UNIT-I HTML Basics

1. HTML means Hyper Text Markup Language. HTML is the language of the Internet used to create Web pages of web sites.
2. HTML is a set of tags or commands used to create HTML document.
3. HTML file display images, text, different font etc.
4. HTML has same features of a basic word processing program and it is capable of using graphics.
5. HTML is used to design various homepages and hypertext documents of web pages.
6. HTML document allows information to be presented in a multimedia format with hyperlinks.
7. Hyperlink is used to link between pages.

STRUCTURE OF HTML DOCUMENT:

1. HTML files are normal text files, usually have the extension of .htm or .html.
2. HTML is not a case sensitive language.
3. HTML instructions divide the text of a document into blocks called elements.
4. An HTML document has two parts.
    a. Head part
    b. Body part

<HTML> ⟶ Indicates the starting of a HTML Document.

<HEAD> — Head Tag contains information about

<TITLE> Title of the Web Page</TITLE> — Web.

</HEAD>

⟶ Title Tag contains web page title.

<BODY> — BODY tag contains the content of the web page.

Content of the page.

</BODY>

</HTML> ⟶ Indicates the ending of a HTML Document.

HEAD: The head element contains title and meta data of a web document.

BODY: The body element contains the information that display on a web page.

1. The first tag is <html>. This tag tells your browser that this is the start of an HTML document. The last tag is </html>. This tag tells your browser that this is the end of the HTML document.
2. The text between the <head> tag and </head> tag is header information. Header information is not displayed in the browser window.
3. The text between the <title> tag and </title> tag is the title of your document. The title is displayed in your browser's title bar.

4. The text between the <body> tag and </body> is the text that will be displayed in your browser.

TYPES OF TAGS:

There are two types of tags in HTML. They are

1. Paired Tag:
   A Tag which has both opening and closing tag is called as Paired Tag.
   Example: Welcome
2. Un-Paired Tag:
   A Tag which doesn't have its companion tag is called as Un-Paired Tag.
   Example:
, <hr>

HTML supports 6 levels of heading tags.

<h1> - Level 1 heading

<h2> - Level 2 heading

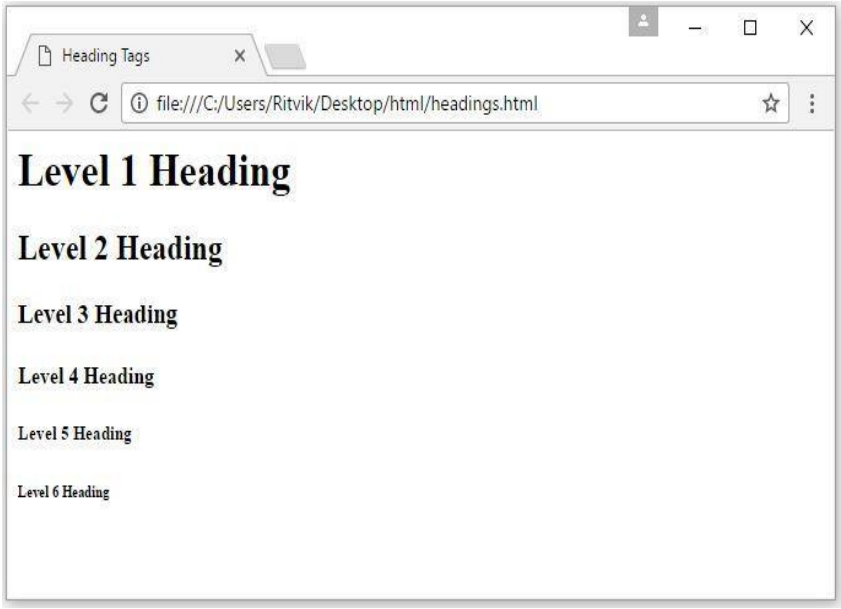
<h3> - Level 3 heading

<h4> - Level 4 heading

<h5> - Level 5 heading

<h6> - Level 6 heading

```
<HTML>
<HEAD>
<TITLE> Heading Tags </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>
```



TEXT FORMATTING TAGS:

Text formatting elements are used to change the actual presentation styles of text to make the text bold, italic, underlined etc.

