Chapter 7:

Web Applications

Informatics Practices

Class XII (CBSE Board)

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Introduction

A Web Application refers an application which sends and receive information through Word Wide Web over Internet or Intranet.

A typical Web Application may include-

- Hyper Text Information:

  Information that contains links to other information resources.

- Multimedia Information:

  Text, movies, pictures and sound etc.

- Graphical User interface:

  GUI which enables user to point and click to request/submit information instead of typing.

What is Internet?

In simple words, an **Internet is a network of networks**, spread over world-wide network of computers with millions of users.

- Access to Internet is provided through Internet Service Provider (ISP) such as MTNL, BSNL, Reliance, Airtel and Tata etc. (in India).
- Internet begins with Advanced Research Project Agency Network (ARPANet) in 1969 under American Defense Deptt.
- In 1986, the National Science Foundation establishes NSFNet, which works as a backbone of Internet.
- In 1990, the British Programmer Tim Berners-Lee devised Hypertext and HTML to create WWW.
- There is no owner of Internet. The Internet Society (IS) and Internet Engineering Task Force (IETF) regulates the Internet.

What is Web Browser?

A web browser is an Web Client program which allows users to access and navigate the World Wide Web over Internet.

- It provides an interface to interact with Internet.
- It send request to Web Server for specified web page and displays at client machine.
- It also maintains History of visited Web Pages and may provide tools for easy web surfing.

Some commonly used Web Browsers are Microsoft Internet Explorer, Mozilla FireFox, Google Chrome, Opera and Webkit etc.

What is Web Server?

Web servers are computers on Internet on which Web pages are stored. It is equipped with a program which listens request from the web client (Web Browser) and sends web pages.

The major functions of a web server are-

- Serving of Web pages on request of Browser.
- Controlling access and security of the server.
- Monitoring and logging server access statistics.

Some most popular Web Servers are Apache Web Server (Open Source software for Linux), MS Internet Information Server (IIS) and Netscape Enterprise Web Server etc.

Web Address & URL

A location of a web server is called Website and each webpage stored on a Website has a unique address called URL (Uniform Resource Locator)

Ex. http://www.thinkquest.org/aboutus.html

A general structure of URL is-

Protocol://domain name/Directory Path/object name

- **Protocol:**

  It specifies the type of protocol to be followed by server. Some commonly protocols are http, https, ftp, new etc.

- **Domain Name:**

  It specifies the name of web server on the Internet including domain name like .com, .org, .mil, .edu or country domain like .in, .ca .au etc.

- **Directory Path**

  It specifies the location of file/web page on the server.

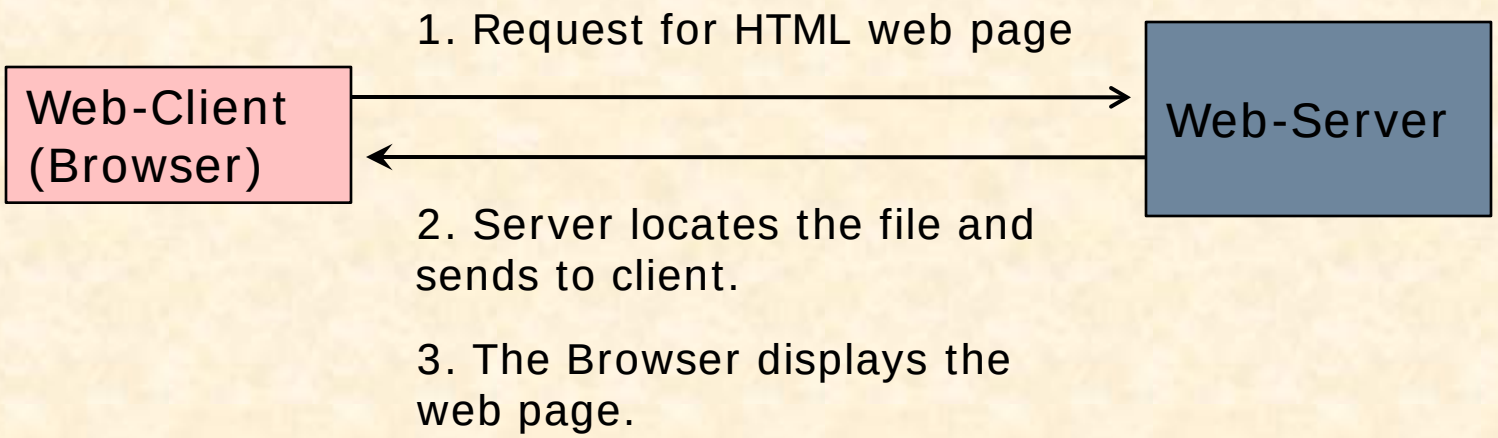
- **Object Name**

  It specifies the name of specific web page like index.html

Communication with Web Server

The Internet or WWW works on Client-Server computing model. In this model your PC equipped with Web Browser works as Web-Client and other machine which serves the pages called Web servers. A Web server follows some protocols like HTTP, FTP or SMTP etc.

When Web Browser (Web-Client) request for a HTML pages stored on a remote machine (Web-Server), the server locates the file and passes it to the client.



