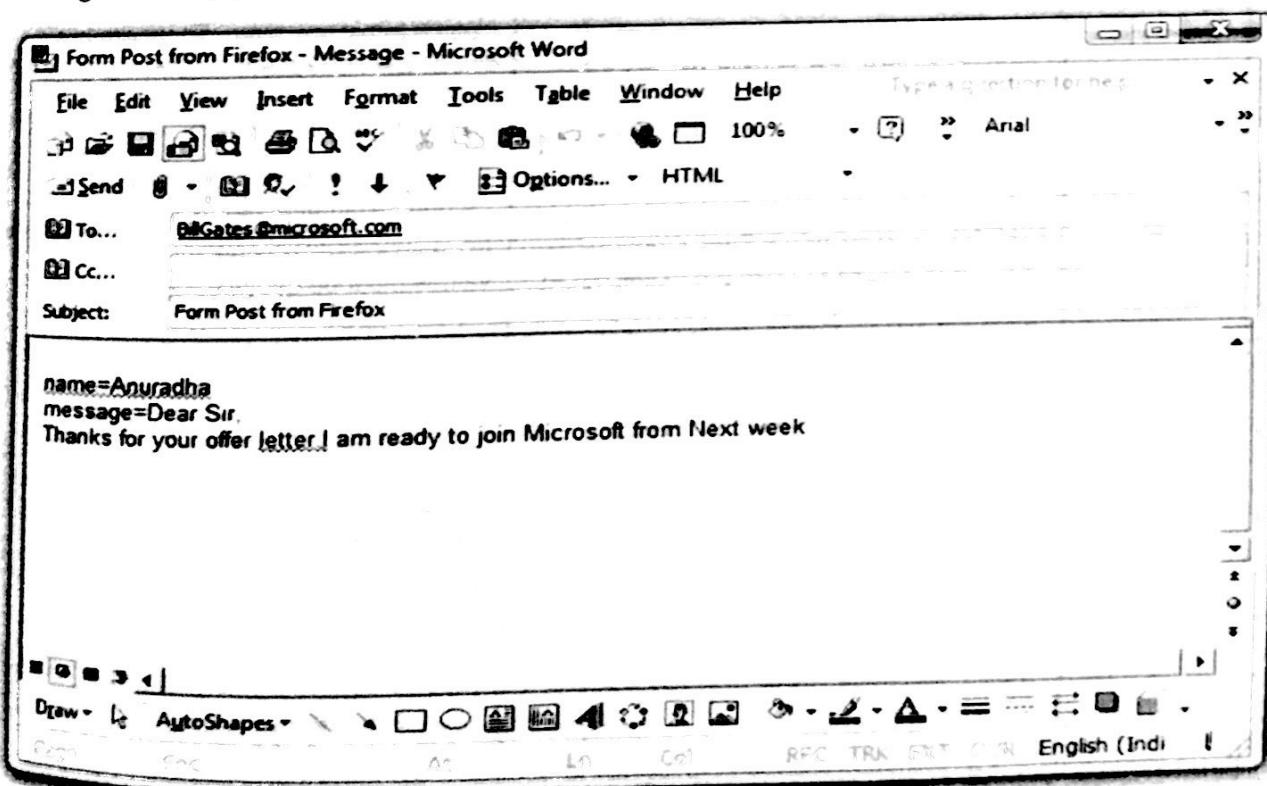
Select the option *View or Change existing e-mail accounts* then click **Next** button. And following window will appear. Just click *New Outlook Data File...* option.



Create a Personal Folders File and save it by some suitable Data file name. It is shown below -



When you click OK button Outlook Express gets opened up and then you can see the message send by your HTML document in the Outlook express as follows -



In above program we have specified action as
MAILTO:BillGates@microsoft.com

And method is specified as post. That means this form can be sent as an e-mail to the e-mail address mentioned by action parameter. On the form we have placed one text field for storing the name, one text area for storing the message, one submit button to send the information as e-mail and one reset button to reset the previous data.

Thus we can send some form to an E-mail client using HTML document.

2.9 XHTML

HTML stands for hypertext markup language and XHTML stands for extensible hypertext markup language.

In the very early stage of web designing the static HTML scripting language was popularly used but late in 1999 the XHTML 1.0 was approved by the World Wide Web Consortium (W3C). We now use the latest version of XHTML and i.e. XHTML1.1.

Here are some syntactic difference enlisted below -

Sr.No.	HTML	XHTML
1.	The HTML tags are case insensitive. Hence <body> or <BODY> or <Body> are treated as one and the same.	The XHTML is case sensitive and all the tags in XHTML document must be written in lower case.
2.	We can omit the closing tags sometimes in HTML document.	For every tag there must be a closing tag. Some browsers get confused if the closing tag is not given. There are two ways by which we can mention the closing tags or
3.	In HTML the attribute values it not always necessary to quote the attribute values. In fact numeric attribute values are rarely quoted in HTML. Only if some special characters or white spaces are present in the attribute values then only it is essential to put quotes around them in HTML.	In every XHTML document the attribute values must be quoted.
4.	In HTML there are some implicit attribute values.	In every XHTML the attribute values must be specified explicitly.
5.	In HTML even if we do not follow the nesting rules strictly it does not cause much difference.	In XHTML document the nesting rules must be strictly followed. These nesting rules are- <ul style="list-style-type: none"> • A form element can not contain another form element. • An anchor element does not contain

		<ul style="list-style-type: none"> another form element. List element can not be nested in the list elements. If there are two nested elements then the inner element must be enclosed first before closing the outer element. Text elements can not be directly nested in form elements.
--	--	---

2.10 Frames

HTML frames allow us to present documents in multiple views. Using multiple views we can keep certain information visible and at the same time other views are scrolled or replaced. For example, within the same window, one frame can display a company information, a second frame can be a navigation menu and a third frame may display selected document that can be scrolled through or replaced by navigating in the second frame. Various frames can be set in one browser window .

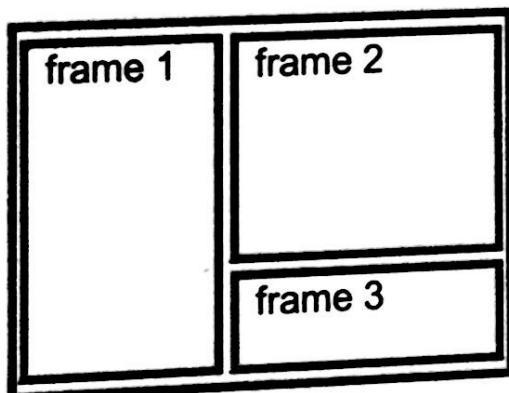


Fig. 2.1 Frames

To set the frames in the browser window we use frame set. For example -

<frameset cols="150,*">

will allow us to divide the window into two columns (i.e. in two vertical frames). One frame occupying the size of 150 pixels and the other occupies the remaining portion of the window. Here * means any number of pixels. Similarly

<frameset rows="*,120">

will divide the window into two rows (i.e. in two horizontal frames). The second part of horizontal frame will be of 120 pixels and upper horizontal frame will occupy remaining portion of the window.

Similarly we can also specify the frameset in percentage form. For example

<frameset rows="30%,70%">

Using frameset we can divide the rows and columns in any number of frames.

For example

```
<frameset rows = "20%,30%,50%" cols = "30%,*">
```

This will create a frames in the browser's window as follows -

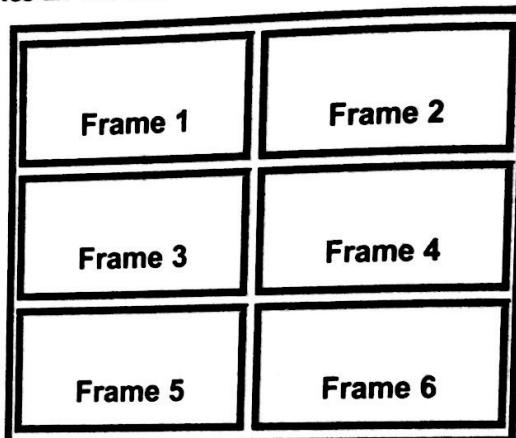


Fig. 2.2 Frames

In every layout frame we can load the desired html page by using **frame src**. For example

```
<frame src="D:\\html_examples\\bulleted1.html" name="Left_Vertical">
```

By this statement we are loading the web page **bulleted1.html** in the specific frame and the frame is named as **Left_Vertical**.

