Indira Gandhi National Open University
School of Computer and Information Sciences

CIT-003
WEB BASED TECHNOLOGIES
AND MULTIMEDIA APPLICATIONS

Web Page Design

2

''शिक्षा मानव को बन्धनों से मुक्त करती है और आज के युग में तो यह लोकतंत्र की भावना का आधार भी है। जन्म तथा अन्य कारणों से उत्पन्न जाति एवं वर्गगत विषमताओं को दूर करते हुए मनुष्य को इन सबसे ऊपर उठाती है।''

— इन्दिरा गांधी

"Education is a liberating force, and in our age it is also a democratising force, cutting across the barriers of caste and class, smoothing out inequalities imposed by birth and other circumstances."

— Indira Gandhi

Indira Gandhi
National Open University
School of Computer and
Information Sciences

CIT-003
Web Based Technologies and Multimedia Applications

Block

2

WEB PAGE DESIGN

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BLOCK INTRODUCTION

In the first Block of this course, you have been introduced to some of the basic concepts relating to Internet Technologies. Some of the key issues discussed in the Block included overview of the Internet concepts, searching on the Internet, concepts of a web browser, and various facilities available on the Internet. One of the most popular applications of Internet is the World Wide Web (WWW) or simply the web. The basic protocol used for WWW is called HTTP (Hyper Text Transfer Protocol) which ensures transfer of web pages between a web client and a web server. But what is a Web page? What is a web site? How are they created? This Block attempts to answer these questions. This Block introduces you to the concepts of web site design. This course consists of three units:

Unit 1 introduces you to one of the Basic language of web page design called Hyper Text Markup Language (HTML). The unit introduces you to the concept of HTML tags and their attributes, text formatting tags used in HTML and using images and graphics on a web page. This unit also introduces the limitations of HTML. Thus, this unit attempts to provide you a basic overview of HTML such that you are able to create your own simple web pages.

Unit 2 provides you information about two tools that can be used for web page designing; these are Microsoft Expression Web – which contains a number of features for creating a web page in a very simple way and GIF construction set that allows creation of simple animations. The animation files then can be integrated on a web site. Please note that there are many different open source and proprietary software which are available for web site creation having similar or sometimes even enhanced features. You may use any of those tools for development of web sites.

Unit 3 provides information about two useful features of website – Frames and Forms. Frames are used to provide structure to a web page, whereas forms are used for getting information from the users. This unit also presents an example of development of a website with some basic and some advanced features. This example will help you in understanding the efforts required to develop a web site.

One of the best ways to learn web site design is to look into the code (HTML) of a web page, its colour combinations, content organisation, site organisation etc. One of the simplest ways to see the code of a web page is through the browser. You can see the code from a browser using the "view source" or "page source" option from the View menu. Remember the web site creation is a very creative activity. Enjoy creating your web pages. Good Luck.

UNIT 1 INTRODUCTION TO HTML

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1.0 INTRODUCTION

In the previous Block, you have gone through the concepts of Internet technologies. You have been explained in detail various services and tools on Internet. You have also read the concepts of World Wide Web. HTML (Hyper Text Markup Language) is the standard language used for developing World Wide Web (www) documents. A program called browser is used to view these documents. The basic element of a HTML page, which is a text file, is ASCII text and small **markup tags** represented inside the angular brackets "<" and ">". These markup tags tell the Web browser how to display the page. A HTML file can be created using any simple text editor like notepad or WordPad and must have an **htm** or **html** file extension. A web browser is required to interpret HTML files irrespective of whether it is running on a machine using windows or UNIX or any other operating system or hardware. Internet Explorer and Mozilla Firefox are the two most used web browser software. In this unit, you will learn some of the important syntax of HTML programming and milestones in the direction of completing a web page step by step.

1.1 OBJECTIVES

After completing this unit, you will be able to:

- work with different HTML tags and text;
- use headings and control the appearance of text;
- create HTML page containing menu, tables, frames, directory and definition lists;
- add images and references to your web document; and
- create simple web page of your own.

1.2 HTML BASICS

The Web is a wide area hypermedia system aimed at universal access. Find out what is hypermedia?

A web page is a document or resource of information, i.e., created for the World Wide Web and can be accessed through a web browser. You can access a web page either by clicking a hyperlink or entering a URL in the browser. The server, where the page is stored returns the HTML document to your computer and the browser displays it. You may interact with this displayed document through various available links. There are two categories of web pages: Static and Dynamic web pages. As the name implies, static means fixed or stationary, therefore, the static web pages returns information, i.e., predefined and pre-formatted at the time of page creation. For example, the present Home page of IGNOU web site. On the other hand on a dynamic Web page, you can make requests for data, i.e., available in a database on the server and the required information is assembled on the fly. For example, to book a ticket you want to find out information about ticket availability for particular dates, ticket fare etc. When you select these options, the request is relayed to the server, the server compiles the relevant information specifically for your request and sends it back to your browser.

Static web pages are written using markup languages like HTML. A markup language is simply a set of tags which are used to "mark up" text documents so that sections of text can be logically arranged and labeled. The browser parses this document, looking for markup tags, and then arranges and formats the document according to the properties of the tags. Dynamic web pages provide instant access to highly relevant information and are created using technologies like; CGI, ASP, Cold Fusion, JSP, PHP, etc. Markup languages (HTML, XML) are somewhat different from both "programming languages" (C, C++, VB etc.) which are used to write general purpose programs and "scripting languages" (PHP, ASP, JSP, JavaScript, VBScript) which are used for adding dynamism in web page design.

The web uses documents that have been created using Hypertext Mark-Up language

HTML is the Hyper Text Markup Language which defines a web page. In this section, you will study about basics of HTML with the help of several examples. You will learn progressively how to make web pages more animated and interactive by using frames, forms and links.

A simple web page is a hypertext document written using the HTML which is nothing but a text file made up of HTML elements and ASCII text. These HTML elements are defined using HTML tags.

1.2.1 Document Tags

Any file that is browsable on the web is termed as a Document. Therefore, every HTML page created by you has Document tags. These tags define different parts of the document. An HTML document has two parts-a head and a body.

To create the head portion of your HTML document, enter the following text in text editor:

```
<head>
        <title> My Web Page </title>
</head>
```

This tells a web browser the information to be included in the head portion of the document. This information is displayed in the title bar of the browser window.

The body is where the actual work is done; you can enter text, graphics, headlines etc in it. The body section starts after </head> tag that indicates the end of <head> tag.

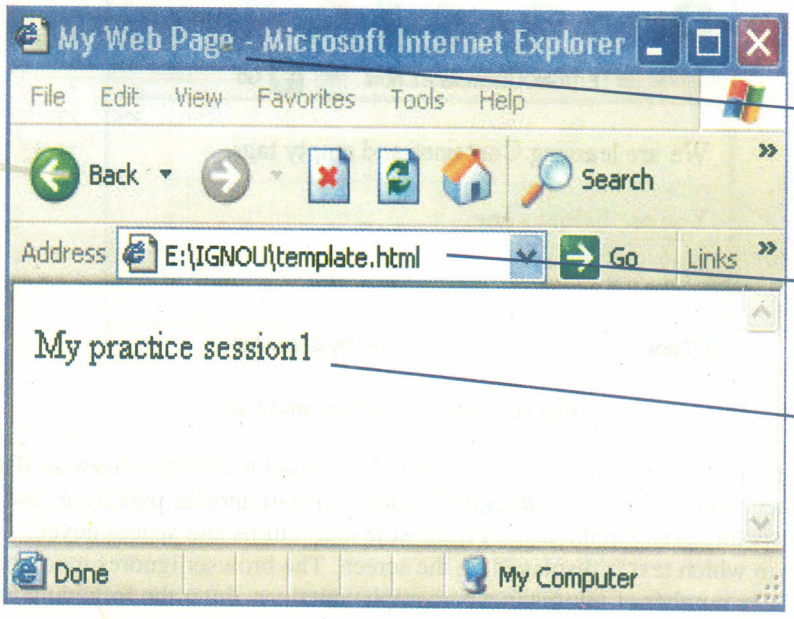
The body of a HTML document is enclosed between <body> and </body> tags. In order that the web browsers recognize your file as an html document, you need to enter <html> before the <head> tag and </html> after the </body> tag.

Now create your first html document by entering the following in text file using Notepad application on your computer:

```
<html>
        <head>
                <title> my web page </title>
        </head>
        <body>
                my practice session1
        </body>
</html>
```

Program 1.1 (template.html)

Select **File Save As** command from notepad and save this file as template.html. Now open your web browser and select the **File Open** menu option, browse for the file template.html, select OK to load it to your web browser. You will have the output similar to Figure 1.



Title of the page

Path where template.htm is saved

Body consists of the text written between <body> and </body> tags

Figure 1: Display of template.html file in a Browser

In the earlier versions of HTML tags were not case-sensitive and may be written in uppercase or lowercase as per your wish. However, as per the latest web standards, you should always use lowercase tags. **The World Wide Web Consortium (W3C) recommended lowercase tags in their HTML 4 recommendations. XHTML (the next generation HTML) demands lowercase tags.**

1.2.2 Container and Empty Tags

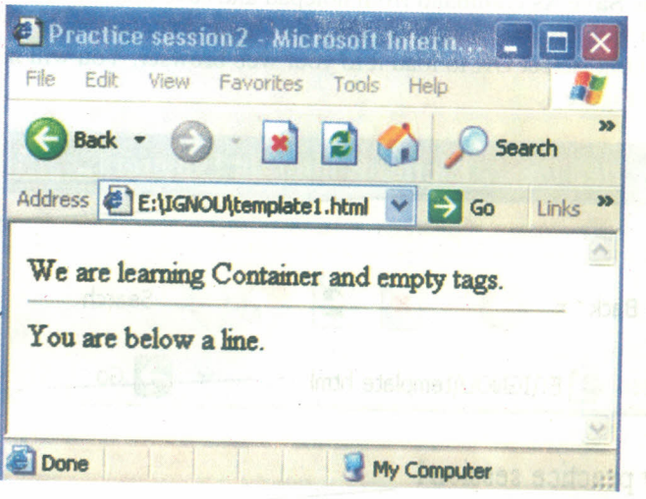
The tags which have the form <> and </> are called container tags. The <html>, <head>, <title> and <body> tags are all container tags.

Some tags do not require '</>', such tags are called empty tags. For example horizontal rule tag written as <hr>, draws a line across the width of the document. Enter the following lines in template.html:

```
<html>
        <head>
            <title> Practice session2</title>
        </head>
        <body>
            We are learning Container and empty tags.
            <hr>
            You are below a line.
        </body>
</html>
```

Program 1.2 (template1.html)

When viewed in Internet explorer, Figure 2 will appear.



Inserted line through <hr>

Figure 2: Drawing a Horizontal Line

Returns and spaces never affect the way in which text is displayed on the browser. The browser ignores more than one space and any number of returns in a paragraph container

Another important container tag is paragraph tag is used to tell Web browser that text in your document constitute a paragraph. When you start another paragraph, the browser inserts a line between the texts. Please note that returns and spaces never affect the way in which text is displayed on the screen. The browser ignores more than one space and any number of returns in a paragraph container. Enter the following two examples one by one in template3.txt:

Example 1

 We are learning paragraph tag here which is responsible for giving paragraphs to your document.

Even though we have entered a new paragraph, the browser will ignore this and consider it as single paragraph only.

 This is next paragraph. A new paragraph is created only when you end one tag and begin with new paragraph tag

Example 2

We are learning paragraph tag here which is responsible for giving paragraphs to your document. Even though, we have entered a new paragraph, the browser will ignore this and consider it as single paragraph only. This is next paragraph. A new paragraph is created only when you end one tag and begin with new paragraph tag

Both examples will be displayed in the Web browser in exactly the same way as shown in the Figure 3.

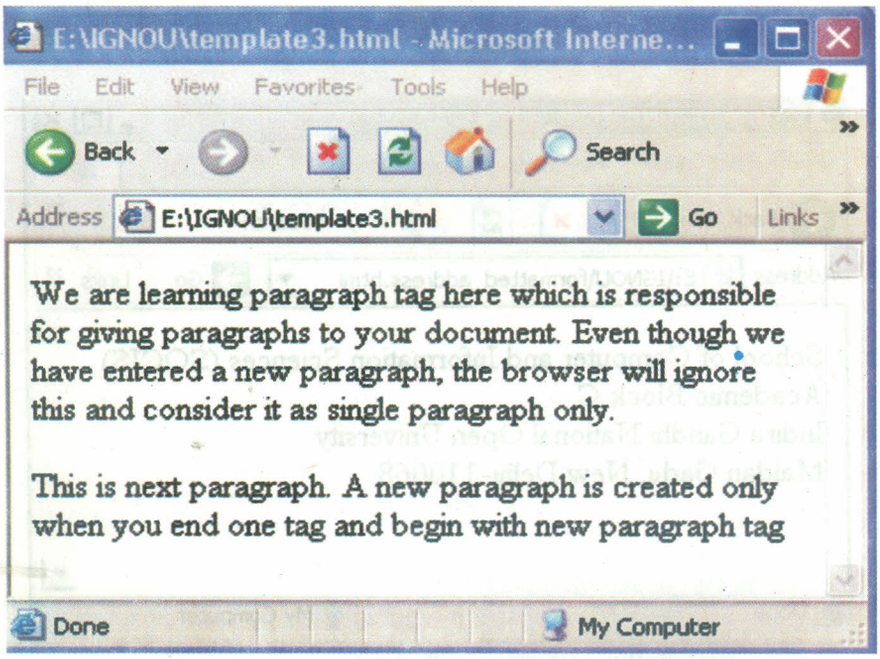


**Figure 3: Use of paragraph tags (and **

Now enter the following address into your text editor and save the file as address.html

```
<p>
        School of Computer and Information Sciences (SOCIS)
        Academic Block C
        Indira Gandhi National Open University
        Maidan Garhi, New Delhi-110068.
</p>
```

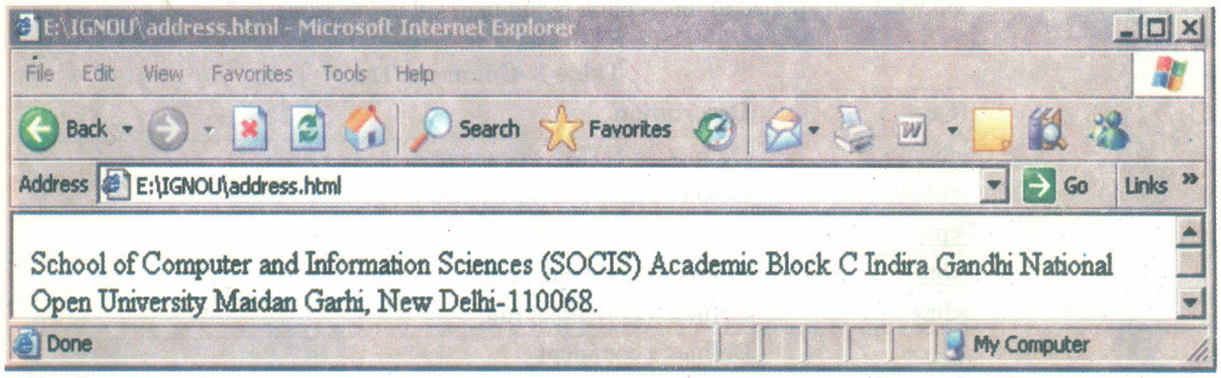


Figure 4: Display of address without <br> tag

You can see here that address is not properly formatted; in fact it is not even looking like an address. This is because web browser ignores spaces and returns. The empty tag <br> helps here by inserting a new line in your web document. Now you type address in your html document as

```
<p>
  School of Computer and Information Sciences (SOCIS)<br>
  Academic Block C <br>
  Indira Gandhi National Open University <br>
  Maidan Garhi, New Delhi-110068 <br>
</p>
```

Program 1.3

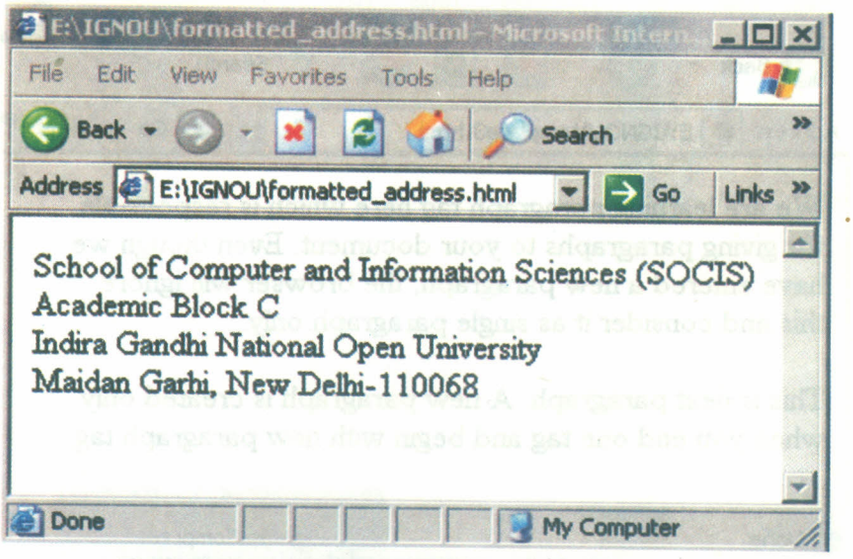


Figure 5: Display of address with <br> tags

1.2.3 Comment Tag

Comment tag helps to make comments in your document which can help you when you edit the source code at a later date. Anything you type between <!-- and --> is ignored by the browser. Even the multiple lines are ignored.

Note that you need an exclamation point after the opening bracket, but not before the closing bracket.

So what you studied in this section is summarized in the Table 1:

Table 1: Comment Tag

Tag	Description
<html>	Defines an HTML document
<body>	Defines the document's body
<p>	Defines a paragraph
 	Inserts a single line break
<hr>	Defines a horizontal rule
<!-->	Defines a comment

1.3 WORKING WITH HTML TEXT

While publishing a webpage many times you are required to put headings and subheadings, some important word as bold or underline or italics and many more enhancements of text such as changing the colour of text as well as background. In this section, you will study how to organize text in an HTML document as per your requirement. One of the ways to differentiate a portion of text from rest of the text is by use of header tag. These tags allow you to create different level of emphasised headings to organize your document.

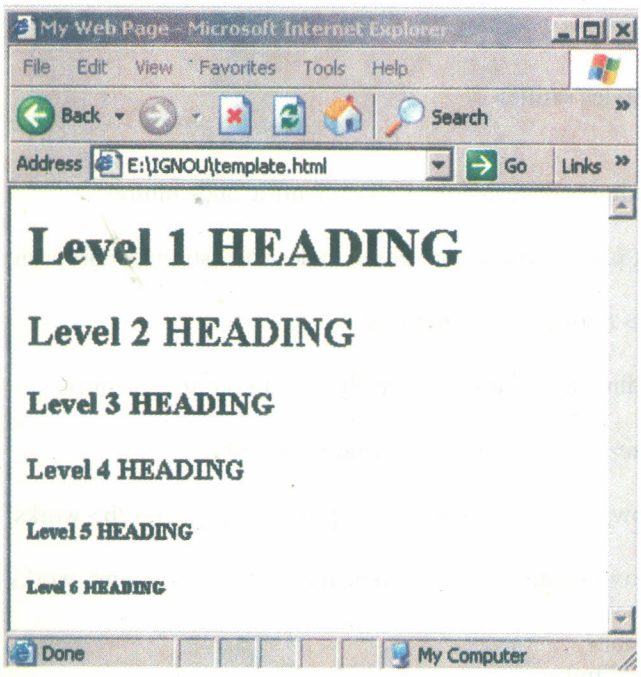
The header tag has the same effect as a paragraph tag, in that it creates a new line after its "closing" tag

1.3.1 Headings

These are container tags having range from level 1 to 6. <h1> defines the largest heading; <h6> defines the smallest heading. See the result of the following input to an html file

```
<html>
        <head>
                <title> my web page </title>
        </head>
                <body>
                    <h1> level 1 heading </h1>
                            <h2> level 2 heading </h2>
                    <h3> level 3 heading </h3>
                    <h4> level 4 heading </h4>
  <h5> level 5 heading </h5>
  <h6> level 6 heading </h6>
                <body>
</html>
```

Program 1.4



Note: Header tag creates a new line after its closing </h> tag.

Figure 6: Headings at different levels

1.3.2 Emphasizing Text

Explicit tags, often-called Physical tags tell the browser how the programmer wants text to appear physically. Some of the common physical tags are tabulated in Table 2.

Table 2: Emphasizing Text

Tags	Meanings and effects
,	bold text
,	italic text
<u>,</u>	Underlined text. Not used in current versions, styles used instead.
<big>,</big>	Uses a larger font size to display text
<small>,</small>	Uses a smaller font size to display text
_,	subscripted text
[,]	superscripted text
<strike>,</strike>	Draws a horizontal line through the middle of the text. Not used in the current versions of HTML. Use <del> instead

Logical tags are different from physical tags in mainly two ways:

1. These tags are generally not effective when used together.

2. Any web browser that views them will always render these tags

Two physical tags can be applied together on the same portion of text.
Implicit tags, also called logical styles give some freedom to browser in displaying text. These tags are relative to one another, depending upon the browser. Some basic implicit tags are tabulated in Table 3.

Table 3: Implicit Tags

Tags	Meanings and effects
,	emphasized text. These are generally rendered as italic text
,	strong emphasis. These are generally rendered as bold text
<tt>,</tt>	teletype. These are generally rendered as text having equal space as was the case for the old typewriter characters.

Unlike physical tags, these tags are not generally effective when used together. Use the following listing to see the difference between physical and logical tags, if your browser shows any.

```
<html>
 <head>
   <title>Different Text Styles </title>
 </head>
        <body>
            <p> In this unit, we have desribed <b> scientific and cultural
development </b>
                that took place. Now we are going to desribe <strong> European
Society
                </strong> during that period. <br>
            </p>
            <p> After reading this, you should be able to <i> outline scientific
development </i>
                in the <em> post Renaissance period </em>.<br>
            </p>
            <p> This is how <b><i> combination of physical tags </i></b> works.
However
                <strong><em> combination of logical tags </strong></em> works
as
                together.<br>
            </p> </body></html>
```

Program 1.5

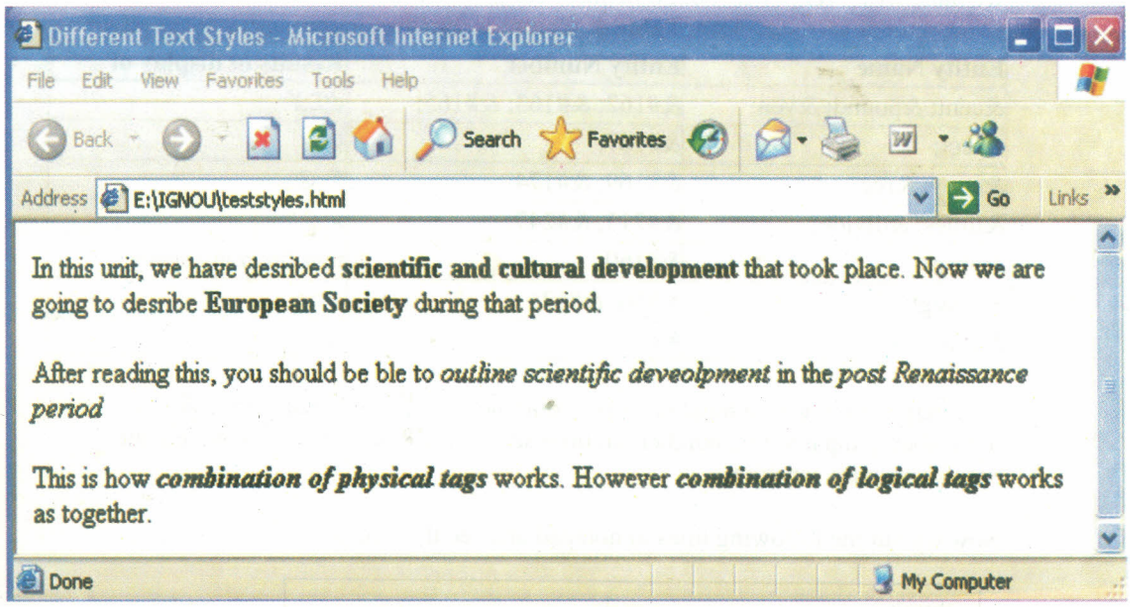


Figure 7: Use of tags for text enhancement

Please note that if in your HTML text you have mis-spelt a word, it can not be flagged or corrected by the browser. For example, in the Figure 7 the incorrect word 'desribed' is due to the fact that in the HTML code you have entered it in the same way. Thus, you must make sure that all the spellings used in your text are correct.

1.3.3 Appearance of the text

The appearance of the text in an HTML document can be controlled using <font> and </font> tags along with face, color and size attribute. Face="face-name" defines the font-name, like <font face="Times"> set the font to Times Roman. You can also provide a list of acceptable choices, like for example, <font face="Times", "Arial" "Helvetica">, where Times is listed as first choice, while Arial and Helvetica as alternatives.

Size attribute is used to specify character height for the text, on a relative scale from 1 though 7 (normal font size being 3). The size can be stated in absolute terms like "size=5" or relatively like "size=+2".

The colour attribute can also be specified using a hexadecimal color value like color="#eeff00" or one of the standard color names like color="red". In addition, to changing the font colour, you can also change the background colour of the window in which text is being displayed. This can be done using bgcolor attribute in the body tag. Figure 8 displays the change in background and text colour.

1.3.4 Some Special Characters

Some characters have a special meaning in HTML, like the less than sign (<) that defines the start of an HTML tag and also there are some special symbols like © that may be required in your document. To display these characters, you must insert character entities in your HTML source.

Special characters must be ended with a semicolon to appear in the browser as they are intended to. Else the browser would not render them properly

A character entity has three parts: an ampersand (&), an entity name or # and an entity number, and finally a semicolon (;). To display a less than sign in an HTML document we must write: < or &#60. Some most common entities are tabulated in Table 4.

Table 4: Common Entities

Entity Name	Entity Number	Results in display of
¢ £ ¥	¢ £ ¥	¢;£;¥
§	§	§
© ®	© ®	©;®
× ÷	× ÷	×;÷
		non-breaking space
< >	< >	<;>
&	#38;	&

You may use name or a number as per your choice. Though a name is easier to remember compared to a number, all browser do not support name. Note that the entities are case sensitive.

Now try out the following lines in notepad and see the output

```
<html>
<head>
<title> Special Characters and Appearance of text </title>
</head>
<body bgcolor = "yellow">
  <font face="arial" color="red">
  <pre>
    The spade symbol          &spades;
    The club symbol           &clubs;
    The heart symbol          &hearts;
    The diamond symbol &diams;
  </pre></font>
</body>
</html>
```

Program 1.6

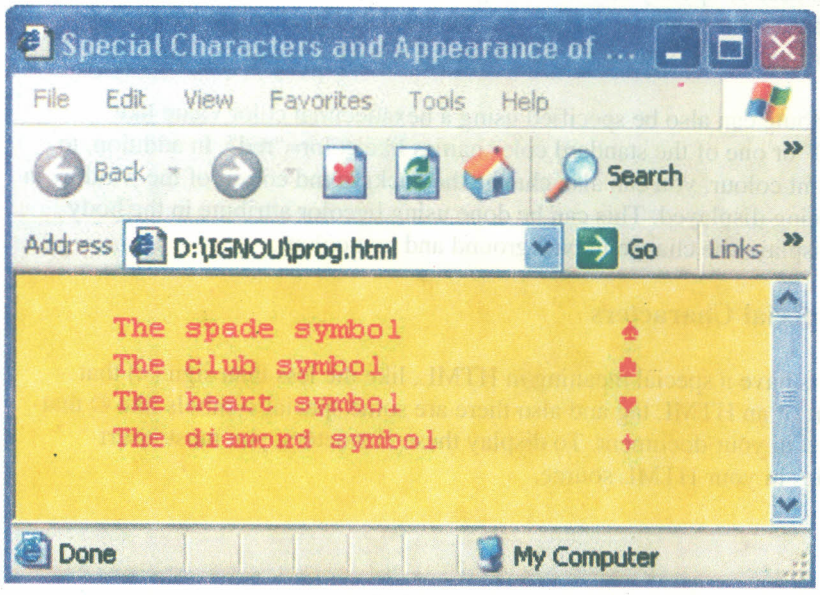


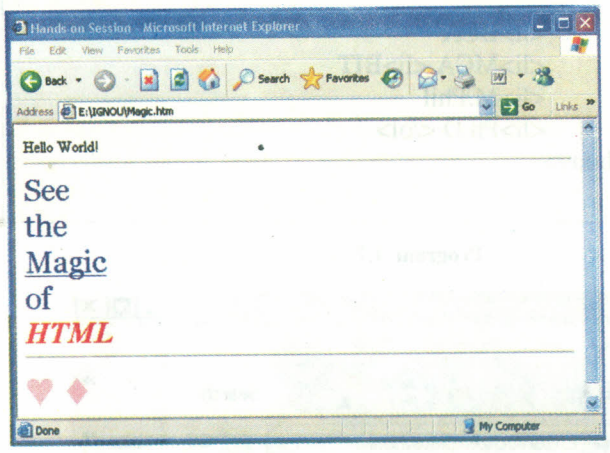
Figure 8: Use of background colour, Text colour and displaying special characters

☞ Check Your Progress 1

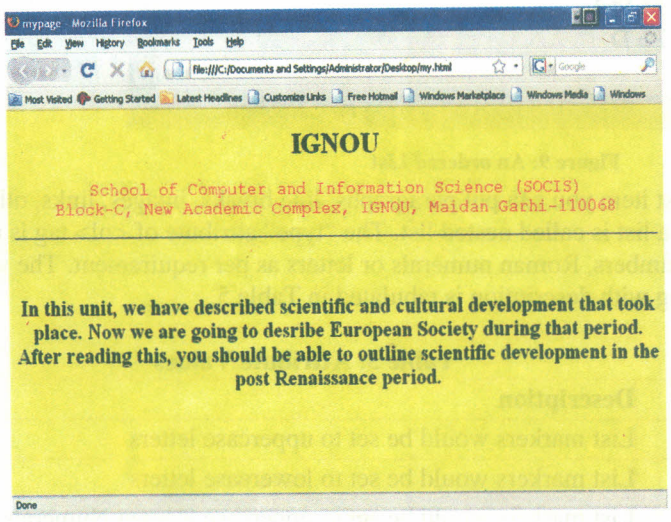
1) State true or false.
   a) Special characters are not supported by HTML.
   b) Font color can be specified either by using name of color or its numeric value.
   c) <hr> tag is used for line break.