What is HTML ?

HTML is a document-layout and Hyper link-specification language i.e. a language used to design the layout of a document with Hyperlink.

HTML tells the Web browser how to display the contents of a Hyper Text document including text, images and other supported media.

- **HTML is:**
  - Web page layout language.
  - Hyper Link specification languages.
- **HTML is Not:**
  - Word Processing tool.
  - Programming language.

Elements of HTML document

HTML is made up of elements called **Tags** and **Attributes**, which specifies the format of the documents.

- A Tag is a coded HTML command that indicates how parts of web page should be displayed.
- Tags are not case sensitive and contained within Angle Bracket <> i.e. <HTML> and <html> are same.
- Most of the Tags are used in pair i.e. begin and end of the Tag. End Tag are begins with / character.

  e.g. <Head> ..... </Head>
- An Attribute is a special word inside a Tag, which specifies additional information to Tags such as colour, alignment etc.
- Most of the Attributes are followed by a Value (number or words).

  e.g. <BODY BGColor = “RED”>

Container and Empty Tag

There are two types of Tags are used in HTML.

- **Container Tag**

  These HTML Tag written in pair i.e. starting <..> as well as ending </...> .

  Ex. <Title> My First Page < /Title>

- **Empty Tag**

  These Tags require just a starting tag and not ending tag.

  Ex. <HR>,
 <IMG > etc.

HTML Tag Structure

- Every HTML Tag consist of a tag name, sometimes followed by an optional list of Attributes, all closed in Angel Bracket < >.
- Tags are in nested form. i.e. Starts later-Closed earlier.
- Multiple Attributes may appear after Tag Name, each separated by space. The order of appearance is not important.
- An Attribute's value, if any is given after the equal (=) sign in quotes after attribute name.

  Ex. <A href = "http://www.google.com">
- Quotes may be omitted if there is a single value or word (without space).

  Ex. <BODY bgcolor=RED>

  <HR WIDTH = 30%>

Structure of HTML Document

Every HTML page is structured as follows-

```
<HTML>
   <HEAD>
      <TITLE>
         ..............
      </TITLE>
   </HEAD>
   <BODY>
         ..................
   </BODY>
</HTML>
```

Example

```
<HTML>
<HEAD>
<TITLE> My First Page </TITLE>
<BODY>
        This is my Test Page written in
         HTML. HTML is easy to learn .
</BODY>
</HTML>
```

- <HTML> Identifies that the document is an HTML document.
- <HEAD> Contains information about document including its title, scripts used, style definition and other descriptions.
- <TITLE> Contains title which appears on browser' title bar.
- <BODY> Contains many other tags and attributes, which specifies what to be displayed on Browser.

How to write HTML page?

The easiest way to create and view the stylish HTML page is to use of HTML editor software like MS Front Page, Macromedia Dream Viewer etc. But we create a web page in any Text editor utility like Note pad.

The following steps may be followed to create a web page using Windows Note Pad utility.

- Open Note pad (Program ➔Accessories ➔Notepad)
- Type HTML code
- Save the file (File ➔ Save) along with .htm or .html extension.
- Close Note pad and View Page using any Web Browser like Internet Explorer.

Commonly used Container Tags…

❑ <HTML> ….. </HTML>

This Tag marks the begin and end of HTML document. It may contains <Head> and <Body> tag inside.

Commonly used Attributes are-

Attributes	Value	Description
DIR	LTR RTL	(Direction of the Text) It specifies the direction of text in the document either Left-to-right (LTR) or Right-to-left (RTL)
Lang	En, Fr etc.	(Language) It specifies the Language used in the document e.g. English (en), French (fr), Italian (it) , Hindi (hi) etc.
Example:	<HTML Lang=EN DIR = LTR>	

We can also use Kashmiri (ks), Nepali (ne), Marathi (mr), Sanskrit(sa) etc.

Commonly used Container Tags…

- **<HEAD> ….. </HEAD> Tag**

  This Tag defines the document header. It contains information like title, script and style etc.

- **<TITLE> ….. </TITLE> Tag**

  This Tag contains the title and identifies its content in a global context. Title is displayed in the Title bar of the Browser.

  Ex. <Title> My First Page </Title>

Commonly used Container Tags…

❑ <BODY> ….. </BODY> Tag

This is the largest Tag which defines the content of the document. It may contains text, images, lists, tables and hyperlinks etc.

Attributes	Value	Description
Background	Image file	Defines the background image to be displayed. Smaller image is tiled to cover the whole page.
Bgcolor	Color	Specifies the background color of the page.
Text	Color	Specifies the color of the text.
Link	Color	Specifies the color of the Hyper link.
VLink	Color	Specifies the color of the visited Hyper link.
ALink	Color	Specifies the color of the Active Hyper link.
LEFTMARGIN	value	Specifies the area left from the edge of page.
TOPMARGIN	value	Specifies the area left from the top of page.
Example:	<Body BGCOLOR="Red" TEXT="#ffffff" LINK="Yellow" <Body Topmargine =60 Leftmargine=40>	

Note : Margine value is defined in the pixel and 72 pixel = 1 inch

Commonly used Container Tags…

- **<H1> ….. </H1> Heading Tag**

  HTML specifies six levels of headings, numbered from 1 to 6. Headings are typically displayed in larger fonts than normal body text. <H1> is the largest and <H6> is smallest size.