These elements are used to format texts of a page and present them effectively on the user's screen. All browsers support these elements.

The following are the important text formatting tags.

<B>	Specifies that the text written within <B> … </B> tags should be displayed in boldface.
<I>	Specifies that the text written within <I> … </I> tags should be displayed in Italic font style.

<U>	Specifies that the text written within <U> … </U> tags should be underlined.
<BIG>	Specifies that the text written within <BIG> … </BIG> tags should be displayed in bigger font size than the current font size.
<SMALL>	Specifies that the text written within <SMALL>…</SMALL> tags should be displayed in smaller font size than the current font size.
<STRIKE>	Specifies that the text written within <STRIKE> … </STRIKE> tags should be displayed with a horizontal line striking through the text.
<SUB>	Specifies that the text written within _… tags should be displayed as subscript by using a smaller font size.
<SUP>	Specifies that the text written within […] tags should be displayed as superscript by using a smaller font size.

```
<HTML>
<HEAD>
<TITLE>Text Formatting Tags</TITLE>
</HEAD>
<BODY>
<B>Using Bold Tag</B><BR>
<I>Using Italic Tag </I><BR>
<U>Using Underline Tag</U><BR>
<BIG>Using Big Tag</BIG><BR>
<SMALL>Using Small Tag </SMALL><BR>
<STRIKE>Using STRIKE Tag</STRIKE><BR>
Using of Subscript Tag : X<SUB>1</SUB> , X<SUB>2</SUB><BR>
Using of Superscript Tag : X<SUP>2</SUB> , Y<SUP>3</SUB><BR>
</BODY>
</HTML>
```

FONT TAG:

The <font> tag alone doesn't provide any real functionality, but with the help of a few attributes this tag us used to change the style, face, size and color of HTML text elements.

Attributes of font Tag:

1. Size: Changes the size of text. The value must be between 1 and 7.
2. Color: Changes the color of the text.
3. Face: Changes the font type of the text.

Syntax: <FONT SIZE=value COLOR=color FACE="font-names">

Example: <FONT SIZE=3 FACE="Times new Roman" COLOR=red> Hello World</FONT>

IMAGE TAG:

1. Images are inserted in web documents using the IMG tag and this tag has no closing tag.
2. The <IMG> tag requires the location of the image file.
3. <IMG> tag alone doesn't place an image in the HTML document. It requires another attributes SRC, HEIGHT and WIDTH.

Syntax:

<IMG SRC="URL/Path of the image file" WIDTH=value HEIGHT=value>

Example:

<IMG SRC="adam.jpeg" WIDTH=300 HEIGHT=300>

ANCHOR TAGS OR LINK TAG:

1. HTML allows linking to other HTML documents as well as images.
2. Hyperlinks appear blue in color by default.
3. When the mouse cursor is placed over it, the standard arrow shaped mouse cursor changes to the shape of a hand.

LINK – changes the default color of a hyperlink to whatever color is specified with this tag.

ALINK – changes the default color of a hyperlink that is activated to whatever color is specified with this tag.

VLINK – changes the default color of a hyperlink that is already visited to whatever color is specified with this tag.

Syntax: <A HREF="target file name"> Clickable Text </A>

Example: <A HREF=https://www.google.com>Click here for Google</A>

LISTS IN HTML:

1. Lists are the index of items to be appeared in web pages in a specified format.
2. There are three types of lists
   a. Ordered Lists