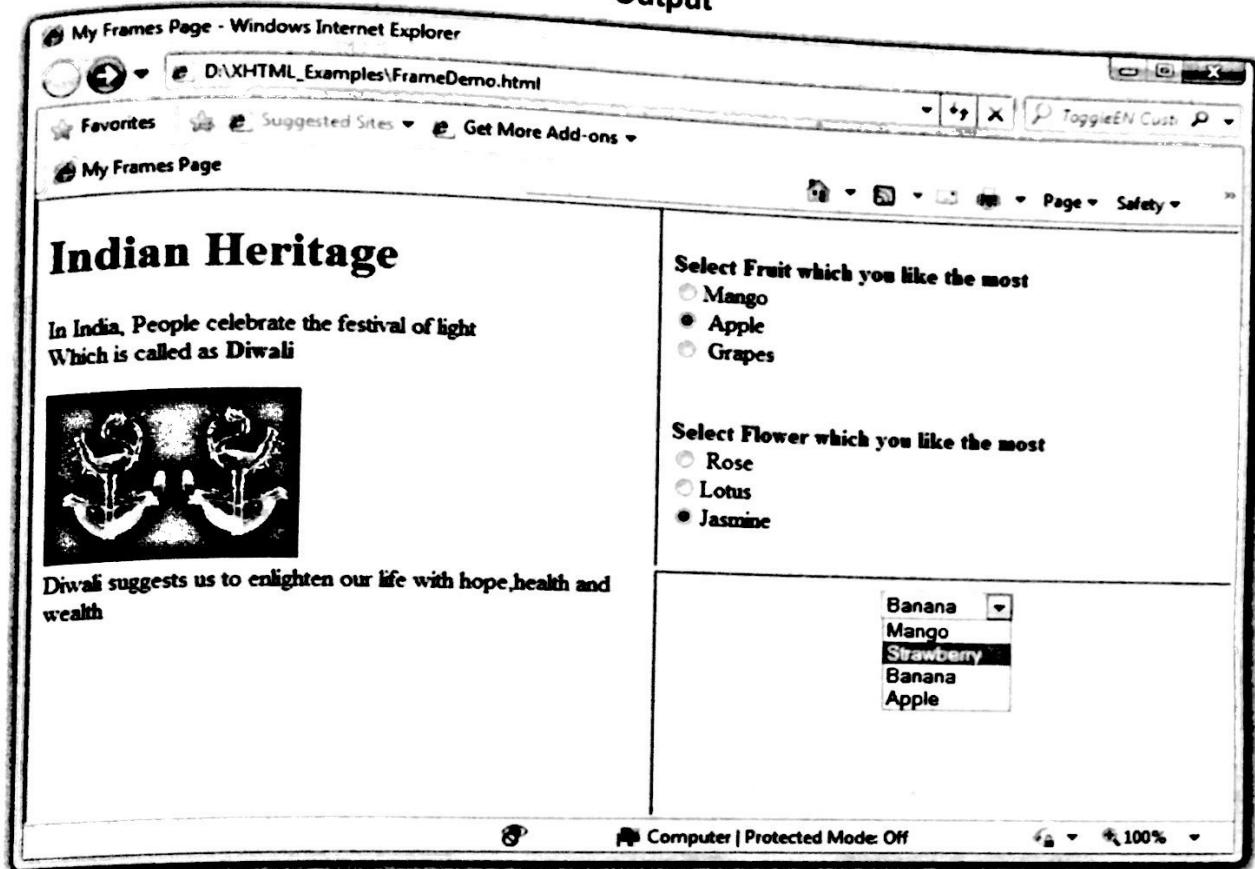
2.10.1 Browser Window Containing Frames

Let us understand the concept of frames by developing a sample HTML document.

HTML Document[FrameDemo.html]

```
<?xml version = "1.0" encoding = "utf-8"?>
<!DOCTYPE html PUBLIC "-//W3C//DTD XHTML 1.0 Frameset//EN"
"http://www.w3.org/TR/xhtml1/DTD/xhtml1-frameset.dtd">
<html xmlns="http://www.w3.org/1999/xhtml">
  <head>
    <title>My Frames Page</title>
  </head>
  <frameset cols="50%,50%">
    <frame src="imagedemo.html" name="Left_Vertical"/>
    <frameset rows="*,170">
      <frame src="RadioButDemo.html" name="Right_top"/>
      <frame src="Menu.html" name="Right_Bottom"/>
    </frameset>
  </frameset>
</html>
```

Output



In above HTML document, for getting the frame displayed we have to make changes in the DOCTYPE suggested. These changes are shown by bold text.

Note one more thing that the code for frameset should not be written within the **<body>** tag. It should be simply after the **</head>**

First of all we have divided the window into two vertical frames - both the frames are equally divided within the window by specifying the frameset columns of 50 %. The left vertical frame (of size 150 pixels) is named as **Left_Vertical**. You can give any name to a frame but remember that naming a frame is the most essential thing. Then further in our document, we have divided the right vertical frame into two horizontal frames - The bottom frame is name as **Right_bottom** which is of size 170 pixels and the top frame is named as **Right_top** which occupies remaining portion of the window. As you can see in the output, the **Left_Vertical** frame displays *imagedemo.html* file. (We have already created it), similarly **Right_top** frame displays *RadioButDemo.html* and **Right_bottom** frame displays *Menu.html* file respectively. At the end of the document we have to close the tags of frameset by **</frameset>**.

The above program creates the frames which can be resized but if we want to lock these frames at their respective sizes we can perform this by **noresize** parameter. For that matter, we will simply modify the above document as follows -

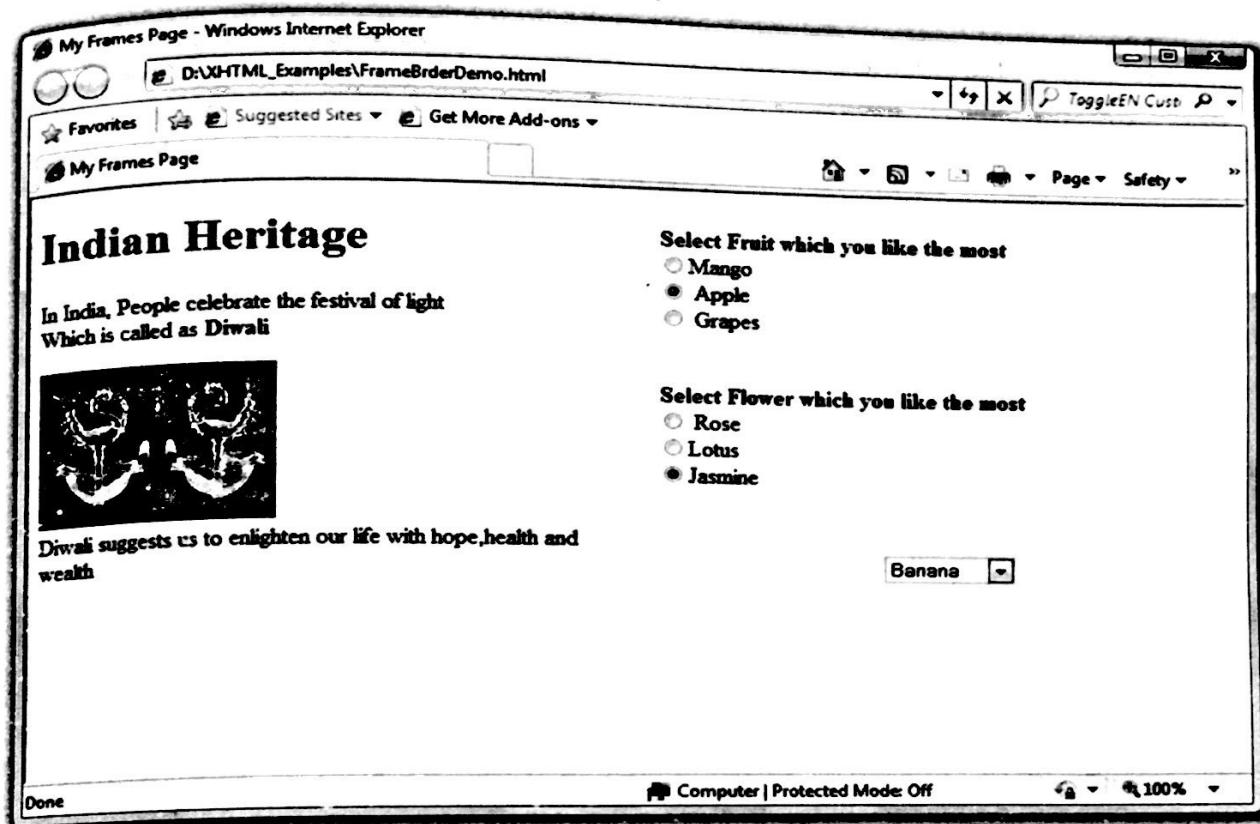
```
<?xml version = "1.0" encoding = "utf-8"?>
<!DOCTYPE html PUBLIC "-//W3C//DTD XHTML 1.0 Frameset//EN"
"http://www.w3.org/TR/xhtml1/DTD/xhtml1-frameset.dtd">
<html xmlns="http://www.w3.org/1999/xhtml">
    <head>
        <title>My Frames Page</title>
    </head>
    <frameset cols="50%,50%">
        <frame src="imagedemo.html" name="Left_Vertical" noresize />
        <frameset rows="*,170">
            <frame src="RadioButDemo.html" name="Right_top"/>
            <frame src="Menu.html" name="Right_Bottom"/>
        </frameset>
    </frameset>
</html>
```

Of course output will be similar to the previous program, but we can not resize the vertical frame.

2.10.2 Border

HTML Document [FrameBrder.html]

```
<?xml version = "1.0" encoding = "utf-8"?>
<!DOCTYPE html PUBLIC "-//W3C//DTD XHTML 1.0 Frameset//EN"
"http://www.w3.org/TR/xhtml1/DTD/xhtml1-frameset.dtd">
<html xmlns="http://www.w3.org/1999/xhtml">
    <head>
        <title>My Frames Page</title>
    </head>
    <frameset cols="50%,50%" frameborder="0" border="0" framespacing="0">
        <frame src="imagedemo.html" name="Left_Vertical" />
        <frameset rows="*,170">
            <frame src="RadioButDemo.html" name="Right_top"/>
            <frame src="Menu.html" name="Right_Bottom"/>
        </frameset>
    </frameset>
</html>
```

Output

Look at this output, this is an output without borders to the frames.