2) Fill in the blanks with appropriate word or group of words.
   a) The two main sections of an HTML document are _____ and _____
   b) Face is an attribute of_____ tag.
   c) Some tags do not require closing tag are called _____

3) Create an HTML document which when opened in a web browser should appear like the following figure:



4) Create an HTML document having the yellow background and looks like the figure given below. The font to be used is arial and you must use <hr>, <p>, <br>, <pre> tags.



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1.4 USING LISTS IN WEB DOCUMENTS

Lists enhance the display. HTML supports ordered, unordered and definition lists.

Ordered List: A list of items in which items are marked with numbers is called an ordered list. An ordered list is created with the <ol> and </ol> tags. Each list item starts with the <li> tag and list heading is given by <lh> tag. The output of following text in template.html will generate the output shown in figure.

```
<html>
        <head>
                <title> My Web Page </title>
          </head>
        <body>
                <ol>
                <lh><em> School of Computer science </em>
<br>
                <li>BCA
                <li>MCA <li>BIT
                <li>M.Phil
                <li>Ph.D </ol>
        </body>
</html>
```

Program 1.7

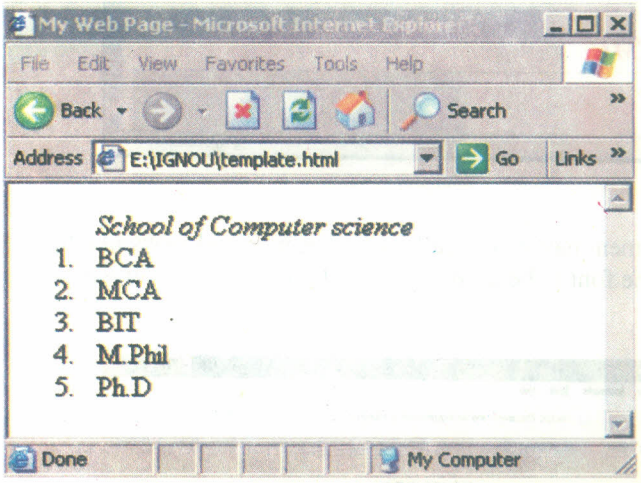


Figure 9: An ordered List

Inside a list item you can put paragraphs, line breaks, images, links, other lists, etc. A list inside a list is called nested list. The "type" attribute of <ol> tag is used to list items in numbers, Roman numerals or letters as per requirement. The various attribute value along with description is tabulated in Table 5.

Table 5: Attribute Values

Attribute	Description
Type=A	List markers would be set to uppercase letters
Type=a	List markers would be set to lowercase letters
Type=I	List markers would be set to uppercase Roman Numerals
Type=i	List markers would be set to lower Roman Numerals
Type=1	List markers would be set to numbers

```
<html>
    <head>
        <title> Nested Lists </Title>
    </head>
        <body>
      <ol>
       <lh><em>Indira Gandhi National Open University</em> <br>
        <li>School of Computer Sciences
         <ol type=i>
            <li>MCA <li>BCA
           <li>M.Phil
           <li>Ph.D </ol>
         <li>School of Management Studies
         <ol type=i>
            <li>BBA
           <li>MBA
           <li>M.Phil
           <li>Ph.D </ol>
        <li>School of Physical Sciences
          <ol type=i>
            <li>BSc
           <li>MSc
           <li>M.Phil
           <li>Ph.D </ol>
        </ol>
</body>
</html>
```

Program 1.7

The output of the following nested lists using attribute is shown in the Figure 10.

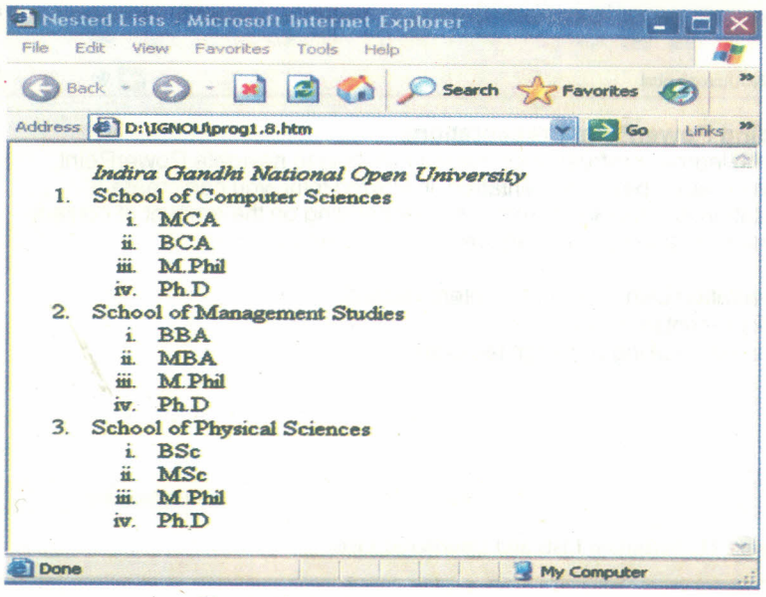


Figure 10: A nested ordered list

Definition lists have a format very similar to a dictionary

Unordered lists: The list items are marked with bullets in an unordered list. <ul> and </ul> tags are used to create unordered lists. Each list item starts with the <li> tag. The type attribute of <li> tag when has "value=circle" creates a circle and when has "value=disc" creates a filled circle (bullet). Inside a list item you can put paragraphs, line breaks, images, links, other lists etc.

Definition lists: These lists are also known as glossary lists which consist of a list of terms and explanation of the terms. A definition list starts with the <dl> tag, each definition-list term starts with the <dt> tag and each definition-list definition starts with the <dd> tag. For example, enter the following lines in prog2.html and view result.

Inside a definition-list definition (the <dd> tag) you can put paragraphs, line breaks, images, links, other lists etc. Follows here is an example along with its output that shows how unordered list and definition list works.

```
<html><head>
<title> Definition Lists and Unordered lists </title>
</head>
<body>
<font face="arial">
 <dl>
   <dt><b>Understanding PowerPoint Presentations</b>
   <dd>Once you learn--or refresh your memory of--how to navigate PowerPoint, you can create
a basic presentation. In PowerPoint, you can create a presentation in several different ways,
depending on the amount of content and design assistance you require. You can create
 </dl>
<ul>
      <li type=disc>A presentation using the AutoContent Wizard
      <li type=disc>      A blank presentation
<li type=disc>  A presentation using a design template
</ul> </font>
</body>
</html>
```

Program 1.8

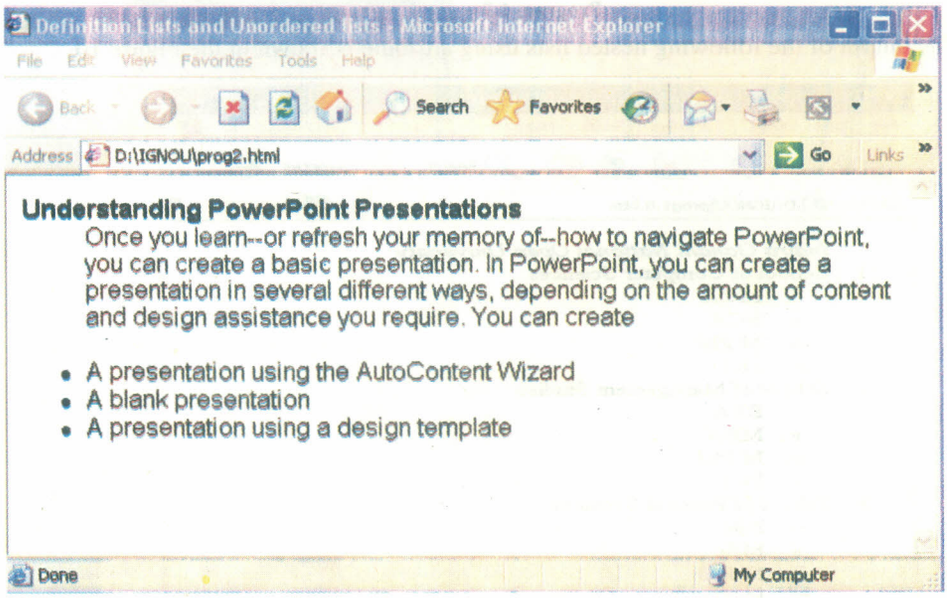


Figure 11: Definition Lists and Unordered Lists

Each graphics file format has its advantages and drawbacks. While one file format may download faster, another may deliver images with more details.

1.5 USING GRAPHICS AND LINKS

Graphics and links are two major component used in any web page. Graphics are used to enhance the look and feel of a web page. Links are the main building block of Hypertext and hence the web. Links helps you to navigate from one page to other even across the websites. Let us describe the graphics and links in more details.

HTML Images

You can display images in a HTML document. There are many image formats available today; few being most popular are GIF, JPEG, PCX, PNG, WMF etc. While inserting images in an HTML document, one should restrict to JPEG or GIF formats only because these two formats are widely supported by a range of web browsers. In HTML, images are defined with the <img> tag with its src attribute (src stands for "source"). The value of the src attribute is the URL of the image you want to display on your page. The <img> tag is empty, which means that it contains attributes only and it has no closing tag.

The syntax of defining an image:

```
<img src= "url">
```

The URL points to the location where the image is stored. Assume that an image named "image2.jpg" located in the directory "ignou" in "D:" drive has the URL: D://ignou/image2.jpg. The browser puts the image where the image tag occurs in the document. For example, the following listing will put the image before the text as shown in figure.

```
<html>
 <head>
  <title>Images in HTML </title>
</head>
 <body> <p>
  <img src="d://ignou/image1.jpg"> Images preceeds this text </p>
 </body>
</html>
```

Program 1.9

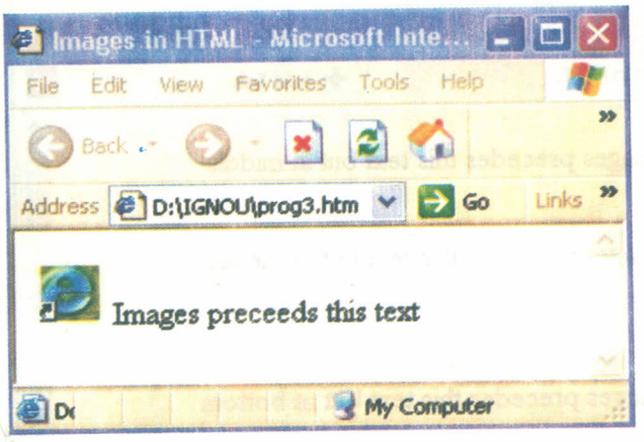


Figure 12: Use of Graphics using HTML

When an inline image is inserted in an HTML document along with text, by default the text is aligned with the bottom of the image as shown in Figure 12. The default alignment can be changed in Table 6.

Table 6: Default Alignment

value	Meaning
top	Align the text with the top of the image
middle	Align the text with the middle of the image
bottom	Align the text with the bottom of the image
left	Displays image on the left side and surrounding text flows around the image
Right	Displays image on the right side and surrounding text flows around the image

```
<html>
 <head>
    <title>Images in HTML </Title>
  </head>
     <body><p>
        <img src="d://ignou/image1.jpg" align=middle> Images precedes this text
but
                 in middle
</p>
 <p>
<img src="d://ignou/image1.jpg" align=top> Images precedes this text but at the top

</p>
 <p>
  <img src="d://ignou/image1.jpg" align=bottom> Images precedes this text but at
bottom </p>

</body>
</html>
```

Program 1.10

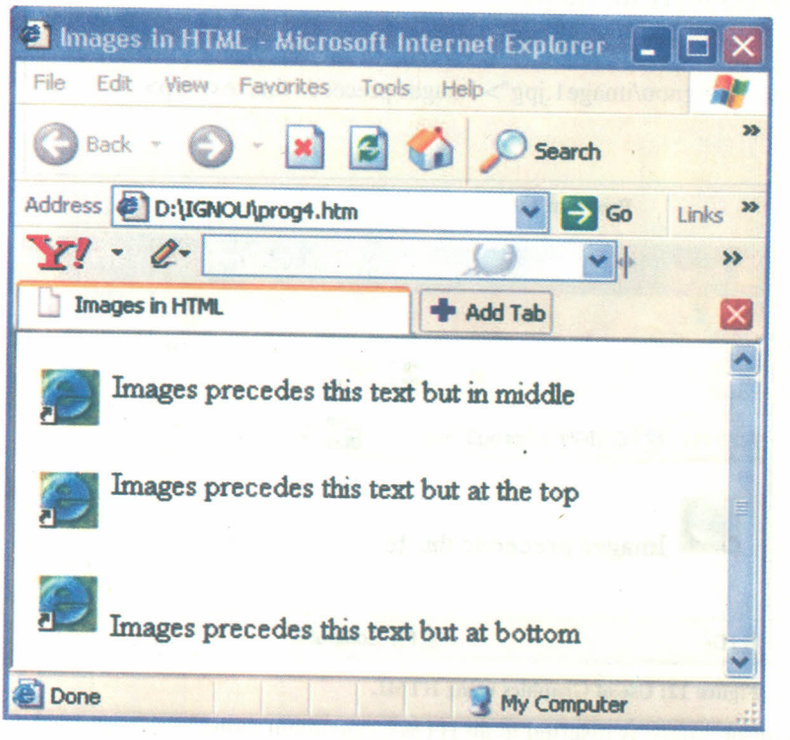


Figure 13: Alignment of Images in HTML

The Alt Attribute

An alternative text is provided with an image for users of text-based browsers or the ones who turn off the graphics to increase the download speed of the web pages. The browser will then display the alternate text instead of the image. This can be done by using the following syntax:

< img src="d://ignou/image1.jpg" alt="Internet Explorer">

The "alt" attribute is to improve the display and usefulness of your document that tells the user what they are missing in absence of a graphics based browser.

HTML Links

Links are used to connect various web resources to your current document. It is done by anchor tags <a> and </a> and href attribute of this tag. An anchor can point to any resource on the Web: an HTML page, an image, a sound file, a movie, etc. These links are called hypertext links and would appear underlined or in different colour to distinguish it from normal text.

There are two categories of links: Relative links and Absolute links.

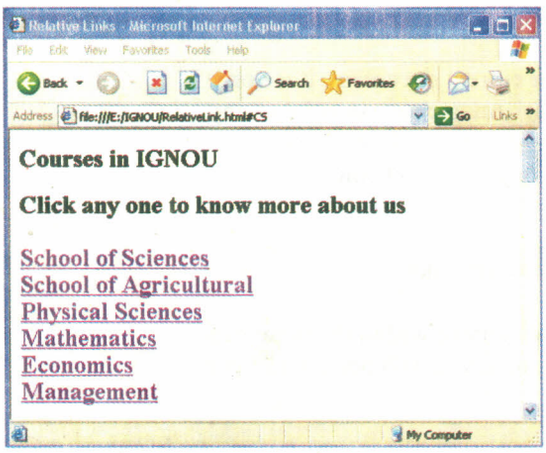
Relative links: Theses refer documents in the current directory or within the same page on which the link is used. For references to the current document, you need to use two instances of the anchor tag

Hypertext link as <a href= "section1"> link to section 1</a>

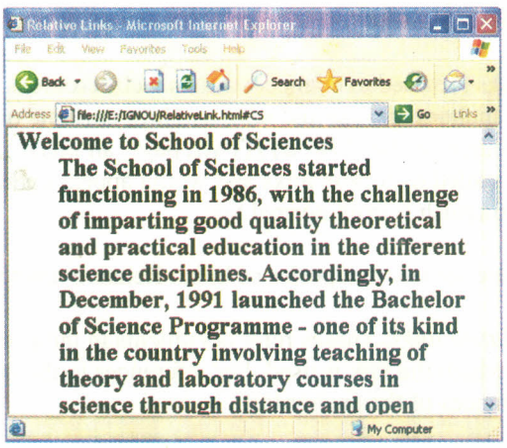
Reference point for that link as <a name= "section 1"> Section1 starts here</a>

```
<html>
 <head>
   <title> Relative Links </Title>
     </head>
        <body>
            <h2> Courses in IGNOU <h2>
                <p> Click any one to know more about us <a><br><br>
                <a href="#CS"> School of Sciences </a> <br>
                <a href="#BE"> School of Agricultural </a> <br>
                <a href="#PS"> Physical Sciences </a> <br>
                <a href="#MA"> Mathematics </a> <br>
                <a href="#EC"> Economics </a> <br>
                <a href="#MG"> Management</a> <br><br>
                <dl> <dt> <a name="CS"><B> Welcome to School of Sciences
</B></A>
<dd>The School of Sciences started functioning in 1986, with the challenge of imparting
good quality theoretical and practical education in the different science disciplines.
Accordingly, in December, 1991 launched the Bachelor of Science Programme - one of its
kind in the country involving teaching of theory and laboratory courses in science through
distance and open learning mode. The programme was initially designed to offer a B.Sc.
(General) degree, but was subsequently upgraded so as to offer a B.Sc. (Major) degree in
Botany, Chemistry, Mathematics, Physics and Zoology. Therefore, the students of the
B.Sc. programme have six options, a B.Sc. (General) degree and five B.Sc. (Major)
degrees. At present, along with these programmes, the School of Sciences also offers the
Doctoral (Ph.D) Programmes in Physics and Mathematics, the Integrated Doctoral
Programme in Physics and Mathematics (in collaboration with HRI, Allahabad), the Post
Graduate Diploma in Environment and Sustainable Development (PGDESD), the Post
Graduate Diploma in Intellectual Property Rights (PGDIPR), the Diploma Programme in
Aquaculture (DAQ), the Certificate Programme in Laboratory Techniques (CPLT), the
Certificate Programme in Teaching of Primary School Mathematics (CTPM), and the
Appreciation Course in Environment. The School has also collaborated with the School of
Social Sciences and School of Education in launching the Certificate Programme in
Environmental Studies (CES) and the Post Graduate Certificate in Professional
Development of Teachers (PGCPDT) respectively. Some of the other courses prepared by
the School also form part of BPP, BA, B.Com, BCA, BIT, B Sc (Nursing), BTS and MCA
programmes.
   </dl>
</body>
</html>
```

Program 1.11



(a) The Page showing hyperlinks



(b) The content of page changes when you click on School of Sciences link

Figure 14: The Page showing hyperlinks and its effect

When <base> tag is used in an HTML document, references are then always relative to the url given in the tag. For example:

<base href= http://www.ignou.com/cgi-bin>

<a href= "submit.pl"> refers to
http://www.ignou.com/cgi-bin/submit.pl

irrespective of the actual location of the document.

Absolute links: These provide full address or the url of the document, described in the link text.

Animated GIFs: These are multiple gif files contained in a file with information how long a frame should stay on the screen. Like ordinary gif files, animated gif files also have an extension of gif. Only web browsers that support animated gifs can find out if a file is animated or not. In browsers that do not support animated gifs, such files are displayed as static.

<Marquee> tag: This tag supported by Internet explorer makes scrolling of text across the web page possible. You can use following attributes with <marquee> tag

align	Align to left or right
bgcolor	Background color
direction	Direction of text scroll
loop	Number of times text would loop
width	Sets the width of marquee pixels
height	Height of marquee in pixels

<blink > tag: This tag supported only by netscape navigator, blinks the text. Enter the following line of text in notepad and check in your browser for difference:

<marquee bgcolor='red' loop=3 height=24> This is scrolling text </marquee>

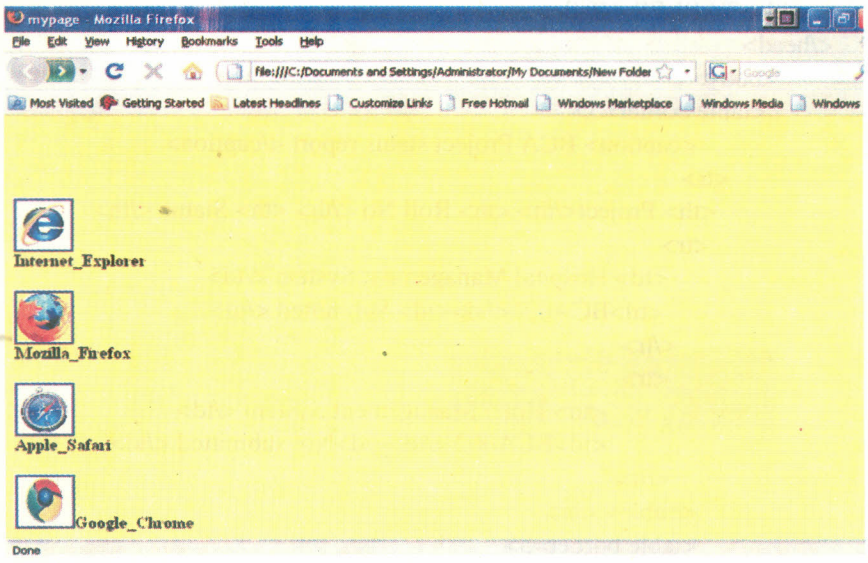
<blink> Blinking text </blink>

Check Your Progress 2

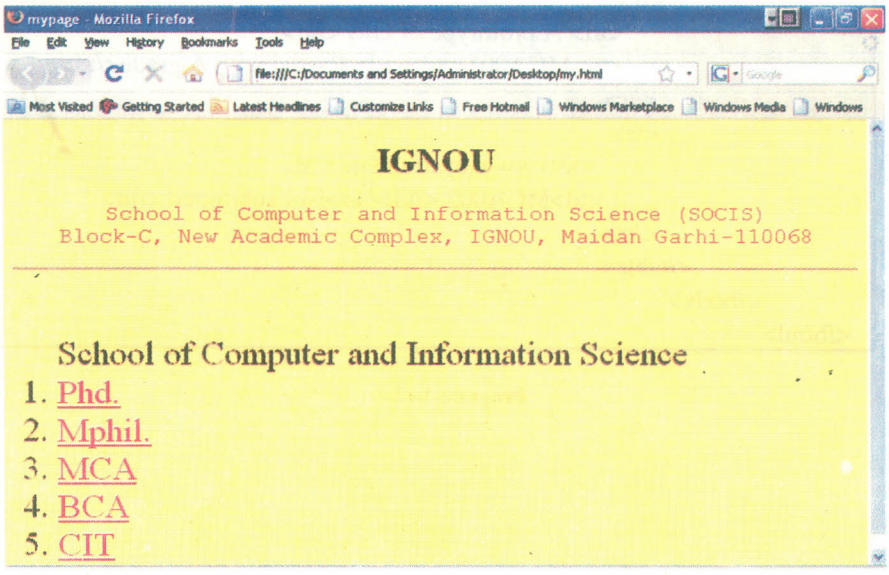
1) State true or false.
   a) Special characters are not supported by HTML.
   b) When an inline image is inserted in an HTML document along with text, the text is aligned in the middle of image by default.
   c) <ul> tag is used for creating unordered list.

2) Fill in the blanks with appropriate word or group of words.
   a) The <link> tag is used to _____ _____
   b) Aligned text can be provided with_____ attribute of an <img> tag.
   c) Scaling down of an image means that the image would be displayed in a size described by _____ and _____ attributes.

3) Create an HTML document, which uses four images along with their references as shown in the Figure below.



4) Create an HTML document to create an ordered and hyperlinked list of computer programme offered by SOCIS as shown in the Figure below.



1.6 MORE ON HTML

HTML supports many other important tags for representing tables, creating frames and forms. Tables are very useful for data representation. Frames help in imparting structure to web pages, whereas forms are most useful for interaction with the users. This section provides details on these topics.

Table: With HTML you can create tables with the <table> tag. These are defined row by row with the <tr> tag and each row is divided into data cells with the help of <th> (table header) and <td> (table data) tags. The "border" attribute of the table creates a table with border and it takes the value in pixels. "border=0" creates a borderless table.

```
<html>
 <head>
   <title>TABLES </Title>
 </head>
      <body>
       <table border=5>
              <caption> BCA Project status report </caption>
           <tr>
            <th> Project</th> <th> Roll No </th> <th> Status </th>
             <tr>
                <td> Hospital Management System </td>
                 <td>BCA001</td><td> Submitted </td>
               </tr>
               <tr>
                     <td> Hotel Management System </td>
                     <td>BCA002 </td><td>Not submitted </td>
               </tr>
             </table> <br>
             <table border=5>
             <caption> MCA Project status report </caption>
               <tr>
                 <th> Project</th> <th> Roll No </th> <th> Status </th>
               <tr>
                   <td> A prototype of GIS </td>
                   <td>MCA001</td><td> Passed with A grade</td>
                 </tr>
                 <tr>
                      <td> www.eyatra.com </td>
                     <td>MCA002 </td><td>Not submitted </td>
                 </tr>
             </table>
       </body>
</html>
```

Program 1.12

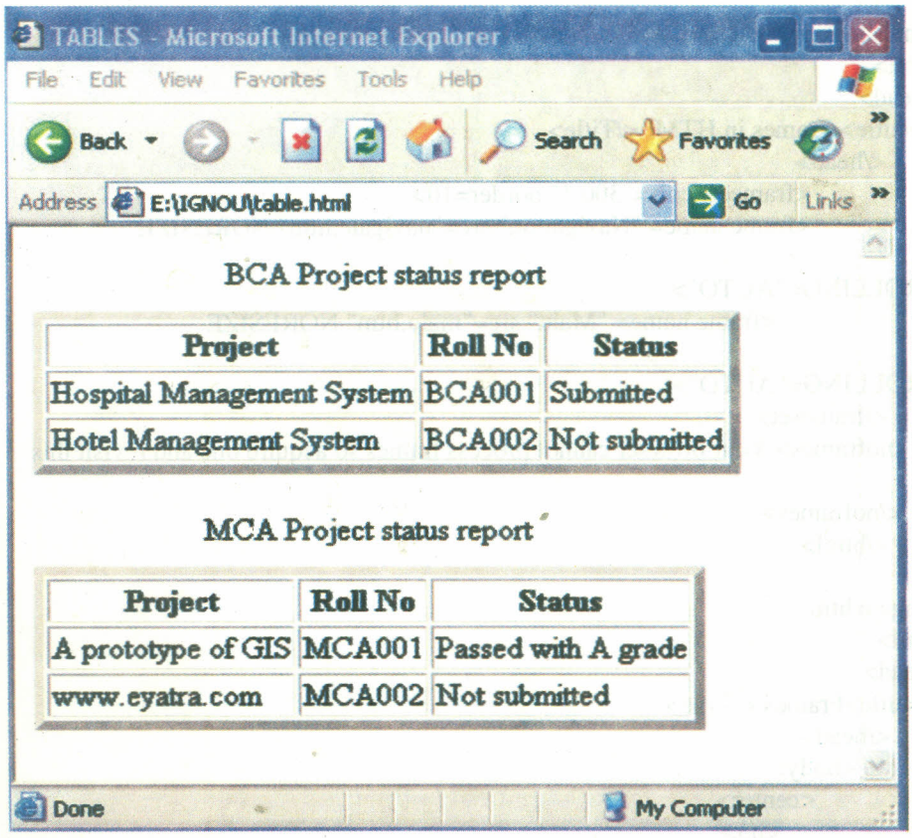


Figure 15: Use of Tables in HTML

A data cell in a table can contain text, images, lists, paragraphs, forms, horizontal rules, tables etc. Some of the tags used for creating tables are shown in Table 7.

Table 7: Tags

Tag	Description
<table>	Defines a table
<th>	Defines a table header
<tr>	Defines a table row
<td>	Defines a table cell
<caption>	Defines a table caption
<colgroup>	Defines groups of table columns
<col>	Defines the attribute values for one or more columns in a table
<thead>	Defines a table head
<tbody>	Defines a table body
<tfoot>	Defines a table footer

Frames provide way to organize Web documents, visually and logically by dividing the pages into different parts

Frames: With frames, you can display more than one HTML document in the same browser window. Each HTML document is called a frame, and each frame is independent of the others. Frames provide an effective way to organize the web content by dividing the page into different parts.

In the example shown in Programe 1.13 "frames.htm" we have a frameset with two columns. The first column is set to 300 pixel of the width of the browser window. The second column is set to rest of the width of the browser window. The HTML document "navigate.htm" is put into the first column, and the HTML document "main.htm" is put into the second column.

```
Frames.htm
<html>
 <head>
   <title> Frames in HTML</Title>
     </head>
            <frameset cols="300,*" border=10>
            <frame name= "Navigation" src="navigate.htm" NORESIZE

SCROLLING="AUTO">
                <frame name= "Main" src="main.htm" NORESIZE

SCROLLING="AUTO">
     </frameset>
    <noframes> Your browser cannot process frames so acquire one and revisit this
site.
    </noframes>
     </html>

Navigate.htm
<html>
 <head>
   <title>Frames </Title>
     </head>
        <body>
            <center>
                <h3>
                <a href="index.htm"> About us </a><br><br>
                <a href="courses.htm"> Courses </a><br><br>
                <a href="faculties.htm"> Faculties </a><br><br>
                <a href="contact.htm"> Contact us </a><br><br>
                </h3>
          </center>
</body>
</html>

Main.htm
<html>
 <head>
   <title>Frames </Title>
     </head>
        <body>
            <center>
                <h1 align="center"> Welcome to Indira Gandhi National Open
                University </h1>
          <p> Welcome to IGNOU home page, The university was established in
           </p>
           </center>
</body>
</html>
```

Program 1.13

Note: The frameset column size value can be set in pixels (cols="200,500") or percentage where one of the columns can be set to use the remaining space (cols="25%,*").

