UNIT 2: BASIC OF HTML & ADVANCE HTML 5

CS-04 NETWORKING & INTERNET ENVIRONMENT

- **FORMATTING TAGS**
- **LIST TAGS**
- **LINK TAG**
- **ADDING IMAGES**
- **TABLE TAG**
- **FRAME TAG**
- **INTRODUCTION OF HTML 5 & SYNTEX**
- **ATTRIBUTES OF HTML 5**
- **WEB FORMS**
- **AUDIO & VIDEO TAG**
- **CANVAS TAG**

: ASSIGNMENT UNIT 2:

1. **Full form of
**
2. **Full form of <hr>**
3. **Html stands for**
4. **Full form of **
5. **Explain <a> tag.**
6. **__ Attribute is used to leave space between cell in table tag.**
7. **__ tag is used for line break.**
8. **What is the extension of html document ?**
9. **__ tag is used to define data input form.**
10. **Explain <sub> and <sup> tags.**
11. **Write a note on html5 document structure.**
12. **Explain list tag with example.**
13. **Explain <img> tag with attributes and example.**
14. **Explain <form> tag with its attributes and example**
15. **Give full form of href**
16. **Explain audio/video tag of html 5**
17. **Explain canvas tag of html 5**
18. **Explain formatting tag in html with example**
19. **Html stands for?**
20. **Which tag is used to mark a beginning of paragraph ?**

BASICS HTML

- HTML was originated by Tim Berners-Lee.
- HTML developed a few years ago as a subset of SGML (Standard Generalized Mark-up
- Language) which is a higher-level mark-up language that has long been a favorite of the Department of Defence.
- 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 cross platform 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 that are embedded in an ASCII document.
- These Tags are interpreted by web browser like Internet Explorer, Netscape Navigator etc.
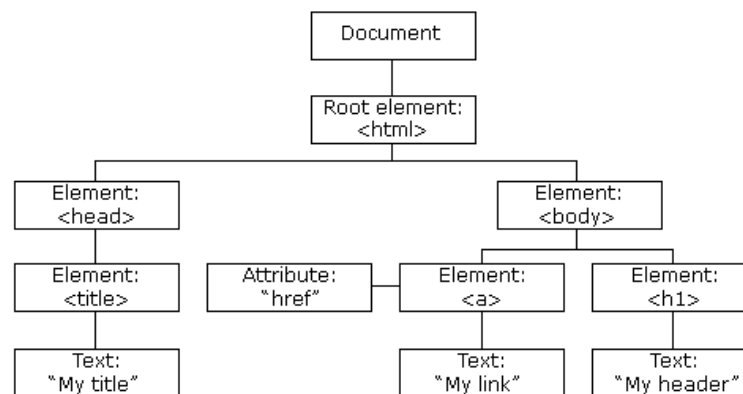
BASIC ELEMENTS OF HTML TAG

The basic building blocks of HTML Tags are the part of HTML that tells a web browser 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 a case sensitive.
- For Example <Title> Welcome To KSC </Title>
- This tag tells a web browser to format the text string "Welcome to HNS" display in the title bar of your web browser.
- Here <Title> is a opening tag and </Title> is closing tag.

ATTRIBUTES

- Attributes are used with Tag that provides the exact information and actions. o 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.

Prepared By: Prof. N. K. Pandya Kamani Science College, Amreli(BCA/BSC)

URL (Uniform Resource Locator)

- Web resources are access by a descriptive address known as Uniform Resource Locator (URL).
- HTML use URL to specify the location of needed file or other web pages that are connected by Hyper Links.

Basic Tags and Attributes

HTML (outermost tag)

- The HTML tag identifies a document as an HTML document.
- 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.
- The header contains information about the document rather than information to
- be displayed in the document.
- You should put all header information between the <HEAD> and </HEAD> tags,
- which should precede the BODY tag.
- The HEAD tag can contain TITLE, BASE, SCRIPT, STYLE, and LINK tags.