2.10.3 Scroll Bars

Sometimes a particular frame may consist of large amount of information. For just going through that specified information we may require to scroll the frame. And in such a case **scroll bar** must be accompanying the frame. But there are some other situations in which we do not require scroll bars along with the frame. HTML provides the facility of setting or resetting the scrollbars to the frames.

Following is an HTML document which illustrates the same -

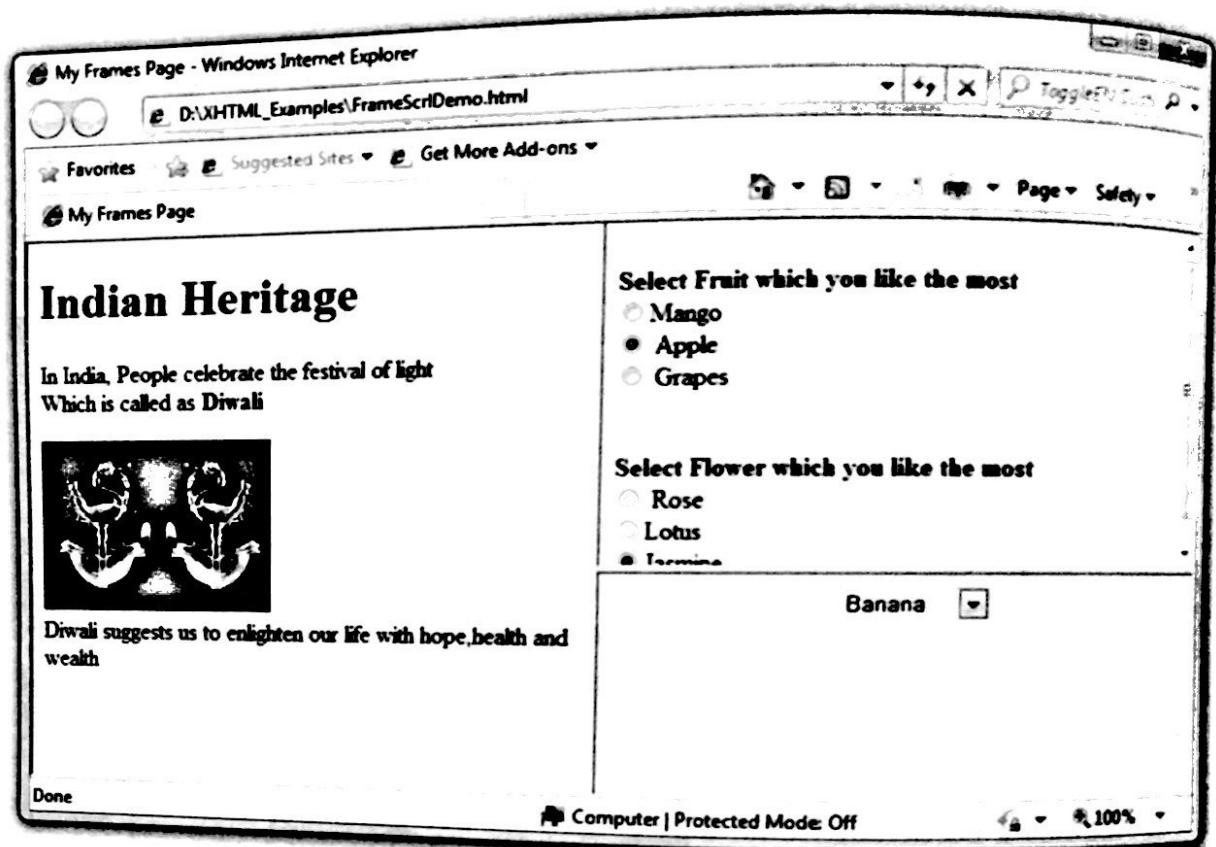
HTML Document [FrameScrlDemo.html]

```
<?xml version = "1.0" encoding = "utf-8"?>
<!DOCTYPE html PUBLIC "-//W3C//DTD XHTML 1.0 Frameset//EN"
"http://www.w3.org/TR/xhtml1/DTD/xhtml1-frameset.dtd">
<html xmlns="http://www.w3.org/1999/xhtml">
<head>
    <title>My Frames Page</title>
</head>
<frameset cols="50%,50%">
    <frame src="imagedemo.html" name="Left_Vertical" noresize />
    <frameset rows="*,170">
```

```

<frame src="RadioButDemo.html" name="Right_top" scrolling="auto"/>
<frame src="Menu.html" name="Right_Bottom" scrolling="no"/>
</frameset>
</frameset>
</html>

```

Output

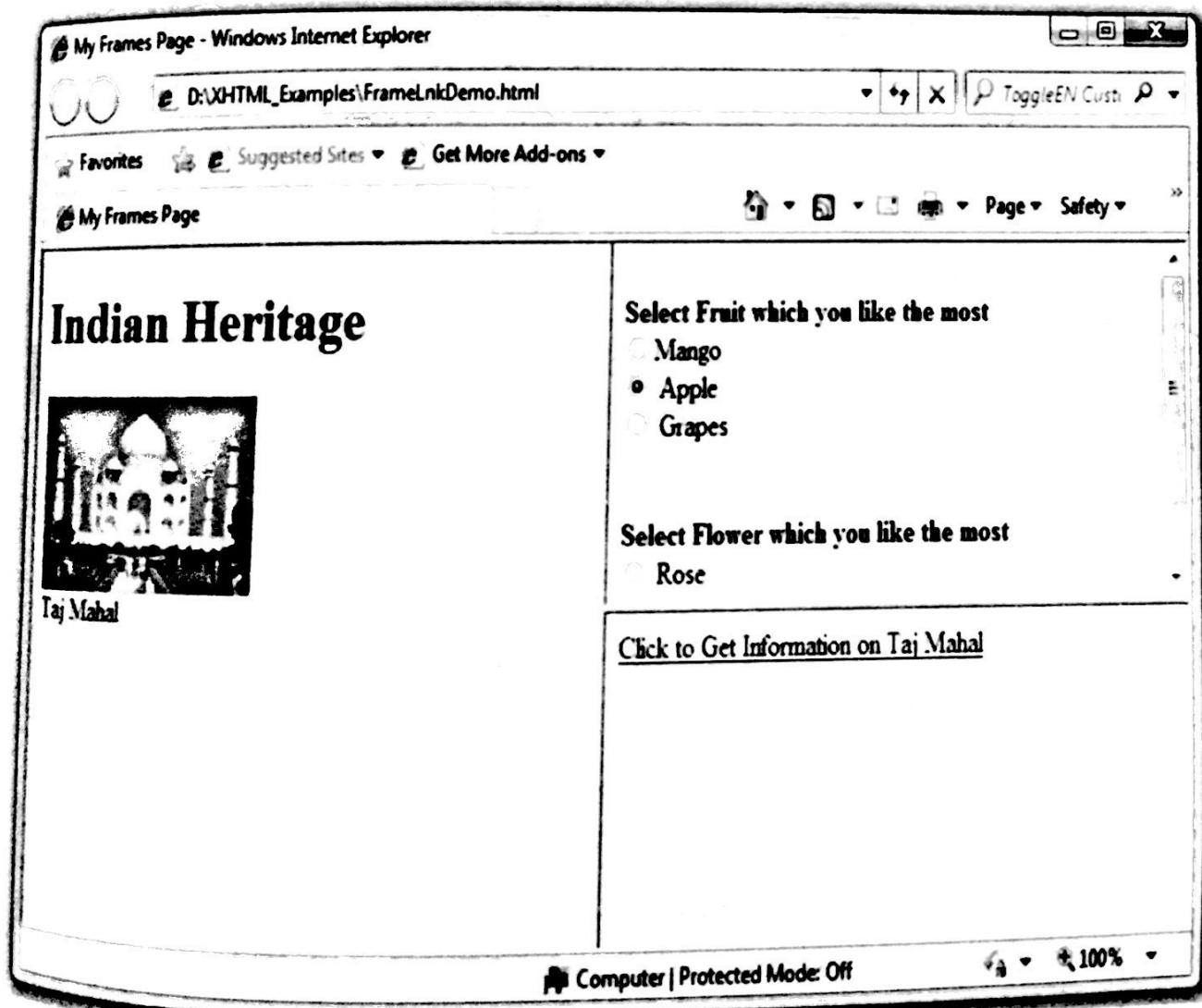
Note that in the above HTML document we have used parameter **scrolling** in **frame src** tag. To set the scroll bar we should assign the value **auto** to the **scrolling** parameter and if we do not want the scroll bar accompanying the frame then we must assign the value **no** to the **scrolling** parameter.