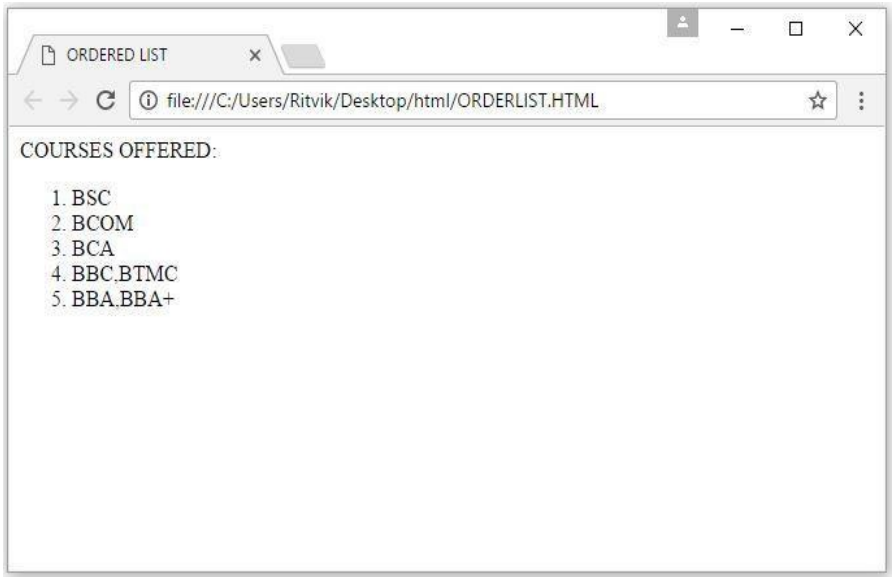
b. Unordered Lists
c. Definition Lists

<UL> </UL>	Specifies an Unordered List.
<OL> </OL>	Specifies an Ordered List.
<LI> </LI>	Specifies a list item.
<DL> </DL>	Specifies a Definition List.
<DT> </DT>	Specifies the term in a description list.
<DD> </DD>	Specifies description of term in a description list.

ORDERED LIST:

1. The ordered list is also known as the Number List, I which each list item has a number in front of it.
2. To create ordered list use <OL> tag.

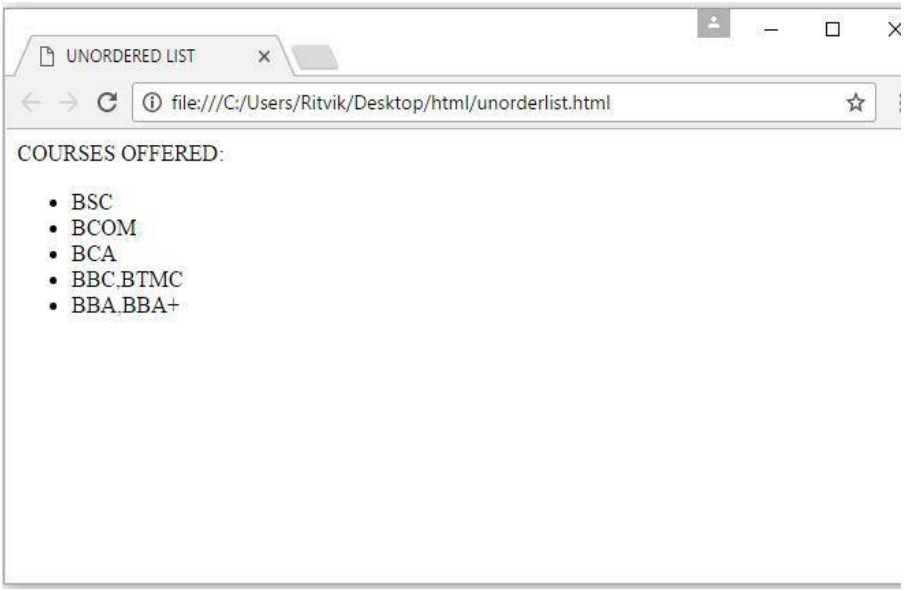
```
<HTML>
<HEAD>
<TITLE>ORDERED
LIST</TITLE>
</HEAD>
<BODY>
COURSES
OFFERED:
<OL>
<LI>BSC
<LI>BCOM
<LI>BCA
<LI>BBC,BTMC
<LI>BBA,BBA+
</OL>
</BODY>
</HTML>
```



UNORDERED LIST:

1. The unordered list is created using <UL> tag.
2. Each list item is displayed with bullets if we use unordered lists.

```
<HTML>
<HEAD>
<TITLE>UNORDERE
D LIST</TITLE>
</HEAD>
<BODY>
COURSES
OFFERED:
<UL>
<LI>BSC
<LI>BCOM
<LI>BCA
<LI>BBC,BTMC
<LI>BBA,BBA+
</UL>
</BODY>
</HTML>
```



DEFINITION LIST:

1. A definition list consists of name-value groups.
2. Definition lists are intended for groups of terms and definitions, meta data topics and values.