Syntax: <HEAD>...</HEAD>
Example:
```
<HEAD>
<TITLE>KSC</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.
- The BODY tag has attributes that let you specify characteristics for the document.
- You can specify the background color or an image to use as a tiled background for the Window in which the document is displayed.
- You can specify the default text color, active link color, unvisited link color, and visited link color.

Prepared By: Prof. N. K. Pandya Kamani Science College, Amreli(BCA/BSC)

Syntax:
 <BODY BACKGROUND="bgURL" BGCOLOR="color" TEXT="color">
---------- SOME CONTENT ----------
</BODY>

BACKGROUND="bgURL"
- Specifies an image to display in the background of the document.
- The URL value can be an absolute URL (for example,
- "http://www.rcompany.com/images/image1.html") or a relative URL (for
- Example, "images/image1.gif").
- The image is tiled, which means it is repeated in a grid to fill the entire
- window or frame where the document is displayed.

BGCOLOR="color"
- Sets the color of the background.

TEXT="color"
- Sets the color of normal text (that is, text that is not in a link) in the document.

Comments
      Comments in HTML take the form: <!-- comment here -->

For example:
      TITLE (Document Title)
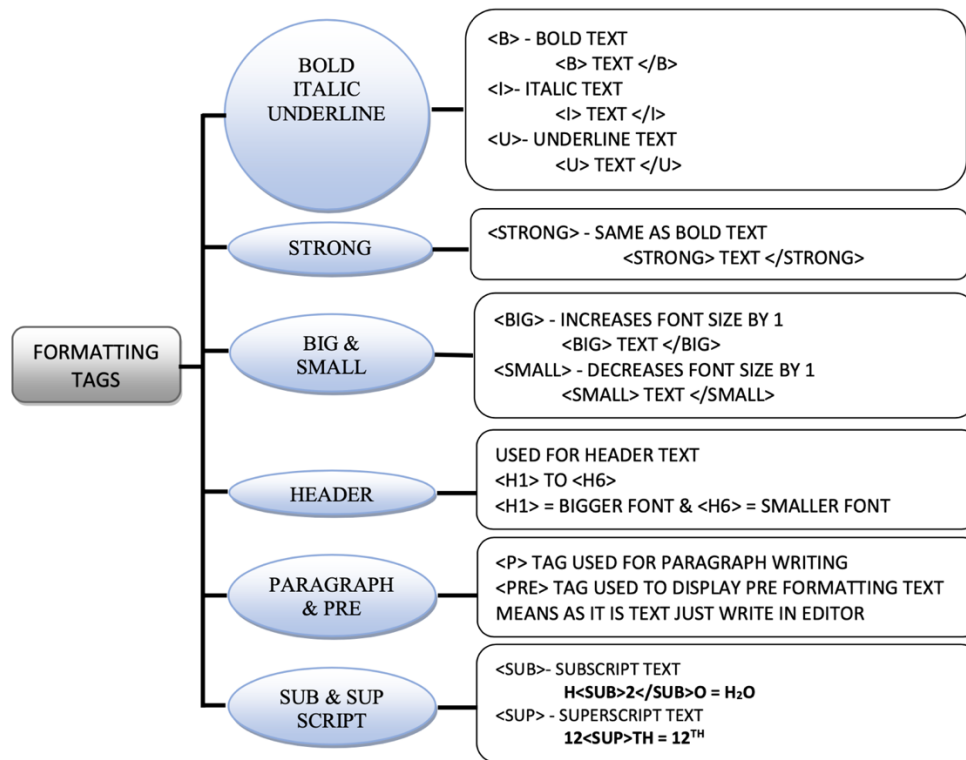   <!-- red background --> <BODY BGCOLOR="red">

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 Used within HEAD tag.

Example
<HTML>
  <HEAD>
    <TITLE>HTML Tag Reference</TITLE>
  </HEAD>
</HTML>

Formatting Tag

P (Paragraph)
- The P tag displays a paragraph.
- All P elements start on a new line and are usually preceded by extra space. o You can also use the P tag to insert a line break with extra space.
- The closing </P> tag guarantees that the paragraph is followed by extra
- space. Omitting the closing </P> tag often has no effect.

Syntax

<P ALIGN="LEFT"|"CENTER"|"RIGHT" >...........</P>

ALIGN
- Specifies the horizontal alignment of the paragraph.
- The value can be one of these:
  - o LEFT aligns the paragraph flush left (the default).
  - o CENTER centres the paragraph.
  - o RIGHT aligns the paragraph flush right.

Example
- The following example displays two paragraphs.