2.10.4 Use of Link

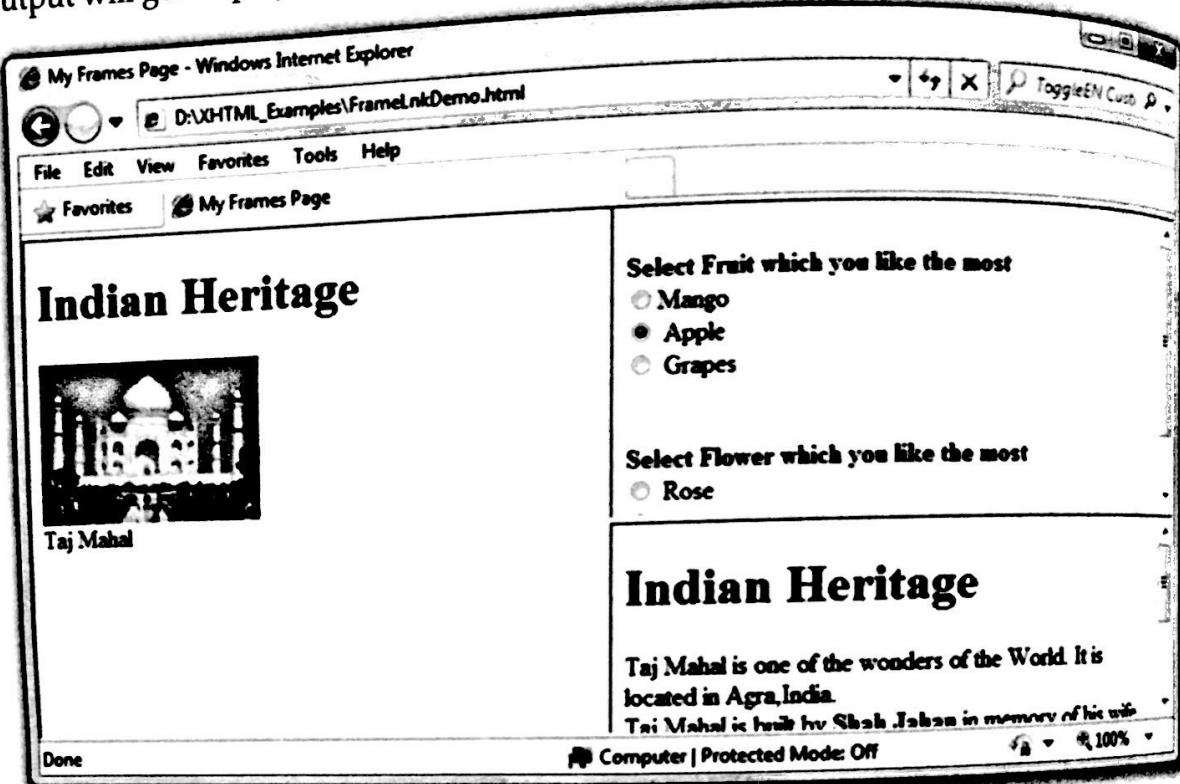
Use of Hyperlink in one frame and displaying the target information within the same or different frame is a common practice in any web page designing. In the following document we are using the hyperlink for some HTML page and displaying the information within that frame -

HTML Document[FrameLnkDemo.html]

```
<?xml version = "1.0" encoding = "utf-8"?>
<!DOCTYPE html PUBLIC "-//W3C//DTD XHTML 1.0 Frameset//EN"
"http://www.w3.org/TR/xhtml1/DTD/xhtml1-frameset.dtd">
<html xmlns="http://www.w3.org/1999/xhtml">
    <head>
        <title>My Frames Page</title>
    </head>
    <frameset cols="50%,50%">
        <frame src="TajImg.html" name="Left_Vertical" noresize />
        <frameset rows="*,170">
            <frame src="RadioButDemo.html" name="Right_top" />
            <frame src="test_link.html" name="Right_Bottom"/>
        </frameset>
    </frameset>
</html>
```

Output

Just click on the hyperlink given in the right bottom frame and following kind of output will get displayed -



We have used three HTML files from three frames those are as given below -

HTML Document[TajImg.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>  
      <img src= "TajMahal.jpg" alt= "Taj Mahal!!" />  
      <br/>Taj Mahal  
      <br/>  
    </body>  
</html>
```

HTML Document[RadioButDemoDemo.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>My Form with radio buttons Page</title>
</head>
<body>
<form name="myform">
  <div align="left"><br>
    <b>Select Fruit which you like the most</b><br/>
    <input type="radio" name="group1" value="Mango"> Mango<br/>
    <input type="radio" name="group1" value="Apple" checked> Apple<br/>
    <input type="radio" name="group1" value="Grapes"> Grapes
    <br/><br/><br/>
    <b>Select Flower which you like the most</b><br/>
    <input type="radio" name="group2" value="Rose"> Rose<br/>
    <input type="radio" name="group2" value="Lotus"> Lotus<br/>
    <input type="radio" name="group2" value="Jasmine" checked> Jasmine<br/>
  </div>
</form>
</body>
</html>

```

HTML Document[test_link.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>
    <a href="Tajmahal.html" target="Right_Bottom"> Click to Get Information on Taj
Mahal </a>
  </body>
</html>

```

This is the name of right bottom frame which is already mentioned in FrameLnkDemo.html

2.11 Web Site Structure

Web page design is certainly an art or a skill. Having programming/scripting language knowledge is not the only criteria for web page designer. Having very good attitude towards the real world life is required. When we wish to create some website then we have to design collection of web pages in which the information must be arranged systematically and in orderly manner. Website is similar to a book. As book consists of several pages having some meaningful sequence, likewise a website has several web pages containing information. Due to rapid growth of internetworking

technologies and having heavy demand for huge source of information it is a must to create the websites that are satisfying the today's needs. Following are some criteria for building the web page **Meaningful Title**.

Every web page must have some meaningful title. As we know the title can be set in the head part of HTML page using <title> tag.

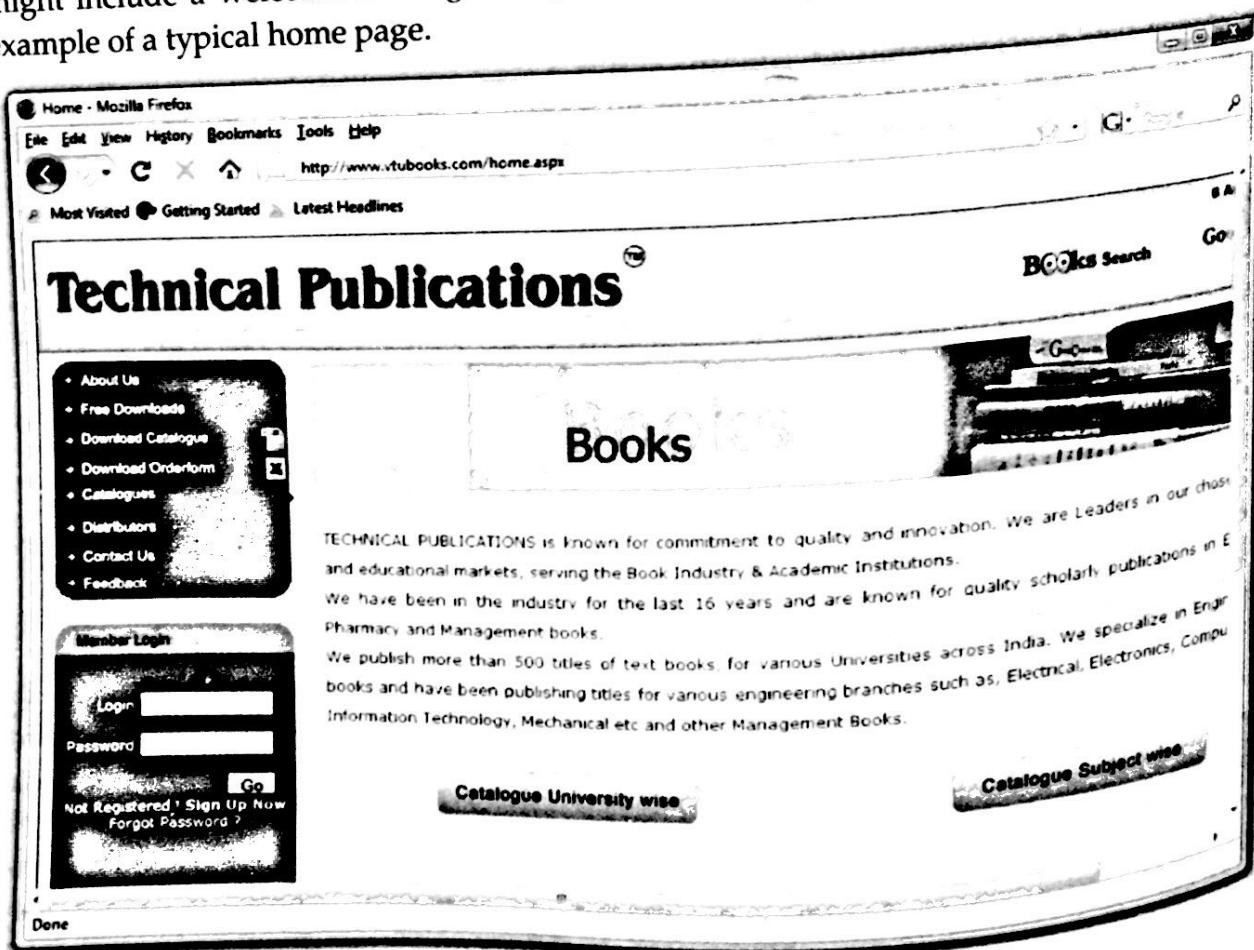
Proper navigation menu and standardized layout

The information provided on the website should be relevant to the site. The user demanded valid information must be published on the website with a simple navigation menu. The information must be contained within a proper layout. The style of web page should be professional, appealing and relevant.

Consistency

This criterion adds up the user friendliness of the websites. There should be consistency among the web pages, so that any casual user can find the ease in handling the website.

Typically first page of a website is known as the **Home page or Index**. These pages might include a welcome message, language/region selection or disclaimer. Here is an example of a typical home page.



Each web page within a website is an HTML file having some address or URL. While constructing a website some web pages are created, they are typically linked together using a navigation menu. This menu consists of hyperlinks to the next page. After creation of a website, it must be published or uploaded so that it can be viewed over the internet. This can be done using an FTP client.

Thus HTML is the easiest option for creating a website of your choice.

2.12 Metatags

- Metadata is information about data.
- The `<meta>` tag provides metadata about the HTML document. Metadata will not be displayed on the web page, but can be checked for its syntax.
- Meta elements are typically used to specify page description, keywords, author of the document, last modified, and so on.
- The `<meta>` tag is always written within `<head>` section.
- The metadata can be used by browsers, search engines and web services.
- In HTML metatag has no end tag but in XHTML the metatag must be ended properly.
- Metatag does not support any event.

For example

MetatagDemo.html