<DT> …. </DT> : A name in a definition list

<DD> …. </DD> : A value in a definition list

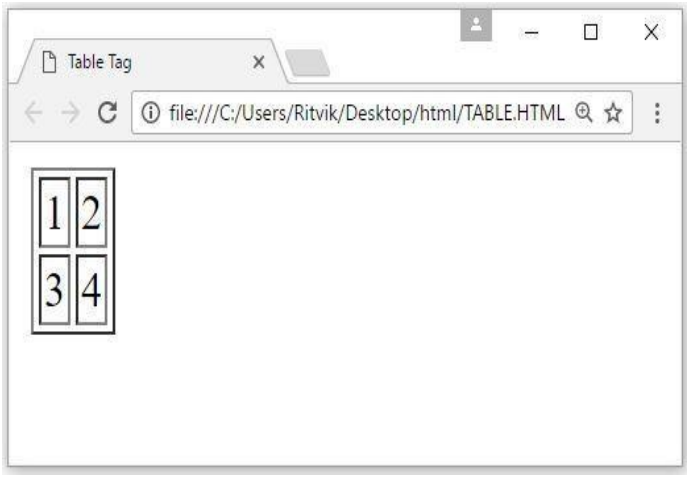
TABLE TAG:

An HTML table is a rectangular grid of rows and columns on a web page, to which you can enter all kinds of information, including text, numbers, links, and even images.

<TABLE> </TABLE>	Specifies a table
<TR> </TR>	Specifies a row in the table.
<TD> </TD>	Specifies the data in a cell of the table.
<TH> </TH>	Specifies header cell in the table.

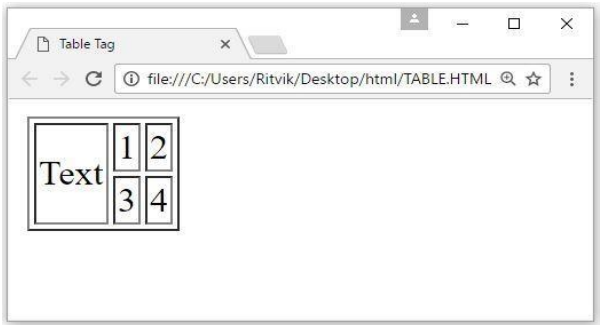
1. The BORDER attribute in <TABLE> tag tells the visibility of table border.
2. The ROWSPAN attribute in <TR> tag is used to merge the cells vertically.
3. The COLSPAN attribute in <TR> tag is used to merge the cells horizontally.
4. The CELLPADDING attribute in <TABLE> tag specifies the distance between the cell content and cell borders.
5. The CELLSPACING attribute in <TABLE> tag specifies the distance between the cells in a table.

```
<HTML>
<HEAD>
<TITLE>Table Tag</TITLE>
</HEAD>
<BODY>
<TABLE BORDER=1>
<TR><TD>1</TD><TD>2</TD></TR>
<TR><TD>3</TD><TD>4</TD></TR>
</TABLE>
</BODY>
</HEAD>
```

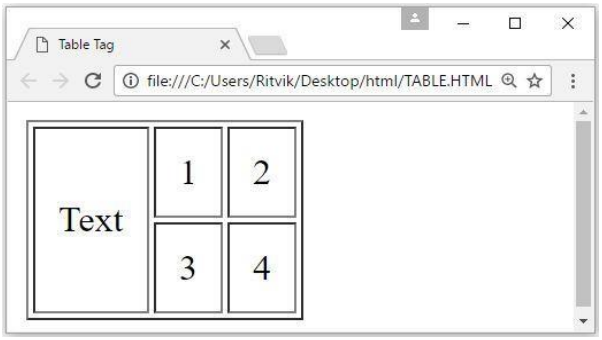



```
<TABLE BORDER=1>
<TR>
<TD COLSPAN=3>Enter Text</TD>
</TR>
<TR>
<TD>1</TD><TD>2</TD><TD>3</TD></TR>
</TABLE>
```