- <P>Use the P tag to display paragraphs. The P element starts on a new line, and is preceded by extra space. <P> you can also use the P tag to insert a line break with extra space.

Output

Use the P tag to display paragraphs. The P element starts on a new line, and is preceded by extra space.

You can also use the P tag to insert a line break with extra space.

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)
- The U tag underlines the text it encloses.
- 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

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

I (Italic)
- 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
- _{...}

Example
- The chemical notation for water is H₂0.

Output

The chemical notation for water is H_2O.

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

- ^{...}

Example

- If Einstein was right, then E=mc².

Output

If Einstein was right, then $E=mc^2$.

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.
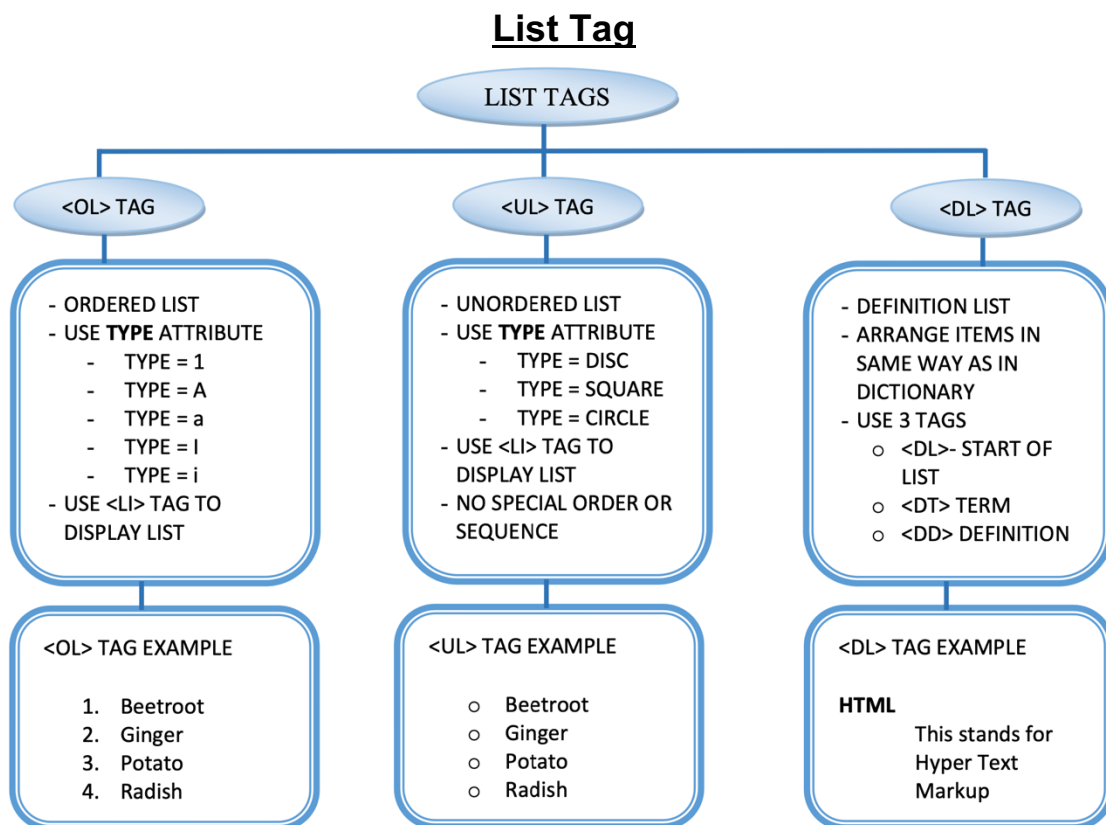
Syntax

- <SMALL>...</SMALL>

HTML Heading

- A HTML heading or HTML h tag can be defined as a title or a subtitle which you want to display on the webpage. When you place the text within the heading tags <h1>.........</h1>, it is displayed on the browser in the bold format and size of the text depends on the number of heading.
- There are six different HTML headings which are defined with the <h1> to <h6> tags, from highest level h1 (main heading) to the least level h6 (least important heading).
- h1 is the largest heading tag and h6 is the smallest one. So h1 is used for most important heading and h6 is used for least important.

- Headings in HTML helps the search engine to understand and index the structure of web page.
- **Note**: The main keyword of the whole content of a webpage should be display by h1 heading tag.

Prepared By: Prof. N. K. Pandya Kamani Science College, Amreli(BCA/BSC)

Syntax/Example
<h1>Heading no. 1</h1>
<h2>Heading no. 2</h2>
<h3>Heading no. 3</h3>
<h4>Heading no. 4</h4>
<h5>Heading no. 5</h5>
<h6>Heading no. 6</h6>

Element name	Description
<b>	This is a physical tag, which is used to bold the text written between it.
<strong>	This is a logical tag, which tells the browser that the text is important.