```

<html>
<head>
<meta name="description" content="This book is on introduction to web technologies />
<meta name="keywords" content="web design,JavaScript,webservices,CSS" />
<meta http-equiv="Content-Type" content="text/html;charset=ISO-8859-1" />
</head>

<body>
</body>
</html>
    
```

meta, No = "

Explanation

The **content** is useful for specifying the content of meta information. This is a required attribute. The other optional attributes are **name**, **scheme**, **http-equiv**. The **name** specifies the name for the information in the content attribute. The **scheme** attribute specifies a format or URI to be used to interpret the value of the content attribute.

For example: **scheme = "YYYY-MM-DD"**

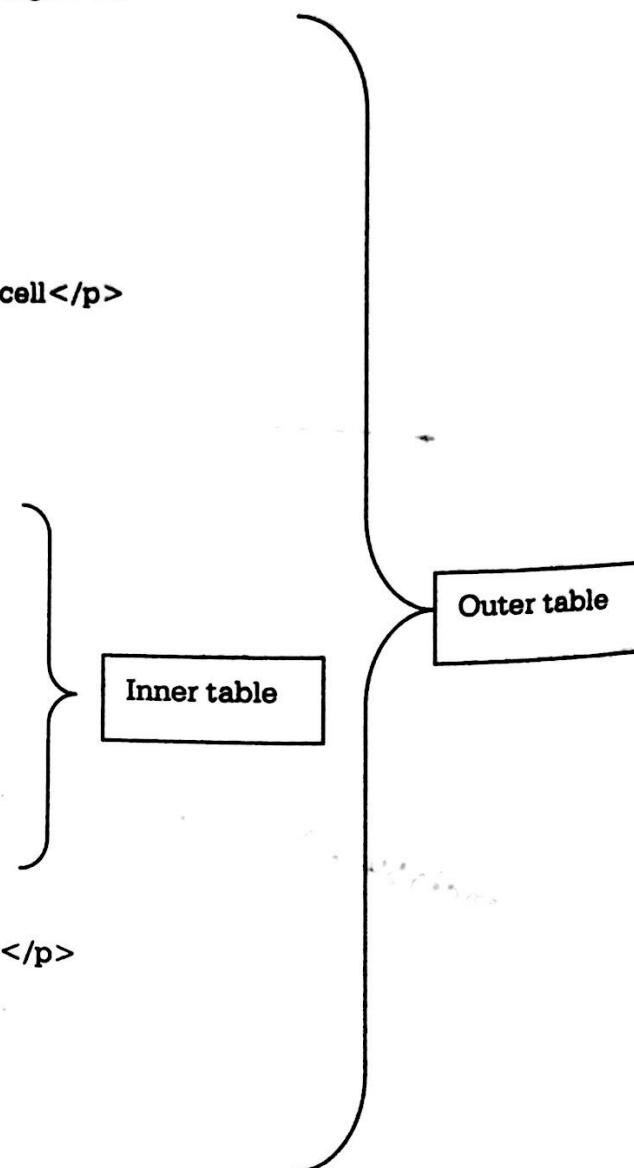
The `http-equiv` attribute can be used to simulate an HTTP response header. It specifies the type of contents such as text or image, character set, Date and so on.

Solved Exercise

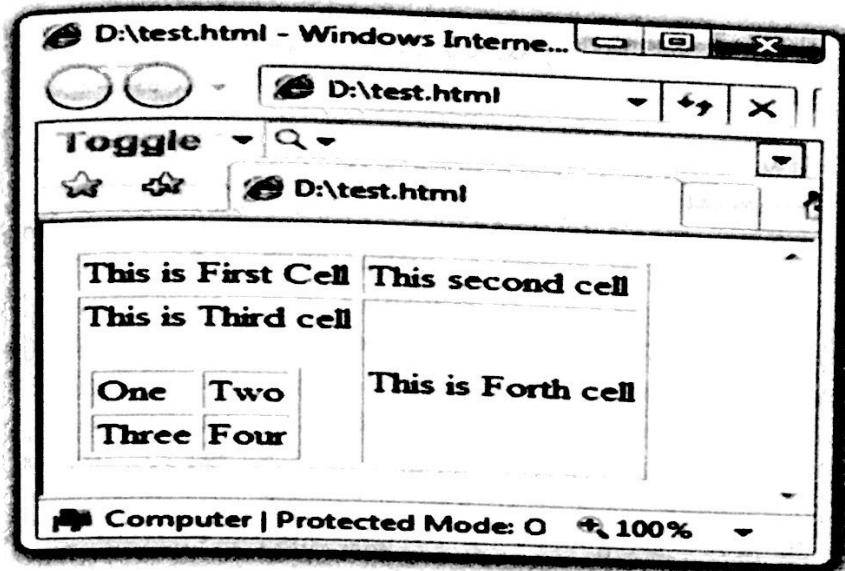
Q.1 What do you understand by nested tables? Explain it with some suitable example.

Ans. : Nested table is a table in which another table can be defined. For example

```
<!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">  
<body>  
<table border="1">  
<tr>  
<td>  
<p>This is First Cell</p>  
</td>  
<td>  
<p>This second cell</p>  
</td>  
</tr>  
<tr>  
<td>  
<p>This is Third cell</p>  
<table border="1">  
<tr>  
<td>One</td>  
<td>Two</td>  
</tr>  
<tr>  
<td>Three</td>  
<td>Four</td>  
</tr>  
</table>  
</td>  
<td><p>This is Forth cell</p>  
</td>  
</tr>  
</table>  
</body>  
</html>
```



Output



Q.2 Create a HTML table with columns for a Country name, National sport, National flower, National animal, National tree. There must be atleast five states as rows in the table.

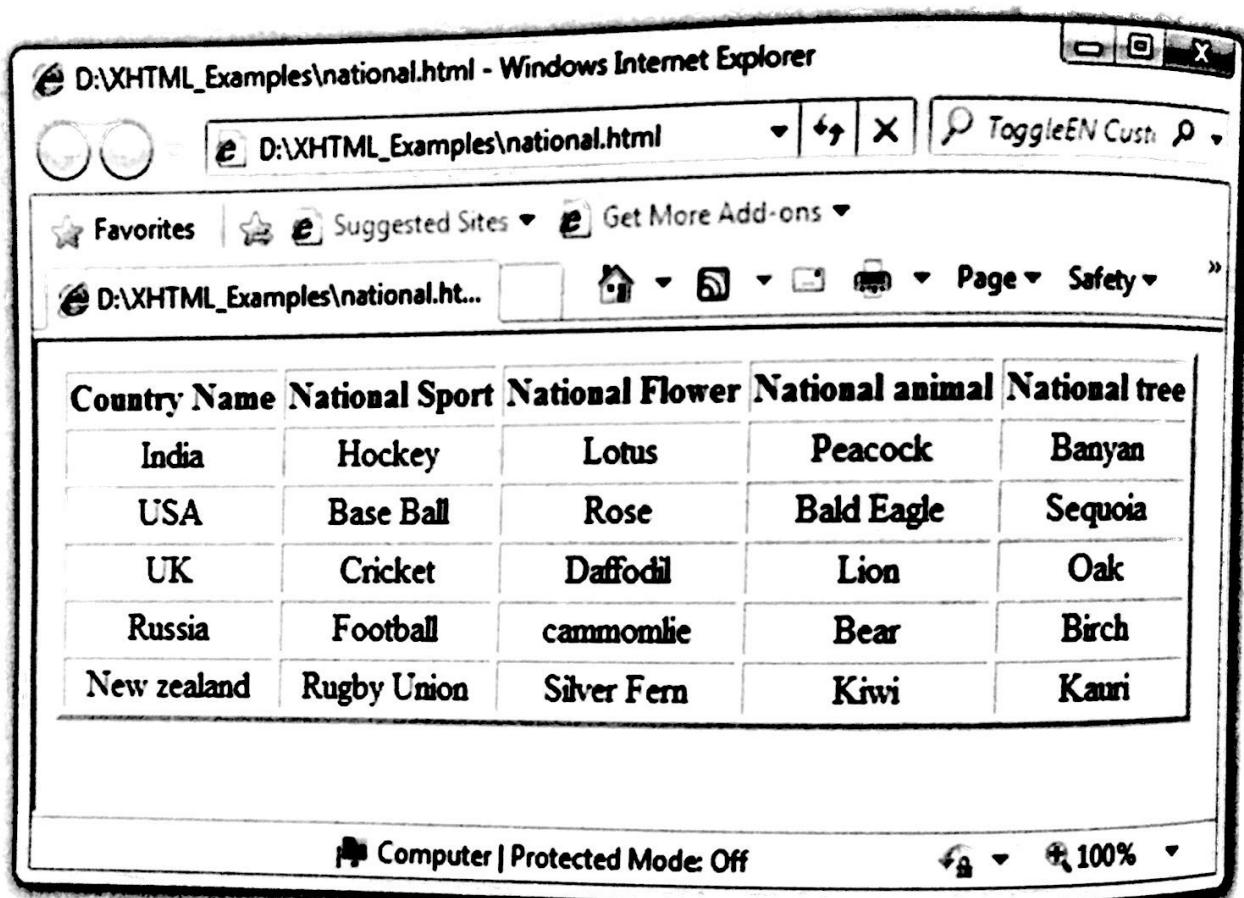
Ans. :

