

## **UNIT-2**

### **• *BASICS OF HTML & ADVANCE HTML***

- FUNDAMENTALS OF HTML & BASIC TAGS & ATTRIBUTES
- FORMATTING TAGS
- LIST TAGS
- LINK TAG
- ADDING IMAGES
- TABLE TAG
- FRAME TAG
- INTRODUCTION OF HTML 5 & SYNTAX
- HTML 5 DOCUMENT STRUCTURE
- ATTRIBUTES OF HTML 5
- WEB FORMS
- AUDIO & VIDEO TAG
- CANVAS TAG
- INSERTING SPECIAL CHARACTERS

## ➤ WHAT IS HTML? EXPLAIN ELEMENTS AND STRUCTURE OF HTML (1 / 2 / 3 M)

### DETAILS

#### 1) UNDERSTANDING HTML

- HTML was originated by Tim Berners-Lee in 1993.
- HTML developed a few years ago as a subset of *SGML*.
- *Standard Generalized Mark-up Language* which is a higher-level mark-up language.
- Any HTML document is also valid for SGML.
- HTML is a Hyper Text Markup Language that is used to develop web pages.
- HTML is not a programming language like C, C++ and Java etc.
- It is a markup language that is design to be flexible enough to display text and other elements like graphical on a variety of views.
  - The HTML documents consist of special Tags.
- These Tags are run on web browser like Internet Explorer, Netscape Navigatoretc.

#### 2) BASIC ELEMENTS OF HTML

- Basic elements of HTML are TAGS , ATTRIBUTES , URL

##### TAG

- The basic building blocks of HTML.
- Tags are the part of HTML that tells a webbrowser How to display Text and Graphics.
- A tag is always enclosed in angle brackets and most tags come in pairs with an opening tag and closing tag.( < > </>)
- The closing tag is same as opening tag but start with forward slash.
- You can create a tag in either uppercase or lowercase because HTML is not acase sensitive.
- **For Example** <Title> Welcome To HNS </Title>
- Here <Title> is a opening tag and </Title> is closing tag.

##### ATTRIBUTES

- Attributes are used with Tag that provides the accurate information.
- For Example <IMG Src ="D:\Picture\First.jpg">
- Here <IMG> tag tells a web browser to display a graphical image but which image? Then SRC attribute give picture file path information and display that picture in the browser.

### **URL (Uniform Resource Locator)**

- Web resources are access by a address known as UniformResource Locator (URL).

### **3) Basic Tags and AttributesHTML (outermost tag)**

- All HTML documents should start with the <HTML> tag and end with the </HTML> tag.

Syntax

<HTML>...</HTML>

#### **Example**

The following example begins and ends a short document with the HTML tag.

<HTML>

<BODY>

This is a small HTML file.

</BODY>

</HTML>

### **HEAD (document header)**

- The HEAD tag defines an HTML document header.
- You should put all header information between the <HEAD> and </HEAD> tags.
- The HEAD tag can contain TITLE, BASE, SCRIPT, STYLE, and LINK tags.

#### **Syntax**

<HEAD>...</HEAD>

#### **Example**

<HEAD>

<TITLE>HNS</TITLE>

</HEAD>

### **BODY (main content of document)**

- The BODY tag specifies the main content of a document.
- You should put all content that is to appear in the web page between the <BODY> and </BODY> tags.

#### **Syntax**

<BODY BACKGROUND="*bgURL*"

BGCOLOR="*color*" TEXT="*color*" >

-----

</BODY>

### **Title (Document Title) :**

- The TITLE tag specifies the title of the document.
- This title appears in the title bar of the browser window.
- If no title is specified, the default title depends on the browser being used.
- This tag is used within HEAD tag.