<i>	This is a physical tag which is used to make text italic.
<em>	This is a logical tag which is used to display content in italic.
<mark>	This tag is used to highlight text.
<u>	This tag is used to underline text written between it.
<tt>	This tag is used to appear a text in teletype. (not supported in HTML5)
<strike>	This tag is used to draw a strikethrough on a section of text. (Not supported in HTML5)
<sup>	It displays the content slightly above the normal line.
<sub>	It displays the content slightly below the normal line.
<del>	This tag is used to display the deleted content.
<ins>	This tag displays the content which is added
<big>	This tag is used to increase the font size by one conventional unit.
<small>	This tag is used to decrease the font size by one unit from base font size.

List Tag

LIST TAGS

<OL> TAG

- ORDERED LIST
- USE **TYPE** ATTRIBUTE
  - TYPE = 1
  - TYPE = A
  - TYPE = a
  - TYPE = I
  - TYPE = i
- USE <LI> TAG TO DISPLAY LIST

<OL> TAG EXAMPLE

1. Beetroot
2. Ginger
3. Potato
4. Radish

<UL> TAG

- UNORDERED LIST
- USE **TYPE** ATTRIBUTE
  - TYPE = DISC
  - TYPE = SQUARE
  - TYPE = CIRCLE
- USE <LI> TAG TO DISPLAY LIST
- NO SPECIAL ORDER OR SEQUENCE

<UL> TAG EXAMPLE

o Beetroot
o Ginger
o Potato
o Radish

<DL> TAG

- DEFINITION LIST
- ARRANGE ITEMS IN SAME WAY AS IN DICTIONARY
- USE 3 TAGS
  o <DL>- START OF LIST
  o <DT> TERM
  o <DD> DEFINITION

<DL> TAG EXAMPLE

HTML
This stands for Hyper Text Markup

Prepared By: Prof. N. K. Pandya Kamani Science College, Amreli(BCA/BSC)

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
- 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" >
</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).

Prepared By: Prof. N. K. Pandya Kamani Science College, Amreli(BCA/BSC)

- **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:
- **CIRCLE** specifies a hollow bullet.
- **DISC** specifies a solid round bullet.
- **SQUARE** specifies a square bullet.
- **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.

Note: 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.

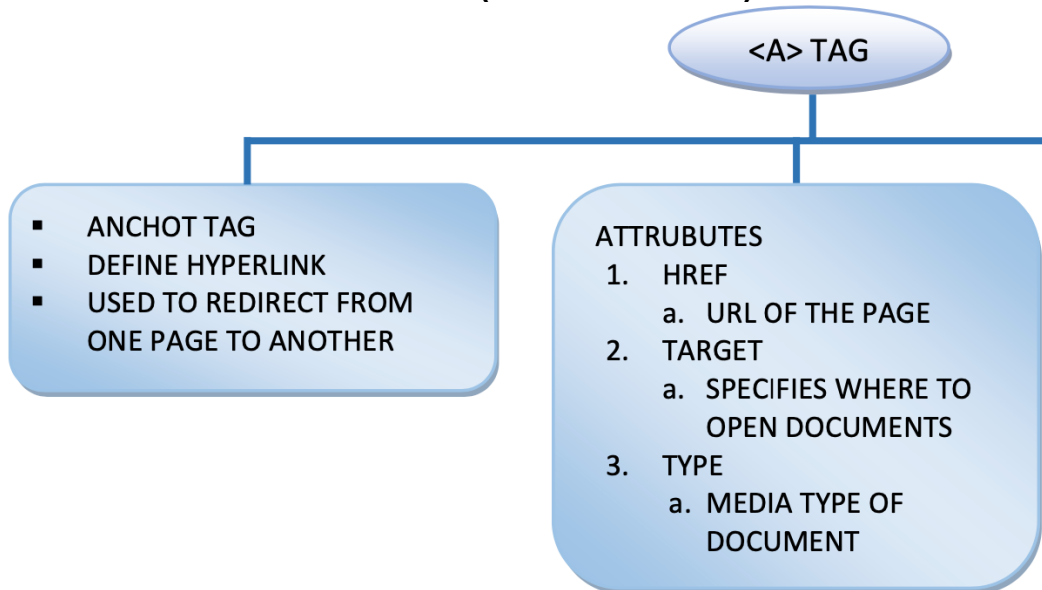- The DD tag does not require a closing tag.

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