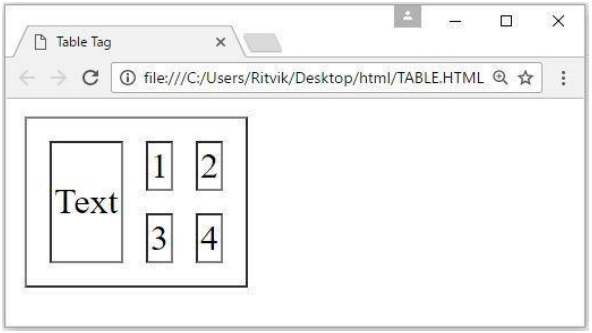
```
<TABLE BORDER=1>
<TR><TD
ROWSPAN=3>Text</TD><TD>1</TD><TD>2
</TD></TR>
<TR><TD>3</TD><TD>4</TD></TR>
</TABLE>
```




```
<TABLE BORDER=1 CELLPADDING=10>
<TR><TD
ROWSPAN=3>Text</TD><TD>1</TD><TD>2
</TD></TR>
<TR><TD>3</TD><TD>4</TD></TR>
</TABLE>
```




```
<TABLE BORDER=1 CELLSPACING=10>
<TR><TD
ROWSPAN=3>Text</TD><TD>1</TD><TD>2
</TD></TR>
<TR><TD>3</TD><TD>4</TD></TR>
</TABLE>
```



FRAMES IN HTML:

1. Frames divide a browser window into two or more document windows, each displaying a different document, or a different part of the same document.
2. Frames in an HTML document can cause a web page to appear to be divided into multiple, scrollable regions.
3. Each frame can be assigned a name, a source document locator, dimensions, border alignment and decoration, scroll and resize etc.
4. Frames in HTML documents are created and controlled through the structure of three element types:
   <FRAMESET> →Define a set of frames
   <FRAME> →Define a sub window (a frame)
   <NOFRAME> →Defines a noframe section for browsers that do not handle frames

Syntax for FRAMES:

```
<FRAMESET cols=”50%,50%”>
        <FRAME name=”frame1”>
        <FRAME name=”frame2”>
</FRAMESET>
```

Elements of FRAMESET:

1. ROWS: specifies the number of rows and their height in either pixels, percentages. Default is 100%.
2. COLS: specifies the number of columns and their height in pixels, percentages. Default value is 100%.
3. FRAMEBORDER: determines if there should be 3D borders between the frames which should be either yer(1) or no(0).
4. FRAMESPACING: specifies space between the frames in integer.
5. BORDERCOLOR: specifies the color of border in the frameset in '#rrggbb'.

Elements of FRAME:

1. NAME: assigns a name to a frame.
2. SRC: define the path or full URL to the HTML page to appear in a named frame.
3. SCROLLING: specifies whether a frame should be scrollable or not. (auto, yes, no)
4. FRAMEBORDER: specifies whether a frame should have a border or not.
5. MARGINWIDTH: specifies the margin, in pixels, between the frame's contents and it's left and right margins.
6. MARGINHEIGHT: specifies the margin, in pixels, between the frame's content and it's top and bottom margins.
7. NORESIZE: making individual frames non-resizable.
8. TARGET: used to direct the new page to another named frame.
   _self: a document is loaded into the same frame.
   _parent: a document is loaded into the same frameset window.
   _top: a document is loaded into the full area of the browser window and all frames will be removed.
   _blank: a document is loaded into a new and completely separate window.

framedemo.html

```
<html>
<head>
  <title>Frame Demo</title>
</head>
<frameset rows="150,850">
  <frame name="titles" src="titles.html">
<frameset cols="150,850">
  <frame name="links" src="links.html">
  <frame name="destination">
</frameset>
</frameset>
</html>
```

titles.html

```
<html>
<head>
  <title>Heading Frame</title>
</head>
<body bgcolor=gray>
<center>
<h1>HTML Tags</h1>
</center>
</html>
```