#### **Example**

<HTML>

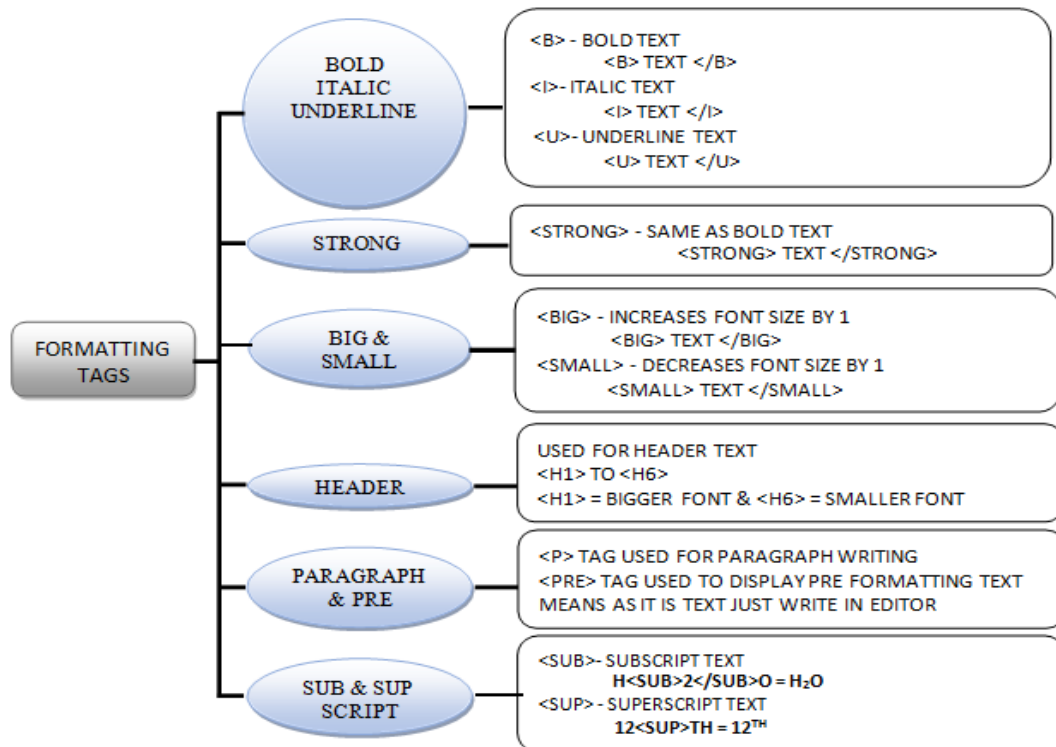
<HEAD>

<TITLE>First program in html</TITLE>

</HEAD>

</HTML>

**Q- EXPLAIN FORMATTING TAGS. (1 OR 2 M EACH)(WITH EXAMPLE 3M)**



## DETAIL

### **P (Paragraph)**

- The P tag displays a paragraph.
- All P elements start on a new line and are usually preceded by extra space.

#### *Syntax*

<P>..... </P>

### ALIGN

- LEFT aligns the paragraph flush left (the default).
- CENTER centers the paragraph.
- RIGHT aligns the paragraph flush right.

### **PRE (preformatted text, fixed-width font)**

- The PRE tag displays preformatted text in a fixed-width font.
- The PRE element displays all white space and line breaks exactly as they appear inside the <PRE> and </PRE> tags.

#### **Syntax:**

<PRE>.....

</PRE>

### Example:

<PRE>9/20/97 8:00 a.m.Room 218 </PRE>

### Output:

9/20/97 8:00 a.m.Room 218

### **B (boldface)**

The B tag displays text in boldface type.

### Syntax

<B>...</B>

### Example

My preferred browser is <B>Netscape Navigator</B>.

### Output

My preferred browser is **Netscape Navigator**.

### **U (Underline)**

- a. The U tag underlines the text it encloses.
- b. Gaps between words in the enclosed text are also underlined.

### Syntax

<U>...</U>

### Example

<U>All the text in this paragraph is underlined.</U>

### Output

All the text in this paragraph is underlined

### **I (Italic)**

- a. The I tag displays text in italic.

### Syntax

<I>...</I>

### Example

Putting text in <I> italic </I> can slant its meaning.

### Output

Putting text in *italic* can slant its meaning.

### **TT (Typewriter Font)**

- The TT tag displays text in the fixed-width font.

### Syntax

<TT>...</TT>

### **STRIKE (strikeout type)**

- The STRIKE tag displays text with a line (strike) through it.
- The STRIKE tag has the same effect as the S tag.

#### **Syntax**

<STRIKE>...</STRIKE>

#### **Example**

<STRIKE> Hello How Are You ? </STRIKE>

#### **Output**

~~Hello How Are You?~~

### **SUB (subscript)**

- The SUB tag displays text as a subscript.
- A subscript appears slightly below the baseline (bottom edge) and in a smaller font.

#### **Syntax**

<SUB>...</SUB>

#### **Example**

The chemical notation for water is H<SUB>2</SUB>O.

#### **Output**

The chemical notation for water is H<sub>2</sub>O.

### **SUP (superscript)**

- The SUP tag displays text as a superscript.
- A superscript appears slightly above the top of the preceding text and in a smaller font.

#### **Syntax**

<SUP>...</SUP>

#### **Example**

If Einstein was right, then E=mc<SUP>2</SUP>.

#### **Output**

If Einstein was right, then E=mc<sup>2</sup>.

### **BIG (bigger font size)**

- The BIG tag increases the font size from its current value by 1.
- It has the same effect as using the FONT tag with a SIZE value of +1.

#### **Syntax**

<BIG>...</BIG>

### **STRONG (strong emphasis)**

- The STRONG tag displays text with a strong emphasis.
- Netscape Navigator uses boldface to indicate strong emphasis.

#### **Syntax**

<STRONG>...</STRONG>

#### **Example**

<STRONG>CAUTION!</STRONG>Do not press the reset key

#### **Output**

**CAUTION!** Do not press the reset key

### **SMALL (smaller font size)**

- The SMALL tag reduces the font size from its current value by 1.
- It has the same effect as using the FONT tag with a SIZE value of -1.

#### **Syntax**

<SMALL>...</SMALL>

### **Heading tag:- (H1 to H6) tag:-**

- HTML headings are defined with the <h1> to <h6> tags.

<h1> defines the most important heading. <h6> defines the least important heading.

#### **Ex.**



```
<html>
<body>
<h1>Heading 1</h1>
<h2>Heading 2</h2>
<h3>Heading 3</h3>
<h4>Heading 4</h4>
<h5>Heading 5</h5>
<h6>Heading 6</h6>
</body>
</html>
```

## **Output:-**

**Heading 1**

*Heading 2*

**Heading 3**

**Heading 4**

*Heading 5*

Heading 6

## **Font (font color, face, and size)**

- The FONT tag lets you change the color, size, and typeface (font family) of the font.
- All text between the <FONT> and </FONT> tags is displayed with the specified font characteristics.