```
<DL>
   <DT>HTML
      <DD>This tag marks a text file as an HTML document. </DD>
   </DL>
</DL>
```

LINK TAG (ANCHOR TAG)

- 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.
- When the user clicks any content between the <A HREF> and </A> tags, the link is activated.
- The value of the HREF attribute must be a URL.
- Most browsers display hypertext links in a color different from that of the rest of the document so that users can easily identify them.
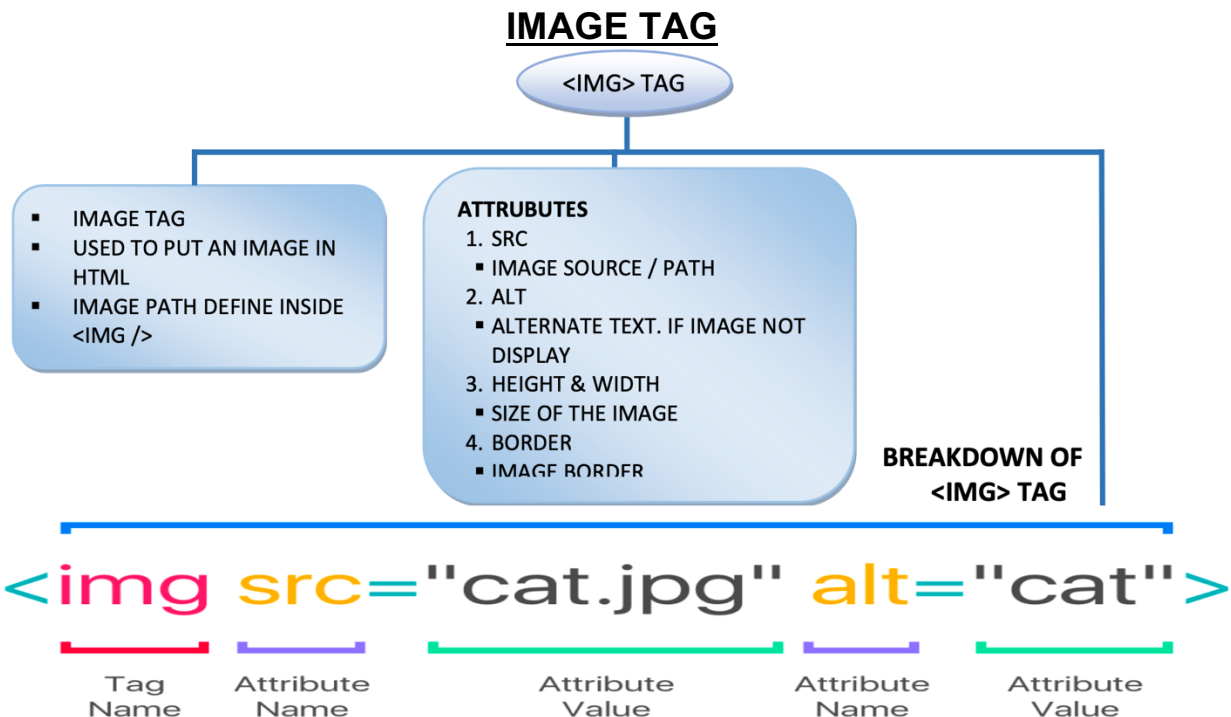
Syntax

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

HREF="location"

Prepared By: Prof. N. K. Pandya Kamani Science College, Amreli(BCA/BSC)

- Specifies a destination URL for the link.
- The most common value here is a document name or an anchor.
- To specify a document to open, provide the URL for the document, either as an absolute or relative URL.
- An example of an absolute URL is:
  HREF=http://home.netscape.com/index.html
- An example of a relative URL is:
  HREF="documents/nextdoc.html"

EXAMPLE
```
<html>
<body>
<p>Click on <a href = "https://www.kscpac.org" > this link </a>to go on home page of Kamani Science
College, Amreli.</p>
</body>
</html>
```

IMAGE TAG

<IMG> TAG

- IMAGE TAG
- USED TO PUT AN IMAGE IN HTML
- IMAGE PATH DEFINE INSIDE <IMG />

ATTRUBUTES
1. SRC
   - IMAGE SOURCE / PATH
2. ALT
   - ALTERNATE TEXT. IF IMAGE NOT DISPLAY
3. HEIGHT & WIDTH
   - SIZE OF THE IMAGE
4. BORDER
   - IMAGE BORDER

BREAKDOWN OF <IMG> TAG

<img src="cat.jpg" alt="cat">

| Tag Name | Attribute Name | Attribute Value | Attribute Name | Attribute Value |

- 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.
- An image can be embedded in an <A HREF> tag so that the user can click it to open a URL.
- An image can also be an image map, which has multiple click able areas that each link to different URLS.

Syntax