If multiple headings are used, it should continuous i.e. You can't use <H4> after <H1> without using <H2> and <H3>.

Attributes	Value	Description
Align	LEFT RIGHT CENTER	(Alignment of the Heading Text) It specifies the alignment of text i.e. Left/ Right/ Center.
Example:	<H1> Kendriya Vidyalaya Sangathan </H1> <H2> Regional Office – Jaipur Region </H2>	

Commonly used Container Tags…

❑ <P> ….. </P> Paragraph Tag

The Paragraph Tag specifies the begin and end of the paragraph of the text.

Attributes	Value	Description
Align	LEFT ,RIGHT, CENTER	Alignment of the Heading Text
Example:	**<P>** This is a single line paragraph **</P>**	

❑ Other Tags

The following tags are frequently used within a paragraph.

Tags	Description
<B> ….</B>	Specifies Bold Text
<I> …. </I>	Specifies Italics Text.
<U> ….</U>	Specifies Underline Text.
<TT> … <TT>	Specifies Type writer text (fixed –width font)
_{….}	Specifies the Subscript like 2 in H_2O
<Sup> …. <Sup>	Specifies the Subscript like 2 in X^2

Commonly used Container Tags…

- **<Font> …. </Font>**

The Font tag defines the size, style and colour of the text. HTML uses Relative font size from 1 to 7. Default value is 3. Each successive Font size is 20% larger or smaller than default size.

Attributes	Value	Description
Size	Values (1 -7)	Specifies the relative size of the font.
Color	Color	Specifies the color of the text.
Face	Font name	Specifies the Font name. You can define multiple fonts separated by , so that if first font is not supported/ available the second can be used.
Example:	<Font Size = 4 color = Red > How are You </Font> <Font Face =“ Arial” > Hello </Font> <Font Face = “Broadway”, “Arial” > Good Bye </Font>	

Commonly used Container Tags…

❑ <A> …. </A> Linking other Web Page or WebSite

Anchor tag defines the Active link of other Web page or File. A hand shaped cursor appears when mouse is rolled over the text, which indicates the active link.

Attributes	Value	Description
HREF	File/Web URL	Specifies the Web page or Web URL (Address) to be linked with given text.
Example:	<A Href = “www.google.com” > Google </A> <A Href = “resume.doc” > My Bio-Data </A> <A Href = “www.kvsangathan.nic.in/vacancy.htm” > Vacancy at Kendriya Vidyalaya </A>	

Note

Color Code in HTML is 6 digit RGB value started with # sign. RGB (Red-Green-Value), each is defined with 2 digit starting with 00 to FF. e.g. #00000 (Black), #00FFFF (Aqua), #FF0000 (Red) and #FFFFFF is White etc. Color value can be given in words also like Red, Black, White etc.

Commonly used Empty Tags…

❑ <Base Font>

This Tag allow you to define the basic (default) size for the font, which is used for normal text, where <Font> is not defined.

Attributes	Value	Description
Size	(1 -7)	Specifies the relative size of the font.
Color	Color	Specifies the color of the text.
Face	Font name	Specifies the Font name.
Example:	<BASEFONT Size = 4 color = Red > <BASEFONT Face =“ Arial” Size =4 >	

Difference between <Font> and <BaseFont> tag

<Font> is a container tag which is used to change the appearance of short segment of text, whereas <BaseFont> is empty tag which is used to set the default font settings where <font> is not defined.

Commonly used Empty Tags…

- **<!.. Comment ..>**
- **<COMMENT>……</COMMENT>**

  You may define comment text which appears in source code but not displayed in browser window.

Ex. <!.. This text is displayed at browser ..>

- **
 Break Line**

  Some times, it is required to break a paragraph i.e. remaining text to be appear on next line.
 tag does this job.

Ex. Hello! Every body …..
 How are you

Commonly used Container Tags…

❑ <HR> Horizontal Rular

This tag produces a Horizontal line spread across the width of the Browser window.

The Thickness, width and colour etc. can be defined by the following attributes.

Attributes	Value	Description
Size	Values	Specifies the size (thickness) of the line. Default is 3.
Color	Color	Specifies the color of the line.
Width	Number or %	Specifies the width of the line. It may be absolute value or certain % of the Browser Window width.
NoShade	-	Specifies the shade to be appear or not. If NOSHADE option is not given 3-D lines appears.
Example:	<HR Size =5 color = Red Width = 80> <HR Size = 4 Color= Yellow Width = 80% Noshade>	

Commonly used Container Tags…

❑ <IMG> Displaying Images

This tag displays specified image file (.jpg, .gif, .bmp, .png etc.) with defined size (width and height)

Attributes	Value	Description
SRC	File name	Specifies the image /picture file with path. If path is not given then current folder is assumed.
Width	Number	Specifies the width of the image. If given width is smaller than picture's width, then picture is resized.
Height	Number	Specifies the height of the image. If height is smaller than picture's height, then picture is resized.
Align	Alignment	Specifies the Alignment of the image as Left, Right, Top, Middle and Bottom (default).
Border	Number	Specified the thickness of border. 0 for no border.
Example:	<IMG SRC="myphoto.jpg" Width = 200 Height=300>	

Un Ordered List

- **<UL> ..... </UL>**

Each list element is defined with <LI> tag.