### **Syntax**

<FONT

COLOR="*color*"

FACE="*fontlist*"

SIZE="*number*">

...

</FONT>

### Example

```
<FONT      face="timesroman,serif"      size=18  
      color=red>
```

Red font that has a size of 18 points.

</font>

## **Q. EXPLAIN LIST TAGS WITH EXAMPLE. (3 OR 5M)(IMP)**

### DETAILS

#### **OL ( Ordered List )**

- The OL tag displays an ordered, or numbered, list.
- The default numbering style is determined by the browser, but you can use the your style.
- tag's TYPE attributes to change the numbering sequence and numbering style.
- Use the LI tag to designate the individual list items.

#### **Syntax**

<OL

START="value"

TYPE="A"|"a"|"I"|"i"|"1" >

START="value"

</OL>

#### **START="value"**

- Indicates the starting number for the list.
- The number must be a positive integer.

#### **TYPE**

- Defines the type of numbering sequence used for each list item.
- The value can be one of the following:
  - **A** specifies a sequence of uppercase letters
  - **a** specifies a sequence of lowercase letters
  - **I** specifies a sequence of uppercase Roman numerals
  - **i** specifies a sequence of lowercase Roman numeral
  - **1** specifies a sequence of numbers.

#### **Example**

The following example uses the LI tag to define three list elements in an ordered list. The numbers are shown as roman numerals and the first item has the number three.

```
<OL START="3" TYPE="I">
```

```
<LI> Use a text editor or Netscape Composer to create your HTML file.
```

```
<LI>Put the HTML files on a web server.
```

```
<LI> Test the files by viewing them in a web browser
```

```
</OL>
```

### Web Browser Display Following Output

- III. Use a text editor such as Netscape Composer to create your HTML file.
- IV. Put the HTML files on a web server.
- V. Test the files by viewing them in a web browser.

### **UL (Unordered List)**

- The UL tag displays a bulleted list.
- You can use the tag's TYPE attribute to change the bullet style.
- Use the LI tag to designate the individual list items in the list.

#### **Syntax**

```
<UL TYPE="CIRCLE"|"DISC"|"SQUARE" </UL>
```

#### **TYPE**

- Defines the type of bullet used for each list item.
- The value can be one of the following:
- **CIRCLE** specifies a hollow bullet.
- **DISC** specifies a solid round bullet (Netscape Navigator's default).
- **SQUARE** specifies a square bullet.

#### **Example**

```
<UL TYPE=SQUARE>
```

```
<LI>Edit web pages directly in Navigator
```

```
<LI> Easy options for setting background and link colors
```

```
<LI>As easy to use as any text editor
```

```
<LI> No need to learn HTML
```

```
</UL>
```

### **LI ( List Item )**

- The LI tag indicates an itemized element, which is usually preceded by a bullet, a number, or a letter.

- The LI tag is used inside list elements such as OL (ordered list) and UL (unordered list)
- The LI tag does not require a closing tag.

### Syntax

<LI TYPE="DISC"|"CIRCLE"|"SQUARE"|"A"|"a"|"I"|"i"|"1" >

### TYPE

The value can be one of the following:

- o **CIRCLE** specifies a hollow bullet.
- o **DISC** specifies a solid round bullet.
- o **SQUARE** specifies a square bullet.
- o **A** specifies a sequence of uppercase letters
- o **a** specifies a sequence of lowercase letters
- o **I** specifies a sequence of uppercase Roman numerals
- o **i** specifies a sequence of lowercase Roman numeral
- o **1** specifies a sequence of numbers.

The values DISC, CIRCLE, and SQUARE can be used in unordered lists, while the values A, a, I, i, and 1 can be used in ordered lists that have a numerical sequence.

### **DL(definition list)**

- The DL tag encloses a definition list.
- A definition list contains terms, which are defined with the DT tag, and definitions, which are defined with the DD tag.

### Syntax

<DL>..... </DL>

### **DT(definition term)**

- The DT tag specifies a term in a definition list.
- The DT tag must be used in a DL tag.
- Usually a DT tag is followed by a DD tag that describes the term in the DT tag.
- The DT tag does not require a closing tag.

### **DD(definition description/data)**

- The DD tag displays a definition description in a definition list.
- The DD tag must be used within a DL tag and usually follows immediately after a DT tag that indicates the term being defined.
- The DD tag does not require a closing tag.

### Example For <DL> <DT> <DD> Tag

<DL>

<DT>HTML

<DD>This tag marks a text file as an HTML document.

<DT>HEAD

<DD>This tag encloses the heading for the HTML document.

<DT>BODY

<DD>This tag displays the body for the HTML document.

<DT>DL

<DD>This tag displays a definition list in the HTML document.

<DT>DT

<DD>This tag displays a term in a definition list.

<DT>DD

<DD>This tag displays a definition description.

</DL>

### **Web Browser Display Following Output**

HTML: This tag marks a text file as an HTML document.

HEAD: This tag encloses the heading for the HTML document.

BODY: This tag displays the body for the HTML document.

DL : This tag displays a definition list in the HTML document.

DT : This tag displays a term in a definition list.

DD : This tag displays a definition description.