<IMG SRC="location" ALT="alterntiveText" ALIGN="alignment" BORDER="borderWidth" HEIGHT="height" WIDTH="width" HSPACE="horizMargin" VSPACE="verticalMargin" >

SRC="location"
- The SRC attribute is required.
- Specifies the URL of the image to be displayed in the document.

ALT="alternativeText"

Prepared By: Prof. N. K. Pandya Kamani Science College, Amreli(BCA/BSC)

- Specifies text to be displayed if the browser does not support the IMG tag or if the user has suspended image loading in the browser.

ALIGN

- Specifies the alignment of the image in relation to the surrounding text. If you do not specify a value for ALIGN, Navigator uses BOTTOM as the default.
- Values are Left, right, center, middle, top, bottom

BORDER="borderWidth"

- Specifies the width, in pixels, of a border around the image.   The value must be an integer.

HEIGHT="height"

- Specifies the height of the image, either in pixels or as a percentage of the height of the window, frame, or positioned block of HTML that contains the image.
- To indicate a number of pixels, specify the value as an integer, for example, "100". To indicate a percentage, specify the value as an integer followed by the percentage sign, for example "20%".

WIDTH="width"

- Specifies the width of the image either in pixels or as a percentage of the window, frame, or positioned block of HTML containing the image.
- To indicate a number of pixels, specify the value as an integer, for example, "100". To indicate a percentage, specify the value as an integer followed by the percentage sign, for example, "20%".

HSPACE="horizMargin"

- Specifies a margin in pixels between the left and right edges of the image and surrounding text and images.
- Give the value as an integer.

VSPACE="verticalMargin"

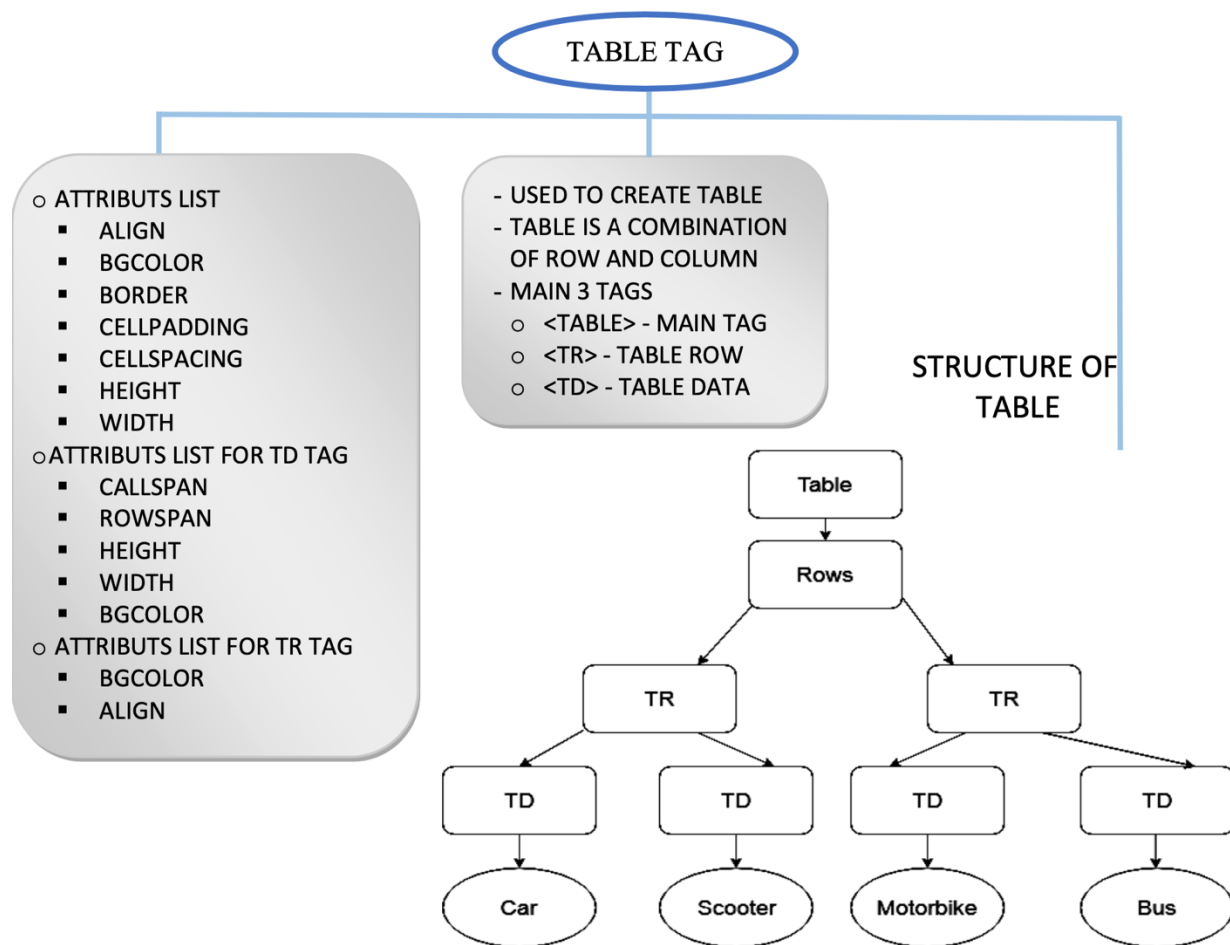- Specifies a margin in pixels between the top and bottom edges of the image and surrounding text and images.
- Give the value as an integer.

EXAMPLE