Attributes	Value	Description
TYPE	Disk Square Circle	It specifies the type Bullet symbol. Default is Disk type.

Example:

```
<UL>
<LI> Drink
      <UL Type=Square>
          <LI> Tea
          <LI> Coffee
      </UL>
<LI> Fruits
       <UL Type=Square>
          <LI> Apple
          <LI> Mango
       </UL>
</UL>
```

- Drink
  - Tea
  - Coffee
- Fruits
  - Apple
  - Mango

Ordered List

❑ <OL> ..... </OL>

Attributes	Value	Description
TYPE	A or a I or i 1	It specifies capital/small A,B,C,D.. etc. It specifies capital/small Romans I,II,III etc. It specifies the number 1,2,3 etc. (Default)
START	Value	Defines starting value of list.

Example:

```
<OL Type=A>
<LI> Drink
      <OL>
          <LI> Tea
          <LI> Coffee
      </OL>
<LI> Fruits
       <OL Type=I>
         <LI> Apple
         <LI> Mango
       </OL>
</OL>
```

A. Drink
   1. Tea
   2. Coffee

B. Fruits
   I. Apple
   II. Mango

Tables in HTML

❑ <Table> ….. </Table>

Tables are useful to display data in tabular form. The following core tags are used to create a table.

- ❖ <Table>.. </Table> defines a table object.
- ❖ <TR>… </TR> defines a Table Row.
- ❖ <TD>…</TD> defines a Table Data (cell value)
- ❖ <TH> .. </TH> defines Column Header.
- ❖ <CAPTION> .. </CAPTION> Defines caption of table.

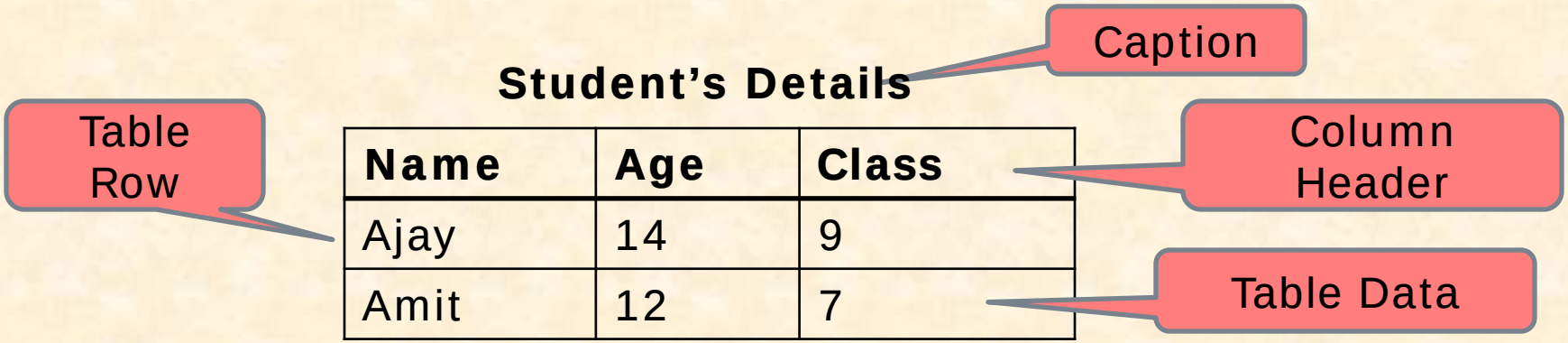


Table - Simple Example

```
<Table Border="3">
 <Caption> <B>Student's Details </B></Caption>
 <TR>
    <TH> Name</TH> <TH>Age</TH> <TH>Class></TH>
 </TR>
 <TR>
    <TD> Ajay</TD> <TD>14</TD> <TD>9</TD>
 </TR>
 <TR>
   <TD> Amit</TD> <TD>12</TD> <TD>7</TD>
 </TR>
</TABLE>
```

Output

Student's Details

Name	Age	Class
Ajay	14	9
Amit	12	7

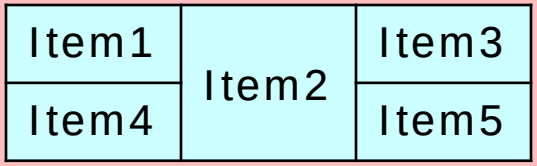
Attributes in <Table> Tag

Attributes	Value	Description
Background	Color	Specifies the background image file (.jpg, .gif etc.)
Bgcolor	Color	Specifies the background color.
Border	Value	Defines the outline border size (0 – no border)
Bordercolor	Color	Specifies the color of border.
Frame	Above, Below, Box, Hsides, Vsides etc.	Specifies the portion of border will display. Used with Border attribute.
Rules	All, Cols, Rows, None	Specifies the inside border edges to be displayed.
Cellspacing	Value	Space between cells.
Cellpadding	Value	Space between the cell border and cell data.
Height	Value	Defines the height of table in pixel.
Width	Value	Defines the width of table in pixel.
Align	Left, Right, Center	Specifies the alignment of table across the page.
Example:	<Table Bgcolor=“Red” Border=3 Rules =“All” Align= center>	