### **EXPLAIN LINK TAGS WITH EXAMPLE (ANCHOR TAG).**

#### **DETAILS**

- A hypertext link is a piece of content that the user can click to invoke an action.
- The most common actions are scrolling to a different place in the current document and opening a new document.
- A hypertext link can contain text and/or graphics.
- To define a hypertext link, use the <A> tag with an HREF attribute to indicate the start of the hypertext link, and use the </A> tag to indicate the end of the link.

#### **Syntax**

<A HREF="location"> ... </A>

***HREF="location"***

### EXAMPLE

```
<html>
<body>
<p>Click on <a href="https://www.HNSGROUPOFCOLLEGES.org"
> thislink </a>to          go on home page of SHREE
H.N.SHUKLA GROUP OF COLLEGES.</p>
</body></html>
```

### EXPLAIN IMAGE TAGS WITH EXAMPLE. (3 M)(MIMP)

#### DETAILS

- The IMG tag specifies an image to be displayed in an HTML document.
- An image can be a plain image that simply appears on the page.

#### Syntax

<IMG SRC="location">\_\_</img>

#### EXAMPLE

```
<html>
<body>

</body></html>
```

### EXPLAIN TABLE TAG WITH EXAMPLE. (3 OR 5M)(MIMP)

#### DETAIL

#### **TABLE (table)**

- The TABLE tag defines a table.
- Inside the TABLE tag, use the TR tag to define rows in the table, use the TH tag to define row or column headings, and use the TD tag to define table cells.

#### **Syntax**

<TABLE

ALIGN="LEFT|RIGHT|CENTER"

BGCOLOR="color"  
BORDER="value"  
CELLPADDING="value"  
CELLSPACING="value"  
HEIGHT="height"  
WIDTH="width" >  
</TABLE>

### **CAPTION (table caption)**

- The CAPTION tag defines a caption for a table.
- Place the CAPTION tag within the TABLE tag but not inside the TD or the TR tags, which indicate table cells and table rows respectively.

#### **Syntax**

<CAPTION ALIGN="BOTTOM"|"TOP">...</CAPTION>

### **TR (table row)**

- The TR tag specifies a table row.
- Use the TR tag inside a TABLE tag.
- The TR tag can contain TH tags, which indicate table headings, and TD tags, which indicate table cells.

#### **Syntax**

<TR ALIGN="CENTER|LEFT|RIGHT" BGCOLOR="color" > </TR>

### **TD (table data)**

- i. The TD tag specifies text in a cell in a table.
- ii. Use the TD tag inside a TR tag inside a TABLE tag.

#### **Syntax**

<TD

ALIGN="CENTER|LEFT|RIGHT" BGCOLOR="color"

COLSPAN="value" ROWSPAN="value"

HEIGHT="pixelHeight"

WIDTH="pixelWidth"></TD>

**COLSPAN="value"**

- Indicates the number of columns the cell spans.
- Give the number as an integer.

### **ROWSPAN="value"**

- Indicates the number of rows the cell spans.
- Give the value as an integer.

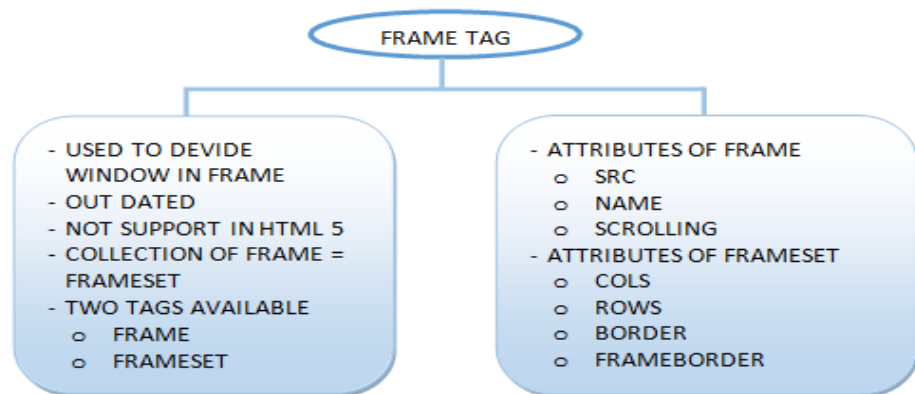
### **+ TH (table heading)**

- The TH tag specifies a table cell whose contents are usually displayed in a bolder
- The intent of the TH tag is that you use it for column or row headings.

### ***Syntax***

`<TH ALIGN="CENTER|LEFT|RIGHT" ></TH>`

### **+ EXPLAIN FRAME TAG WITH EXAMPLE. (3 M)**



### **DETAILS**

#### **i) FRAMESET (set of frames)**

- The FRAMESET tag defines a set of frames that appear in a web browser window.
- The FRAMESET tag contains one or more FRAME tags that each describes a frame.
- An HTML document that contains a FRAMESET tag cannot contain a BODY tag.

### **Syntax**

`<FRAMESET`

`COLS="columnWidthList"`

`ROWS="rowHeightList"`

`BORDER="pixWidth"`

`BORDERCOLOR="color"`

`FRAMEBORDER="YES"|"NO">`

`</FRAMESET>`



- You must supply at least one of the COLS or ROWS attributes.

ii) **FRAME (window region)**

- The FRAME tag creates a frame, which is an individual, independently scrollable region of a web browser.
- The FRAME tag must be used within a FRAMESET tag.
- The FRAMESET tag contains a set of FRAME tags, which each define a frame in the main window.
- Each frame has a distinct URL that determines the content displayed by the frame.