Figure 16: Use of Frames in a web site

Forms in the HTML: HTML Forms are used to select different kinds of user input, it allows the user to interact by sending the requested information in the form of text, drop-down menus, radio buttons, checkboxes, etc.

A form is defined within <form> and </form> tags with the help of <input>, <select> and <textarea> tags.

```
<form>

    <input>
    <input>

</form>
```

<input> tag: The most used form tag is the <input> tag. This is an open tag and is used to add graphical user interface such as text fields, password fields, check boxes, radio buttons, reset button and submit buttons. The different attributes for the <input > tags are shown in Table 8.

Table 8: Different Attributes

Attribute	Meaning
name	Defines name for the data. This is required for submit and clear
size	Defines Size of input field in number of characters for text or password
maxlength	Specifies maximum characters to be allowed for text or password
value	Defines the default text displayed in text or password field; Specifies the value to be returned to server in case of checkbox or radio button; Defines the text inside the button in case of Submit or reset button.
checked	Sets a radio button or check box to "on", not meant for any other input attribute.
type	Sets the type of input field you want to display

The type of input is specified with the "type" attribute. The most commonly used input types are given in the Table 9.

Table 9: Input Types

text	For text fileds
password	"*" appear in text field as the user enters data
checkbox	For checkbox control
radio	For radio button control
reset	A command button which when clicked clears the form
submit	A command button which when clicked posts data to remote server for further action
hidden	A hidden control which does not show up in the form

Pop up and scrolling menus can be created using the <select> and </select> tags with different option given by <option value= "value">. <option selected value= "value1"> will display fixed value1 in the display of scrolling menu.

Similarly <textarea> and </textarea> tags are used to collect text input from the users. User can enter messages and brief report in this filed. It has the following form:
<textarea name= "name1" rows= "number" cols= "number">
Default text can be displayed here </textarea>

Let us combine these elements and create a form

```
<html>
 <head>
   <title>FormS </Title>
     </head>
        <body>
            <form method ="POST" action="http://www.ignou.com/html/cgi-
bin/form.pl">

                Name <input type="text" name="name" size="20" maxlength="50"
/><br><br>
                Enter your password <input type="password" size="20"
maxlength="50" /><br><br>

                Email <input type="text" name="email"><br><br>
          Telephone No<input type="text" name="mobile" id="mobile"
maxlength="12"> <br><br>
                Location <select name="choice1"><br>

                <option selected value=" ">- Select Location
                <option value='Ahmedabad'>Ahmedabad
                <option value='Bangalore'>Bangalore
                <option value='Chennai'>Chennai
                <option value='Delhi'>Delhi
                <option value='Gurgaon'>Gurgaon
                <option value='Hyderabad'>Hyderabad
                <option value='Kolkata'>Kolkata
                <option value='Mumbai'>Mumbai
                <option value='Noida'>Noida
                </select> <br><br> level
                <input type="radio" name="level" value="M" checked>
```

```
PostGraduation
            <input type="radio" name="level" value="B" > Graduation<br><br>

        MCA <input type="checkbox" name="MCA" value="M" checked> <BR>
            BCA <input type="checkbox" name="BCA" value="M" > <br>
            MIT <input type="checkbox" name="MIT" value="M" > <br>
            BIT <input type="checkbox" name="BIT" value="M" > <br><br>
            <textarea name= "msg" rows= "10" cols= "10">
        Enter your message here </textarea><br><br>
            <center>
            <input type="reset" value="clear the form">
            <input type="submit" value="Submit your form">
            </center>
        </form>
</body>
</html>
```

Program 1.14

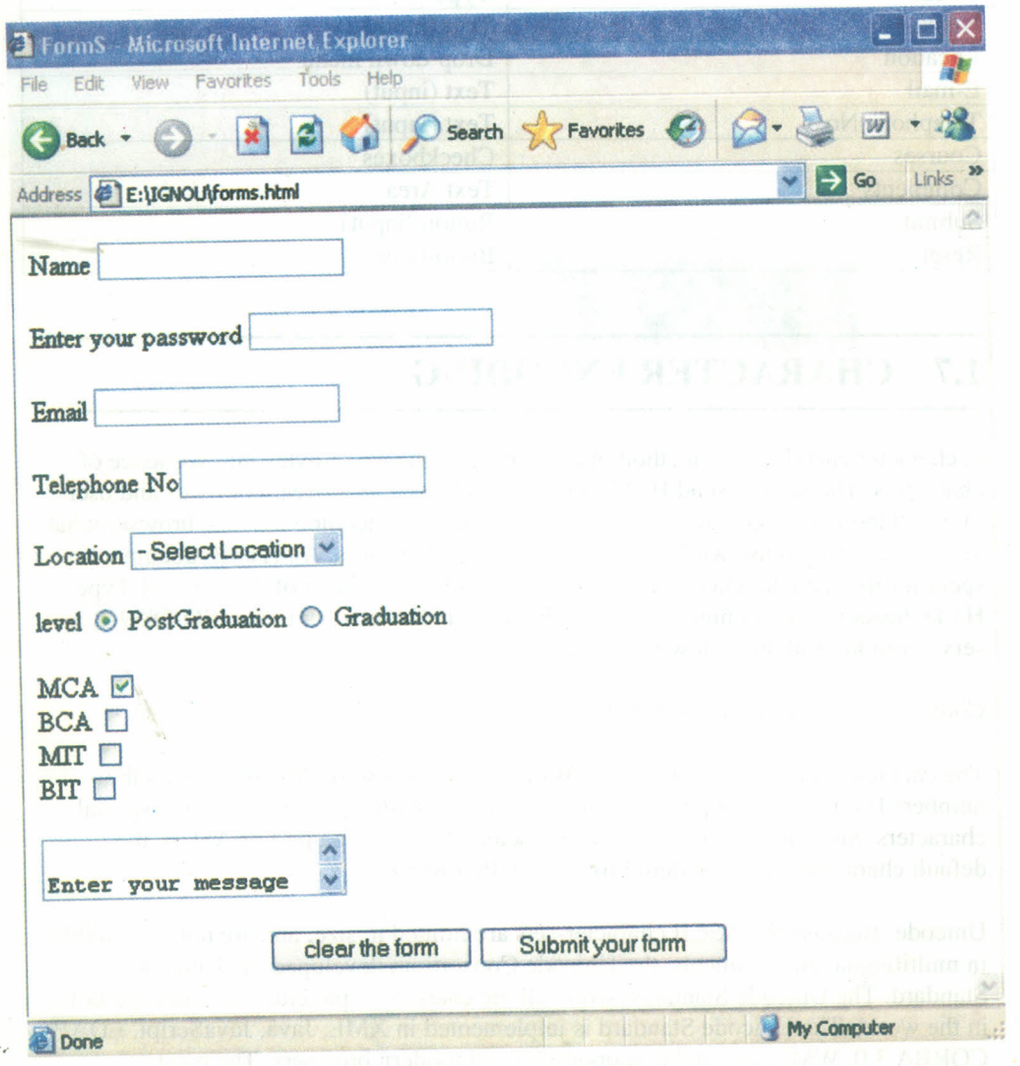


Figure 17: A Sample form created using HTML

Please note that form shown here is not sending the information to web server. To do so you need to do programming using languages like CGI, PHP, ASP or any such scripting language. These are beyond the scope of this unit. You may refer to further readings for more details.

☞ Check Your Progress 3

1) State true or false.
   a) Drop down menus is not supported in HTML.
   b) Text fields may be used for multi-line input.
   c) Each frame within a frameset can again be divided into frames.

2) Create an HTML document which uses two frames, the left frame are further divided into two frames horizontally. The upper portion of left frame contains an image while the lower one has navigation titles. The right frame contains some text description of the titles on the navigation bar.

3) Create a form with the following field:

Fields	Type
Name	Text (input)
Location	Drop-down menu
E-mail	Text (input)
Telephone No.	Text (input)
Courses	Checkboxes
Comments	Text Area
Submit	Button (input)
Reset	Button (input)

1.7 CHARACTER ENCODING

A character encoding is a method of converting sequence of bytes into sequence of characters. The servers send HTML documents to user as a stream of bytes and user interpret these as a sequence of characters. Character encoding tells the browser what set of characters to use while converting bytes to characters. An HTML document specifies its character encoding by using the charset parameter of the Content-Type HTTP header. For example, to specify that an HTML document uses ISO-8859-1, a server would send the following header:

Content-Type: text/html; charset=ISO-8859-1

The character-set for the early World Wide Web was ASCII. ASCII supports the numbers from 0-9, the uppercase and lowercase English alphabet, and some special characters. Since many countries use characters that are not a part of ASCII, the default character-set for modern browsers is ISO-8859-1.

Unicode: Because the ASCII character-sets are limited in size, and are not compatible in multilingual environments, the Unicode Consortium developed the Unicode Standard. The Unicode Standard covers all the characters, punctuations, and symbols in the world. The Unicode Standard is implemented in XML, Java, JavaScript, LDAP, CORBA 3.0, WML, etc. and is supported by all modern browsers. The most commonly used Unicode encodings are UTF-8 and UTF-16.

A detailed discussion on this topic is beyond the scope of this unit. You may refer to further readings for better understanding of character encoding.

1.8 SUMMARY

In this unit, you studied HTML, which is used to create web documents. HTML documents contains a number of tags that tells the browser about the format and the displayed content Some of the basic HTML tags may include headings, emphasizing, text appeance, lists and tables. These documents also contain embedded instruction /links into a file for linking to other files, images, sound, movie and other web document. When these embedded links are clicked, you can jump to the reference or to local site or to the World Wide Web. HTML creates "static" documents means that the user is not allowed to interact significantly with these pages. The web server simply displays the already stored document; it has no capabilities to respond to any change conditions like time of the day. Scripting languages like java script provide another way to activate the web pages. These are beyond the scope of this unit.

1.9 SOLUTIONS/ANSWERS

Check Your Progress 1

1) State true or false
   a) False
   b) True
   c) False

2) Fill in the blanks
   a) Head and Body
   b) Font
   c) Empty tags.

3)
```
<html>
  <head><title> Hands on Session</title>
  </head>
   <body> Hello World!
      <hr> <font face="georgia" size="6" color="blue">
       See <br> the <br> <u>Magic</u> <br> of <br>
      <font face="times new roman" size="6" color="red"> <b>
      <i>HTML </i> </b></font>
     <hr></font> <font face="times new roman" size="8" color="pink">
&hearts; &diams;
     </body>
</html>
```

4)
```
<html>
<head>
<title> mypage </title>
</head>
<body bgcolor = yellow>
<center>
<h1> IGNOU </h1>
<font face= "arial" color="red" size="+2">
<pre>
School of Computer and Information Science (SOCIS)
```

```
Block-C, New Academic Complex, IGNOU, Maidan Garhi-110068
</pre>
</font>
<hr>
</br></br>
<p><b> <font size = " +5">
In this unit, we have described scientific and cultural development that took place.
Now we are going to describe European Society during that period. After reading this,
you should be able to outline scientific development in the post Renaissance period.
</font>
</b>
</p>
</center>
</body>
</html>
```

Check Your Progress 2

1) State true or false
   a) False
   b) False
   c) True

2) Fill in the blanks
   a) Establish a hypertext relationship between the current document and another url.
   b) Align
   c) Height and Width

3)

```
<html>
<head>
<title>mypage</title>
</head>
<body bgcolor=yellow>
<a href="Internet_Explorer"> <img src = "internet_explorer_logo.jpg"  height="50"
width = "50">
</a>
</br>
<b>Internet_Explorer</b>
</br></br>
<a href="Firefox"> <img src = "firefox.gif"  height="50" width = "50">
</a>
</br>
<b>Mozilla_Firefox</b>
</br></br>
<a href="Apple_Safari"> <img src = "apple_safari.jpg"  height="50" width = "50">
</a>
</br>
<b>Apple_Safari</b>
</br></br>
<a href="Google_Chrome"> <img src = "google-chrome-browser.jpg"  height="50"
width = "50">
</a>
<b>Google_Chrome</b>
</br>
</body>
</html>
```

4.

```
<html>
<head>
<title>mypage</title>
</head>
<body bgcolor=yellow>
<center>
<h1> IGNOU </h1>
<font face= "arial" color="red" size="+2">
<pre>
School of Computer and Information Science (SOCIS)
Block-C, New Academic Complex, IGNOU, Maidan Garhi-110068
</pre>
</font>
<hr></br></br>
</center>
<ol>
<font size="+3"> School of Computer and Information Science
<li> <a href> Phd.</a></li>
<li> <a href> Mphil.</a></li>
<li> <a href> MCA </a></li>
<li> <a href> BCA </a></li>
<li> <a href> CIT </a></li>
</font>
</body>
</html>
```

Check Your Progress 3

1) State true or false
   a) False
   b) True
   c) True

2)

```
<html>
 <head>
    <title>FormS </Title>
       </head>
          <body>
               <form method ="POST"
action="http://www.ignou.com/html/cgi-bin/form.pl">

                    <b>Name</b> <input type="text" name="name" size="20"
maxlength="50" /><br><br>


                    <b>Email</b> <input type="text" name="email"><br><br>
            <b>Telephone No</b><input type="text" name="mobile"
id="mobile" maxlength="12"> <br><br>
                    <b>Location</b> <select name="choice1"><br>

                    <option selected value=" ">- Select Location
                    <option value='Ahmedabad'>Ahmedabad
                    <option value='Bangalore'>Bangalore
                    <option value='Chennai'>Chennai
                    <option value='Delhi'>Delhi
```

```
                <option value='Gurgaon'>Gurgaon
              <option value='Hyderabad'>Hyderabad
              <option value='Kolkata'>Kolkata
              <option value='Mumbai'>Mumbai
              <option value='Noida'>Noida
          </select> <br><br>
          <b>Courses</b><br>

          Phd'<input type="checkbox" name="Phd." value="M" checked>
          MCA <input type="checkbox" name="MCA" value="M" >
          BCA <input type="checkbox" name="BCA" value="M" >
          CIT <input type="checkbox" name="CIT" value="M" > <br><br>
          <b>Comments</b><br><textarea name= "msg" rows= "5" cols=
"50">
          Enter your message here </textarea><br><br>
          <center>
          <input type="reset" value="Reset">
          <input type="submit" value="Submit">
          </center>
          </form>
</body>
</html>
```

3) Do it yourself.

1.10 FURTHER READINGS

- http://www.w3schools.com
- Learning Web Design, Second edition, Jennifer Niederst, O'Reily
- HTML Mastery: Semantics, Standards, and Styling, Paul Haine
- HTML for the World Wide Web, Fourth edition, Elizabeth Castro
- Web Standards Programmers's Reference: HTML, CSS, JavaScript, Perl, Python and PHP, Steven M.Schafer

UNIT 2 TOOLS FOR WEB PAGE DESIGNING

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2.0 INTRODUCTION

In the previous unit, you have gone through the process of a simple web page creation using Hyper Text Markup Language (HTML). HTML uses tags that identify the format and structure of a web page. To create a web page you may have to remember and use a number of HTML tags and their attributes. Therefore, in general web designing using HTML is a bit slower. In the present time, a number of Tools are available in the market to design a web site. These tools provide very simple interfaces for development of web pages and make simple the process of web site development. This unit introduces you to two such software which makes your life simpler for web page creation. Microsoft Expression Web 2 is a full-featured HTML editing software used for web site designing and development. You can use HTML editing software to create web pages very easily. They can automatically generate the tags in the HTML document as per your design. In addition, you can use such software to easily create advanced web pages that have features such as rollover effects, image map, thumbnails, forms, frames etc with few mouse clicks. Therefore, most of the web site developers are using HTML editing software to develop the websites. These software are particularly beneficial to the users who have limited knowledge about scripting languages. This unit introduces you to many features of HTML editing software. The features discussed in this unit although are specifically defined in the context of one HTML editor, however, you may try these features in any other commercial and open source HTML editing software. The other package that has been introduced in this unit is GIF construction set that is used for development of simple animation with ease.

2.1 OBJECTIVES

After going through this unit, you should be able to:

- use the features of HTML editors;
- create and save your web pages;
- edit any existing web pages or files using HTML editor;
- create hyperlinks and add images from your hard drives or clip art gallery;
- create division in a web page;
- preview a web site; and
- define the use of GIF in web pages.

Remember HTML is platform independent.

2.2 WHAT ARE HTML EDITORS?

An HTML editor program is called WYSIWYG– an acronym for the term "What You See Is What You Get" - editor. The recent versions of these editors include features that can be used for creation and administration of a web-site. These tools allow beginners to develop a web site easily and efficiently. You need not know much of HTML to use these editors. Most of these editors support DHTML. What is this DHTML?

Find the difference between HTML and DHTML

What is DHTML?

DHTML stands for Dynamic HTML. It itself is not a mark up language like HTML. Rather, DHTML stands for a collection of technologies that are used for designing dynamic and interactive web pages. But what are the Dynamic Web pages? Dynamic web pages are the web pages where the content on a web page changes in response to certain context or condition. You can create a dynamic page using the following:

- You can use client side scripting using languages like JavaScript that responds to events related to Mouse and Keyboard action. Some of the common mouse events are - pressing the left button on mouse, moving mouse over an item etc. On the occurrence of specified event, the web page may change as per the response of the user.

- You can also use server side scripting for the same that may run on the server and create different contents for different types of users. For example, if you are registered user of a newspaper and have asked "Economic" news as your main choice, then you may get a page displaying news related to the topic you have chosen, whereas someone else whose main preference is sports may get page displaying sports news as the main news. This dynamic behaviour is possible due to the server scripts, databases and other DHTML technologies.

Style sheets help you to change the display of the web site without changing the HTML page. They also help you to create consistent web page formats.

DHTML itself is not a technology but consists of a number of following standards/ languages:

HTML 4: This is the backbone for construction of dynamic web pages. One of the key concepts introduced in HTML is that it clearly differentiates between the style of a web page (that identifies presentation or format of display) and document structure (which is identified by HTML tags). It supports style sheets that define the presentation of elements. In addition, HTML 4 supports scripting languages and document object model for making dynamic web pages. Presently HTML 5 standard is under finalization. Please note that many of basic tags of HTML that you have gone through in Unit 1 of this Block are part of HTML 4 and HTML 5.

Scripting: Scripting language help in writing small programs that are run either at the client (called client side scripting) or at the server (server side scripting). The scripting languages are used to create dynamism in to your web pages. The popular client side scripting languages are JavaScript and VBScript. Server-side scripting helps you to create a program that creates a request from the server, which is fulfilled by executing a script directly on the server to generate dynamic web pages. Some of the popular server side scripting languages are ASP (Active Server Page), JSP (Java Server Page), CGI (Common Gateway Interface), Perl, PHP etc. One of the scripting languages JavaScript have found major applications. The following paragraph provides basic information of JavaScipt.

Find the most suitable script for creating dynamic contents

JavaScript: JavaScript is one of the popular client-side scripting languages. DHTML web pages involve JavaScript to control, access and manipulate HTML elements, thus, can be used to create simple interactive actions including simple animations. For example, while you are filling up an online form, and you leave a field blank that is essential to be filled up, now if you try to submit this incomplete form, JavaScript alerts you about the missing data.

The Document Object Model (DOM): DOM identifies the standard ways to manipulate objects including the handling of events in an HTML document. Some of the popular events are - the mouse click, keyboard press etc. HTML-DOM is defined in the W3C standard Document Object Model that has been made for HTML. This standard defines the HTML objects and way to access and manipulate them. The events handling using objects are part of the events. A DHTML page includes Objects and related user events.

The HTML Editorial Review Board (ERB), developed HTML, CSS, and DOM - all in one

Cascading Style Sheets (CSS): CSS defines the style and layout of an HTML page. CSS allows you to change style and layout of a page without changing the structure of a web site. Style sheets were introduced from HTML 4. Style sheets are based on the basic premise that the presentation of HTML document may be separated from the content. You can use Cascading Style Sheets to define all the layouts and attributes setting for HTML tags placed at one place. This facilitates the design of web pages as you can change the style of a web page without changing any content file. This also helps in bringing consistency over a number of web pages as all of them can use the same style sheets. CSS includes codes that define attributes and layout setting. CSS reduces the overheads to define and insert attributes of HTML repeatedly. The code of CSS can be contained in linked CSS documents or embedded in Web pages source code.

A detailed discussion on all these topics is beyond the scope of this course. You may learn more about the DOM, JavaScript and CSS etc. from the further readings.

2.3 FEATURES OF A WEB PAGE DESIGN TOOLS

Almost all the tools that are available these days for designing of web pages include the following features:

- CSS Support
- Dynamic Web Templates
- PHP support
- XML support
- JavaScript support
- Interactive Buttons
- Page Rulers and Layout Grids
- Split View
- Support for server side scripting
- Button Rollover effects
- Thumbnails

CSS Support: As discussed earlier style sheets are useful formatting information that is separated from the structure of a web page. All the web sites produced using newer tools automatically create style sheets or style files as you create the web page. HTML editor software also allows you to create and use your own style sheets.

Dynamic Web Templates: Most of the web pages that you may have designed so far using HTML are called static web pages as they do not change unless you make intentional changes. However, you can also provide interactive experiences to user using web scripting languages (like JavaScript, PHP, ASP etc.). The contents of these dynamic web pages are generated mainly by the sever-side scripts and their interaction with server databases. Most of the present web sites are dynamic in nature. Thus, the web development tools provide some editable dynamic web templates. You can edit these dynamic templates according to your need and generate static or dynamic web pages with ease.

The XML has two current versions: XML1.0 and XML1.1

PHP Support: PHP stands for Hypertext Preprocessor. It is also a server side scripting like ASP. It is open source software and free to download and use. You can edit PHP code as per your need using HTML editors.

XML Support: XML or eXtensible Markup Language is another markup language that in structure is quite close to HTML, however, does not contain any information relating to document presentation. This language was designed for transporting and storing data on the web. You can learn about XML from the further readings. You can design your own tags in XML. Most of the contemporary web development tools support XML tags. You can easily introduce XML tags in your web pages.

JavaScript Support: JavaScript is one of the major scripting languages used in web site design. JavaScript is very useful for creating simple animations and interactivity on the client machines. Most of the browsers have options to turn such scripts off. Sometimes it is done for the security reasons.

Interactive Buttons: You can use a web design tool to create interactive buttons for your web site development. The major advantage here is that you need **not** do any programming using scripting languages like JavaScript to use these buttons in your web pages.

Page Rulers and Layout Grids: Page rulers and Layout Grids provide guides for placing an item (like a picture) on an exact position in your web page. Layout Grids provides options that make your layout fast and accurate.

Split View: Web design tools provide you an outstanding option to view your HTML and other code along with the designed pages. The Split view makes it possible to view both of these at the same time by splitting screen. You can see the code on one half of the screen and design on the other half of the screen.

Support for Server Side Scripting: Web development tools support server side scripting for developing dynamic web pages. You can use PHP or Microsoft's Active Server Pages (ASP) or any other server side scripting tool.

Button rollover effects: You might come across websites where on bringing your cursor pointer on a link changes the color or highlights the link. This change of color or highlight is termed as button rollover that is whenever you place mouse cursors over the buttons, it glows or changes appearance.

Thumbnails: A thumbnail is a small image that links to larger image. A thumbnail is used to save time of downloading a full image. If you want to see the larger image,

you have to click on the thumbnail. Off course it will take extra time to download full image.

There are many other features available in the web development tools, however, a detailed discussions on these is beyond the scope of this Unit. You may refer to further readings for more details.

Explore some more advantages of Expression Web2 editor

2.4 ADVANTAGES OF USING WEB PAGE DESIGING TOOLS

Full-featured HTML editors used for designing web sites have many advantages. Some of these advantages are:

- *Easy to use*: One of the major advantages of using these tools is that they have lots of web page design features and WYSIWYG editor. This editor helps you to create web pages without remembering HTML tags and without having much knowledge of scripting languages. Thus, you create a web page as if you are working on a simple document. In addition, by using some of the existing templates you may be able to create a complete web site with a little bit of support. Therefore, these tools are widely used for design of web sites. Some of the newer tools also support maintenance of web sites, which allows you to edit and upload a page on the website once again using very simple methods.

- *Provide many advanced design features*: Most of the web design tools support creation of dynamic web pages. They can be used for creating simple animations, JavaScript based and other scripting language based applications automatically. For example, a facility like counter can simply be added on a web page using these tools. Thus, web development tools are very useful for web site design.

- *Create HTML automatically*: Since all such tools creates HTML code automatically, your task get simplified.

- *Create professional-looking Web pages with few clicks*: Using these tools you can not only create good web pages but also a complete web site with proper links.

In addition, these tools support many other features which make the life of a web designer very easy. In the present time, most of the web sites are designed using these tools. However, HTML knowledge is still very essential as it helps in performing simple corrections very efficiently. Knowing scripting language makes you a very effective web developer.

☞ Check Your Progress 1

1) What are HTML editors?

.....

.....

.....

.....

.....

2) Write the advantages of using HTML editors.

.....

.....

.....

.....

3) List the main features of HTML editors.

.....

.....

.....

.....

4) Define the following terms in the context of web design:
   - ... DHTML
   - HTML4
   - CSS
   - DOM
   - JavaScript

.....

.....

.....

.....

.....

Microsoft Expression Web 2 has replaced Microsoft FrontPage which was one of the popular HTML editor

2.5 GETTING STARTED WITH MICROSOFT EXPRESSION WEB 2

Microsoft Expression Web 2 is a fully-featured HTML editor that helps you in developing your web pages easily. In this Unit, we are discussing about Microsoft Expression Web 2, however, you may find the similar features in many other HTML editors/ web site development tools. Microsoft Expression Web 2, if installed on your computer, is available as one of the software in the Microsoft Expression suite. There are two ways to open Microsoft Expression Web 2:

1) Double click on the Microsoft Expression Web 2 icon on the desktop.

Microsoft Expression Web 2

OR

2) Click on Start →Programs →Microsoft Expression→Microsoft Expression Web2, as shown in the Figure 1.

Figure 1: Starting Microsoft Expression Web 2

2.6 MICROSOFT EXPRESSION WEB 2 WORK SPACE

Once you start the Expression Web 2, an Expression Web Work Space opens. Figure 2 explains the various component of Expression Web Work Space. This workspace is opened in the Design view that is why you can see a design window. Please notice that since the design has not yet begun, therefore, in Figure 2 the Design workspace is blank.

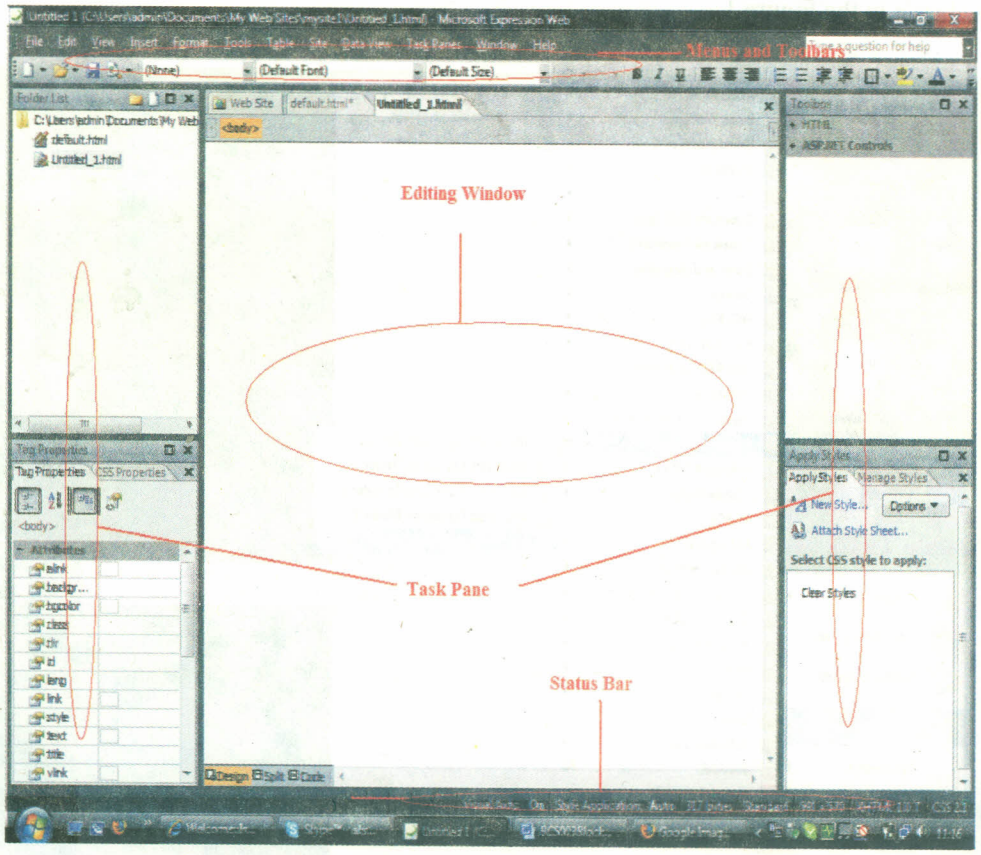

Figure 2 Expression Web Work Space

Components of Expression Web Work Space

There are many components of Web Work Space. Some of these are as under:

- Title bar
- Menus and toolbars
- Editing window
- Status bar
- Task Panes

Title Bar: Title Bar displays the title of the current active page. It always appears at the top of the Expression Web window. The default file names for Microsoft Expression Web2 file is shown in the title bar that is - *Untitled_1*. The Title Bar of Expression Web contains following information:

- Name of the Program (Web page title)
- Minimize button
- Restore down or maximize button
- Close button

This bar can also be used to Move the window.