Attributes in <TD> Tag

Attributes	Value	Description
Background	Color	Specifies the background image file (.jpg, .gif etc.) for a cell.
Bgcolor	Color	Specifies the background color for a cell.
Rowspan	Value	Defines the Span of a cell in respect rows.
Colspan	Value	Defines the span of cell in respect of columns.
Width	Value	Defines the width of cell in pixel or % of table.
Align	Left, Right, Center	Specifies the alignment of data in the cell.
VAlign	Top, Middle, Bottom	Defines Vertical Alignment, when rowspan of a cell is more than one row.

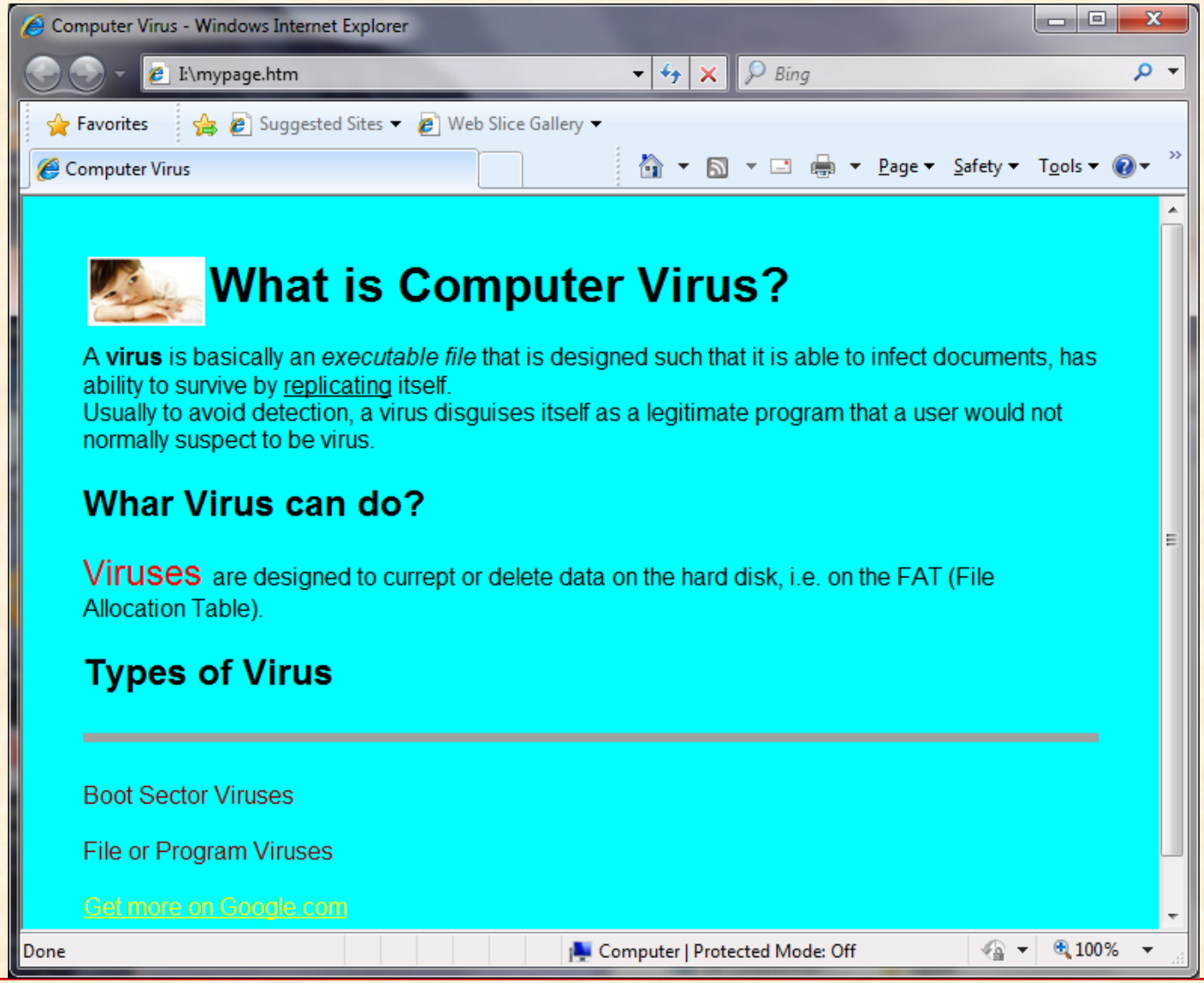
```
<Table >
  <TR>
  <TD> Item1</TD><TD RowSpan=2 VAlign="Middle" >Item2<TD>Item3</TD>
  </TR>
  <TR>
  <TD>Item4</TD><TD>Item5</TD>
  </TR>
 </TABLE>
```