```
<html>
 <body>
  <img src="smiley.gif" alt="Smiley face" width="42" height="42">
  </body>
</html>
```

Prepared By: Prof. N. K. Pandya Kamani Science College, Amreli(BCA/BSC)

TABLE TAG

TABLE TAG

o ATTRIBUTS LIST
- ALIGN
- BGCOLOR
- BORDER
- CELLPADDING
- CELLSPACING
- HEIGHT
- WIDTH

o ATTRIBUTS LIST FOR TD TAG
- CALLSPAN
- ROWSPAN
- HEIGHT
- WIDTH
- BGCOLOR

o ATTRIBUTS LIST FOR TR TAG
- BGCOLOR
- ALIGN

- USED TO CREATE TABLE
- TABLE IS A COMBINATION OF ROW AND COLUMN
- MAIN 3 TAGS
  o <TABLE> - MAIN TAG
  o <TR> - TABLE ROW
  o <TD> - TABLE DATA

STRUCTURE OF TABLE

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>

ALIGN
- Specifies the horizontal placement of the table.
- LEFT aligns the table on the left (the default).
- The content following the table flows to the right of the table.
- RIGHT aligns the table on the right.
- The content following the table flows to the left of the table.
- CENTER aligns the table in the center.

BGCOLOR="color"
- Sets the color of the background for the table.
- This color can be overridden by a BGCOLOR tag in the TH, TR, or TD tags.

BORDER="value"

- Indicates the thickness, in pixels, of the border to draw around the table.
- Give the value as an integer.
- A value of 0 means the table has no border.
- You can also supply the BORDER attribute without specifying a value for it to indicate that the table has a border of the default thickness.

CELLPADDING="value"

- Determines the amount of space, in pixels, between the border of a cell and the contents of the cell.
- The default is 1.

CELLSPACING="value"

- Determines the amount of space, in pixels, between individual cells in a table.   The default is 2.

HEIGHT="height"

- Specifies the height of the table.
- The default is the optimal height determined by the contents of each cell.
- The height value can be a number of pixels, given as an integer, or a percentage of the height of the page or parent element, given as an integer followed by the percent sign.
- The table is scaled to fit the specified height and width.

WIDTH="width"

- Defines the width of the table.
- The default is the optimal width determined by the contents of each cell.
- The width value can be a number of pixels, given as an integer, or a percentage of the width of the page or parent element, given as an integer followed by the percent sign.
- The table is scaled to fit the specified height and width.

CAPTION(tablecaption)

- 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> ALIGN

- Specifies the placement of the caption within a table.
- BOTTOM places the caption at the bottom of the table.
- TOP places the caption at the top of the table. TOP is the default.

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>

ALIGN

- Specifies the horizontal placement of the table:
- CENTER centers the table .
- LEFT aligns the table to the left (the default).
- RIGHT aligns the table to the right.

BGCOLOR="color"

- Sets the default color of the background of the table row.

Prepared By: Prof. N. K. Pandya Kamani Science College, Amreli(BCA/BSC)

* Table cells defined with the TD tag inside the row can set their own background color.

TD (table data)

* The TD tag specifies text in a cell in a table.
* 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>

ALIGN

* Specifies the horizontal placement of the contents of the table cell:
* CENTER centers the content within the cell.
* LEFT aligns the content with the cell's left edge (the default).
* RIGHT aligns the content with the cell's right edge.

VALIGN

* Specifies the vertical placement of the contents of the cell:
* BASELINE aligns the content with the cell's baseline.
* BOTTOM aligns the content with the cell's bottom.
* MIDDLE centers the content within the cell (the default).
* TOP aligns the content with the cell's top.

BGCOLOR="color"

* Sets the color of the background of the table cell. COLSPAN="value"

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.

HEIGHT="pixelHeight"

* Specifies the suggested height of the table cell, in pixels.

WIDTH="pixelWidth"

* Specifies the suggested width of the table cell, in pixels.

TH (table heading)

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

Syntax
<TH ALIGN="CENTER|LEFT|RIGHT" ></TH>
Example Of Table Tags