Figure 3: Title Bar

Menu Bar: Menu Bar is positioned below the Title Bar and displays the list of the menu items. The menu bar is used for selecting a set of commands during the design of web page. The menu bar contains a drop down list of all the commands which helps you to make an effective web page. By using mouse, you can move across the menu bar and select the commands by clicking on that command. You can also use arrow keys or shortcut keys of keyboard to access these commands.

Figure 4: Menu Bar

The Menu Bar contains nine options:

- **File**: This Menu bar option includes commands to open an existing pages, save new pages, close current pages, print, create new pages, open sites, preview in browser and properties option.
- **Edit**: This Menu bar option includes commands to copy, cut, paste, find, replace and quick tag editor.
- **View**: This Menu bar option includes commands for folders list, page and ruler and grid. It is used to design the webpage to display on the screen.
- **Insert**: It shows the list of items that you can use to design a web page, such as HTML tags, ASP.Net Controls, hyperlink, graphics, database etc.
- **Format**: This option includes commands to format fonts, dynamic web templates, style, borders CSS styles or properties etc.
- **Tools**: It allows the use of the tools such as the spell checker, macros, Add Ins browser compatibility etc.
- **Table**: This Menu bar option includes commands to insert tables, merging cells, borders etc
- **Site**: This Menu bar option includes commands related to folders, remote web site, reports hyperlinks etc
- **Data View**: This Menu bar option includes commands to analyze and work with data view.
- **Task Pane**: This Menu bar option help in adding or removing various task panes on your display. For example, there are many task panes open in Figure 2. Two of these are: "Folder List" and "Toolbox".
- **Window**: This option includes commands to display and arrange multiple windows.
- **Help**: Though this option, you can get help for developing web pages using Expression Web 2.

Toolbar: Toolbar is positioned below to the Menu Bar. Toolbar contains buttons, drop-down menus and other controls to help you to create your web pages. Toolbar has the shortcuts to the menu items in the Menu bar.

The most commonly used toolbars are:

- Standard toolbar
- Formatting toolbar

Standard Toolbar: The standard toolbar consists of commands of shortcuts to menu items. It is placed just below the Menu bar. The toolbar performs the basic windows-based tasks such as open a new file, save a new file, cut and paste text, print the pages and many more.

Figure 5: Standard Toolbar

Formatting Toolbar: The formatting toolbar comprises of shortcuts to menu items. It is placed just below the standard toolbar. The Formatting Toolbar contains tools related to formatting of text in Expression Web 2. It includes changing style, font, font type, color, paragraph alignments, borders etc.

Figure 6: Formatting Toolbar

Editing Window: The Editing window is used to write the code or design the module of your web page. You can have more than one web page open at a time. Each web page contains designing window or coding window. Figure 7 shows the Split view window.

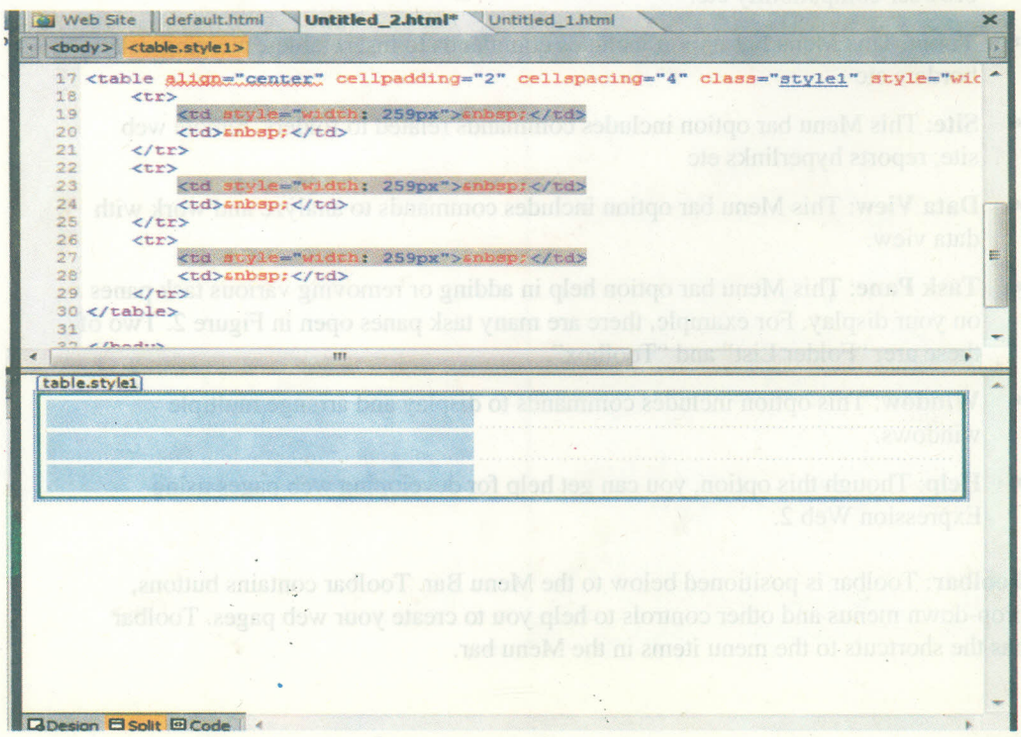

Figure 7: Working window with Split View (Code View and Design View)

The editing window has three views which you can work with to design your web site. The first view is code window, if you are good in HTML tag or Scripting language then you can use this window for your work. The second view of the editing windows is design view that is very easy to use for beginners. Finally the last view shown in the Figure 7 is the combination of both the view that is Split view, in this view you can see your design with the HTML code. Different view tabs are placed at bottom of the Editing Window. These tabs help you to display the view of Editing window that you want to work upon.

View bar contains all the three views of work space –viz. Design, Split and Code.

Status Bar: It displays messages and feedback. If the status bar is on, it will appear at the bottom of the screen. These are the indicators which appear on the status bar in the lower right of the screen. As you can see in the Figure 8, it displays the window size, size of the web site, CSS and XHTML schema, view mode of the Expression Web etc

Figure 8 Status Bar

Try out more Panes on your window

Task Panes: The task pane contains all the features which are important to web site design. It contains different important features related to design and their controls. The main elements of the task pane are:

- Toolbox
- Folder List
- Tag Properties
- Behaviours

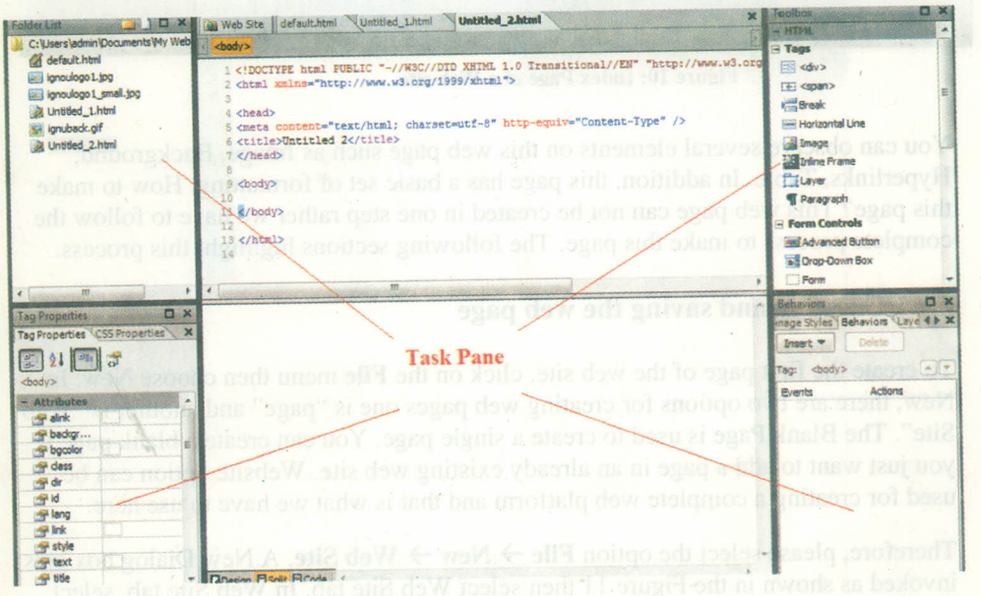

Figure 9 Task Pane

Tag Properties: The Tag Properties task pane enables you to see all the set attributes and values for the tag that is currently active in the web page. You can also modify the set of attributes and set new attributes for the tag.

Behaviour: The behaviour task pane is used to assign an action with an event.

2.7 HOW TO CREATE WEB PAGES USING MICROSOFT EXPRESSION WEB2?

The World Wide Web was created in 1990 by CERN engineer Tim Berners-Lee.

For designing and developing your web site, you have to prepare web pages and then link them systematically. You can use Expression Web 2 to create a web site. This section demonstrates the process of creating a One Page Web Site with the help of Expression Web 2. Consider that you need to create the Index page of a web site. Figure 10 shows a sample page.

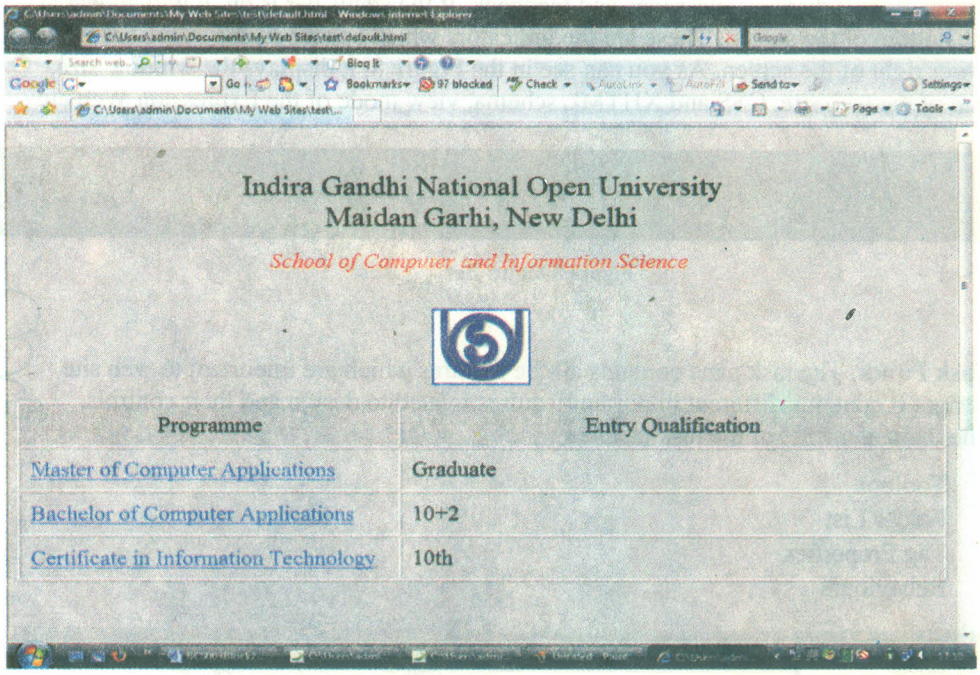

Figure 10: Index Page of a Web site

Shortcut for Saving a Web page is Ctrl+S.

You can observe several elements on this web page such as Image, Background, Hyperlinks, Table. In addition, this page has a basic set of formatting. How to make this page? This web page can not be created in one step rather we have to follow the complete process to make this page. The following sections highlight this process.

2.7.1 Creating and saving the web page

To create the first page of the web site, click on the **File** menu then choose **New**. In New, there are two options for creating web pages one is "page" and another is "Web Site". The Blank Page is used to create a single page. You can create a blank page if you just want to add a page in an already existing web site. Website option can be used for creating a complete web platform and that is what we have to use here.

Therefore, please select the option **File → New → Web Site**. A New Dialog box gets invoked as shown in the Figure 11 then select Web Site tab. In Web Site tab, select One Page Web Site.

Now, you can enter a location for the web page in the option box beginning with http:// OR you can store this one page website in a folder on your disk. For displaying it through the Internet, you have to choose a location with http://. This is the location where you can see the preview of the web site. If you choose to create your web site on a folder on the disk then after completing your web site, you may

transfer it into a web server of your choice for displaying it on the WWW. For this example we have kept the website in the default folder in the C drive of our disk.

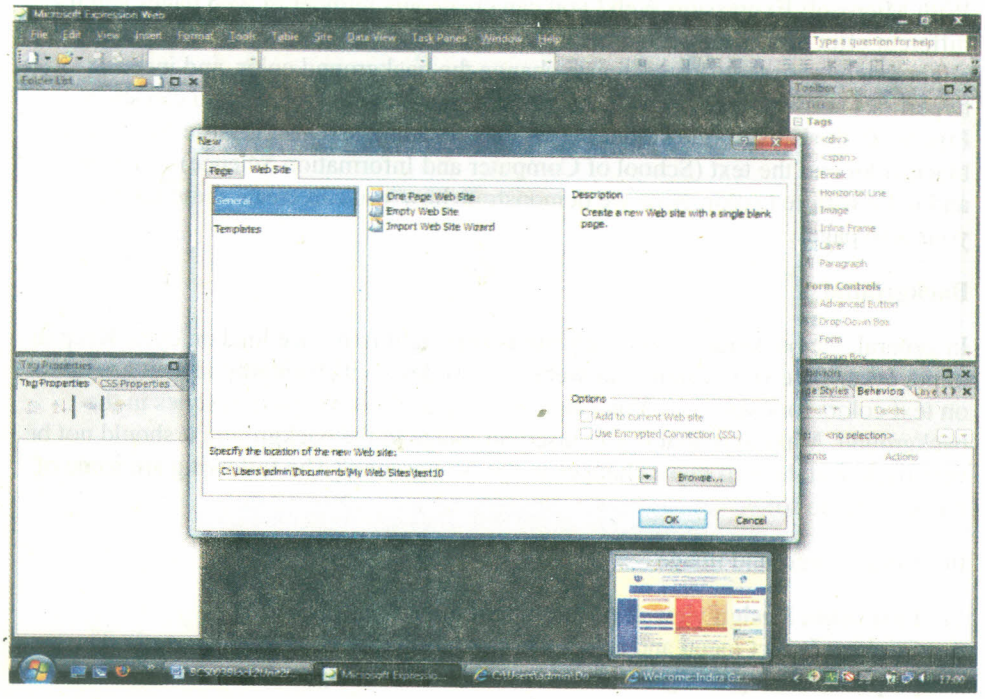

Figure 11: Web sites Templates

Templates contain predefined web pages for designing the web

Finally click Ok button. If you need another page you can create it later by selecting the New → Page option.

Saving your work

You have to save all the pages within the folder created by Microsoft Expression Web2. These pages are saved on the hard drive as you are creating the web site in your hard disk. If you decide to make the website on a web server directly, then the folders and web page will be saved on the web server.

By clicking on **Save, Save As or Save all** button you can save your pages or web sites on a hard disk in the specified folder or on the web server in the specified location. If you want to change the name of page later, then you have to click on **Save As** button and name them accordingly. Otherwise, save the page by click on **Save** button from **File** menu. If you want to save a whole web site with more than one page then you have to choose **Save all** option from **File** menu. When you publish your web site from the disk on the Internet, you have to copy the entire folder to a network drive.

Open a Web page

The information in Web Page is generally in HTML or XHTML format

To open a web page again which you have already created, you have to follow these steps:

1) Select **File** from menu bar.
2) Open file dialog box get invoked. Now, select the web page you want to open from the specific location.
3) Click on Open.

Like this, you also can open a web site from the Open Site option from the **File** menu. After selecting appropriate folder you can open the website you want to open.

2.7.2 Creating background and Formatting text

With Microsoft Expression Web2 you can create any number of web pages and try different effects on your web pages by changing the font size, style, color, and alignment of your text. You can also change the background color, and insert hyperlinks to make your pages more attractive and interesting. As you can see in Figure 10, the background color is grey, main heading text size is large and bold with black color and the text (School of Computer and Information Science) size is large and italic with red color. Now we demonstrate how you can create these contents in your web pages.

Background

In general, the background of a web site is kept light to reduce load on eyes. Keep in mind, every time you design your website, first design its background as it has effect on text colors font sizes etc. You can insert images, colors and font styles in the background. Make sure that if you insert an image in the background it should not be very dark. But, how to make changes in the background? The following are some of the ways to do so:

Inserting background image

1) First select **Design** view at the bottom of the working window.
2) Click on **Insert** menu and select **Background (Insert → Background)**. The page properties dialog box gets invoked as shown in the Figure 12.
3) Click on the **Formatting** tab.
4) Select the **Background picture** check box and click **Browse (Background picture → Browse)**.
5) Locate the image file from your disk and click the image file that you want to set as background and then click **Open**.
6) If you want to add the picture as a watermark (it makes image semi transparent), select the **Make it a watermark** check box.

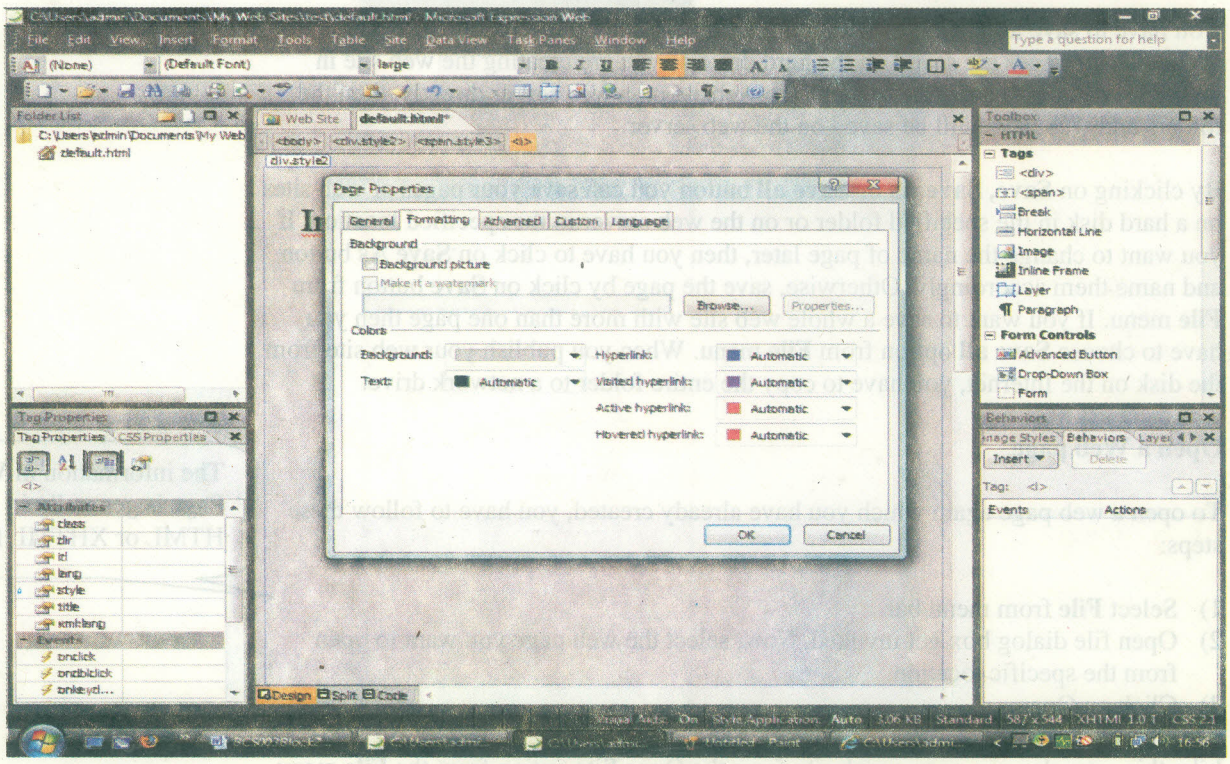

Figure 12 Page Properties Dialog box

Changing the background color

If you have already inserted an image as the background then it is not advisable to set the background color also. As you can see in Figure 10 we have not inserted any background picture and the background colour is Grey. Perform the following steps to do so.

1) First select **Design** view at the bottom of the working window.
2) Click on **Insert** menu and select **Background (Insert → Background)**. The page properties dialog box gets invoked as shown in the Figure 12.
3) Click on the **Formatting** tab.
4) Under Colors select the color you want in the Background (Grey for the case of our example).

Try out different colors in text and background

Removing a background picture

You can also remove the background picture whenever you desire so using the following steps:

1) First select **Design** view at the bottom of the working window.
2) Click on **Insert** menu → select **Background (Insert → Background)**. The page properties dialog box gets invoked as shown in the figure 12.
3) Click on the **Formatting** tab
4) Clear the **Background picture** check box.

Formatting of text

The formatting of text includes font, font style, font size, color of text, effects and spacing between texts. For interactive website, you have to choose right font, style and color.

Formatting text

1) First select **Design** view at the bottom of the working window.
2) Select the text you want to format and then right-click on the text and click **Font** on the shortcut menu or click **Format** menu and select **Font** option (**Format → Font**).
3) Click on the **Font** tab as shown in the Figure 13.
4) Select the properties you want for the text. This will change the selected text only.

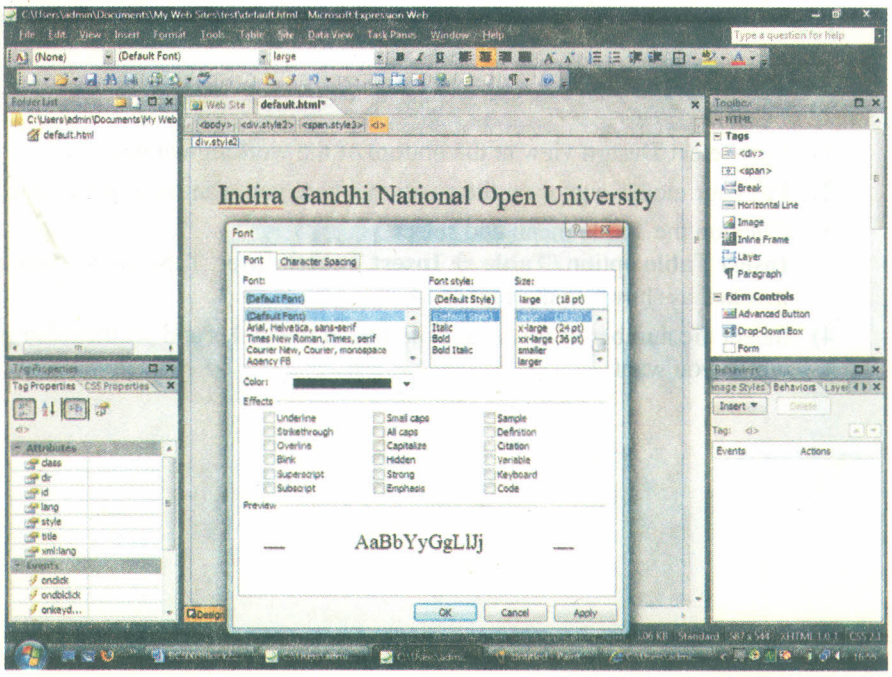

Figure 13: Formatting Text

You may observe that the text in the Figure 10 uses different size, color and style.

You may create these text items and set the formatting of these different text items by selecting them and setting the properties as shown in Figure 13.

Removing format

1) First select **Design** view at the bottom of the working window.
2) Select the content that you want to remove formatting from.
3) Click on the **Format** menu and click **Remove Formatting (Format → Remove Formatting.)**

Highlighting text with color

1) First select **Design** view at the bottom of the working window.
2) Select the letter, word, or block of text that you want to highlight with color.
3) Click on the **Formatting** toolbar and click the arrow for **Highlight Color (Formatting → Highlight Color).**
4) Select the color you want.

Shading text with color

1) First select **Design** view at the bottom of the working window.
2) Select the text that you want to shade with color.
3) Click on the **Format** menu and then click **Borders and Shading (Format → Borders and Shading)**. The border and shading dialog box get invoked.
4) Click the **Shading** tab and select a color in the background and in the foreground by clicking their color box.

Tables along with hyperlinks can be used to create very light weight menu.

2.7.3 Inserting Tables

Tables are very useful for the design of a web page as they add a definite structure for the items included. They are very simple to add and provide a good look to a web page. As you can see in figure 10, it shows the table with 4 rows and 2 columns.

Adding a Table

1) First select **Design** view at the bottom of the working window.
2) Put your mouse cursor on the position where you want to insert a table.
3) Click on the **Table** menu and select **Insert Table** option **(Table → Insert Table)**. Insert Table dialog box gets invoked as shown in the Figure 14.
4) Select the number of rows and columns of the tables and set the other properties which you want.

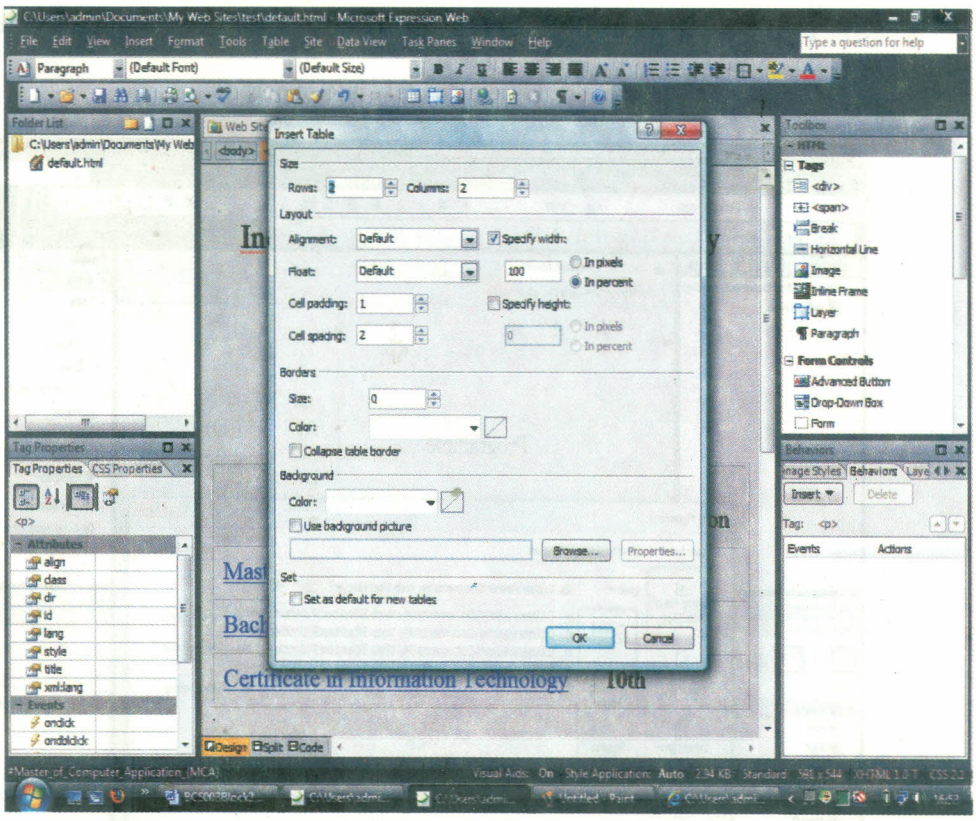

Figure 14: Table Insertion

If you want to make the properties of your current table assign to all other tables in your website. Right click on the table, select Table properties. Then in Table properties dialog box, under Set, click the **Set as default for new tables** check box (Prefer to Figure 14).

Deleting a Table

1) First select **Design** view at the bottom of the working window.
2) Select the table that you want to delete.
3) Click on the **Table** menu and select **Delete** option (**Table → Delete**). It will delete the table that you have selected for deletion.

2.7.4 Adding Hyperlinks

The term hyperlink was coined in 1965 (or possibly 1964) by Ted Nelson at the start of Project Xanadu.

Hyperlinks are the most important part of web page. A hyperlink instantly connects you to a location or another web page with a single mouse click. A hyperlink may link your web page to the other web page within your web site or another web site. As you can see in the Figure 10, the text MCA, BCA and CIT are hyperlinks. The underline and color of text shows that they are properly linked.

Converting text into hyperlink: You can convert texts or words into hyperlinks. The steps to do so are:

1) First select **Design** view at the bottom of the working window.
2) Put your mouse cursor on the text or word that you want to convert into hyperlink.
3) Select the word or phrase.
4) Click on **Insert** menu and select **Hyperlink (Insert → Hyperlink)**. The Insert Hyperlink window gets invoked as shown in the Figure 15.

5) Type the web page or file name in the Address field of **Edit Hyperlinks** dialog box from which you want to link it.
6) Click on **OK** to convert the selected text into hyperlink.