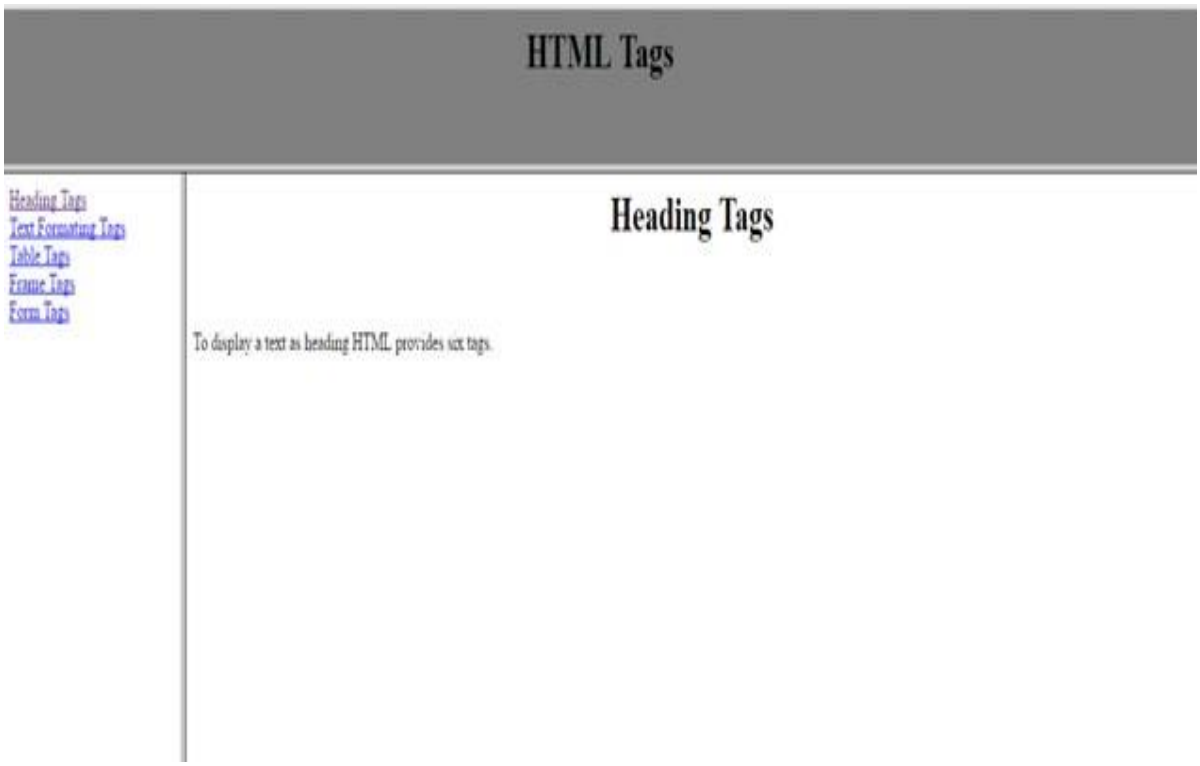
links.html

```
<html>
<head><title>Links</title></head>
<body>
<a href="heading.html" target="destination">Heading Tags</a><br>
<a href="text.html" target="destination">Text Formating Tags</a><br>
<a href="table.html" target="destination">Table Tags</a><br>
```

```
<a href="frames.html" target="destination">Frame Tags</a><br>
<a href="form.html" target="destination">Form Tags</a><br>
</body>
</html>
```

NOFRAMES: If your browser does not support frames then NOFRAME section will be displayed on the web page.

```
<html>
<head><title>Frames Set with Header</title></head>
<FRAMESET rows="45,*">
<FRAME name="top" scrolling="no" noresize target="main" src="form1.html">
<FRAME name="main" src="form2.html" scrolling="auto">
<NOFRAMES>
<BODY>
<P>This page uses frames, but your  browser doesn't support them.<br>
</BODY>
</NOFRAMES>
</FRAMESET>
</HTML>
```



ADVANTAGES:

1. The most obvious feature of frames is the ability to keep one part of the page static while changing another part.
2. Frames can also help reduce bandwidth and server load, because the same content does not need to loaded every time a new page is visited.