Example Coding

```
<HTML>
<HEAD>
<TITLE> Computer Viruses</TITLE>
</HEAD>
<BODY BGCOLOR= #00ffff  Topmargin=40 leftmargin=40>
<BASEFONT SIZE=3 FACE="Arial">
<IMG src="photo1.jpg" width="78" height="46" align="left">
<H1> What is Computer Virus?</H1>
<p align=left> A <b>virus</b> is basically an <i>executable file</i> that is designed such that it is able to infect documents, has ability to survive by <u>replicating</u> itself.<br> Usually to avoid detection, a virus disguises itself as a legitimate program that a user would not normally suspect to be virus. </p>
<H2> Whar Virus can do? </H2>
<p> <font size=5 color= #ff0000 >Viruses </font>are designed to corrupt or delete data on the hard disk, i.e. on the FAT (File Allocation Table).</p>
<H2> Types of Virus </H2>
<hr size=6 width=100% noshade>
<Font color= Maroon>
<p> Boot Sector Viruses </p>
<p> File or Program Viruses</p>
<a href="http://www.google.com/" ><font color="#ffff00" size=3> Get more on Google.com</font></a>
</BODY>
</HTML>
```

How it works...


Computer Virus - Windows Internet Explorer
I:\mypage.htm
Bing
Favorites
Suggested Sites
Web Slice Gallery
Computer Virus
Page
Safety
Tools
What is Computer Virus?
A virus is basically an executable file that is designed such that it is able to infect documents, has ability to survive by replicating itself.
Usually to avoid detection, a virus disguises itself as a legitimate program that a user would not normally suspect to be virus.
Whar Virus can do?
Viruses are designed to currept or delete data on the hard disk, i.e. on the FAT (File Allocation Table).
Types of Virus
Boot Sector Viruses
File or Program Viruses
Get more on Google.com
Done
Computer | Protected Mode: Off
100%

Forms in HTML

Forms are means to collect information/data from the Site-visitor or client.

<FORM> ... </Form> is used to define a form in <BODY> section of HTML page.

Form contains some GUI controls to interact with users. Some of important controls are-

- **Buttons**
  - **Submit Button**
  - **Reset Buttons**
  - **Push Buttons**
- **Check Boxes**
- **Radio Buttons**
- **Combo Boxes (Menus)**
- **Password field**
- **Text Input (Text Field, Text Area etc.)**

Creating Forms

❑ <FORM> ..... </FORM>

This Tag can be used in <BODY> section to create a form. It may contains many other input controls.

Commonly used Attributes are-

Attributes	Value	Description
Name	String	Specifies the name of the form
Action	Script or URL	It specifies the Script or email-ID or URL which will receive data (destination of form's data).
Method	Get Post Form	Specifies how the form-data is submitted. Get- form data is submitted as URL variables. Post-form data is submitted as HTTP post. Form- Opens a new form as per specified URL.
Example:	<Form Method=Get Action="www.google.com"> Commonly used method is- <Form Method=Post Action="mailto:abc@yahoo.com">	

Adding Input Controls on the Form

❑ <INPUT >

This Tag defines various input controls to get input from the user.

Attributes	Value	Description
Type	Text Radio Checkbox Password Submit Reset Button Image File	Defines a Text Box. Defines a Radio Button. Defines a Check Box Creates a Password input box. Creates a Submit Button. Creates a Reset Buttons. Creates a push buttons. Creates an image collector. Creates a file collector.
Name	String	It specifies the name of the input control.
Value	String/Val	Specifies the initial value for the control.
Size	value	Specifies the size of control.
Example:	<INPUT Type="Text" Name="St_name"> <INPUT Type="Submit" Name="MyButton" Value="Submit">	

Button, Image & File are not covered in the syllabus

Adding Input Controls on the Form

❑ <SELECT>… </SELECT>

This Tag creates a Drop-down Option menu from which user may select an option.

```
<SELECT Name="name" Size="Value>
  <OPTION Value="Value" [Selected]> Prompt </OPTION>
  ……..
</SELECT>
```