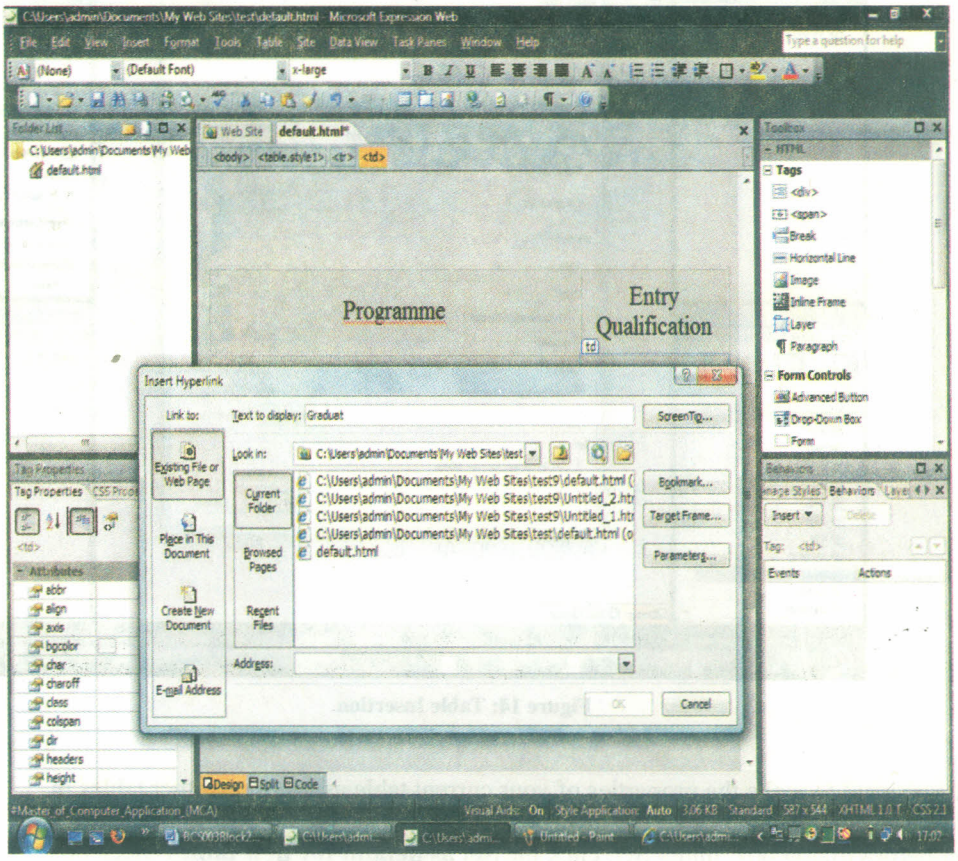

Figure 15: Insert Hyperlinks window

After converting selected text into hyperlink, check that link – i.e. if it is working properly or not. Check your web site on browser, hyperlinks will get blue and underlined. That means that hyperlinks in the page are working properly. Click on this link, you will be taken to the specified web page or file. You can also remove a hyperlink.

The JPEG stands for Joint Photographic Experts Group.

2.7.5 Adding Images

You can add any type of digital image on your web page. Images add to look and feel of a web site. Generally, in web you can use two basic graphics file formats– JPEG and GIF. You can use any Graphics images from the clip art gallery or you can use your own scanned images on your web site.

Adding images created by you on the web page

To add images created by you, first you have to create or scan images and save it in the hard drive of your computer. Microsoft Expression Web2 will automatically convert these digital images into JPEG or GIF and then you can insert them on your web page.

Before inserting images in a web document, it is a good idea to collect all these image files in a folder, you may name it **image** folder. This helps in the process of maintenance of your web site. You may have noticed that in Figure 10, an IGNOU

logo is a graphics image that has been included in the web site. For adding this image, you may follow the steps as given below:

1) First select **Design** view at the bottom of the working window.
2) Place the cursor on the page where you want to place the image.
3) Click on **Insert** menu and then select **Picture (Insert → Picture)**.
4) Select **From File.** The Picture dialog box gets invokes as shown in the Figure 16.
5) Select a stored image from your computer hard disk.
6) Click on Open.
7) The image will be inserted on that position on your web page.

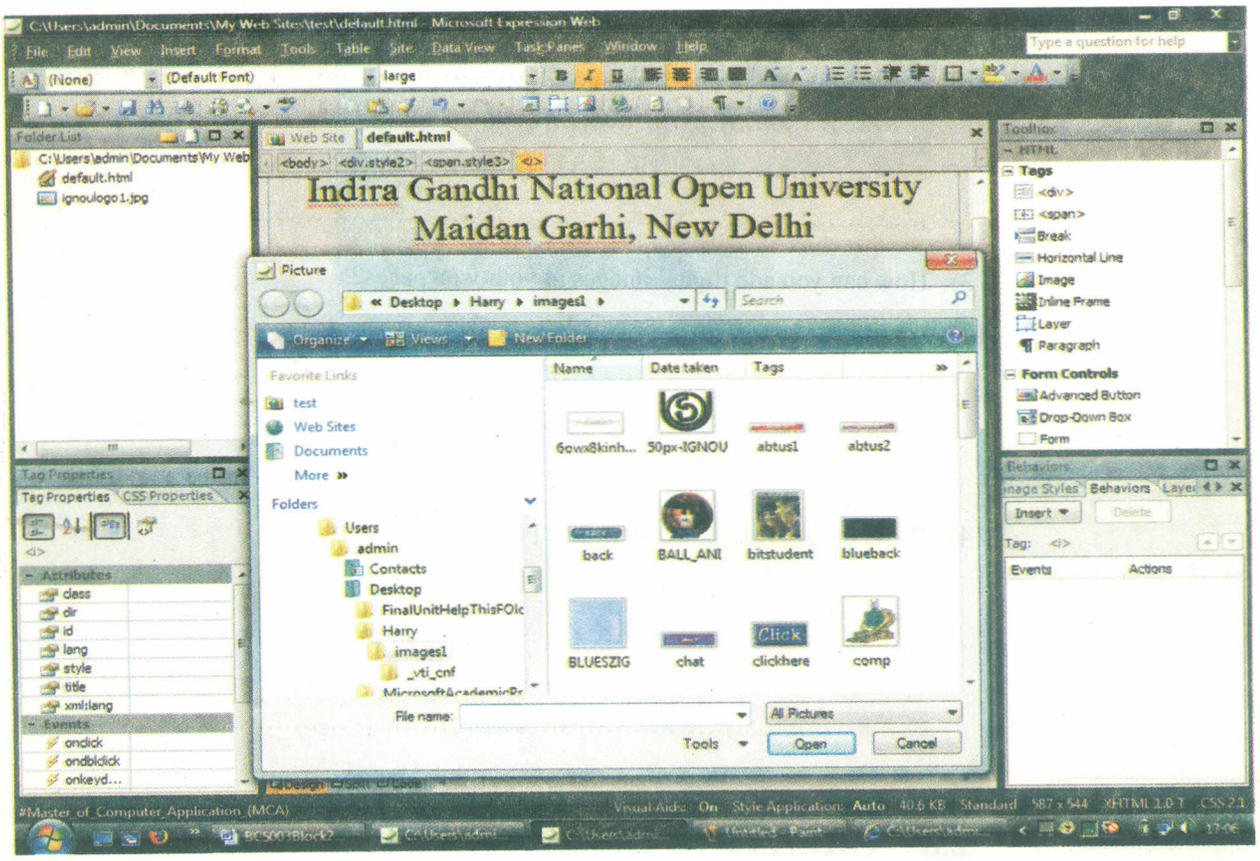

Figure 16: Picture box

Creating a thumbnail

1) First select **Design** View at the bottom of the working window.
2) Select image for creating thumbnail.
3) You can right click on that image and click on **Auto Thumbnail** from shortcut menu. (Other shortcut way, select the image and press "ctrl + t" for creating thumbnails).

If you click on thumbnail that you just created, it will navigate you directly to the location where the full image is stored. Then it displays the whole image.

Check Your Progress 2

1) What is the purpose of using Code and design view in Microsoft Expression Web2?

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2) What is a Hyperlink? Why do your use hyperlink in web pages?

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3) How can you add digital images in your web pages?

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4) Write the procedure to open a web page?

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The Div tags is supported in all major browsers

2.8 CREATING DIVISION

You can create a web page as a whole or can divide it in several sections. For example, the web page shown in Figure 17 consists of three sections – one top section consisting of logo and organization name, the second vertical menu bar and third table about the programme details. Such a design divides the whole screen into several divisions. You may be wondering, why would you like to do so? The main advantage of such a design is in the form of site maintenance and creating consistent pages. You can easily have a different layout and formatting scheme for each of these divisions by having separate style sheets for each. You may keep two divisions as same while changing the third one. This helps in providing consistency of web page across whole web site. It also makes web site very flexible as far as changing the layout is concerned. It is to be noted here that normally such features can be achieved by even separating the style files and non changing information into separate files that can be included in all the web pages to make them consistent.

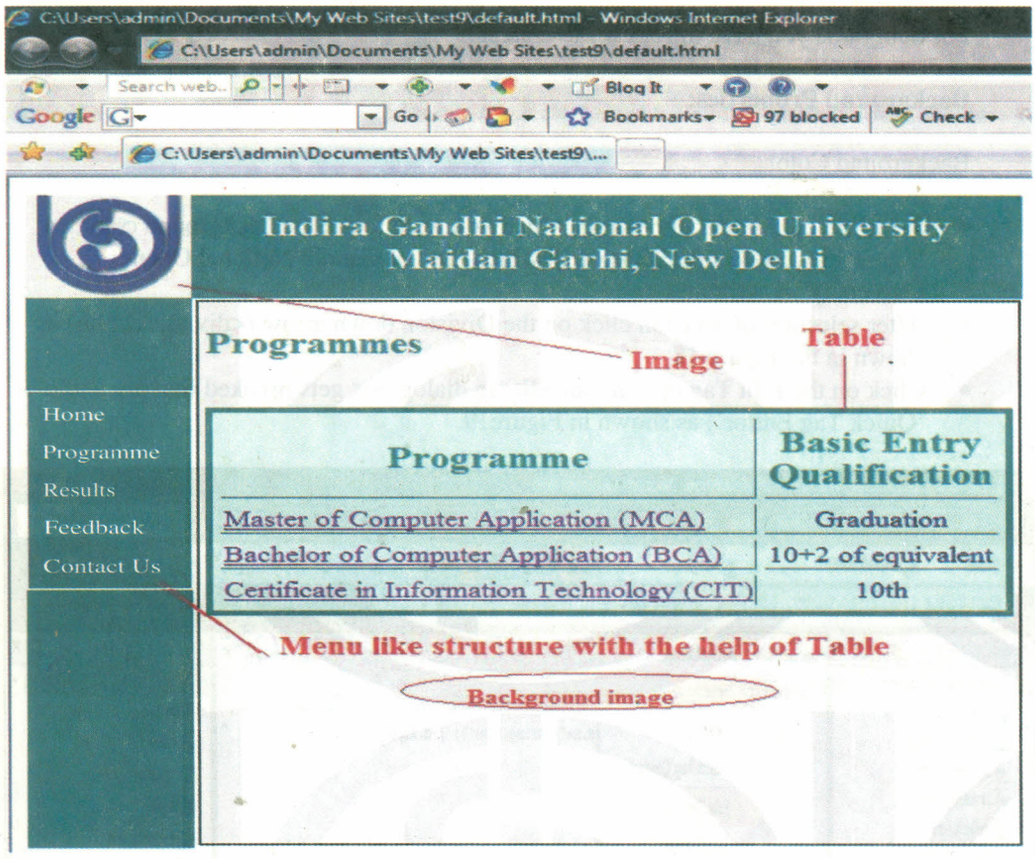

Figure 17: Index page with Divisions

How to make divisions?

To make divisions in your web page, the steps are:

- In the Toolbox pane at the right side of the window click on HTML drop down list if it is not displayed.
- In HTML drop down menu, click on the Tag Drop down list and double click on Div ( ) tag.

There are three divisions in Figure 17, each division has its personal properties such as background color, text color, size and format, tables etc.

As you can see the topmost section which is also a division, so you have to select some properties for it. The basic properties of Div tag that are being used in Figure 17 are:

- Background properties such as Color. Image, position etc.
- Text Formatting such as font, size, color etc.
- Table insertion.
- Add images.
- Add hyperlinks.

The background properties are different in different divisions, such as background color of topmost section and left side menu bar consists of teal color but the content division contains a background image. Similarly you can see the text formatting is different in all three sections such as size of the text, color of the text, style and font of the text.

For doing this you have to follow these steps:

Background Properties:

Background Color

- Select that particular division in which you want to put the background color. In Figure 18 we select the division in which "Indira Gandhi National Open University" is written.
- After selection of division click on the Division down arrow (<div.topsection) as shown in the Figure 18.
- Click on the Edit Tag option - an edit tag dialog box gets invoked (having a title 'Quick Tag Editor') as shown in Figure19

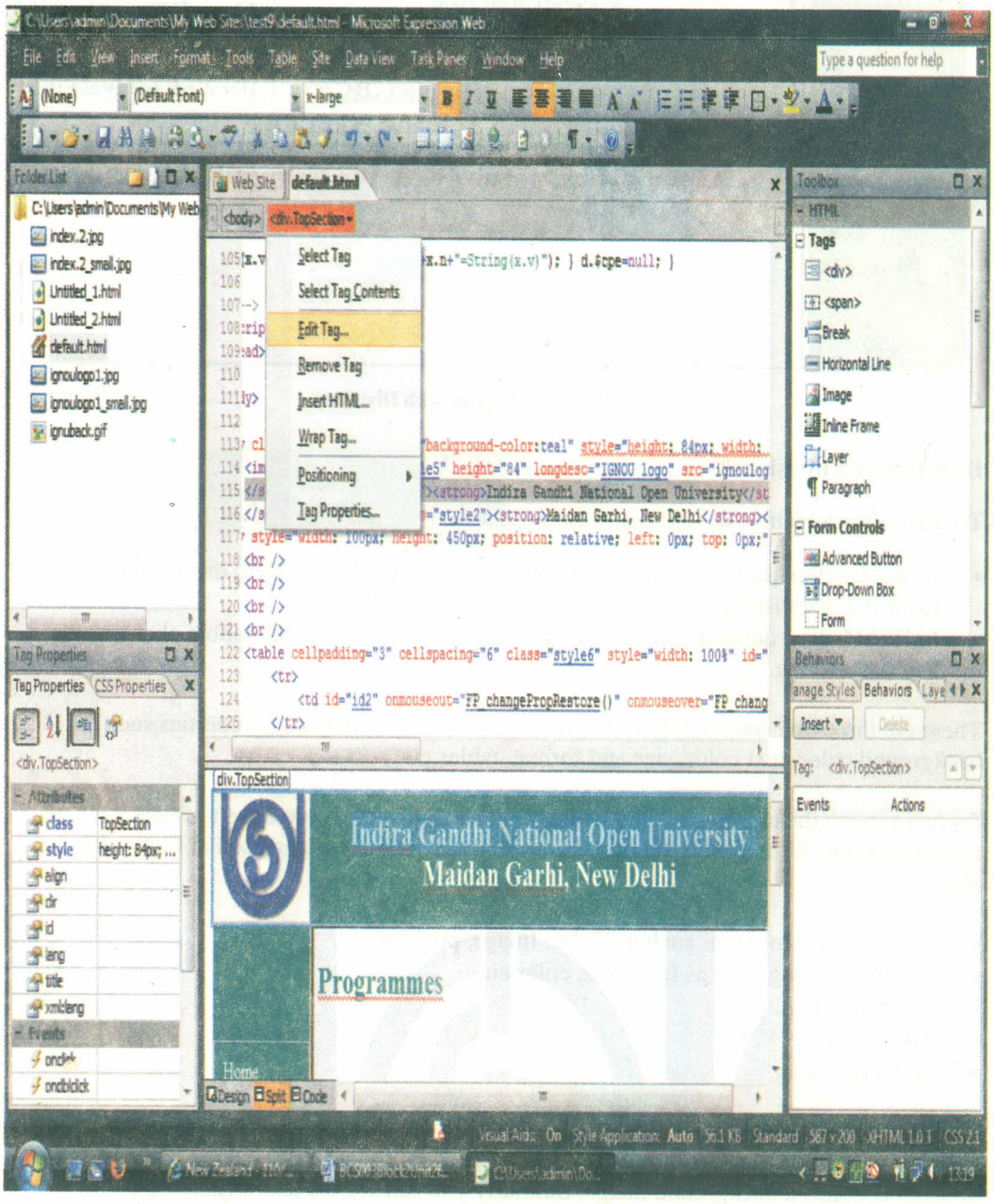

Figure 18 Division Edit Tag Properties

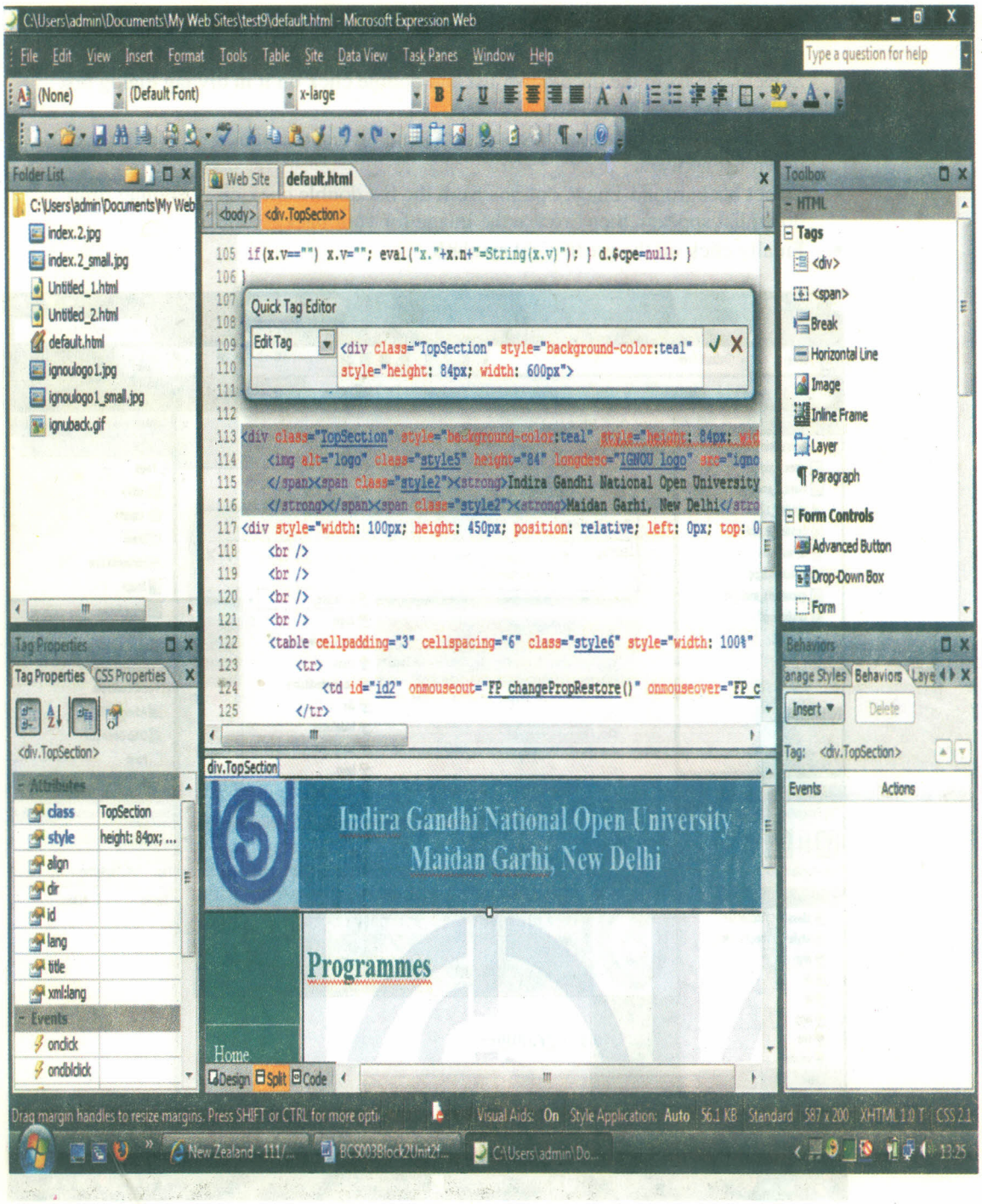

Figure 19 Quick Tag Editor box

The Quick Tag Editor dialog box helps you to directly insert HTML, edit existing tags, or wrap a set of tags around another tag or set of tags while working in either the Design view or Code view of a web page

Background image:

Follow the same procedure till the style tag, as style tag contains all the elements related to text, background, margin, padding, alignment etc.

- Select that particular division in which you insert background image. In Figure 18 we select division in which Programme written.
- After selection of division click on the Division down arrow (<div).
- Click on the Edit Tag option an edit tag dialog box gets invoked (having a title 'Quick Tag Editor') as shown in figure19.

- At the end of the div tag dialog box(before closing tag">") just press a space a drop down list gets visible as shown in Figure 20.
- Select style from the drop down list and double click on it in div tag dialog box style="" tag appears.
- Put the cursor in between these tags ("") and hit a space button → another drop down list appears.
- Select background-image options from the list double click on it another drop down list appears, then browse the image for your background.
- Finally click on the green right symbol.

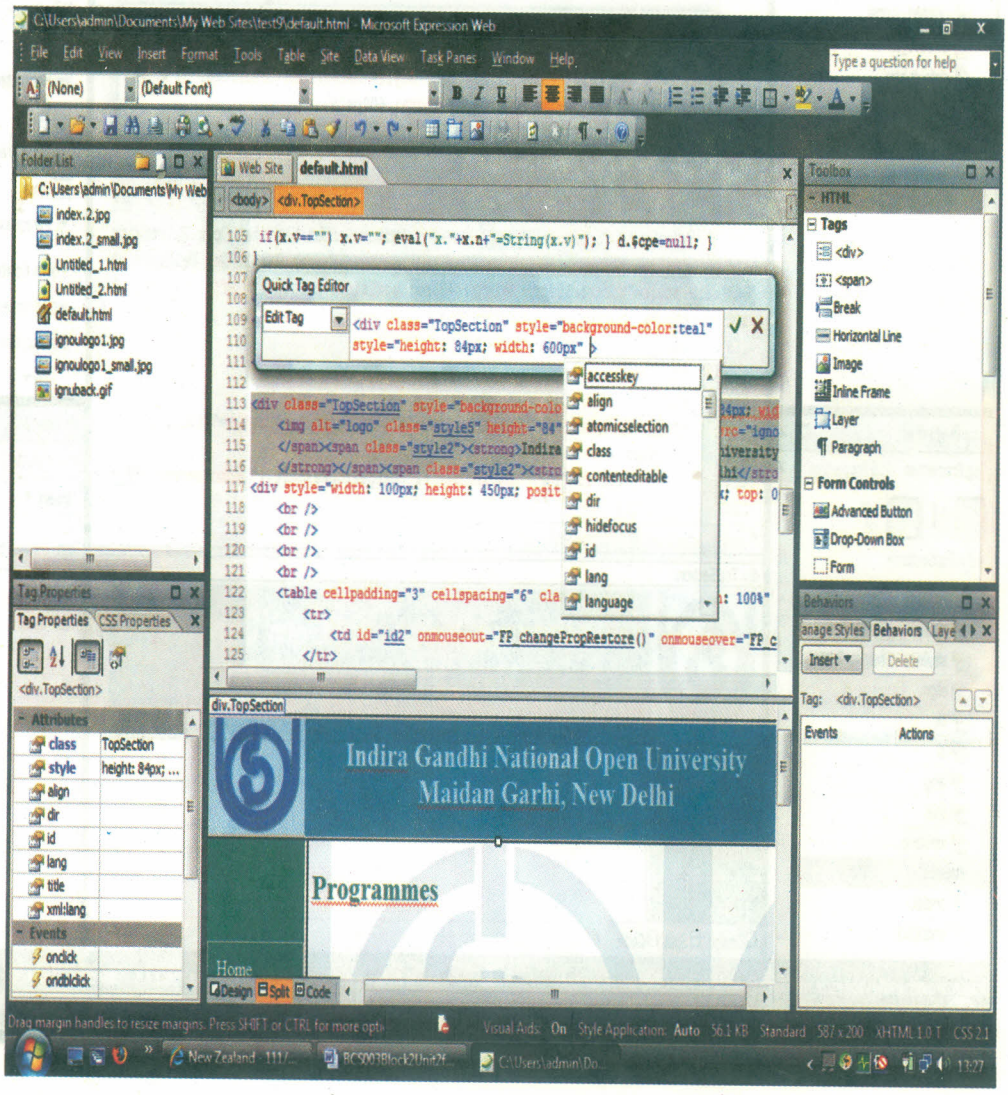

Figure 20: Editing Division

Text Formatting

The text formatting includes the entire task related to the text such as font, font-family, font-style, font-size etc. The font-size option is used to change the size of the text. Font-style is used to make the text italic, normal, oblique etc. Font-family is used for selecting types of fonts like Arial, Times New Roman etc.

- Select that particular division in which you want to format the text. In Figure 18 we select division in which Top section.
- After selection of division click on the Division down arrow (<div).

- Click on the Edit Tag option edit tag dialog box gets invoked as shown in Figure19.
- At the end of the div tag dialog box(before closing tag">") just press a space, a drop down list gets visible as shown in Figure 20.
- Select style from the drop down list and double click on it → in div tag dialog box style="" tag appears.
- Put the cursor in between these tags ("") and hit a space button another drop down list appears.
- Select font, font-family, font-size, font-style option from the drop down lists one by one double clicking on them and selecting options from resulting drop down lists.
- Finally click on the green right symbol.

You can also insert images, tables and hyperlinks in your division by using the same procedure explained in this section. You have to select the appropriate division and follow the same steps as explained.

2.9 PREVIEWING, PUBLISHING AND EDITING THE WEB SITE

Once you have created a website, it is ready to be put online on a web server. After putting a web site online, you may feel the need of making certain changes. This section explains these processes.

The popular web browsers are Windows Internet Explorer, Mozilla Firefox, Apple Safari, Google Chrome, and Opera.

Preview in Browser

As you know, Microsoft Expression Web 2 provides an option to Preview of your website in the **File** Menu. In Preview View, you can see how your website looks like in a browser. You can change your website after seeing the preview. If you want to see your web sites on browser such as Internet Explorer, Mozilla Firefox etc, then you have to use **Preview in Browser** option from **File** menu bar. If you want to see your website preview on Internet explorer, first you have to select a browser for displaying their website. For selecting browser, do the following steps:

- Select **Tools** option from the menu bar.
- Click on **Page Editors Options** and click on **Authoring** tab.
- In authoring tab select any browser from drop-down list under secondary schema.
- Click on OK button.

After selecting the web browser, do the following steps to see the preview in browser:

- Select **Preview in Browser** from **File** menu as shown in Figure 21.
- A list of browser will be displayed. Select an appropriate web browser for preview.
- Click on Browser version. It will automatically open your website in Web Browser.
- Or you can press F12 button to see a preview of your website in a default web browser.

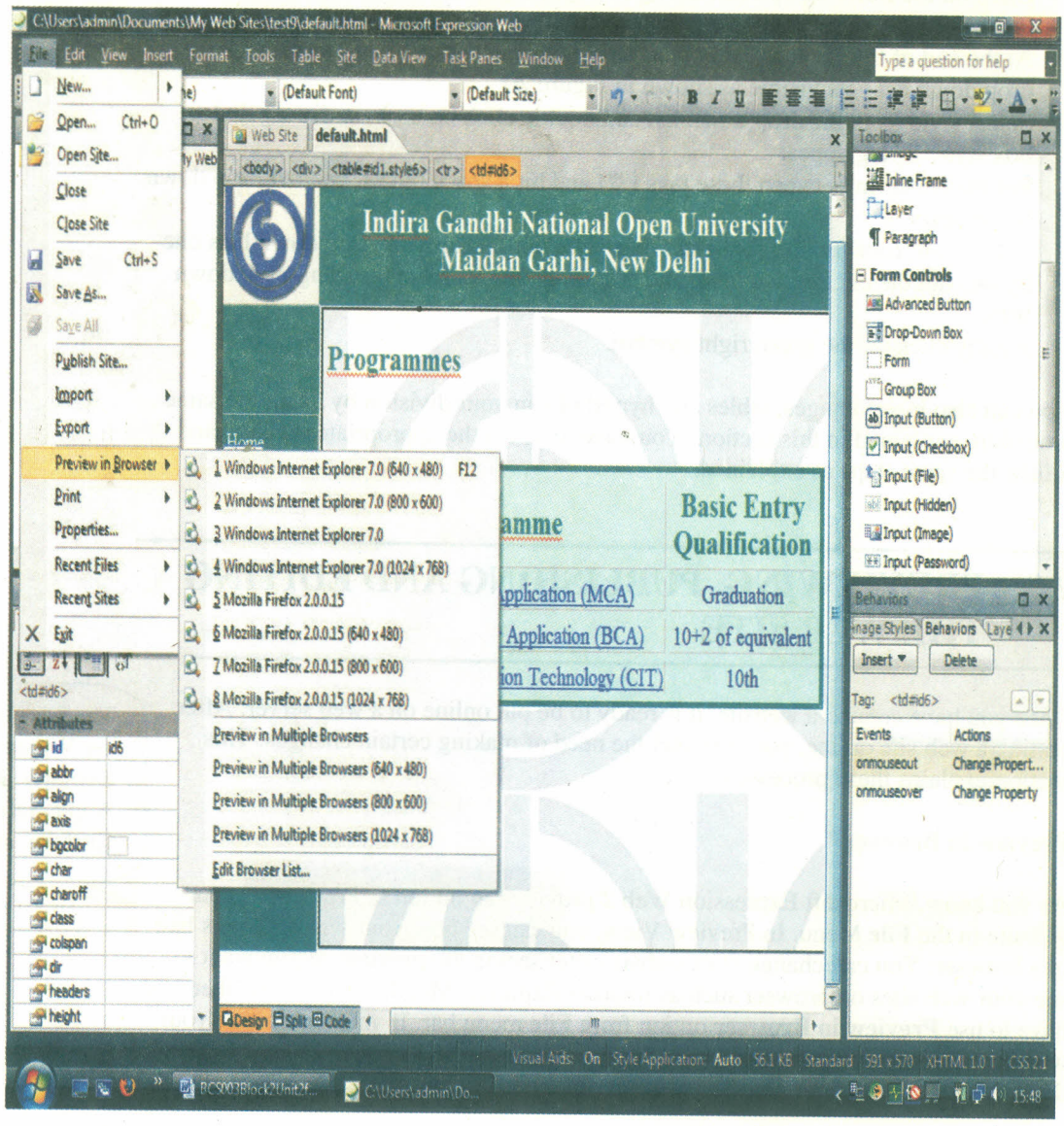

Figure 21: Preview in Browser list

Before previewing, save your recent work. So it reflects properly in the browser. If you are designing your web site, then you have to make changes in your settings frequently. To come out with that problem of continuously saving the web site before previewing, follow these steps:

- Select **Preview in Browser** from **File** menu.
- Click on the **Edit Browser List** option - an Edit Browser List gets invoked as shown in the Figure 22.
- Select the **Automatically save page before previewing** check box.