**Syntax**

<FRAME

BORDERCOLOR=

"color"

FRAMEBORDER=

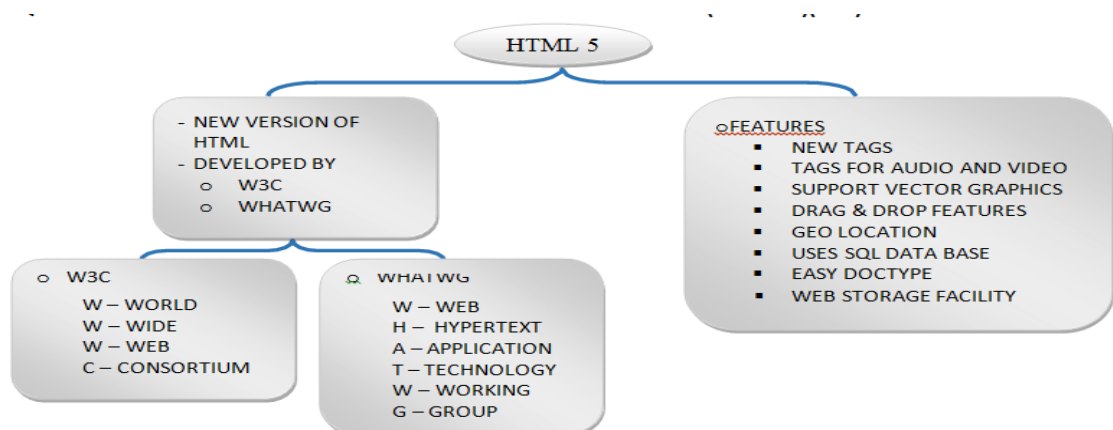
"YES"|"NO"

MARGINHEIGHT="marginHeight"      MARGINWIDTH="marginWidth"

NAME="frameName"    NORESIZE    SCROLLING="YES"|"NO"|"AUTO"

SRC="URL" >

**EXPLAIN HTML 5 WITH DOCUMENT STRUCTURE AND ATTRIBUTES. (3 OR 5 M)(IMP)**



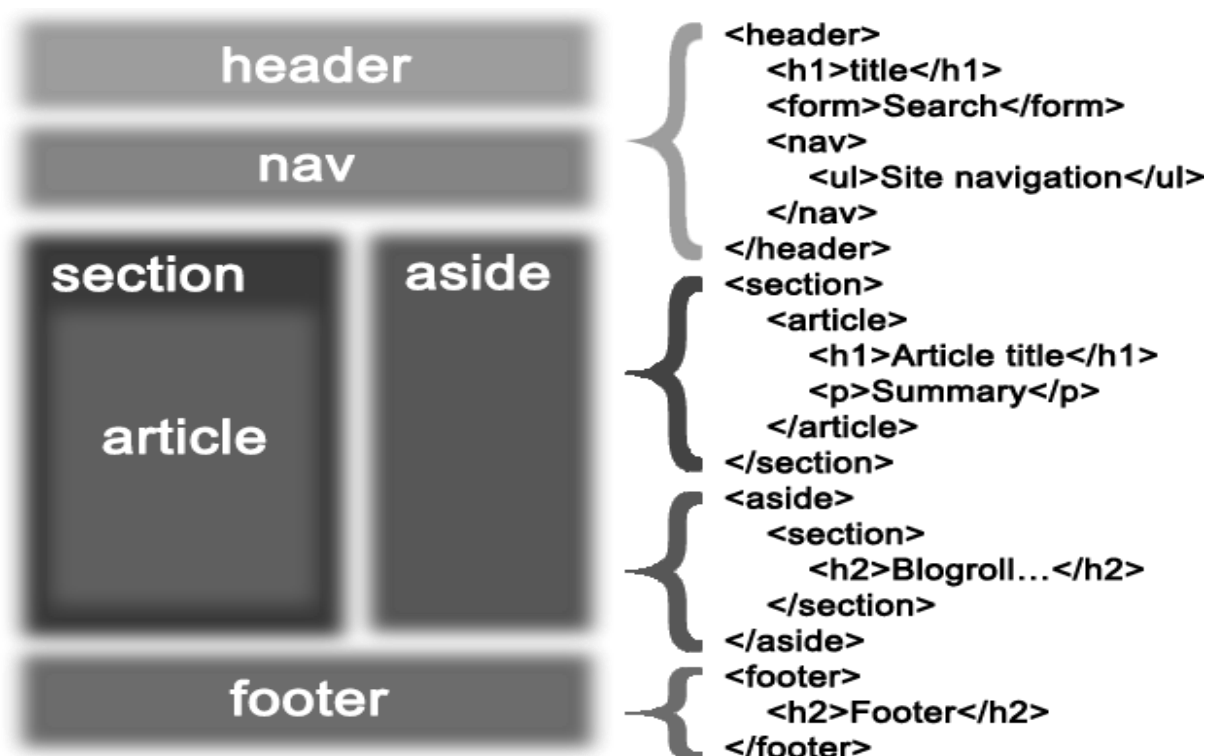
**DETAIL**

- HTML5 is a markup language used for structuring and presenting content on the World Wide Web.