```
<!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">
<body>
<table border="3">
<tr>
<th>Country Name</th>
<th>National Sport </th>
<th>National Flower</th>
<th>National animal</th>
<th>National tree</th>
</tr>
<tr align=center>
<td>India</td><td>Hockey</td><td>Lotus</td><td>Peacock</td><td>Banyan</td>
</tr>
<tr align=center>
<td>USA</td><td>Base Ball</td><td>Rose</td><td>Bald Eagle</td><td>Sequoia</td>
</tr>
<tr align=center>
<td>UK</td><td>Cricket</td><td>Daffodil</td><td>Lion</td><td>Oak</td>
</tr>
<tr align=center>
<td>Russia</td><td>Football</td><td>camomile</td><td>Bear</td><td>Birch
</td>
```

```

</tr>
<tr align=center>
<td>New zealand</td><td>Rugby Union</td><td>Silver
Fern</td><td>Kiwi</td><td>Kauri</td>
</tr>
</table>
</body>
</html>

```

Output**Q.3**

Create a HTML document that has five frames. There must be two rows of frames, the first with three frames and other with two frames. The frames in the first row must have equal width. The left frame in the second row must be 50 percent of the width of the display. Each of the frames in the top row must display a document that has a form. The left top frame must have two text boxes, each 30 characters wide, labelled Name and Address. The middle top frame must have five radio buttons with color name labels. The right top frame must have check boxes, labelled with four kinds of equipments such as CD player, air conditioning. The two bottom frames must have images of two different cars. The top row frames must use 20 percent of the height of the display.

Ans. : We will first create a HTML document named test.html in which the basic frame structure is created.

HTML Document [test.html]

```
<?xml version = "1.0" encoding = "utf-8"?>
<!DOCTYPE html PUBLIC "-//W3C//DTD XHTML 1.0 Frameset//EN"
"http://www.w3.org/TR/xhtml1/DTD/xhtml1-frameset.dtd">
<html xmlns="http://www.w3.org/1999/xhtml">
<frameset rows="20%,80%">
<frameset cols="33%,33%,33%">
<frame src="form1.html">
<frame src="form2.html">
<frame src="form3.html">
</frameset>
<frameset cols="50%,50%">
<frame src="car1.jpg">
<frame src="car2.jpg">
</frameset>
</frameset>
</html>
```

Following are the HTML documents containing forms. These forms will get loaded in the top row.

form1.html

```
<html>
<head>
<title>My Page</title>
</head>
<body>
<form>
Name: <input type="text" size="30" value=""><br/>
Address: <input type="text" size="30" value="">
```

Two text boxes of 30
characters width

form2.html

```
<html>
<body>
<form name="myform">
<div align="left"><br>
```

```

<input type="radio" name="group1" value="Red">Red<br/>
<input type="radio" name="group1" value="Green">Green<br/>
<input type="radio" name="group1" value="Blue"> Blue<br/>
<input type="radio" name="group1" value="Yellow">Yellow<br/>
<input type="radio" name="group1" value="Orange">Orange<br/>
</div>
</form>
</body>
</html>

```

Five radio
buttons for
colors

form3.html

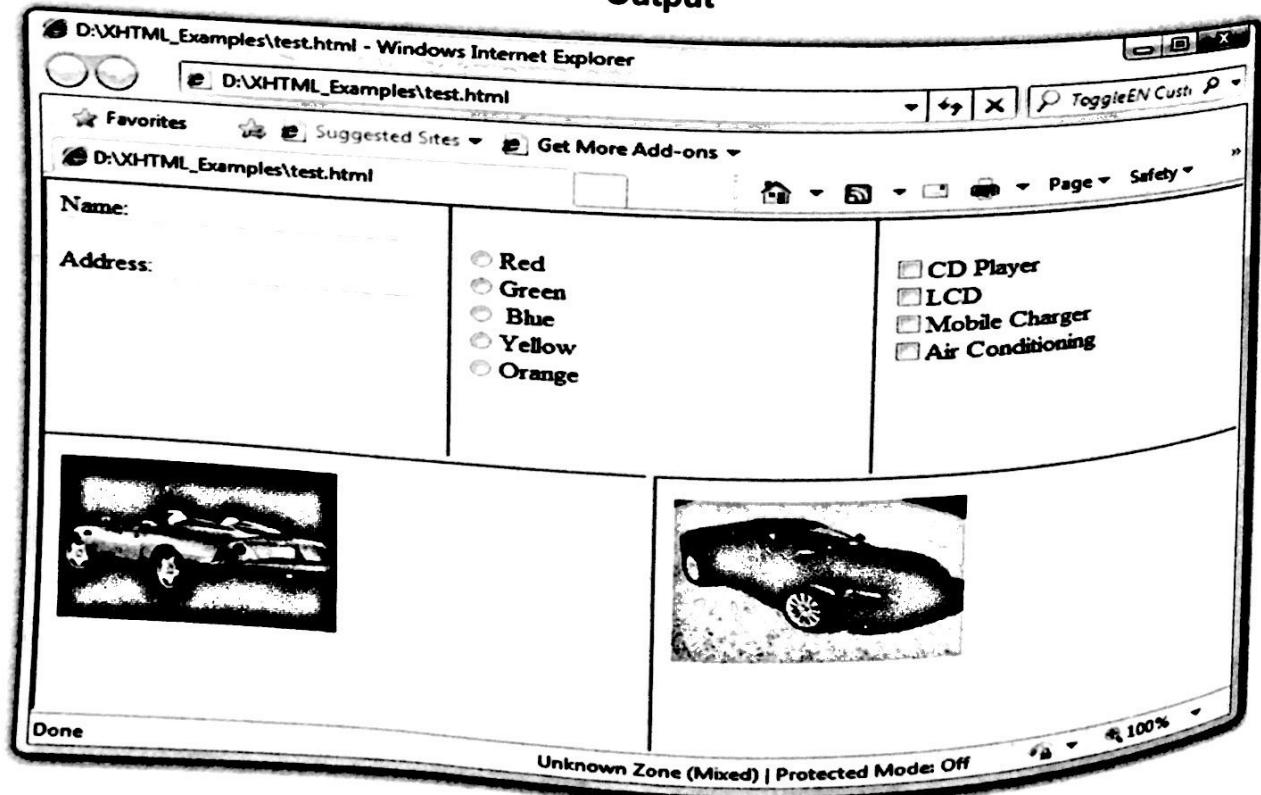
```

<html>
<body>
<form name = "checkboxForm">
<div align="left"> <br>
<input type="checkbox" name="option1" value="CD Player">CD Player<br/>
<input type="checkbox" name="option2" value="LCD">LCD<br/>
<input type="checkbox" name="option3" value="Mobile Charger"> Mobile Charger<br/>
<input type="checkbox" name="option3" value="Air Conditioning"> Air Conditioning<br/>
<br>
</div>
</form>
</body>
</html>

```

Check boxes for car
decor equipments

Output



Q.4

Explain the structure of HTML documents, write code to display following table:

Sr.No.	College Name			
	Section A		Section B	
	X	Y	X	Y
1				
2				
3				

Ans. :

```

<html>
  <head>
    <title>My Table</title>
  </head>
  <body>
    <table border=1>
      <tr>
        <td rowspan="3">
          <p align=center>Sr.No.</p>
          <p>&nbsp</p>
        </td>

        <td colspan="4">
          <p align="center">College Name</p>
        </td>
      </tr>
      <tr>
        <td width="40%" colspan="2" align="center">Section A</td>
        <td width="40%" colspan="2" align="center">Section B</td>
      </tr>
      <tr>
        <td align="center">X</td>
        <td align="center">Y</td>
        <td align="center">X</td>
        <td align="center">Y</td>
      </tr>
      <tr>
        <td align="center">1</td>
        <td align="center">&nbsp</td>
        <td align="center">&nbsp</td>
        <td align="center">&nbsp</td>
        <td align="center">&nbsp</td>
      </tr>
    </table>
  </body>
</html>