DISADVANTAGES:

1. The browser's back button does not work if a web page designed using frames.
2. Frames reduce the amount of usable space on the web page.
3. The URL in the address bar will not change when you navigate to different links.
4. It is not possible to bookmark a web page since URL will not change.
5. Frames create problems with printing.

FORMS

1. Forms are used to add an element of interactivity to a web site. Usually forms are used to let the user send information back to the server.
   <FORM name=”form1” action=”URL” method=”post/get”> . . . </FORM>
2. The action attribute specifies the name and location of a CGI script that will be used to process the data.
3. Data can be sent in one of two ways: post or get. Get is used to retrieve information from a server and post is used to send information to a server.
4. Forms are a mechanism that allow the user to type information into fields on a browser screen and submit to a web server.
5. Forms provide an interface for collecting, displaying, and delivering information, and are used as a key component in HTML.
6. The HTML forms are created using a <form> and </form> dependent tag. All the form controls included in <input> elements should be enclosed between the <form> and </form> tag.
7. A webpage contain more than one HTML forms. But Forms are not nested in HTML it means user is not allowed to implement one form in another form.
8. The basic structure of the form is created using the following code:
   <form action=”URL” method=”post/get”>
   <input type=**control based on user choice**>
   </form>

ELEMENTS OF FORM Tag:

1. Elements are the sub tags implemented between the starting and closing of the root element.
2. HTML <form> support with many elements which plays a vital role in creating and executing user defined structure for processing the information.
3. The following are the sub element of <form> tag which supports with different controls to accept and submit message from html forms.
   a. <INPUT>
   b. <SELECT>
   c. <TEXTAREA>
   d. <FIELDSET>

INPUT Tag:

1. The primary element of HTML FORM which helps the user to create various controls using its **type** attribute.
2. It is an independent tag, which don’t have a corresponding closing tag.

<input type=

1. Text
2. Password
3. Checkbox
4. Radio
5. Reset
6. Submit
7. Button
8. File
9. Image

Name, value, size, maxlength, checked, style, align, type are the common attributes of input element.

TEXT BOX:

- A rectangular shaped field in which a user can enter text is considered as text box.
- TYPE and NAME attributes are required for the input tag. The name attribute specifies the name of the parameter that will be assigned as the value that the user enters into the field.
- The SIZE attribute specifies that the text box is to be how many characters wide and the MAXLENGTH attribute specifies that the most characters a user can enter into the field.

Example:

Enter your Name: <input type=”text” name=”T1” size=”30” maxlength=”50”>

PASSWORD:

- The password input type creates a single line empty text box where the user can enter text into it.
- It is very similar to text field.
- The difference is the display structure of the text is changed into “stars” or “dots”.

Example:

Enter password: <input type=”password” size=”25”>

CHECKBOX:

- A checkbox is represented by square icon, which is used for multiple selections.
- The user can select or deselect by clicking on it.
- Checkbox are often used in series, so that a user can easily specify all of their preferences.

Example:

Select Your Qualification:
<input type=”checkbox”>S.S.C
<input type=”checkbox”>Intermediate
<input type=”checkbox”>Graduation
<input type=”checkbox”>Post Graduation

RADIO BUTTONS:

- Radio buttons are similar to check box but these are displayed in circular format.
- These radio buttons can be implemented in 2 ways.
  a. Which is used for multiple selection as checkbox
  b. Group selection
- In group selection all radio buttons have the same name, so that a user can select only one element.

Example: <input type=”radio” name=”gender” value=”male”>Male
<input type=”radio” name=”gender” value=”female”>Female

BUTTONS:

- There are two types of buttons. Predefined and user defined where predefined are considered as Action Buttons.
- User defined button helps the user to create his own control button and fix the action using script code.
  a. As the type of input tag
     <input type=”button” value=”Login”>
  b. As the element of form tag
     <button value=”Login”>
- There are two types of action buttons. They are **SUBMIT** and **RESET**. When the user clicks on submit all the form data will be sent for process.