- It is the fifth and final major HTML version that is a World Wide Web Consortium recommendation.
- The current specification is known as the HTML Living Standard.
- The parent concern of HTML5, The **Web Hypertext Application Technology Working Group (WHATWG)** along with **World Wide Web Consortium (W3C)** began work on the new standard in 2004.
- In April 2010, Apple CEO Steve Jobs issued a public letter claiming HTML5 will replace Adobe Flash as far watching Video and many other similar consumption of content is concerned
- Using HTML5 you can make web document much more meaningfully to read (for Search Engines as well as for authors).

### Features:

- It has introduced new multimedia features which supports audio and video controls by using `<audio>` and `<video>` tags.
- There are new graphics elements including vector graphics and tags.
- Drag and drop option available in this version.
- It support Geo-location services.
- Easy DOCTYPE declaration i.e. `<!doctype html>`



## Explain DOCUMENT STRUCTURE OF HTML 5 (MIMP)

### DETAIL

#### Content structure

- ➔ HTML 5 introduces multiple tags to help represent the usual structure of documents.

#### <header>

- ➔ Contains an introduction to a part or the whole page.

#### <footer>

- ➔ Contains information that are usually placed at the end of a section.

#### <section>

- ➔ Sections mark out parts of content.

#### <hgroup>

- ➔ Represents the header of a section. The <header> tag may contain at the beginning a <hgroup> tag.

#### <nav>

- ➔ This container is intended to enclose a group of links.

#### <article>

- ➔ Denotes a typical content that can be found on different pages, or even different sites.

#### <aside>

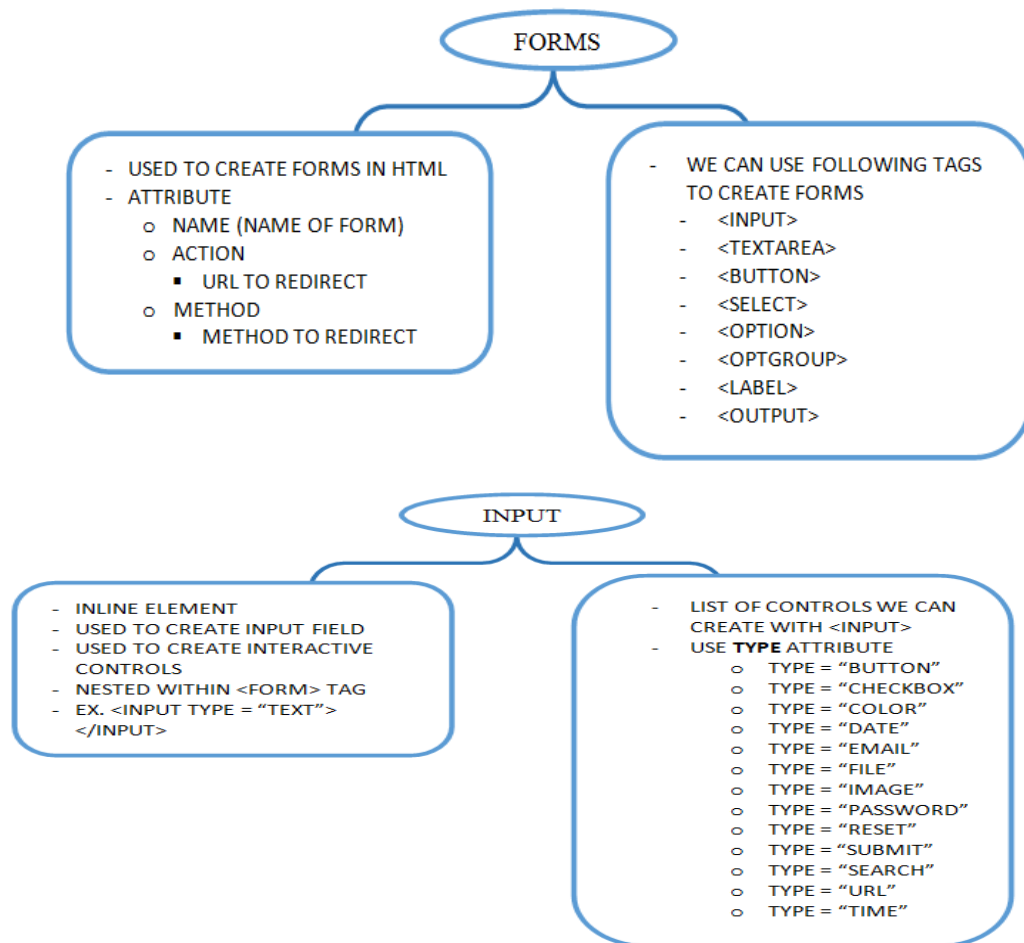
- ➔ To delimit something separate to the actual content, and may define a sidebar.

#### <address>

### □ HTML 5 ATTRIBUTES

Attribute	Function
<u>accesskey</u>	Specifies a keyboard shortcut to access an element.
<u>align</u>	Horizontally aligns tags
<u>background</u>	Places an background image behind an element
<u>bgcolor</u>	Places a background color behind an element
<u>class</u>	Classifies an element for use with Cascading Style Sheets.
<u>title</u>	"Pop-up" title for your elements.
<u>valign</u>	Vertically aligns tags within an HTML element.
<u>width</u>	Specifies the width of tables, images, or table cells.