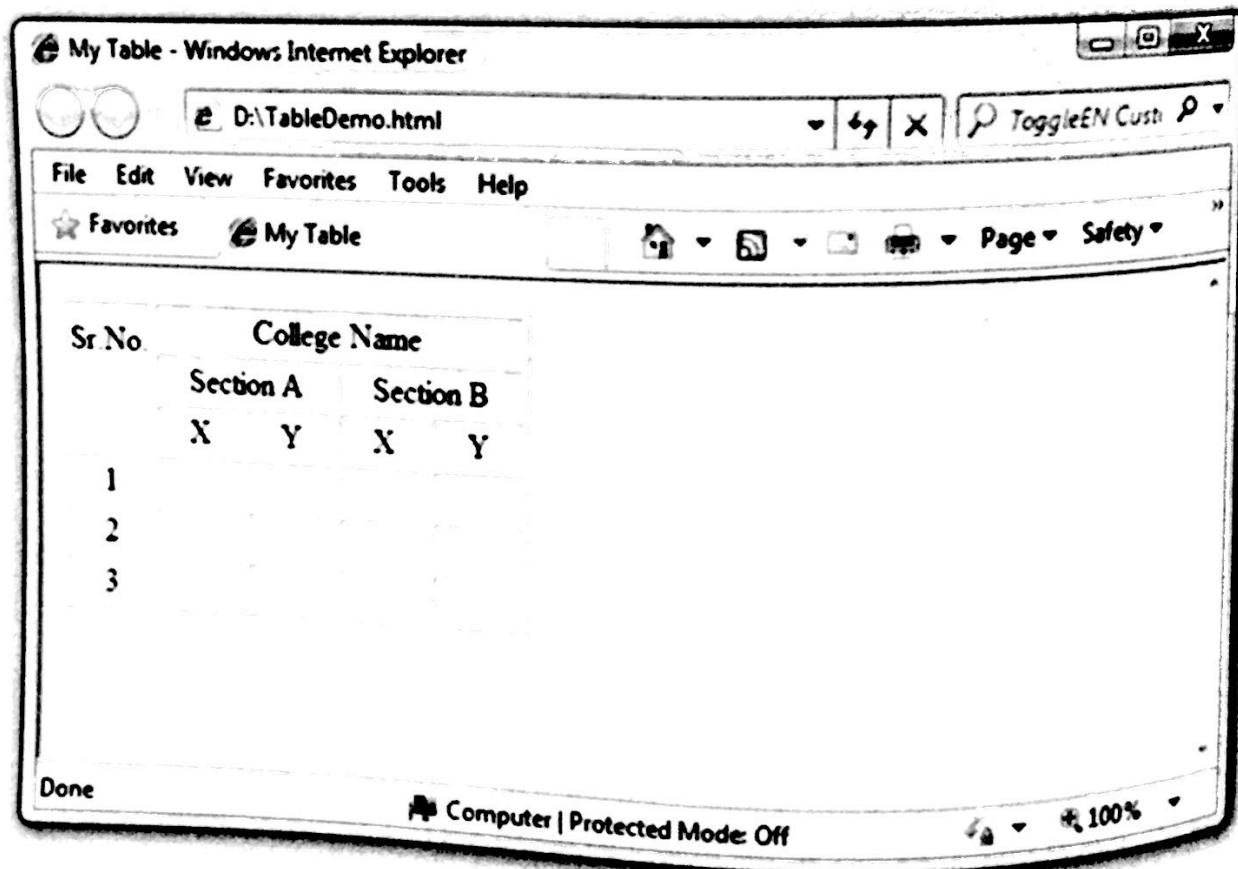
```

```
<tr>
    <td align="center">2</td>
    <td align="center">&nbsp;</td>
    <td align="center">&nbsp;</td>
    <td align="center">&nbsp;</td>
    <td align="center">&nbsp;</td>
</tr>
<tr>
    <td align="center">3</td>
    <td align="center">&nbsp;</td>
    <td align="center">&nbsp;</td>
    <td align="center">&nbsp;</td>
    <td align="center">&nbsp;</td>
</tr>

</table>
</body>
</html>
```

[Note: For the sake of understanding the output will be as given below]

Output



Q.5

Write HTML code to draw table given below :

Image (20 %)	Company Name (80 %)
	Schedule
1	
2	Type 1
3	
4	Type 2

Ans. :

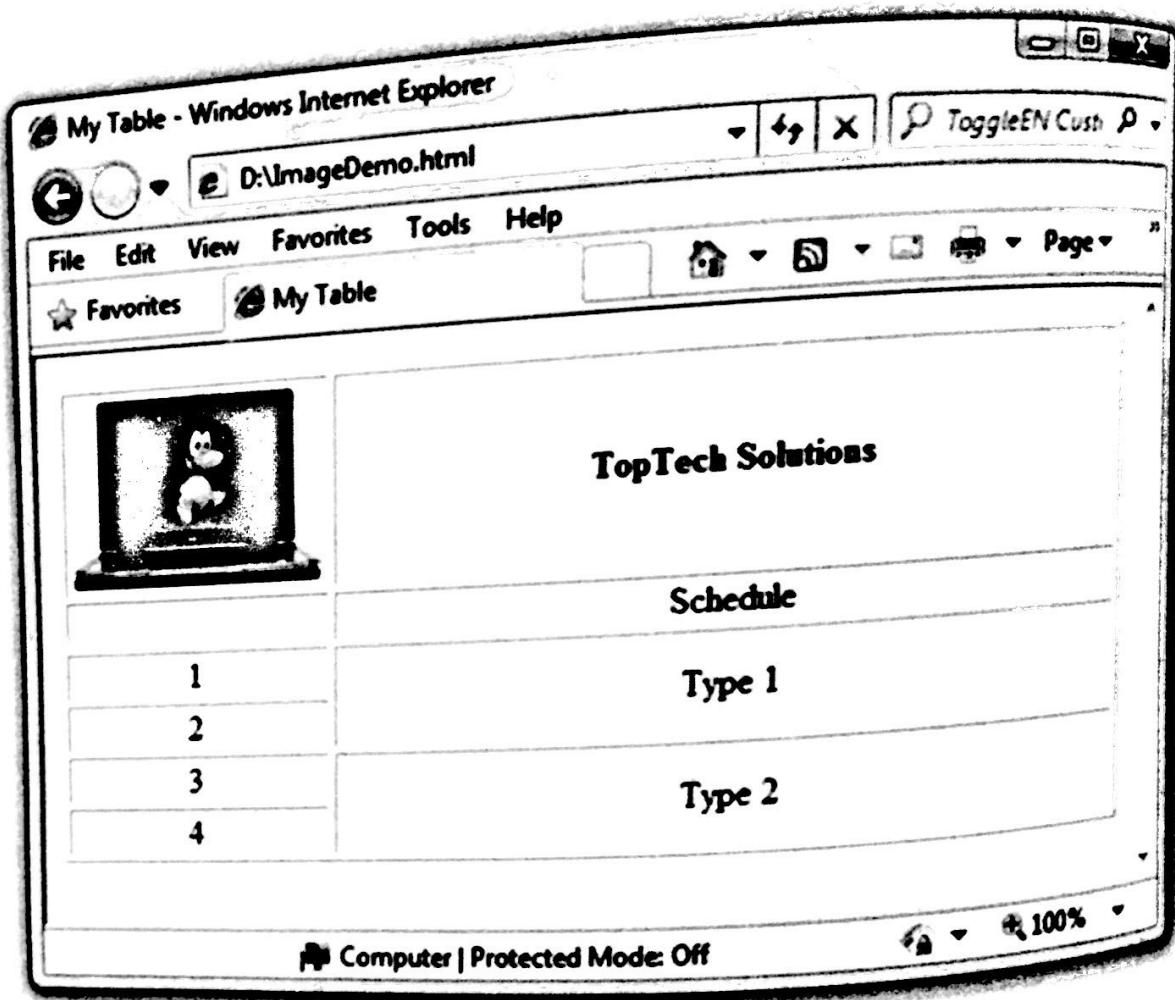
ImageDemo.html

```
<html>
  <head>
    <title>My Table</title>
  </head>
  <body>
    <table border=1>
      <tr>
        <td width="20%" align=center></td>
        <th width="80%" align=center>TopTech Solutions</th>
      </tr>
      <tr>
        <td>&nbsp</td>
        <td align=center>Schedule</td>
      </tr>
      <tr>
        <td align=center>1</td>
        <td rowspan="2" align=center>Type 1</td>
      </tr>
      <tr>
        <td align=center>2</td>
      </tr>
      <tr>
        <td align=center>3</td>
        <td rowspan="2" align=center>Type 2</td>
      </tr>
      <tr>
        <td align=center>4</td>
      </tr>
    </table>
```

```
</body>  
</html>
```

[Note : For the sake of understanding the output will be as given below]

Output



- Q.6** Write HTML code to display your resume consisting of your photo, education in tabular format etc. Use frame consisting of banner of your name, left frame showing the links to different parts of the resume.

Ans. :

Step 1 : We will first create a main html file **resume.html** in which the frame structure is specified.

resume.html

```
<html>  
<head>  
<title>RESUME</title>  
</head>
```

```
<frameset rows="100,*">
  <frame src="d:\\test_program\\Greetings.html" name="Top_frame">
    <frameset cols="250,*">
      <frame src="d:\\test_program\\Link.html" name="Left_frame">
      <frame src="d:\\test_program\\display.html" name="Right_frame">
    </frameset>
  </frameset>
</html>
```

Step 2: The top frame is denoted by **Greetings.html** which simply displays the banner of name.

Greetings.html

```
<html>
<body>
<h2><center>Mr.Sachin Patil</center></h2><br/>
</body>
</html>
```

Step 3: The left frame consists of all the hyper links. Hence these links can be mentioned in **Link.html** file which is as shown below -

Link.html