Example

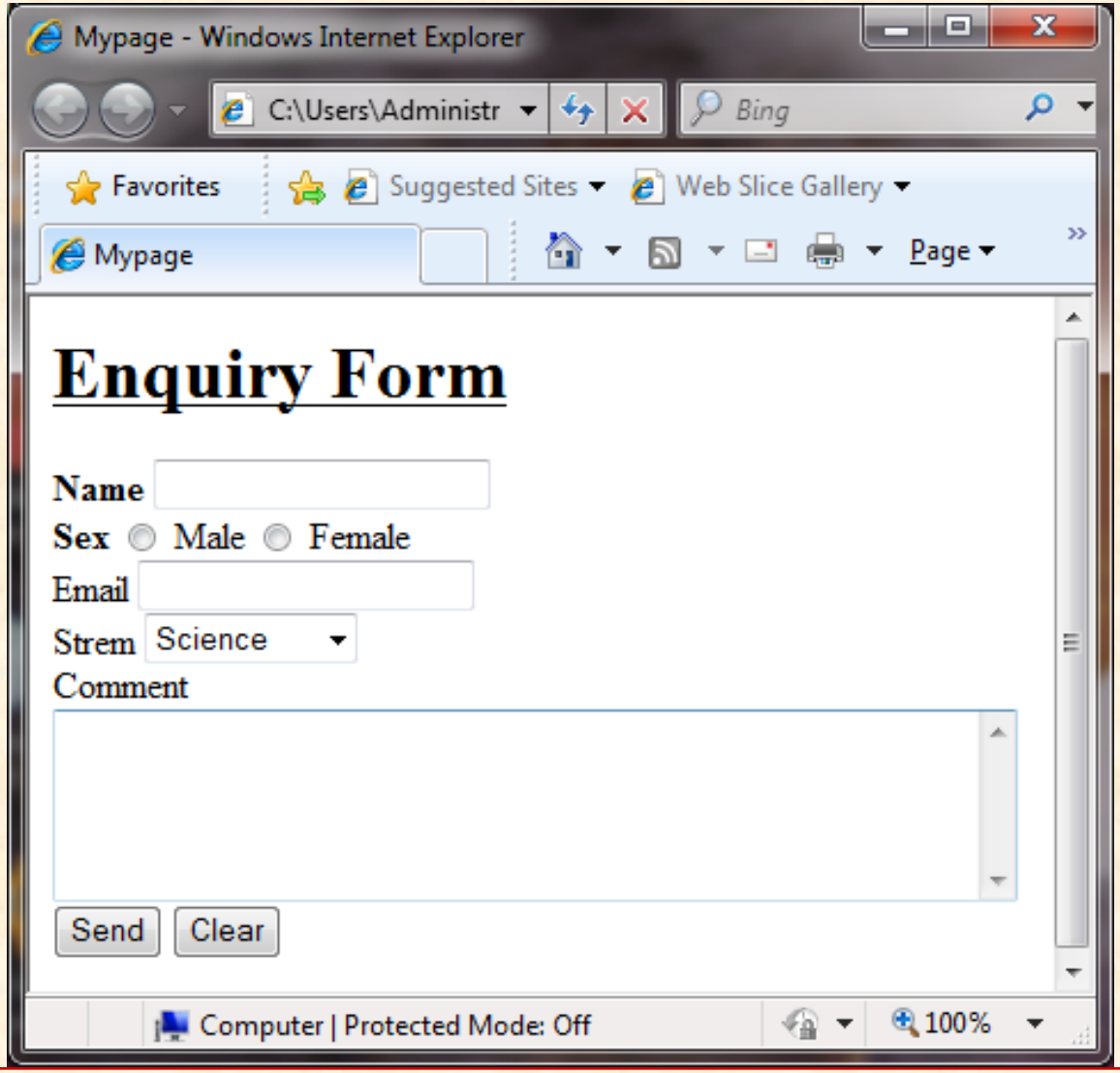
```
<SELECT Name="Stream">
  <OPTION Value="Science" > Science </OPTION>
  <OPTION Value="Commerce"> Commerce </OPTION>
  <OPTION Value="Arts" > Arts </OPTION>
</SELECT>
```

Not covered in the syllabus. Recommended for advanced reading.

Sample Form -Putting all together

```
<html>
<head><title> My page </title> </Head>
<body>
<H1> <U>Enquiry Form </u></h1>
<Form method=Post action= "maoilto:rkmalld@gmail.com">
<b>Name  </b> <Input type=Text name="st_name"><br>
<b>Sex </b>
      <Input type=Radio name="sex" value="Male"> Male
      <Input type=Radio name="sex" value="Female"> Female<Br>
</b>Email  </B><Input type=Text Name ="email“> <br>
Stream <SELECT name="stream">
        <Option value="Science"> Science </Option>
        <Option value="Commerce"> Commerce </OPTION>
        <Option value="Arts"> Arts </Option>
        </SELECT> <Br>
Comment<Br>
<TextAREA name="comment" Rows=5 cols=50> </TEXTAREA><br>
<INPUT Type=Submit Value ="Send">
<INPUT Type=Reset Value ="Clear">
</Form>
</body>
</html>
```

Sample Form


Mypage - Windows Internet Explorer
C:\Users\Administr
Bing
Favorites
Suggested Sites
Web Slice Gallery
Mypage
Page
Enquiry Form
Name
Sex Male Female
Email
Strem Science
Comment
Send
Clear
Computer | Protected Mode: Off
100%

What is XML?

- eXtensible Markup Language (XML) is also a text-based mark-up language which allows to create application specific structured documents.

The common feature of XML are-

- XML was designed to carry or share data, not to display.
- XML is self-Descriptive (Tags are not predefined).
- XML is free and Extensible (It is Meta Language).
- XML is platform Independent.
- XML may be used to create a new Mark-up Language.
- It is supported and recommended by W3C.

HTML v/s XML

HTML and XML both are different types of Mark-up language.

❑ HTML

- HTML formats documents and display it as web page.
- HTML Tags are pre-defined.
- HTML Tags may be Empty type.
- HTML Tags are not case sensitive.
- HTML documents are directly viewable in a Browser.