## **EXPLAIN WEB FORMS. (3 OR 5 M)(MIMP)**



### **DETAIL**

#### ☐ **FORMS**

#### **Definition and Usage**

- The <form> tag is used to create an HTML form for user input.
  - A form can contain input elements like text fields, checkboxes, radio- buttons, submitbuttons and more.
- A forms can also contain select menus, textarea, fieldset, legend, and label elements.
- Forms are used to pass data to a server.

Attribut e	Value	Description
action	<i>URL</i>	Specifies where to send the form-data when a form is submitted

## Example

A simple HTML form with two input fields and one submit button:

```
<form method="get">  
  First name: <input type="text" name="fname" /><br />  
  Last name: <input type="text" name="lname" /><br />  
  <input type="submit" value="Submit" />  
</form>
```

## □ HTML 5 WEB FORM

- Web Forms 2.0 is an extension to the forms features found in HTML4.
- Form elements and attributes in HTML5 provide a greater degree of mark-up than HTML4
- Apart from the above mentioned attributes, HTML5 input elements introduced several new values for the type attribute. These are listed below.

### 1) HTML <input> tag

#### Definition and Usage

- The <input> tag is used to select user information.

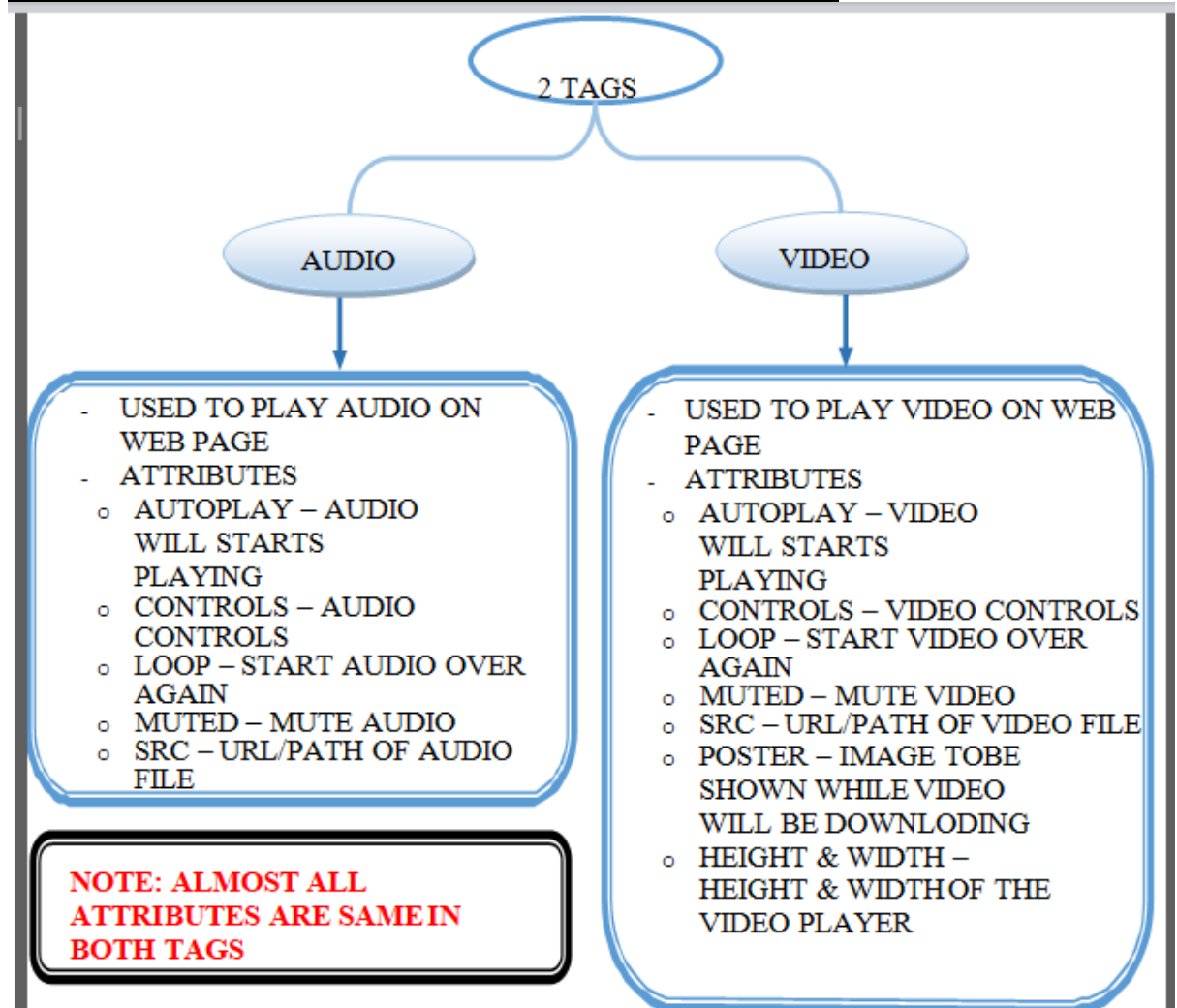
#### INPUT TAG (TYPE ATTRIBUTE)

The available types are as follows:

