CHAPTER 11:

HTML -I [Basics HTML Elements]

Informatics Practices

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>
   <BODY>
      □ □ □ □ □
.
   </BODY>
</HTML>
```

```
<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 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) etc.
Example:		<HTML Lang=EN DIR = LTR>

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 ..>**

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. <p> Hello! Every body □ ..
 How are you</p>

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**

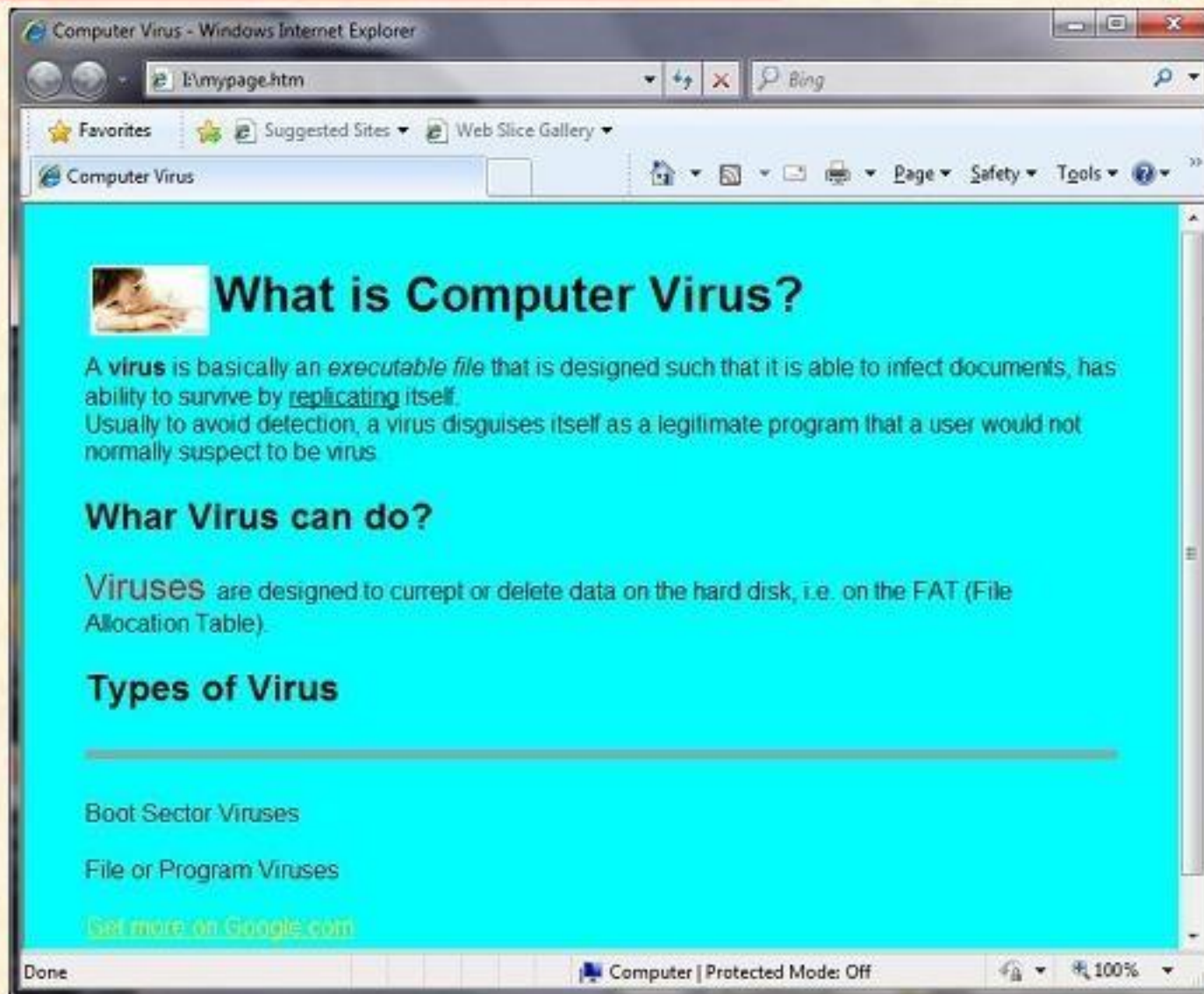This tag displays specified image file (.jpg, .gif, .bmp, .png etc.) with defined size (width and height)

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.
Example:	<IMG SRC="myphoto.jpg" Width = 200 Height=300>	

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

Summery of 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>	
<BASEFONT>	SIZE, COLOR, FACE
<HR>	SIZE, COLOR, WIDTH, NOSHADE
<IMG>	SRC, WIDTH, HEIGHT
<!.. ..>	