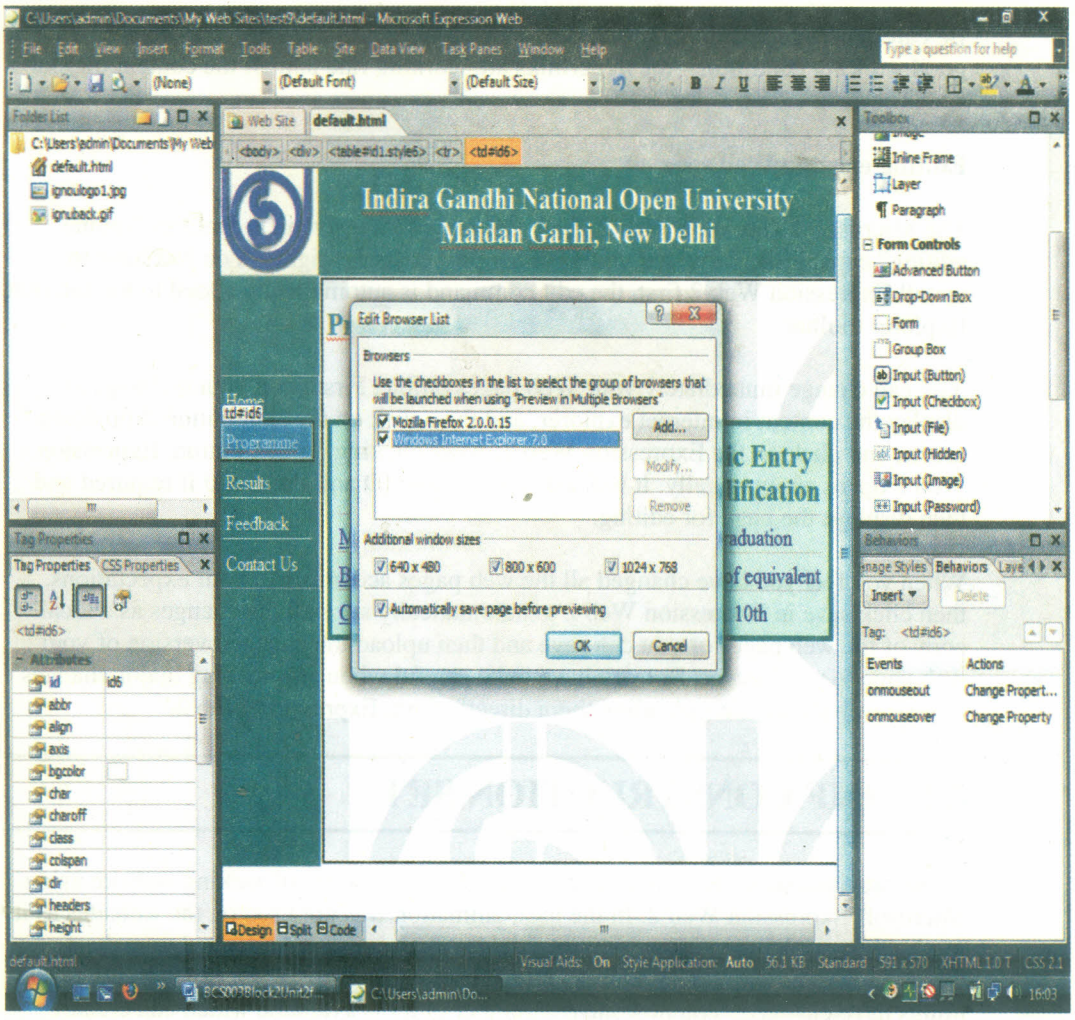

Figure 22 Edit Browser List Dialog box

The Microsoft Expression Web2 automatically selects the values for screen resolution and window size. So you do not need to specify this for the browser. For previewing of ASP.NET and PHP web pages, you need a Microsoft Expression Development Server which is a part of Microsoft Expression Suite, you can install it with Microsoft Expression Web 2.

Publishing Web Site

When you have done all the designing part of your website, then your website is ready for uploading on the Internet for the visitors. For doing this, you have to publish it first to make it available online. This means, you have to send all your files related to your web site to a server basically a web server. Web server is a high capacity powerful computer that stores website documents. It always remains connected to the World Wide Web. Whenever a user wants to visit your website, s/he will connect to the server through the World Wide Web.

You may publish your website through an Internet Service Provider (ISP). For hosting your website, you have to pay some amount for space provide by an ISP to store your files.

Be careful, while hosting your website on the web and make sure your website is in good working condition – the hyperlinks are working fine and all the content of your site is correct.

Editing existing Web sites

The Microsoft Expression Web 2 gives you one of its convenient features "online editing" capabilities provided you have the proper access rights. You just have to install Expression Web 2 first, the edit command is automatically added to the Internet Explorer toolbar.

You can change immediately your Web pages online. First open your webpage to display the content in internet explorer, and then click on the Edit button drop down arrow, and click on the Expression Web 2. After clicking on that button, Expression Web 2 opens automatically. It will ask you for user ID and Password if required and then displays the page for editing.

When you feel you have changed all the web pages according to your expectations, then click save in Expression Web 2 to automatically save all the changes as a local copy of the web pages or you can save and then upload the changed version of your web page to your server. But you have to be careful when you making major changes to your web pages and uploading them directly from Expression Web 2.

2.10 GIF CONSTRUCTION SET

In the previous sections, you have gone through the concept of making website using Microsoft Expression Web 2. In the past, animation was not used on the websites as it used to be very heavy as far as downloadable size is concerned. It used to make a webpage very heavy to download and display, however, in the last few years the things have changed. You now have a number of tools available which can create animation with ease and with lot of compression. GIF Construction Set is software that can animate your images. It is used to assemble your original animations effectively through its animation wizard. The animated images are much larger in size as compared to other format images. However, GIF construction set compresses the size of the file after animation. So, animation file size does not create any problem with GIF format. You can create animated banners and animated transitions. It can also be used to manage all GIF files. If you need to add few more effects in the existing graphics, you can use this software.

GIF Construction Set also provides the following features:

- It has extensive library of animation plug-ins which can help you use certain animations directly.
- It has a number of excellent images and graphics which you can include in your web site.
- This tool is very simple to use, in fact, can be used by a person who does not have much knowledge about GIF format.
- You can create banners, images and graphics easily with the help of this software.
- You can use available Animation Wizard in this software to create animation very easily.
- You can compress the size of GIF files using this software
- You can perform simple operations like rotating, cropping, resizing the portions of animation sequence.

- It can be used to export the GIF animations created by you to audio-video interactive format (AVI) or movie format (MOV) and macromedia flash (SWF) files.
- It can also help in animating your PowerPoint presentations.
- It can be used to manage and protect your graphics files.
- You can create various effects in your text and animations using this software
- You can create even electronic signs using this software.

The extensions of GIF files are .gif, .giff, .gpa.

What is GIF?

The GIF stands for **Graphics Interchange Format**. The CompuServe introduced **GIF** in 1987. It is a bitmap image format and used on the World Wide Web in large scale due to its wide support and portability.

Find out the difference between GIF and other graphics formats

The GIF images supports up to 8 bits per pixel. It also supports animations and allows a separate palette of 256 colors for each frame. The GIF has the color limitation which makes the GIF format unsuitable for color photographs and other images with constant color, but it is well-suited for simpler images such as graphics or logos with solid areas of color. GIF images can be compressed using a lossless data compression algorithm -Lempel-Ziv-Welch (LZW) algorithm. A lossless data compression technique reduces the file size without degrading the visual quality.

Check Your Progress 3

1) What is the purpose of division in your web pages?

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2) Write the procedure of setting background properties of the Div tag.

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3) Write the procedure for publishing the web site?

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4) What is GIF? Write the features of GIF Construction Set.

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2.11 SUMMARY

In this unit, we have discussed about a HTML editors. You have gone through the features and advantages of such editors. You have also gone through the process of creating web pages using one such editor – Microsoft Expression Web2. It provides features for developing and designing web sites. Expression Web is a full featured HTML editing program. In this unit we also learnt about its basic features like setting fonts, colors, thumbnails, hyperlinks and other web page components. The Expression web interface enables you to display your web pages in Design, code and split view. In this unit, we also covered how to open an existing web page, make a new web page, save your web page and publish your web site. We also covered all the basics actions like change in font, size, color, background color, image insertion and hyperlink. We also used the feature of division tag. You can use the div tag in your web site and set the properties for it.

2.12 ANSWERS/SOLUTIONS

Check Your Progress 1

1) An HTML editor program is a WYSIWYG editor for creating web pages. These editors use lots of technologies such as CSS, XML, JavaScript etc. and allow beginners to develop a web site easily and efficiently.

2) The following are main advantages of using HTML editors:
   - Easy to use.
   - Creates professional web sites.
   - Creates HTML automatically.
   - Provides many advanced design features.

3) The following features are inbuilt into Expression Web 2:
   - Dynamic Web Templates
   - Ease of use using Layout Grids, interactive buttons, split view etc.
   - Support for CSS, PHP, ASP, XML, JavaScript etc.

4) *DHTML* stands for Dynamic HTML. DHTML is a collection of technologies that are used for designing dynamic web pages. The DHTML technologies include HTML, DOM, and CSS.

   HTML4: HTML4 is the advanced version of the traditional HTML. The key concept of the HTML4 is that it differentiates between the style of a web page and document structure.

   JavaScript: JavaScript is one of the popular client-side scripting languages. JavaScript is used to control, access and manipulate HTML elements.

   The Document Object Model (DOM) – DOM is used to manipulate objects including the handling of events in a HTML document.

   Cascading Style Sheets (CSS): CSS defines the style and layout of a HTML page. CSS allows you to change style and layout of a page without changing the structure of a web site. CSS reduces the overheads to define and insert attributes of HTML repeatedly.

Check Your Progress 2

1) Code view shows the HTML coding of the design. It is very useful if you are comfortable with HTML and scripting languages. You may use it for some simple editing of HTML tags. Design View displays the actual design of web page as may be visible on the web site. It helps in designing web pages very easily.

2) Hyperlink is used to connect various pages systematically in one site. It can also instantly links the web page to another web page with a single click of mouse. Hyperlinks are used as very simple navigation mechanism across the web.

3) For adding this image following steps are:

   - First select **Design** view at the bottom of the working window.
   - Place the cursor on the page where you want to place your image.
   - Click on **Insert → Picture**.
   - Select **From File** option the Picture dialog box gets invokes.
   - Select a stored image from your computer hard disk.
   - Click on Open to insert the image.

4) Steps to open a web page again or open an existing web page:

   - Select File from menu bar.
   - Open file dialog box get invoked in that Select the web page you want to open from the specific location and click on the Open button.

Check Your Progress 3

1) The main purpose of using division in web site is that it helps in creating consistent web sites and allows easier site maintenance. It also make web site very flexible as far as changing the layout is concerned.

2) Process of setting the background properties of the div tag:

   - Select that particular division in which you introduce background color.
   - Edit the properties of Division tag as shown in Figure 18, 19 and 20
   - Close the editing by clicking on the green right symbol.

3) You can either upload your website on your web server or you have to take space from ISP. Uploading will require that you send all the files related to your web site to the web server.

4) The GIF stands for **Graphics Interchange Format**. The GIF images support up to 8 bits per pixel.

   Some of the important features of GIF Construction Set are:

   - It can be used to create banners, images and graphics easily with the help of this software.
   - Its Animation Wizard helps you to create animation very easily.
   - It compresses the size of GIF files.
   - It performs multiple operations like rotating, cropping, resizing etc.

2.13 FURTHER READINGS

- Expression Web 2 wiki - *en.wikipedia.org/wiki/Microsoft_Expression_Web*
- Learn Expression Web 2 - www.learnexpression.com
- Tutorial on Expression Web 2 - *www.vtc.com/products/Microsoft-Expression-Web-2-Tutorials*.
- More Scripting Language (JavaScript, CSS, DHTML, XHTML) – http://www.w3schools.com/w3c/default.asp

UNIT 3 DESIGNING OF FRAMES AND FORMS

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3.0 INTRODUCTION

In the previous unit, you have gone through the concepts of a web page design using an advanced tool - Microsoft Expression Web 2. Present day web design technologies allow you to create web pages without having a complete knowledge of HTML. They support HTML4.0 and XHTML and also contain ASP.NET Controls, PHP and other scripting languages. Thus, they allow you to create dynamic web pages with ease. One of the keys in designing good web pages is to identify a good structure and interaction. This unit discusses these two issues of web page design through use of Frames and Forms. You can divide a web page logically using DIV tags as discussed in the last unit, or physically by using Frames. The forms elements are basically used to gather information using elements like text box, menu, radio button etc. The HTML editors as discussed in the previous unit provide very simple interfaces for development of web pages and make simple the process of web site development. This unit introduces you to these two important aspects of web page creation using the HTML editor software. This Unit also provides a detailed procedure for creating personal web pages with the help of a template. The idea here is to initiate you to create your own personal web pages.

3.1 OBJECTIVES

After going through this unit, you should be able to:

- create frames on your Web Pages;
- edit and save your frames;
- control the size of the frames, resize your frames etc;
- introduce forms element in your web pages; and
- create your own personal web pages.

3.2 USING FRAMES IN WEB PAGE

Netscape 2.0 introduced the elements used for frames in the 1990s

On the onset, please note that the concept of frames using HTML has been discussed in Unit 1 of this Block. For demonstrating various issues relating to frames, we will be using Microsoft Expression Web 2. However, it should be noted that you can use any other web design tools instead of Microsoft Expression Web 2.

Try creating a webpage using other templates such as Banner and Footer frames

Frames are primarily a tool to include structure within a web page. At present frames are NOT preferred by web designers who are creating logical structure of a web page using Div tags coupled with separate Cascading Style Sheets (CSS) for each division. Yet conceptually they still are useful for creating a structure. A web page can consist of multiple frames. Frames never contain any visible content such as text, images, graphics etc. It just acts as a container to specify which web page to display and how to display the page in that frame. A frame may contain multiple frames. A frame that contains multiple frames is sometimes called a frames page. Every frame may display a different web Page. You can also create frames page by using Web sites frame templates (a predefined format for creating frames in web pages and web sites). The frame template also allows setting up the navigation between frames.

3.2.1 Creating Web Pages using Frames Page

A typical frames page may consist of a Banner frame, a Contents frame and Main frame. If you create your web page through the template - **Banner and Contents** frames, it will show four pages (the frames page, banner frame, contents frame and main frame) simultaneously in the browser. The frames page itself acts like a container which contains the three other frames shown in the Figure 1.

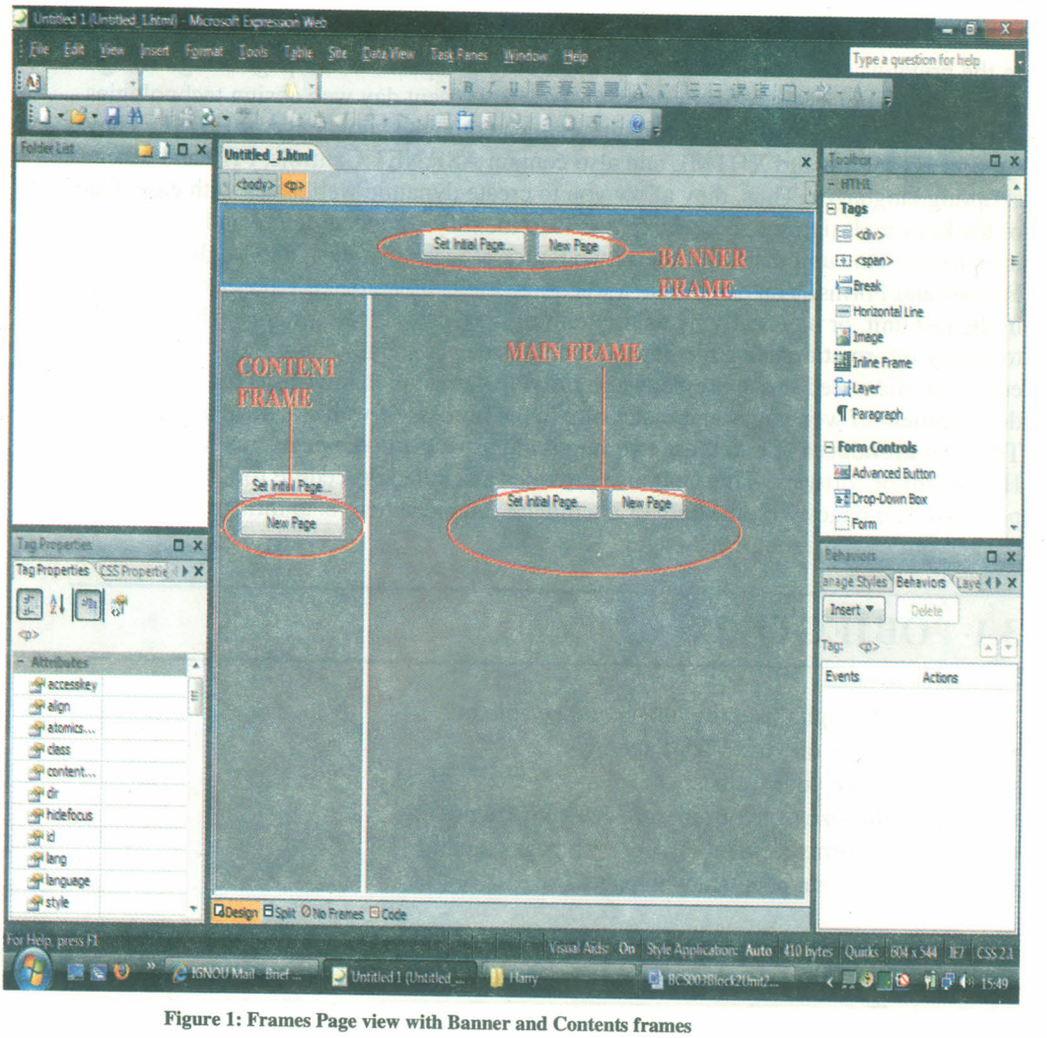

Figure 1: Frames Page view with Banner and Contents frames

The Frames Page shown in Figure 1 consists of three frames. Please note that you may select a different frame template options as shown in Figure 5, to select a frames page with a different format. Such selection in Microsoft Expression Web 2 is possible through the **Frames Pages** tab. The most common frames page for web site development is **Banner and Contents** frame as shown in Figure 1. The different frames in the Figure 1 are:

- The frames page
- The banner frame
- The contents frame
- The main frame

The implementation of frames is inconsistent across different browsers

In the previous unit, you have designed a sample web page. That web page in Unit 2 was created without using frames. Let us create the website again with the help of Frames still keeping the same layout and content. Take a close look at the web page (Refer to Figure 2), the top portion with IGNOU logo, name and Marquee text can be part of a banner frame. The Contents frame may include the entire hyperlink section which includes links for Home, Program, and Results etc. And finally the Main frame can display all the information related to the items in the Contents frame. Thus, you can easily use the frames page **Banner and Contents** to create this frame based web page. However, as you know a frame does not contain any contents like text, graphics, animation etc. therefore, you first need to develop the web pages that will contain the specified content viz. a page containing IGNOU logo, name and Marquee Text, another page containing the list of hyper links like Home, program etc. and other pages containing the detailed contents.

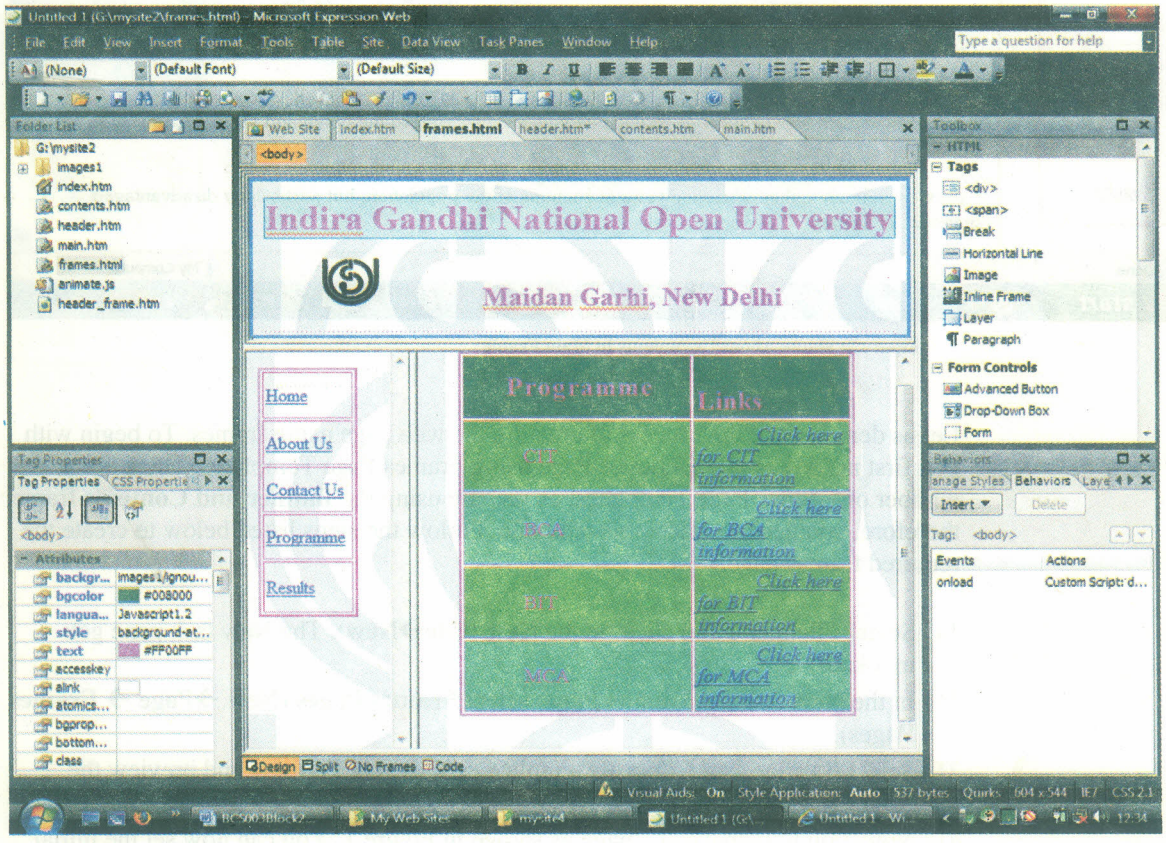

Figure 2: Page divided into Frames

As you can observe in this Figure 2, the contents frame is set to the page containing list of hyperlink such as Program, Contact Us, Results, Home etc., similarly, the other frames are set to specified web pages. Please note here that on clicking a hyper link Programme in the Content Frame will display a page in Main Frame as shown in Figure 2. Similarly, the content of Main Frame will change as per your selection of hyper links in the Contents Frame. Thus, as per your selection on a particular hyperlink in the contents frame, it will open the related web page into the Main frame. As you can see in Figure 3, when you click on **About us** link it will show you the contents of About Us in Main Frame. So for this present design you have to prepare as many pages for Main Frame as are the number of hyperlinks in the Contents Frame.

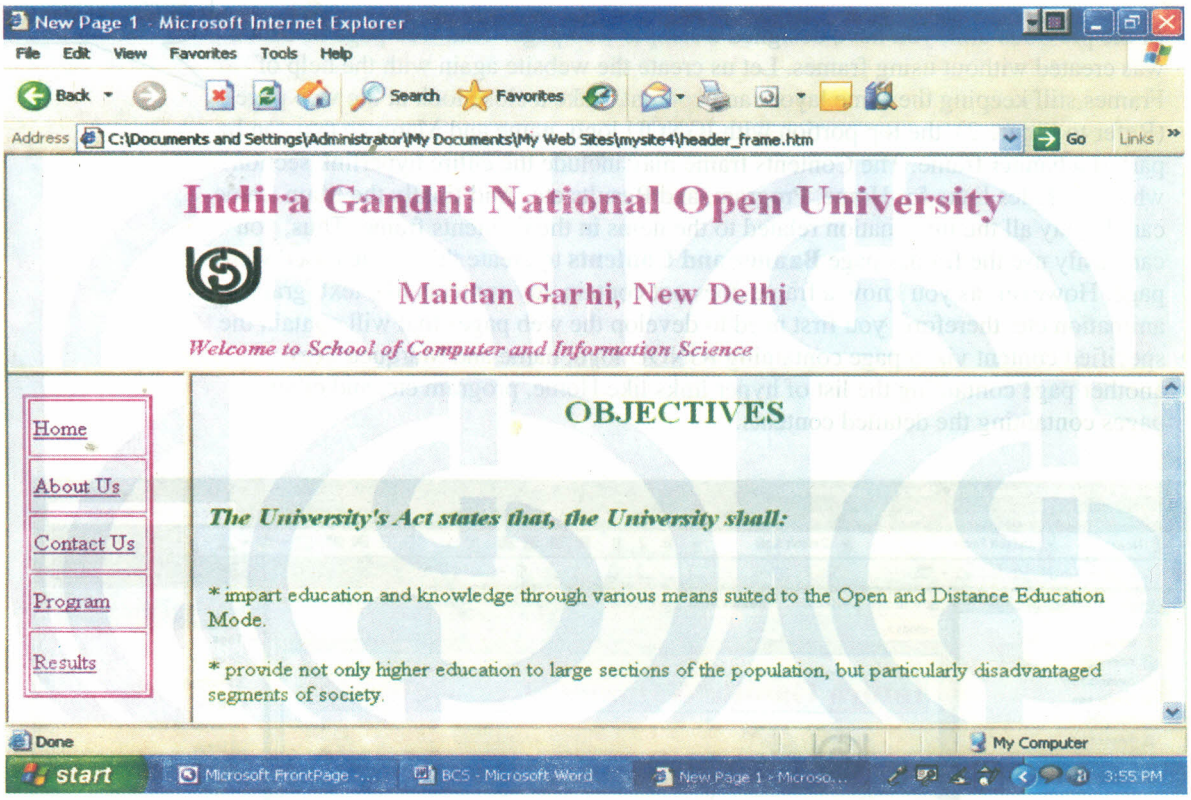

Figure 3: Shows About Us contents in Main Frame

Let us demonstrate the process of creating the web page using frames. To begin with you first need to create a Frames Page using Frames Page Templates. There are a number of Frames Page Templates, as you are using the **Banner and Contents** frame, therefore, you need to select this template. Follow the steps listed below to create the required frames page:

1) Select **File** menu and click on the **New (File→New).** The New task pane gets invoked.
2) In the **New** task pane, under **Page,** select **Frames Pages (New →Page → Frames Pages).**
3) Select **Banner and Contents** template as shown in Figure 4 and preview the layout and then click **OK.**
4) Now, you will arrive at a page as shown in Figure 1. You can now set the initial page that is to be show in each frame.

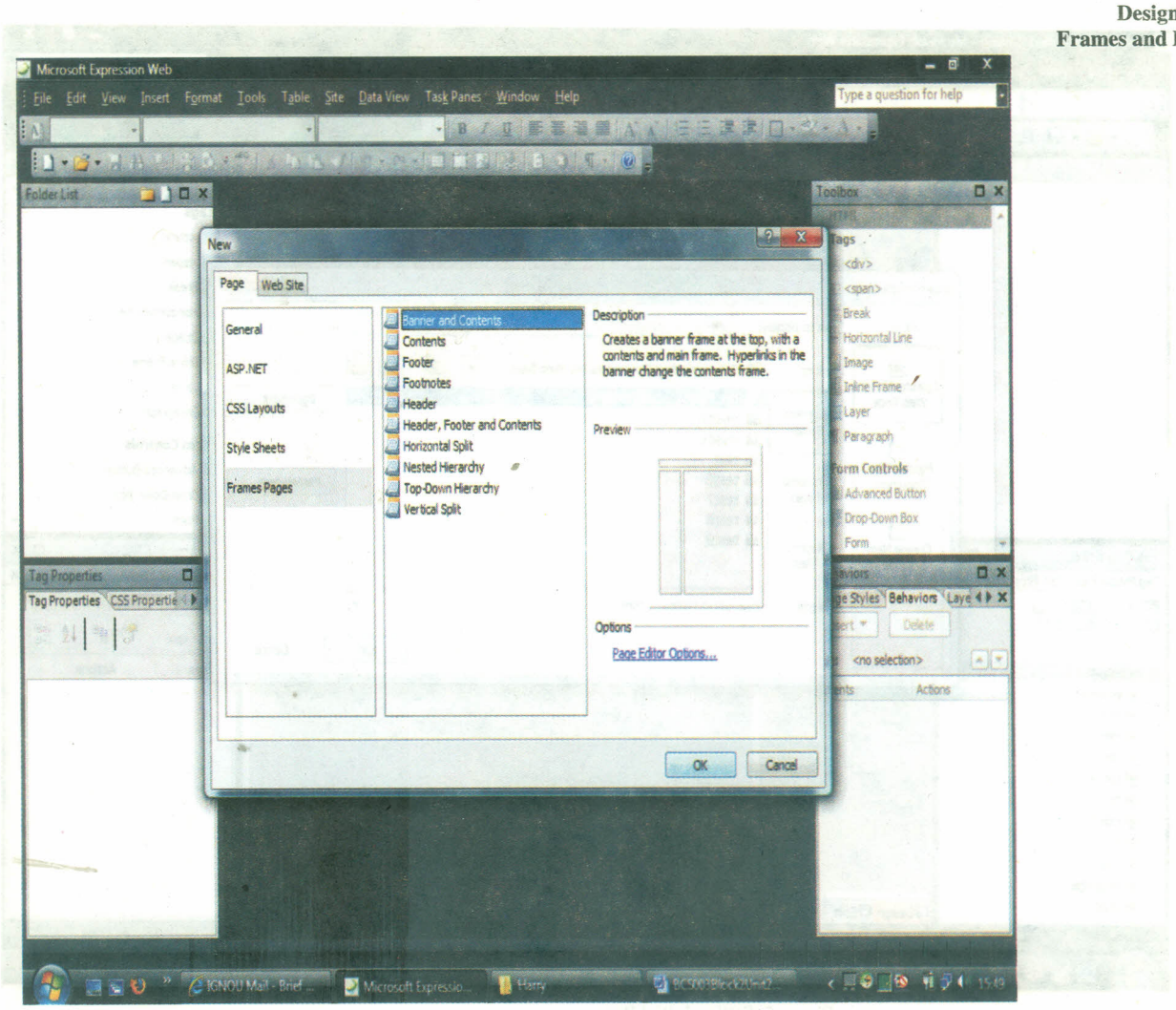

Figure 4: Selecting Frames Pages Templates

Frames change the behavior of the back button.