Type	Description
button	A push button with no default behavior displaying the value of the value attribute, empty by default.
checkbox	A check box allowing single values to be selected/deselected.
color	A control for specifying a color; opening a color picker when active in supporting

	browsers.
date	A control for entering a date (year, month, and day, with no time). Opens a date picker or numeric wheels for year, month, day when active in supporting browsers.
email	A field for editing an email address. Looks like a text input, but has validation parameters and relevant keyboard in supporting browsers and devices with dynamic keyboards.
file	A control that lets the user select a file. Use the accept attribute to define the types of files that the control can select.
image	A graphical submit button. Displays an image defined by the src attribute. The alt attribute displays if the image src is missing.
password	A single-line text field whose value is obscured. Will alert user if site is not secure.
radio	A radio button, allowing a single value to be selected out of multiple choices with the same name value.
reset	A button that resets the contents of the form to default values. Not recommended.
search	A single-line text field for entering search strings. Line-breaks are automatically removed from the input value. May include a delete icon in supporting browsers that can be used to clear the field. Displays a search icon instead of enter key on some devices with dynamic keypads.
submit	A button that submits the form.
text	The default value. A single-line text field. Line-breaks are automatically removed from the input value.
url	A field for entering a URL. Looks like a text input, but has validation parameters and relevant keyboard in supporting browsers and devices with dynamic keyboards.

➤ **EXPLAIN AUDIO & VIDEO TAG. (2 OR 3M)(IMP)**



**DETAIL**

**1. VIDEO TAG**

- The `<video>` element is used to embed video content in an HTML document without requiring any additional plugin like Flash player.
- Support for the `<video>` element varies across browsers. At the moment, there are three main video formats that are supported for the video element: MP4, Ogg and WebM.

**SYNTAX**

*HTML / XHTML:* `<video> ... </video>`

**EXAMPLE**

`<video controls="controls">`

`<source src="shuttle.mp4" type="video/mp4">`

```
<source src="shuttle.ogv" type="video/ogg">
```

Your browser does not support the HTML5 Video element.

```
</video>
```

## 2. AUDIO TAG

- The <audio> element is used to embed audio content in an HTML document without requiring any additional plug-in like Flash player.
- SYNTAX

### EXAMPLE

```
<audio controls="controls">
```

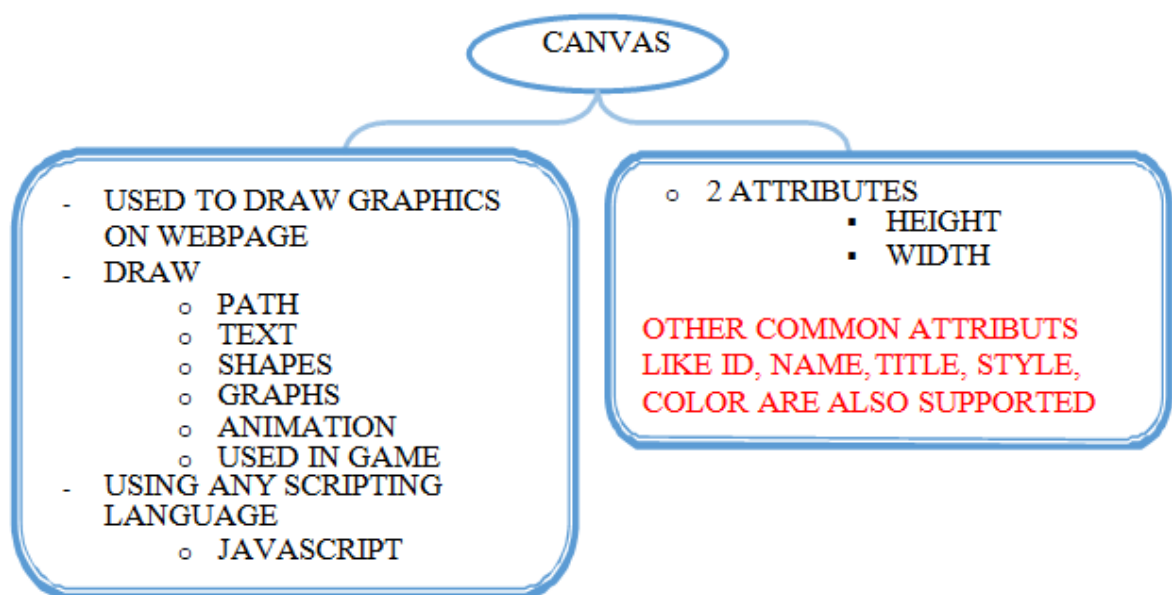
```
<source src="birds.mp3" type="audio/mpeg">
```

```
<source src="birds.ogg" type="audio/ogg">
```

Your browser does not support the HTML5 Audio element.

```
</audio>
```

### ➤ EXPLAIN CANVAS TAG. (2 OR 3M)(IMP)



### DETAIL

- The <canvas> element defines a region in the document, which can be used to draw graphics on the fly via scripting (usually JavaScript).
- For example, it can be used to draw path and shapes, graphs or even perform animations.
- The <canvas> element is only a container for graphics. You must use



a script to actually draw the graphics.

- Canvas has several methods for drawing paths, boxes, circles, text, and adding images.

### **Canvas Examples**

- A canvas is a rectangular area on an HTML page. By default, a canvas has no border and no content.
- The markup looks like this:  
`<canvas id="myCanvas" width="200" height="100"></canvas>`

### **SYNTAX**

*HTML / XHTML:* `<canvas> ..... </canvas>`