  <input type=”submit” value=”submit”>

- The reset button allows the user to clear all the entered data in the form.

  <input type=”reset” value=”clear”>

FILE:

- This filed is used to include more than one file while submitting the form.
- After the form is processed the given files are stored into the disk of the web server.
- That is the reason file input is often known as “File Upload”.

  <input type=”file”>

IMAGE:

- The image can be used as a submit button or to collect data from the image itself.

<input type=”image” src=”submit.gif” alt=”Submit” width=”48” height=”48”>

SELECT:

- The select tag allows to choose any subset of items from a group by using select tag<SELECT> with corresponding ending tag</SELECT>.
- The radio button and checkboxes will occupy a lot of screen space where as select tag does not take.
- The items in a given select tag are usually rendered in the style of a pop-up menu, indicated with in <OPTION></OPTION> tag. The closing tag is optional.
  Select your Branch:
  <select name=”branch”>
  <option> Bsc
  <option> BCA
  <option> BCom
  <option> BBC
  <option> BBA
  </select>
- You can create a group element so that the multiple blocks for multiple sub items can be created by using <optgroup></optgroup> tag a dependent element.
  <select name=”branch”

```
<optgroup label=”BSc”>
        <option value=”mpcs”>MPCS
        <option value=”mscs”>MSCS
        <option value=”mecs”>MECS
</optgroup>
<optgroup label=”BCom”>
        <option value=”general”>General
        <option value=”computers”>Computers
</optgroup>
</select>
```

TEXTAREA:

- The <textarea> tag defines a multi-line text input control. A text area can hold any number of characters, and the text renders in a fixed width font.
- The size of a text area can be specified by the cols and rows attributes.

```
<textarea name=”address” rows=”20” cols=”80” maxlength=”2000” wrap>
Enter Text to be displayed.
</textarea>
```

- <FILEDSET> and <LEGEND> are used to draw the border for the specified form with a title in order to identify each form separately in a single web page.

```
<FIELDSET>
<LEGEND>Personal Information<LEGEND>
        |
        |
        |
</FILEDSET>
```

```
<html>
<head><title>Registration Form</title></head>
<body>
<u><h1 align=center>Registration Form</h1></u>
<form>
<table align=center><tr><td>
<fieldset><legend>Personal Details</legend>
<table>
<tr><th>First Name</th><td><input type="text" name="fname"></td></tr>
<tr><th>Middle Name</th><td><input type="text" name="mname"></td></tr>
<tr><th>Last Name</th><td><input type="text" name="lname"></td></tr>
<tr><th>User ID</th><td><input type="text" name="uid"></td></tr>
<tr><th>Password</th><td><input type="password" name="pwd"></td></tr>
<tr><th>Confirm Password</th><td><input type="password" name="cnfpwd"></td></tr>
<tr><th>DOB</th><td>
<select><option>Day<option>1<option>2<option>3</select>
<select><option>Month<option>Jan<option>Feb<option>March</select>
<select><option>Year<option>1989<option>1990<option>1991<option>1992</select></td></tr
>
<tr><th>Gender</th><td><input type="radio" name="gender" value="male">Male
                <input type="radio" name="gender" value="female">Female  </td></tr>
```

```
</table>
</fieldset>
</td></tr>
<tr><td>
<fieldset><legend>Address</legend>
<table>
<tr><th>Present Address</th><th>Permanent Address</th></tr>
<tr><td><textarea rows=5 cols=30></textarea></td><td><textarea rows=5
cols=30></textarea></td></tr>
<tr><td colspan=2 align="center"><input type="button" value="Submit"><input
type="reset"></td></tr>
</table> </fieldset> </td></tr> </table> </form> </body> </html>
```

Registration Form

Personal Details

First Name	
Middle Name	
Last Name	
User ID	
Password	
Confirm Password	
DOB	Day ▾ Month ▾ Year ▾
Gender	Male Female

Address

Present Address	Permanent Address

Submit Reset

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