❑ XML

- XML documents carry data along with their description.
- XML Tags are not pre-defined. You may create your own Tags.
- XML Tags must be Container type.
- XML Tags are case sensitive.
- XML documents are viewable if its Style Sheet is available.

Why XML is used (Advantages)

XML offers the following advantages-

- XML is fully compatible to various application developed in Java or any other languages.
- XML is portable and can be used on any network or hardware like palmtop or PDAs.
- XML is Extensible i.e. You may create your own tags.
- XML is platform Independent.
- XML document can be stored in the database.
- XML can be used to share data within wide area networks. It is most suited to Internet.

Structure of XML Document System

A XML Document is intended to display data like HTML. An XML document system comprises the following-

- **Style Sheet (CSS or XSL)**

  It defines the style (How it would appear i.e. font, color, size alignment etc.) of the elements.

- **Grammar Structure (DTD)**

  It is optional component in XML document system and defines the Rules of the document (Tag definitions).

- **XML File**

  It contains and describes actual data.

How to Prepare XML Document

In order to prepare XML Document system, you may do the following steps-

- **Prepare XML document file as per problem**

  XML document is divided into two part.

  1. **The Prolog :**

     Preface or Introduction to the XML document. It includes An XML declaration, Comments etc.

  2. **The Data Instance :**

     It contains actual data.

- **Prepare a style-sheet file for XML file**

  It contains style rules that tells a browser how to display an XML document.

- **Link the XML file with Style sheet**

Example to create XML document.

❑ Expected View on Browser

Suppose we want to make an XML document which is displayed in browser as shown here

Computer Parts

Mother Board

Asus
P3B-F
1230.00

TFT Monitor

LG Electronics
995e
8500.00

Example to create XML document.

- **Preparation of XML (test.xml) document**

```
<?xml version="1.0" encoding = UTF-8"  ?>
<?xml-stylesheet type="text/css" href="parts.css"?>
<PARTS>
<TITLE> Computer Parts </TITLE>
   <PART>
   <PARTNAME>Mother Board</PARTNAME>
   <MANUFACTURER>Asus</MANUFACTURER>
   <MODEL>P3B-F</MODEL>
   <COST>1230.00</COST>
   </PART>
   <PART>
   <PARTNAME>TFT Monitor</PARTNAME>
   <MANUFACTURER>LG Electronics</MANUFACTURER>
   <MODEL>995e</MODEL>
   <COST>8500.00</COST>
   </PART>
</PARTS>
```

Prolog

Linking of .css (Style Sheet) file

Data Instance

Example to create XML document.

- **Preparation of StyleSheet (part.css) file**

```
PARTS          {display:block}
TITLE          {display:block; font-fanily:arial; color:#008000;
                font-weight:600; font-size:16 margine-top:12pt;
                text-align:center}
PART           {display:block}
PARTNAME       {display:block; font-fanily:arial; color:#008000;
                font-weight:400; font-size:14 margine-left:10pt;
                margin-top: 10pt}
MANUFACTURER {display:block; font-fanily:arial; color:#600060;
                font-weight:400; font-size:14 margine-left:30pt;
                margin-top: 10pt}
MODEL          {display:block; font-fanily:arial; color:#600060;
                font-weight:400; font-size:14 margine-left:30pt;
                margin-top: 10pt}
COST          {display:block; font-fanily:arial; color:#800000;
                font-weight:400; font-size:14 margine-left:30pt;
                margin-left: 5pt}
```

Summery of HTML Tags

Tags	Attribute
<HTML>……</HTML>	DIR , LANG
<HEAD> ….. </HEAD>	-
<TITLE> …… </TITLE>	-
<BODY> ……</BODY>	Background, Bgcolor, Text, Vlink, Alink, Leftmargin, Topmargine
<H1-6> …. </H1-6>	ALIGN
<P> … </P>	ALIGN
<B>..</B> <I>..</I> <U>..</U> <TT>..</TT> _{..} ^{..}	-
<FONT<..</FONT>	SIZE, COLOR, FACE
<A>..</A>	HREF
<BASEFONT>	SIZE, COLOR, FACE
 	-
<HR>	SIZE, COLOR, WIDTH, NOSHADE
<IMG>	SRC, WIDTH, HEIGHT, BORDER
<!….>	-

Summery of HTML Tags

Tags	Attribute
<OL>… </OL>	TYPE, START
<UL>…. </UL>	TYPE
<LI>….. </LI>	-
<TABLE> .. </TABLE>	BACKGROUND,BGCOLOR, ALIGN, BORDER, CELLSPACING, CELLPADDING, HEIGHT, WIDTH
<TD>….. </TD>	BACKGROUND, BGCOLOR, ALIGN, VALIGN, ROWSPAN, COLSPAN, WIDTH
<FORM> …. </FORM>	NAME, ACTION, METHOD
<INPUT> …. </INPUT>	TYPE, NAME, VALUE Type may be- TEXT- Text Box PASSWORD – Password Field RADIO – Radio Button CHECKBOX – Checkbox control SUBMIT- Submit button RESET- Reset/Clear Button