```
<html>
<body>
<a href="d:\\test_program\\Photo.jpg" target="Right_frame">Photo</a><br/>
<a href="d:\\test_program\\personal.html" target="Right_frame">Personal Details</a><br/>
<a href="d:\\test_program\\qualification.html" target="Right_frame">Educational Qualification</a><br/>
<a href="d:\\test_program\\skill.html" target="Right_frame">Skill</a><br/>
</body>
</html>
```

Step 4: When the link from the left frame is clicked, the corresponding information will be displayed in the right frame. The right frame will display, personal details, educational qualification, skill etc. Hence the required html files will be -

Display.html

```
<html>
<body>
<center>
<h2> WELCOME </h2>
</center>
</body>
</html>
```

personal.html

```
<html>
<body>
<strong>Name: </strong> Mr. Sachin Patil<br/>
<strong>Address: </strong> D10,SunEmpire,SunCityRd,Pune<br/>
<strong>Sex: </strong>Male<br/>
<strong>Phone: </strong>9229229221<br/>
<strong>Email: </strong>puntambekar_a@rediffmail.com
</body>
</html>
```

qualification.html

```
<html>
<body>
<strong>Educational Qualification:</strong>
<table border=2>
<tr>
<th>Examination</th>
<th>Year Of Passing</th>
<th>Board/University</th>
<th>Marks obtained</th>
</tr>
<tr>
<td>S.S.C</td><td>1991</td><td>Pune</td><td>93%</td>
</tr>
<tr>
<td>H.S.C</td><td>1993</td><td>Pune</td><td>90%</td>
</tr>
<tr>
<td>B.E.(Computer)</td><td>1997</td><td>Pune</td><td>72%</td>
</tr>
<tr>
<td>M.Tech(Computer)</td><td>2001</td><td>IIT(Kanpur)</td><td>A
grade</td>
</tr>
</table>
<strong>
</body>
</html>
```

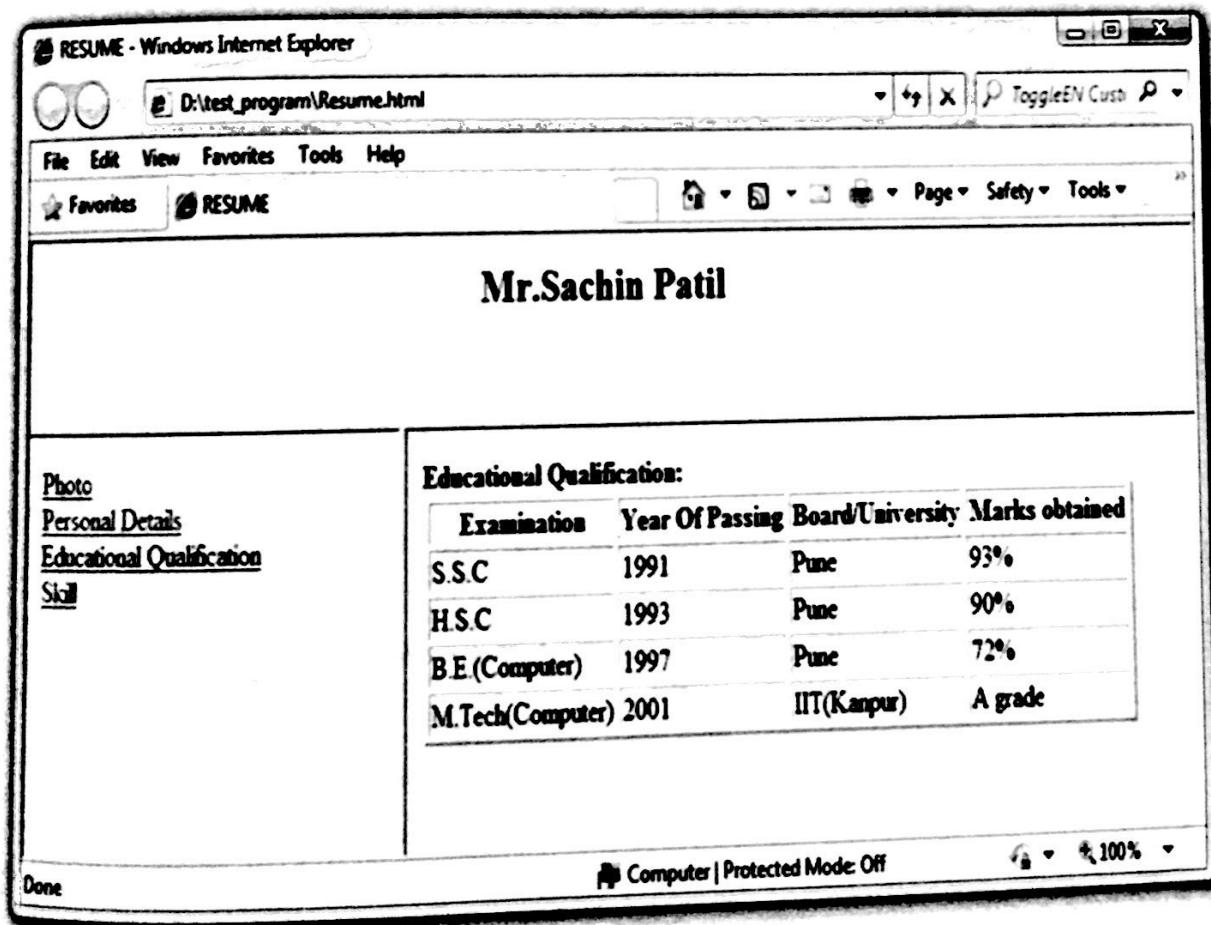
skill.html

```
<html>
<body>
<strong>Programming Languages known:</strong>
```

```
<ul>
<li>Cobol
<li>C
<li>C++
<li>Visual C++
<li>Visual Basic
<li>Java
</ul>
<br/><br/>
<div align=left>Date:</div>
<div align=right>Place:</div>
<br/>
<div align=left>Signature</div>
</body>
</html>
```

[Note for the sake of understanding the output of above code will be as given below -]

Output



- Q.7 Write HTML code which includes table, hyperlink, character formatting ordered and unordered list to display your resume.

Ans. :

resume.html

```
<html>
<head>
<title>RESUME APPLICATION</title>
</head>
<body>
<center><h2>RESUME </h2></center>
<a href="my_photo.jpg">PHOTO</a>
<br/><br/>
<strong>Name: </strong> Mr.Sachin Patil<br/>
<strong>Address: </strong> D10,SunEmpire,SunCityRd,Pune<br/>
<strong>Sex: </strong>Male<br/>
<strong>Phone: </strong>9229229221<br/>
<strong>Email: </strong>puntambekar_a@rediffmail.com
<br/><br/>
<strong>Educational Qualification:</strong>
<table border=2>
<tr>
<th>Examination</th>
<th>Year Of Passing</th>
<th>Board/University</th>
<th>Marks obtained</th>
</tr>
<tr>
<td>S.S.C</td><td>1991</td><td>Pune</td><td>93%</td>
</tr>
<tr>
<td>H.S.C</td><td>1993</td><td>Pune</td><td>90%</td>
</tr>
<tr>
<td>B.E.(Computer)</td><td>1997</td><td>Pune</td><td>72%</td>
</tr>
<tr>
<td>M.Tech(Computer)</td><td>2001</td><td>IIT(Kanpur)</td><td>A
grade</td>
</tr>
</table>
<strong>
<br/><br/>
Programming Languages known:
</strong>
```

```
<ul>
<li>Cobol
<li>C
<li>C++
<li>Visual C++
<li>Visual Basic
<li>Java
</ul>
<br/><br/>
<div align=left>Date:</div>
<div align=right>Place:</div>
<br/>
<div align=left>Signature</div>

</body>
</html>
```

[Note: For the sake of understanding the output is as given below]

Output

The screenshot shows a Windows Internet Explorer window with the title bar "RESUME APPLICATION - Windows Internet Explorer". The address bar shows the URL "D:\Resume.html". The menu bar includes File, Edit, View, Favorites, Tools, and Help. The toolbar includes Favorites, RESUME APPLICATION, and various icons for navigation and search.

The main content area displays a resume form:

RESUME

PHOTO

Name: Mr. Sachin Patil
Address: D10, SunEmpire, SunCity Rd, Pune
Sex: Male
Phone: 9229229221
Email: patambekar_a@rediffmail.com

Educational Qualification:

Examination	Year Of Passing	Board/University	Marks obtained
S.S.C	1991	Pune	93%
H.S.C	1993	Pune	90%
B.E.(Computer)	1997	Pune	72%
M.Tech(Computer)	2001	IIT(Kanpur)	A grade

Programming Languages known:

- Cobol
- C
- C++

At the bottom of the browser window, there are buttons for "Done", "Computer | Protected Mode: Off", and a zoom level indicator set at 100%.

Q.8

Write HTML code to draw table given below.

Items	Price
Shirt	Trouser
Rs.400/-	Rs.600/-

Ans. :

```
<html>
<head>
<title>Item-Price List</title>
</head>
<body>
<table border=1>
<tr>
<th colspan="2"><center>Items </center></th>
<th>Price</th>
</tr>
<tr>
<th><center>Shirt</center></th>
<th><center>Trouser</center></th>
<td rowspan="2"><center>Rs.<br/>1000/-</center></td>
<tr>
<td><center>Rs.400/-</td>
<td><center>Rs.600/-</td>
</tr>
</table>
</body>
</html>
```

[Note: For the sake of understanding the output is as given below]

Output