As stated earlier, frames do not contain any content of its own, therefore, after creating frames, you need to link them with some HTML page. In other words, you need to SET an initial page on a frame such that the contents of that page are displayed in the frame. In Figure 1, you can observe the **Set Initial Page** button in each of the three frames. When you click on that button an **Insert Hyperlink** dialog box gets invoked as shown in Figure 5. Type the address of the location of the web page you want to display on that particular frame and press OK button. You can select several other options like "**Place in this Document** which allows you to create hyperlinks within the documents or you can create a new web page using the option **Create New Document.**

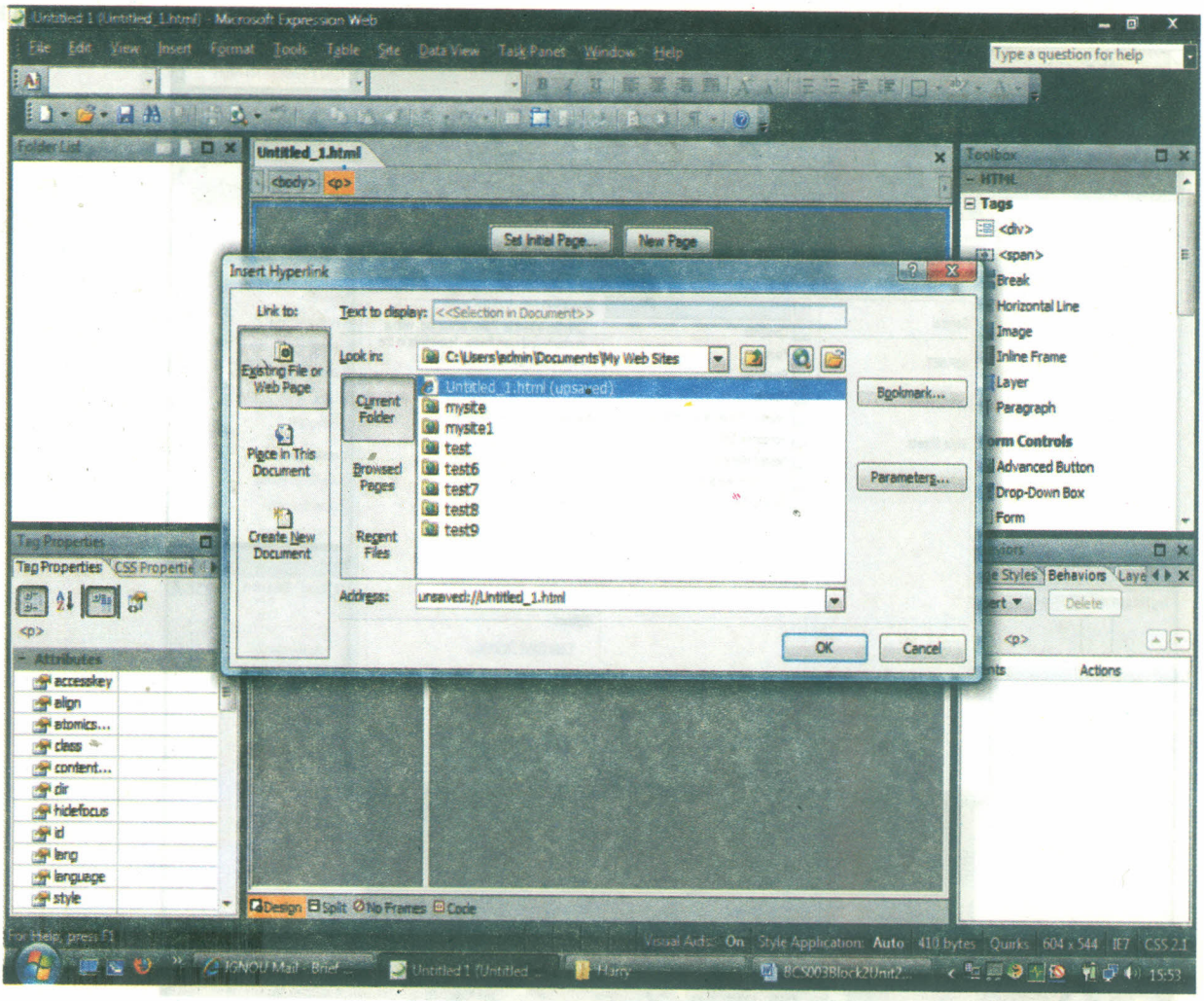

Figure 5: Setting Initial Page

Framing confuses the boundaries between content on different servers.

Thus, while creating frames on a web page you must follow two step procedures:

- Selection of a frames page
- Hyper linking the frames to web pages

Saving a frames page

After creating your web page with the help of frames page, now you have to save your web page before it display on browser. Every time you make changes in your web page, you have to save your web page to reflect the current changes. You can also use **Save** option to save your current work if you do not have time to design a web site in one go. If you get time to work on your saved incomplete web site, then just open it from **File** menu and select **Open** command. For this, you have to follow these steps:

1) Select **Design View** from the bottom of the document window.
2) Select **File** menu and click on the **Save As** option **(File → Save As).** Save As dialog box gets invoked as shown in Figure 6.
3) Type a file name that you want to give to the frames in the **File name** box.
4) And then select a location on your disk where you want to save the page.
5) Click on the **Save** button.

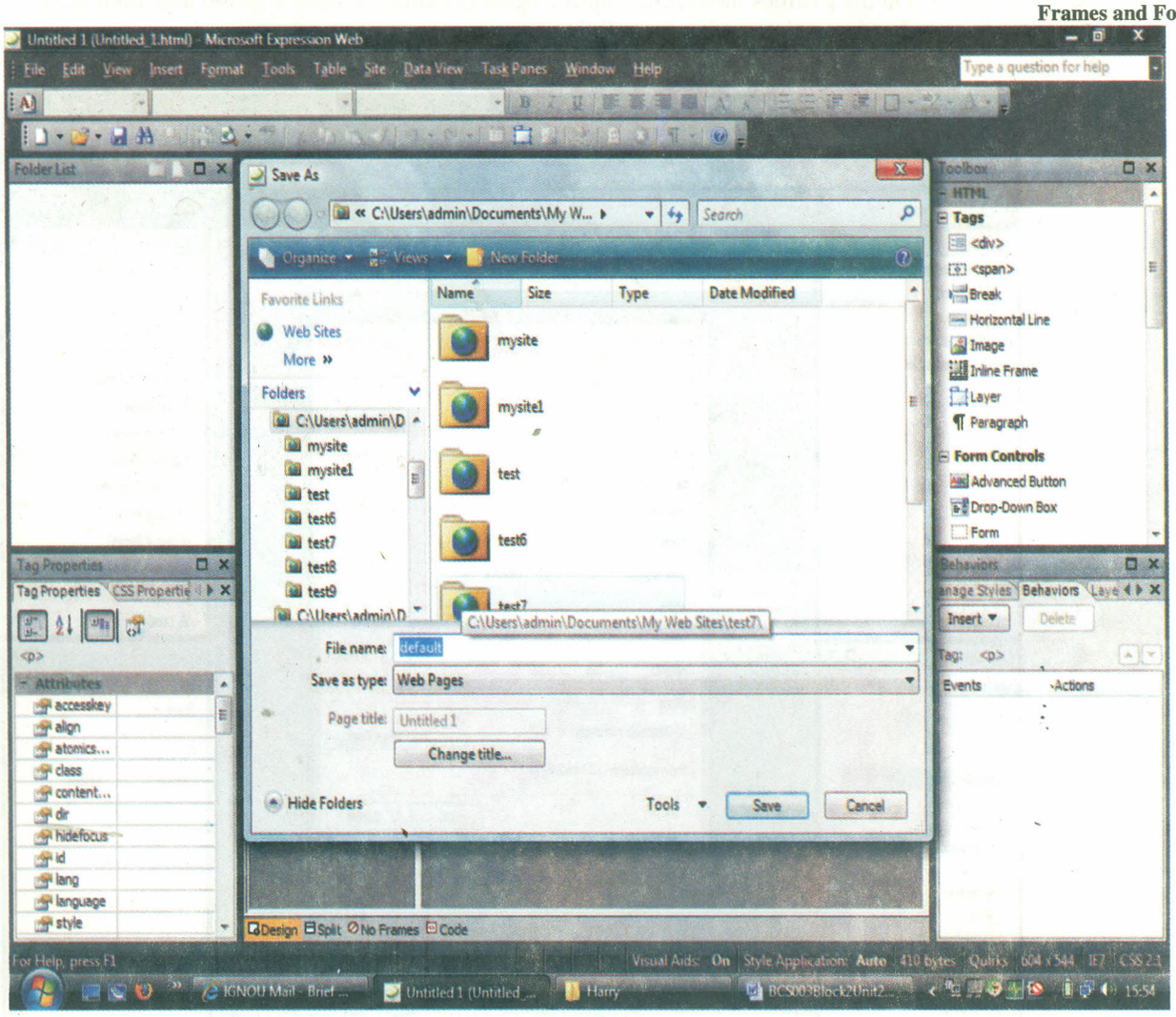

Figure 6: Saving Frames

3.2.2 Controlling the Appearance of Frames

Frames pages can be divided further to control the appearance of frames on a web page. You can divide a frame page horizontally or vertically to create two frames. You can also divide it into rows or columns. You can change the size of frames or delete unnecessary frames by selecting or dragging frame borders. You can also choose to show or hide the borders between frames. Thus, you can perform the following operations on a frame:

- Split a frame
- Resize a frame
- Delete a frame
- Show or hide frame borders

Splitting a frame

Open the frames page you want to modify and do the following:

Select **Design View** from the bottom of the document window.
You can split your frame by dragging or even divide it in columns or rows.
In dragging, Press and hold down CTRL keys and drag any frame border.
In other way, select the frame you want to split by clicking it.

The replacements of frames in XHTML is XFrames.

On the **Frames** menu, click **Split Frame (Frames → Split Frame) and then** select the appropriate option for splitting.

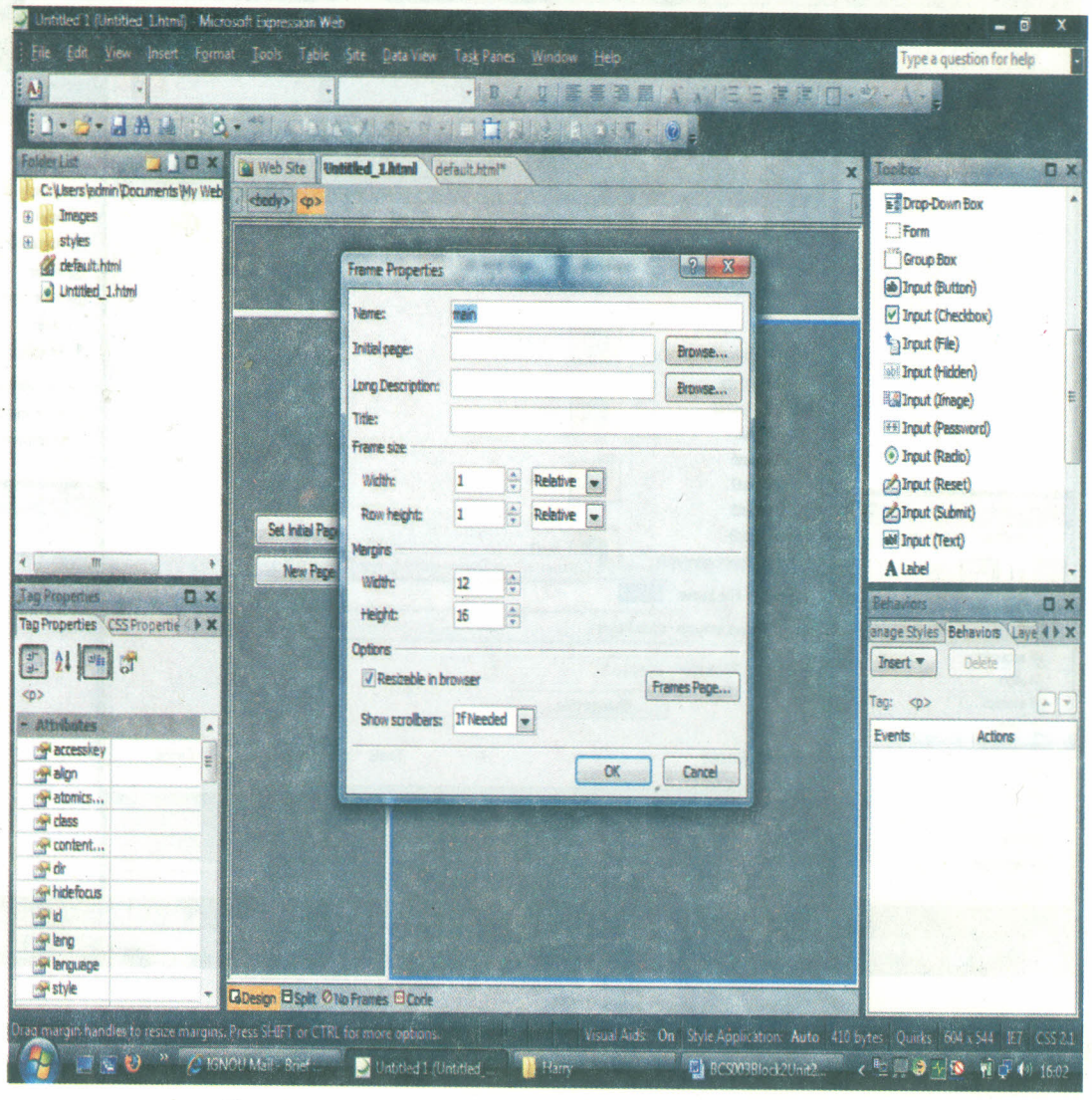

Figure 7: Frame Properties for Resizing and splitting

Resizing a frame

In Microsoft Expression Web 2, you can resize frames according to use by dragging its border or by specifying the exact position setting you want. For resizing frames first open the frames page that you want to resize a frame and do the following necessary steps:

1) Select **Design View** from the bottom of the document window.
2) Right-click in the frame and click on the **Frame Properties** from the shortcut menu.
3) In the **Frame size** area, adjust the **Width** and **Height (Frame size → Width / Height)** settings as you want.
4) Now, specify the frame size options. There are three way to measure the size of the frames. These options are - pixels, percentage and relative. Using pixel option you can specify the actual pixel size in terms of width and height (for example 300 × 300) of the frame on your screen. In percentage, you specify the percentage of the width or height of boxes. The relative option specifies location relative to a position in XY coordinate.

Deleting a frame from a frames page

When you delete a frame from a frames page, the page shown in that frame is deleted, but the remaining content of the frames page is not. Whatever page was in the deleted frame disappears from that frames page but is still in your Web site folders. After you delete a frame, the remaining frames expand to fill the space left by the frame you removed.

1) Select **Design View** from the bottom of the document window.
2) Select the frame you want to delete by clicking it.
3) Select the **Frames** menu and click on the **Delete Frame (Frames → Delete Frame)**.

If the screen resolution or browser window size is too low then each frame will have scroll bars

3.3.3 Additional Options in Frames

Editing the content of the attached through the frame

In Microsoft Expression Web 2, you can edit your existing pages attached to frames directly from the frame itself. First select a frame in a page view by clicking on the specific frame. If you face any problem related to the size of the window for editing it, you can open it in a new full sized window. To edit the content you have to do these steps:

1) Select **Design View** from the bottom of the document window.
2) Right-click anywhere on the page.
3) Click **Open Page in New Window** on the shortcut menu.

Changing the initial page shown in a frame

To change the initial page shown in the frame, you can edit the hyperlink to set it to the new page. To change the initial page for a frame, you have to perform the following steps:

1) Select **Design View** from the bottom of the document window.
2) Right-click in the frame and click **Frame Properties** on the shortcut menu.
3) In the **Initial page** box and type the URL and location of the initial page you want to show in the frame now.

Renaming a frame

You can also rename your existing frame. First open the page for which you want to rename a frame and do the following necessary steps:

1) Select **Design View** from the bottom of the document window.
2) Right-click in the frame and click on the **Frame Properties** from the shortcut menu.
3) In the **Name** box, type the new name for the frame.

Locking a frame

The Microsoft Expression Web 2 provides facilities through Frames Pages to lock the frames such that site visitors can not resize the frames of his/her browser. It is due to the contents and design issues. For locking your frames you have to follow these steps:

1) Select **Design View** from the bottom of the document window.

2) Right-click in the frame and click on the **Frame Properties** from the shortcut menu.
3) Under **Options,** clear the check box named as **Resizable in browser**. You can see this option in Figure 6.

Previewing in a Browser

As discussed in the previous unit, after completing your design, you would like to preview your web site in browser. Select **File menu** and click on the **Preview in Browser** option. This option opens your web page in suitable browser. The Figure 8 shows a web page preview in Internet Explorer.

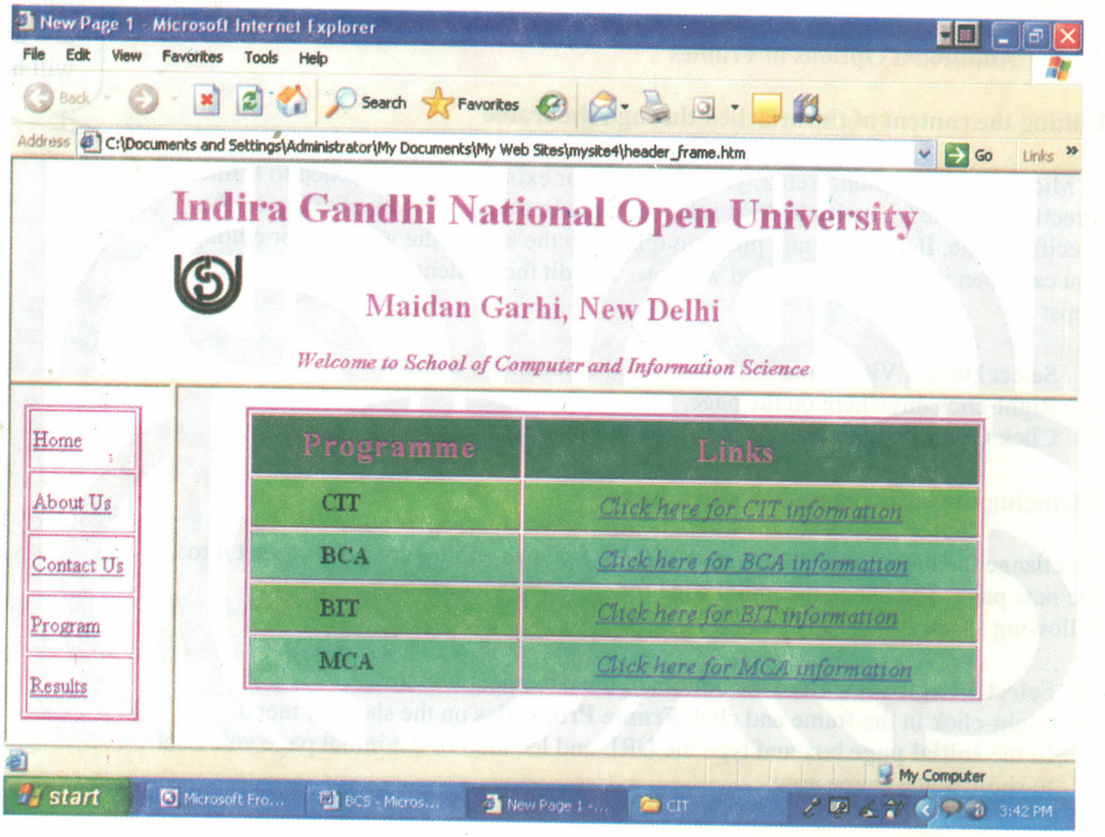

Figure 8: Preview of Web Page in Browser

Check Your Progress 1

1) What is the purpose of introducing Frames Pages in web pages?

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2) List the main elements of Banner and Contents Frames Page.

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3) Write the procedure to set the Initial pages of a Frame.

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4) Write down the different ways to control the appearances of the Frames.

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3.3 WHAT IS THE PURPOSE OF FORMS IN WEB DESIGNING?

Forms are handled using scripting languages such as CGI, Perl, PHP and ASP.NET

A form is used to interact and gather some information about web site visitors on a Web site. It is similar to the concept of a form on a paper, except that you create it online on the web sites.

Basically, you are expected to enter information into form fields while visiting a web site. The forms consist of different types of items such as option buttons, check boxes, drop-down boxes, text boxes etc. you have to enter information related to their respective fields. In general, check boxes, option button and drop down boxes are used to ask preferences of a web site visitor. If you want the web site visitor to insert comments, then you have to used text boxes and text areas.

You can use forms on your website for the following purposes:

- to register a new user.
- to log in to your Web site
- to get feedback about your web site.
- to conduct surveys from your web site.
- to get contact information from the visitors.
- to get orders or gather shipping or billing information, in case you have developed an e-commerce web site.
- to offer searching facility from the web site through a text box.

You can store all the information submitted by users in a database. You can also display the results back to the visitor as a confirmation of their entries. If you maintain a database of the visitors, it will help you to retrieve data next time, when the user logs in to your website again. Please note here that to process the data made available through forms, you must use some client and server side scripting languages. Unfortunately, a detailed discussion on these scripting languages is beyond the scope of this course. Thus, you will be able to create forms, but to process the forms data you need to learn scripting languages.

Fields of a form

A form can be made of several fields. The selection of form fields are dependent on the type of information that you want to gather. For instance, if you want to get the contact number or email id of a web site visitor, you may use text boxes. If you want to ask the site visitor about his/her preferences, then you may use option buttons or radio buttons. The Figure 9 shows a sample form:

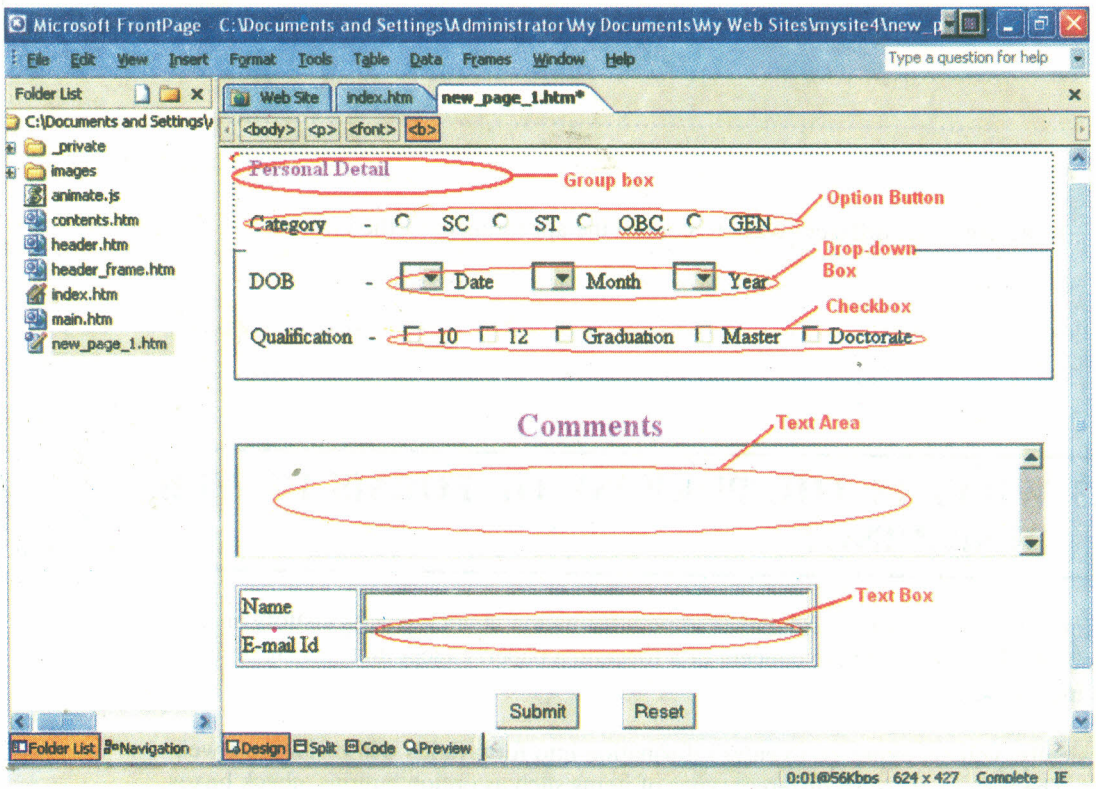

Figure 9 Showing Fields of Forms

Most of the dynamic web sites of today use forms.

A form may consist of the different fields. Some of the frequently fields of a form are explained below:

- **Text Box**: You can use text box to get small amount of text such as for e-mail id, name as in Figure 9.
- **Radio or option buttons**: You can use option buttons for making selection among given alternatives. A user can select the option through a simple click of mouse. For example, in Figure 9, you can select a category using option buttons.
- **Text area**: You can ask for large amount of text in Text Area. For example, in Figure 9, you can ask a user to submit his/her comments through a text area.
- **Drop-Down box**: You can use Drop-down box to facilitate your site visitor by providing a drop down list of their choice. The visitor may be allowed to select multiple options from the drop down list. For example, in Figure 9 date of birth selection is though drop down lists for day, month and year. Please note that in this example, you can select only a single value for each drop down list.
- **Checkbox**: You can use check box for the selection of optional items. A site visitor can select or clear the check box according to his/her choices. They can also select multiple items. For example in Figure 9, a site visitor who is a graduate may check the boxes marked with 10, 12 and Graduate.
- **Group box**: You can use a group box to assemble multiple related controls in a separate area from the rest of the form. As in Figure 9, the personal details are grouped in a group box. It contains information regarding DOB, Qualification and Category.

Now, you are familiar with the forms. But how to create the forms and how to add various items into them, the following details will help you in doing so:

Creating a form

- Select **Design View** from the bottom of the document window.
- Select the position in the page where you want to add the form by clicking on that particular place.
- Go to Toolbox at the right side of the screen and click on the HTML drop down list.
- In HTML drop down list, Click on the + sign of Form Controls →double click on the Form.

Adding a text box to a form

- Select **Design View** from the bottom of the document window.
- Select the position in the form or on the page where you want to add the text box by clicking on that particular position.
- Go to Toolbox at the right side of the screen → click on the HTML drop down list.
- In HTML drop down list, click on the + sign of Form Controls → double click on the **Input (Text)**.

Input of values in forms can be processed by scripting languages for possible storage for later use at the server end.

Setting the properties for a text box

- Double-click on the text box or Right click on the text box → select **Form Field properties**→ The **Text Box Properties** dialog box gets invoked.
- Type a unique name in the **Name** box field to identify the text box.
- You can type the text that you want to show to your site visitor in a text box. Type the text in the **Initial value** box.
- You can set the character length in the text box by using **Width in characters** box option. Type a number in that field that you expect to be the maximum possible length for that field. For example, for Name text box, you may use 50 as the length of the text field.
- If you want to make a text box as a password field then you have to select the Option button of your choice in **Password field**.

Adding a text area to a form

- Select **Design View** from the bottom of the document window.
- Select the position in the form or on the page where you want to add the check box by clicking on that particular position.
- Go to Toolbox at the right side of the screen →click on the HTML drop down list.
- In HTML drop down list, Click on the + sign of Form Controls → double click on the **Text Area.**

Setting the properties of a text area

- Double-click on the Text Area or Right click on the Text Area. The **Text Area Box Properties** dialog box gets invoked.
- Type a unique name in the **Name** box field to identify the text area.
- You can type the text that you want to show to your site visitor in a text box by typing that text in the **Initial value** box.
- You can set the character length in the text box by using **Width in characters** box option. Please note that size of text area can be larger than the text box
- You can set the maximum numbers of line for accepting the text by using **Number of lines** box.

Adding a check box to a form

In web forms, the HTML element <input type="checkbox" /> is used to display a check box

Before creating a check box you should first decide the numbers of check boxes and the label for each check box. In addition, you should also define the number of check boxes that a user may check.

- Select **Design View** from the bottom of the document window.
- Select the position in the form or on the page where you want to add the check box by clicking on that particular position.
- Go to Toolbox at the right side of the screen and click on the HTML drop down list.
- In HTML drop down list, Click on the + sign of Form Controls → Double click on the **Input (Checkbox)**.

Setting the properties of a Checkbox

- Double-click on the Checkbox or Right click on the Checkbox → select **Form Field properties**→ the **Check Box Properties** dialog box gets invoked.
- Type a unique name in the **Name** box field to identify the area.
- You can set the values associated with the check box in the **Value** box. This value indicates the selection or cancellation of the check box.
- You can click on **Checked** if you want to show the default selected check box to the site visitors.

A drop-down list differs from a combo box in that the entry portion of a drop-down list cannot be edited.

Adding a Drop-Down box or menu to a form

Drop-down boxes can be used to accept a choice of the user. Although you can create drop sown boxes for multiple selection, but in general they are used for single selection. Drop down boxes are very useful tool for the design of drop down Menus.

- Select **Design View** from the bottom of the document window.
- Select the position in the form or on the page where you want to add the check box by clicking on that particular position.
- Go to Toolbox at the right side of the screen and click on the HTML drop down list.
- In HTML drop down list, Click on the + sign of Form Controls → double click on the **Drop-Down Box**.

Setting properties for the choices in a Drop-Down box

- Double-click on the Text Area or Right click on the Drop-Down box → select the **Form Field properties**→ the **Drop-Down Box Properties** dialog box gets invoked.
- Type a unique name in the Name box field to identify the text area.
- If you want to show the default selected option in the drop-down box, then under the Initial State option click on the checked.
- Click OK.

Adding an Radio or option button to a form

Unlike other form fields, Radio buttons usually appear in groups, and only one button in the group can be selected at a time.

- Select **Design View** from the bottom of the document window.
- Select the position in the form or on the page where you want to add the Radio button by clicking on that particular position.
- Go to Toolbox at the right side of the screen and click on the HTML drop down list.

- In HTML drop down list, Click on the + sign of Form Controls → double click on the **Drop-Down Box**.
- On the **Insert** menu, select **Form and** click on the **Input (Radio) (Insert → Form→ Input (Radio)).**

Try to create a web page using a number of Forms fields or elements

Setting the properties of an option button

- Double-click on the Radio button or Right click on the Radio button → select **Form Field properties→** the **Option Button Properties** dialog box gets invoked.
- Type a unique name in the **Group name** box field to identify the group to which this option buttons belongs.
- You can set the values associated with the option button in the **Value** box.
- If you want to show the default selected option in the option button then in **Initial state→** click on the **Selected**.

☞ Check Your Progress 2

1) What is Form? Why it is used in web pages?

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2) Name the different fields of the Forms.

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3) What is the difference between Textbox and Text Area?

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4) Write the procedure for setting the properties of Drop-down box.

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3.4 PERSONAL WEB PAGE DEVELOPMENT

Before going through the developmental phase of the personal web site or a web page, we discuss about the term Personal Web page. Generally you have a question in your mind as to what are personal web pages and what is the basic difference between a simple web page and personal web page? In this section we discuss about these things including how you can develop your personal web pages.

Personal web pages are basically created by an individual and contain personal contents. The contents of personal web pages can be about that person or about something related to their achievements or interest. The personal web page can be on the entire personal web site or can be a page or pages of a larger web site, for example, faculty pages on IGNOU web site. The basic purpose behind developing personal web pages is providing information about oneself.

The personal web pages may contain images, hyperlinks, resume, blogs and other information about the person. Many personal web pages contain information about the hobbies, achievements, information about family and friends of the web page creator. Many people maintain their personal web pages because they think this is the best way to express their views or opinions.

In this section, we develop a personal web site with the help of Microsoft Expression Web 2. Figure 10 shows a sample personal home page. For creating these types of personal web pages, you can select a template from the list of templates. If you want to create a web site of your own then you have to follow all the procedure discussed in previous unit.

Try other templates for creating your personal web site

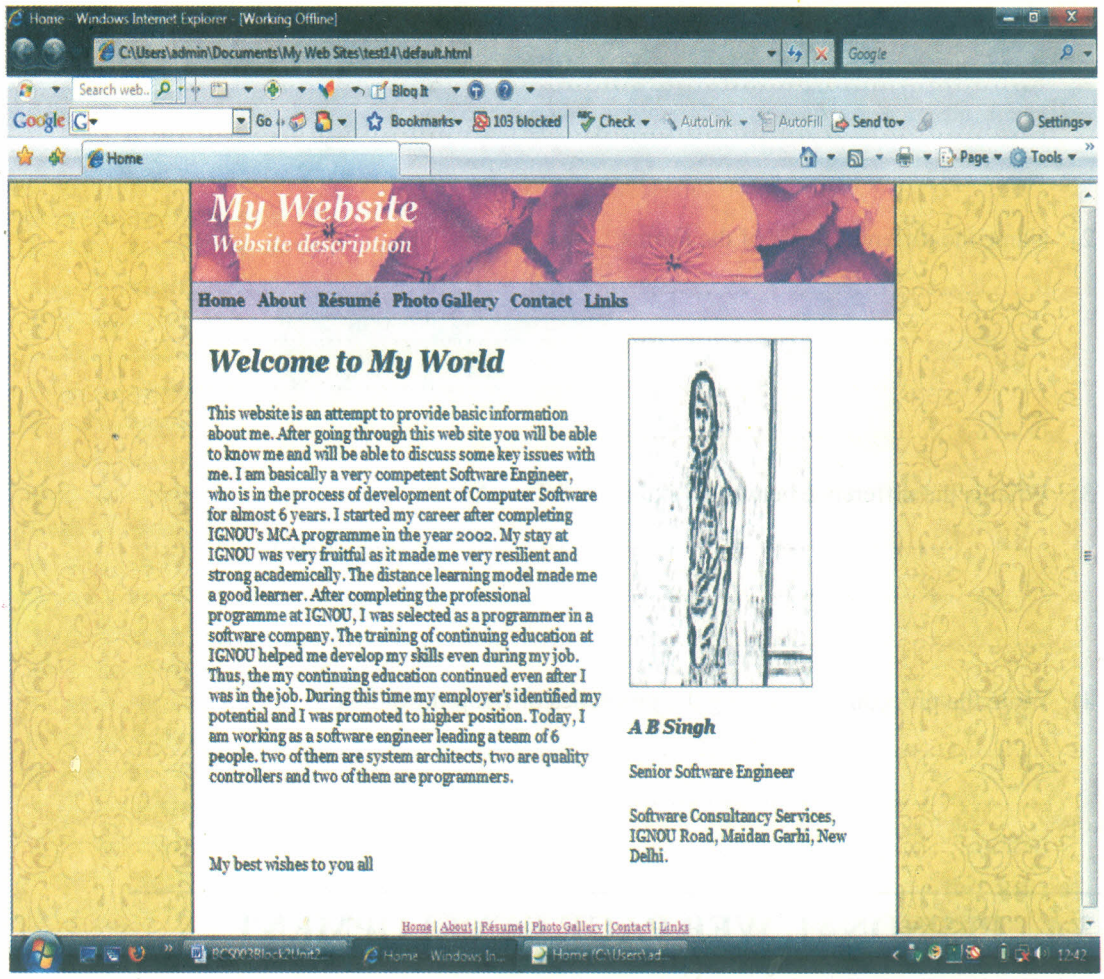

Figure 10: Home page of a Personal Web Site

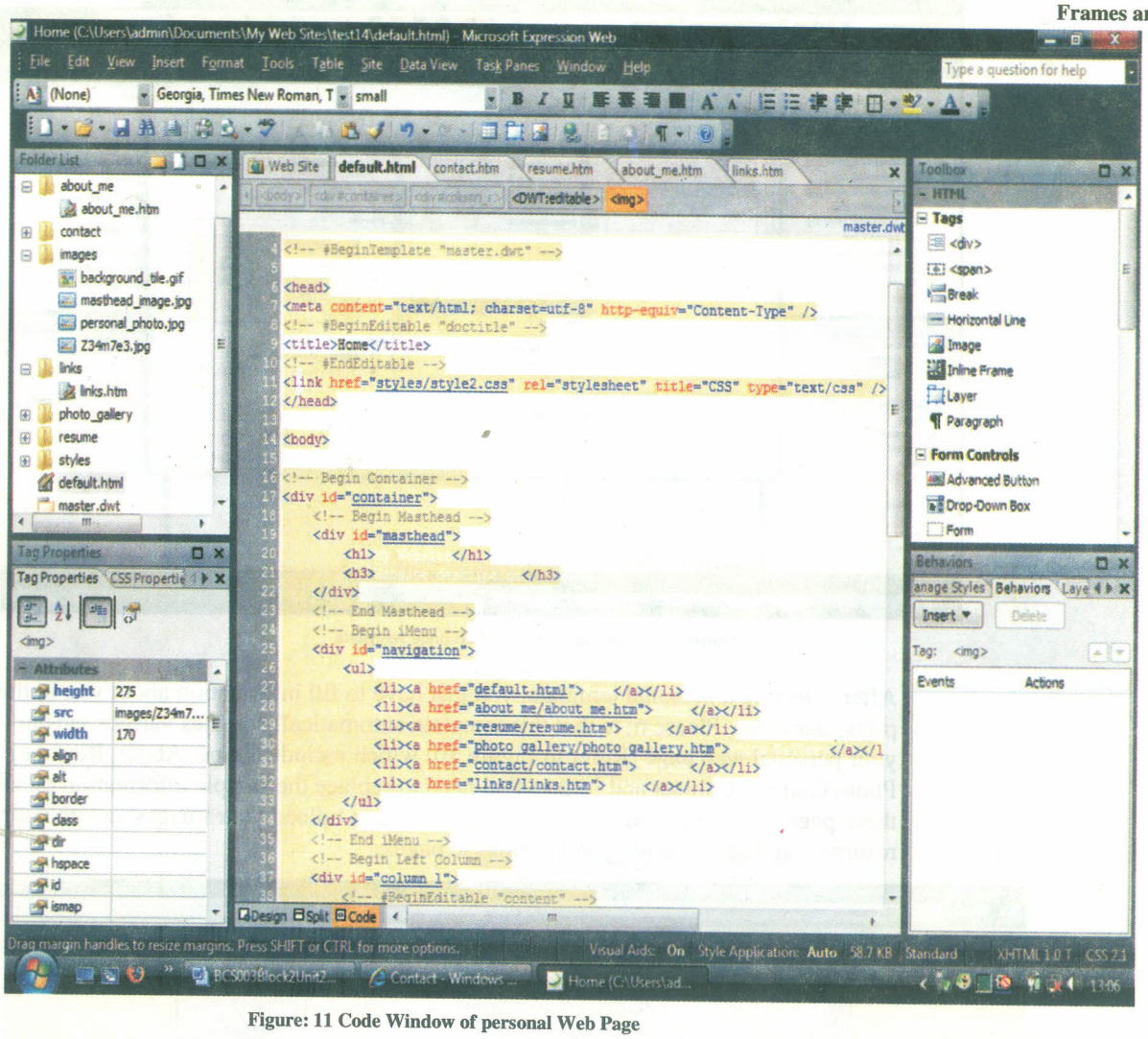

Figure: 11 Code Window of personal Web Page

Figure, 11 shows you the code window of the personal web page. You have to work on your design window leaving code window untouched. As you will change your design in design window it will automatically change the code in code window.

How to use Personal Web Page template?

- Select **File** menu →click on the **New** (**File → New**).The New task pane gets invoked.
- In the **New** task pane, click on the **Web Site** tab.
- Under **Web Site** tab→ click on the **Templates** (**Web Site → Templates**), a list of templates is displayed as shown in the Figure 12.
- Select any one option from "Personal" and click on **Ok** button.

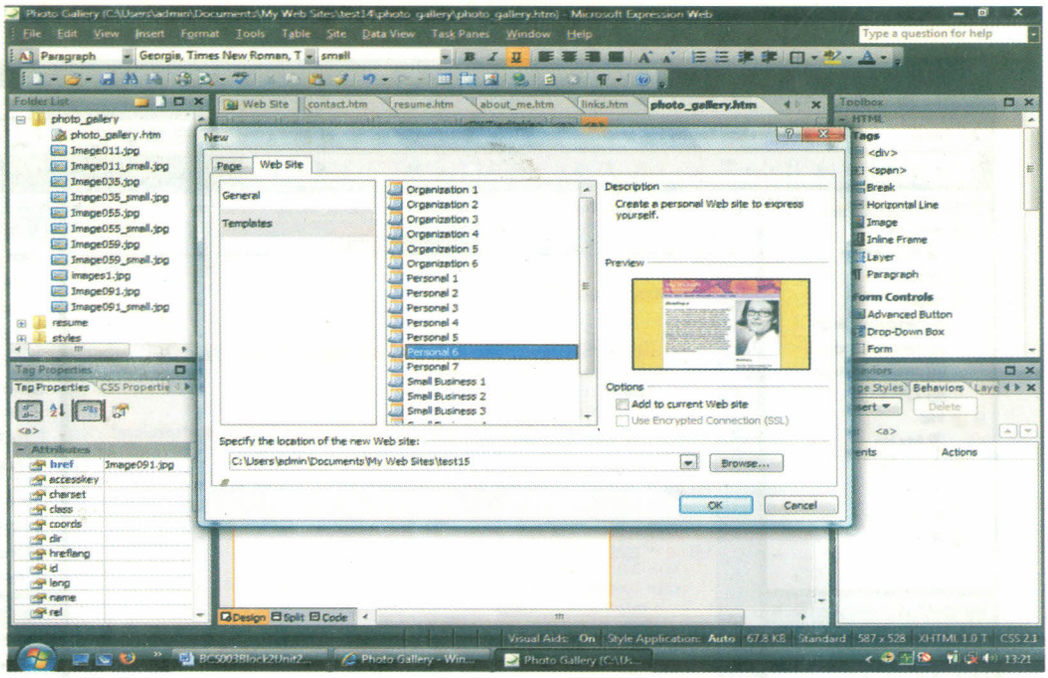

Figure 12: Selecting Personal Web page template

After selecting a personal template, you just have to fill information about you in the particular areas. Please note that this template automatically creates various tabs in your personal web page (Refer to Figure 10) which include Home, About, Resume, Photo Gallery, Contact and Links. You need to replace the sample information on all these pages to create your own web pages. You can upload your images, create your resume and make a photo gallery on these pages.

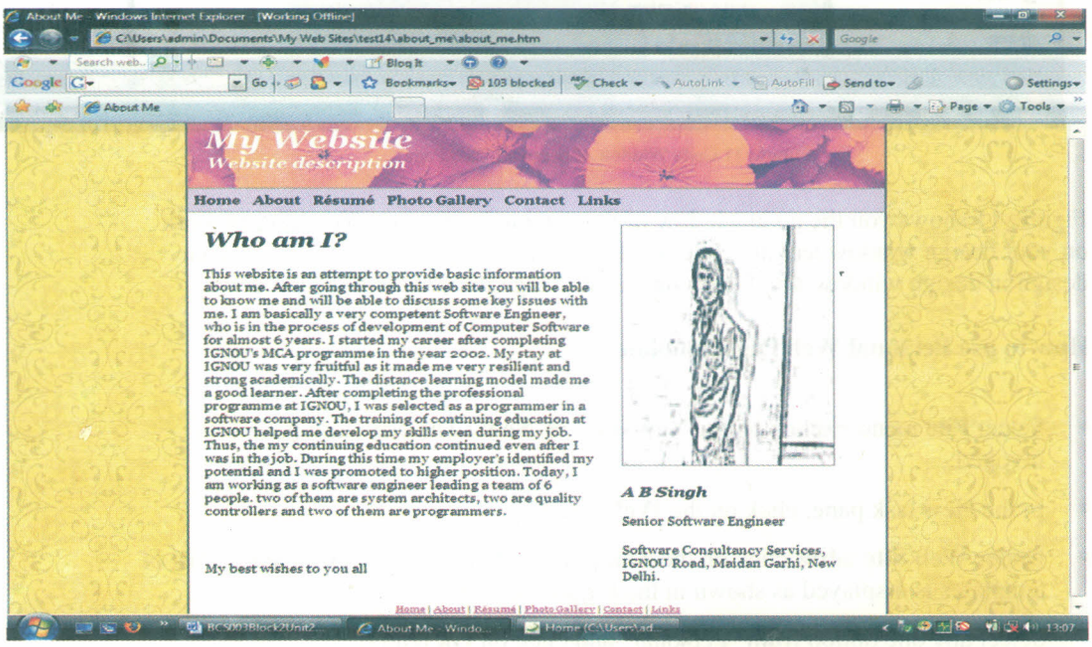

Figure 13: About Page

The about section may be used to store information related to your profession and personal achievements. This section gives a brief of yours achievements, goals etc. related to the academics and professional life to the visitors. As you can see that the about page of my web site has introduced myself as a senior software engineer and how I have achieve this level (Please refer to Figure 13). If you want to create your own personal web site, then you can enter all the information related to you in the about web page.

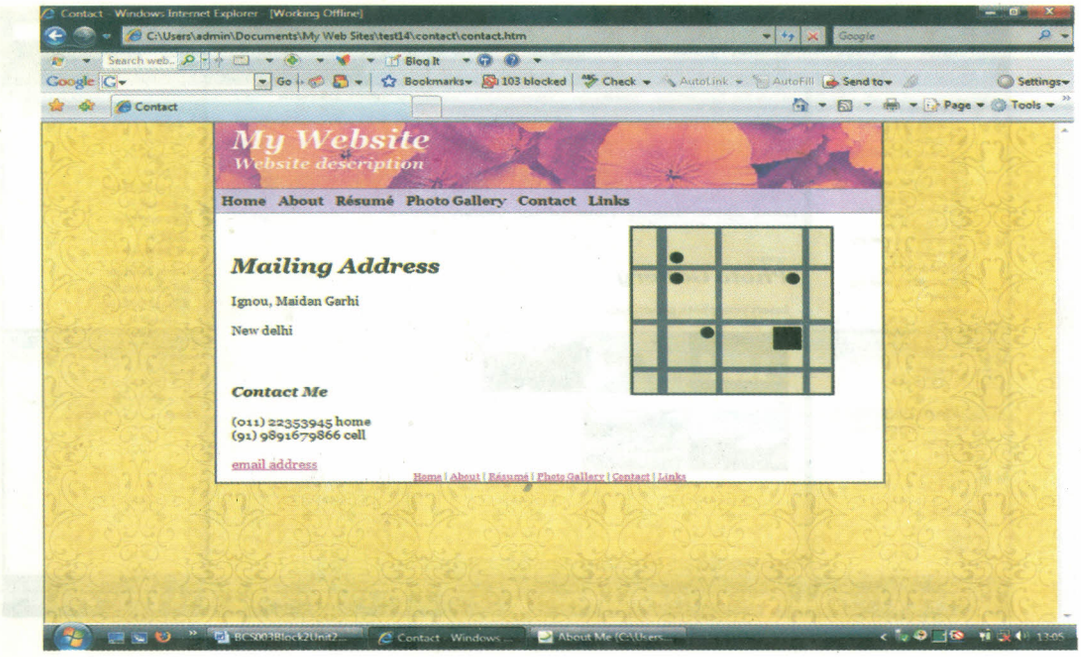

Figure 14: Contact Page

The contact page is used to store contact information of the author of this web site. You can enter your home address as well as your office address. You can put your mobile number or landline number for future reference. As e-mail is an important way of communication in the present time, therefore, I have included my email address in the contact.

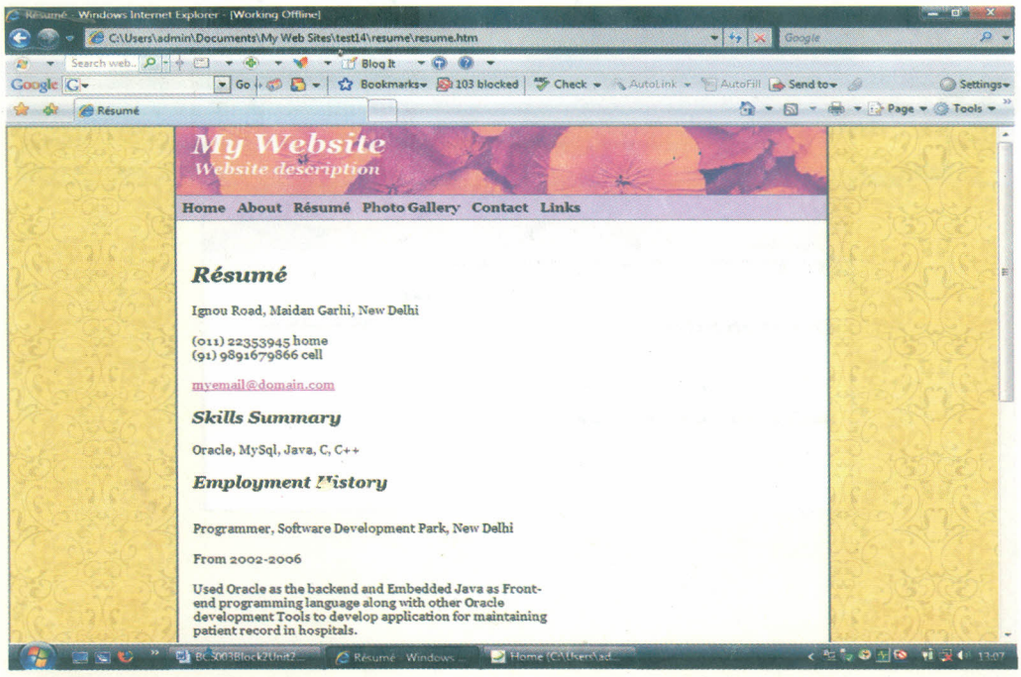

Figure 15: Resume Page

A resume is a document that contains the summary of relevant information about you such that you are able to introduce yourself in a job situation. The resume or CV is the first item that an employer seeks from the applicant (job seeker) and is used to screen them. You can also create your resume with the help of this web template. In this web template you just need to enter text at appropriate places. After entering relevant information you may save your web page and view it in a browser. How can you do this? We have already told you about this in the previous unit.

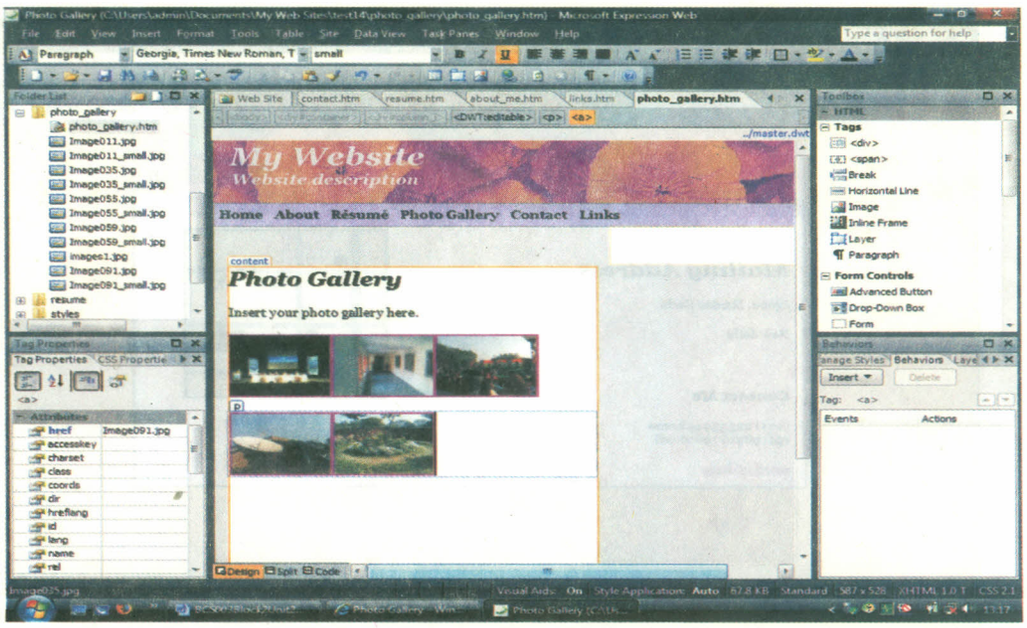

Figure 16: Photo Galleries

The photo gallery is a collection of personal images and pictures. These galleries are used to store the digital images in one place. So, you can use them from anywhere in the world at any time by using internet. You can create albums according to the date of the event and place the pictures in respective albums.

The process of adding an image in your web page and converting it into a thumbnail has already been discussed in the previous unit. If you have any confusion about how to create photo galleries then you can refer to further reading section.

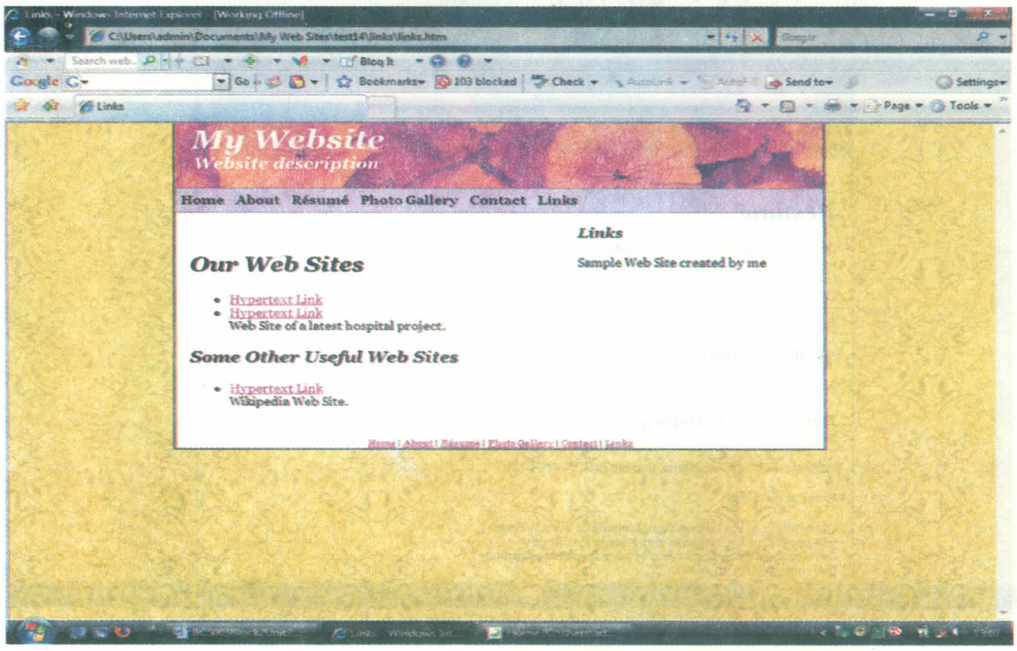

Figure 17: Links Page

Figure 17 is an example of use of hyperlinks. You can use this page to provide some good link to other web sites. For example, if you have written a paper and it is available on a web site, then you can create a hyperlink to that page. The process of creating hyperlinks has already been discussed in the previous unit. Thus, we expect that you will be able to create the necessary linkages.

Thus, you can create you own personal web site using a template very easily. We hope that you will try to do so.

☞ Check Your Progress 3

1) What is the purpose behind to develop personal web pages?

   .....

   .....

2) Write the steps to create personal web pages using a template.

   .....

   .....

3) What are the basic contents of personal web pages?

   .....

   .....

3.5 SUMMARY

In this unit, we have discussed about frames and forms using Microsoft Expression Web 2. Frames are container of objects and provide a standard structure to a web page. A Frames page can contain other frames. A frame is linked to a web page. You can do many operations using frames. Some of the operations on frames that were discussed in the unit are - saving frames, resizing frames, renaming frames, locking frames etc. Forms are very useful for collecting information from the site visitors. Forms consist of elements or fields such as text box, radio buttons drop-down menu etc. This unit discusses about creating a form using its fields. Finally, in this unit we have demonstrated the process of creating a personal web site. In this unit, we have used a template for creation of personal web site.

3.6 ANSWERS/SOLUTIONS

Check Your Progress 1

1) Frames are basically containers and do not contain any contents of their own. Web pages can consist of multiple frames. A frame that contains multiple frames is sometimes called a frames page. A frames page may provide a top level structure to a web site.

2) The Banner and Contents Frames Page consists of three frames:
   - The banner frame
   - The contents frame
   - The main frame

3) After selecting templates for the frames, you can see the Set Initial Page button in each frame. When you click on that button an Insert Hyperlink dialog box gets invoked. Type the address of the location of the web pages you want to display on that particular frame and press OK button. Remember, first you have to create the pages that you want to link with the frames.

4) Frames pages can be divided horizontally or vertically to create two frames. You can also divide them into rows or columns. You can also change the size of frames or delete unnecessary frames. You can choose to show or hide the borders between frames.

Check Your Progress 2

1) A form is a collection of fields that are used for interacting with the site visitors. A form is used for gathering information from the site visitors. This information can be stored on the server for later use, if any. You can use forms on web sites for various purposes like – for registration, for logging in, for feedback or for gathering information.

2) A form may consist of the following fields:
   - Text Box or text area,
   - Radio or option
   - Drop-Down box
   - Group box: that is used only for creating logical grouping of other fields

3) The basic difference between the Text Area and Text box is in the numbers of characters accepted by them. The Textbox accepts only limited text but Text Area accepts large text. The Textbox is used to gather small information like phone number, roll number etc. whereas, Text Area is used to gather large information like Address, feedback etc.

4) For setting the properties of the Drop-Down box, you have to follow these steps:
   - Double-click on the Text Area or Right click on the **Drop-Down box** → select the **Form Field properties**→ the **Drop-Down Box Properties** dialog box gets invoked.
   - Change the properties as desired by you and then Click **OK**.

Check Your Progress 3

1) The personal web pages or sites provide information about the developer or author of the site such as their achievements, professional qualification and interests. Some times the purpose of such web sites is to entertain the site visitors. Anyone can create his/her personal web site by using HTML and scripting language or editing tools.

2) For creating personal web site follow these steps:
   - Select **File** menu → click on the **New**→ the New task pane gets invoked.
   - In the **New** task pane click on the **Web Site** tab.
   - Under Web Site tab→ click on the Templates→ a list of templates gets invoked.
   - Select any one option from "Personal" → click on Ok button.

3) The personal web pages may include; Photo galleries, Contact information, Useful hyperlinks, Resume, Introduction, Achievements

3.7 FURTHER READINGS

- Expression Web 2 wiki - *en.**wikipedia**.org/wiki/**Microsoft_Expression_Web***
- Learn Expression Web 2 - www.learn**expression**.com
- Tutorial on Expression Web 2 - *www.vtc.com/products/**Microsoft-Expression-Web-2-Tutorials***.

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