```
<TABLE BGCOLOR=yellow BORDER CELLPADDING="8" CELLSPACING="4" COLS="3">
   <TR><TH> English </TH><TH> Spanish </TH><TH> German </TH></TR>
   <CAPTION ALIGN="BOTTOM">
        <B>Table 1</B>: Tables are as easy
   </CAPTION>
</TABLE>
```

Prepared By: Prof. N. K. Pandya Kamani Science College, Amreli(BCA/BSC)

FRAME TAG

```
                    ┌─────────────────┐
                    │    FRAME TAG    │
                    └─────────────────┘
```

- USED TO DEVIDE
  WINDOW IN FRAME
- OUT DATED
- NOT SUPPORT IN HTML 5
- COLLECTION OF FRAME =
  FRAMESET
- TWO TAGS AVAILABLE
    o **FRAME**
    o **FRAMESET**

- ATTRIBUTES OF FRAME
    o **SRC**
    o **NAME**
    o **SCROLLING**
- ATTRIBUTES OF FRAMESET
    o **COLS**
    o **ROWS**
    o **BORDER**
    o **FRAMEBORDER**
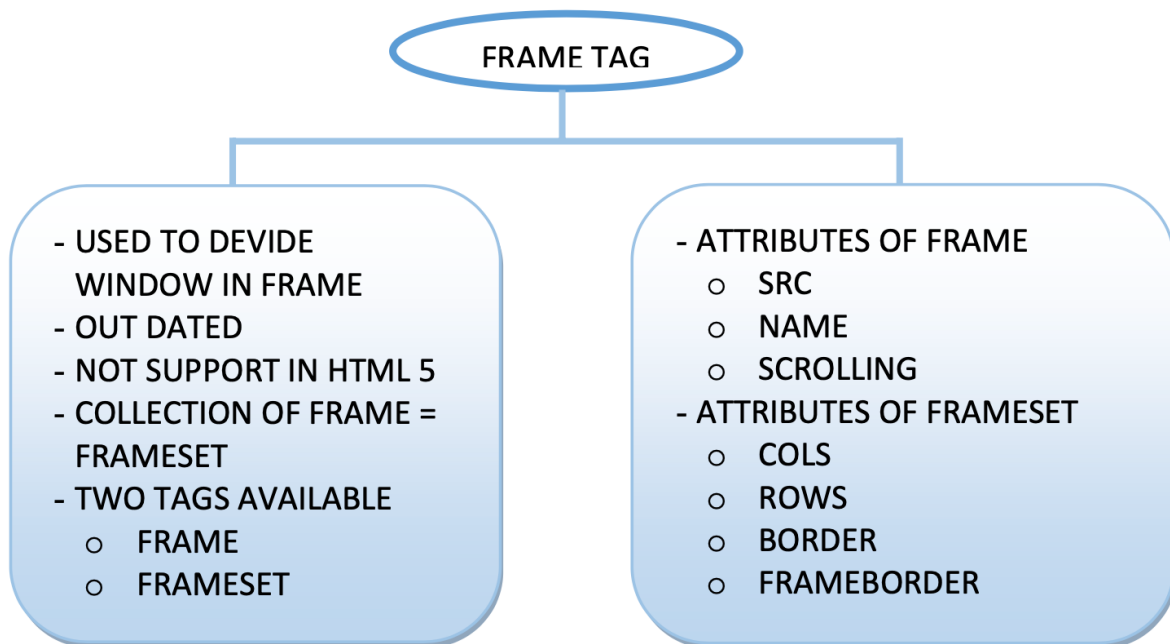
FRAMESET (set of frames)
- The FRAMESET tag defines a set of frames that appear in a web browser window.
- The FRAMESET tag contains one or more FRAME tags that each describes a frame.
- The only place the FRAMESET tag can be used is in a frame definition document, which is an HTML document that contains the FRAMESET and FRAME tags that describe the framesets and frames that make up a Navigator window.
- An HTML document that contains a FRAMESET tag cannot contain a BODY tag.
- A frameset can specify that its frames be laid out in rows or columns.

Syntax:
```
<FRAMESET
    COLS="columnWidthList"
    ROWS="rowHeightList"
    BORDER="pixWidth"
    BORDERCOLOR="color"
    FRAMEBORDER="YES"|"NO">
</FRAMESET>
```
Note: You must supply at least one of the COLS or ROWS attributes.

COLS="columnWidthList"
- Specifies a comma-separated list of values giving the width of each frame in the frameset.
- If one of the values is missing, the browser sizes the corresponding frame to fit the space available.
- The browser may approximate some values to make the total width of the columns equal to the width of the window.
- The value of each item in the column WidthList can be one of the following:
- Width of a frame in pixels.
- Width of a frame as a percentage of its parent frame or window.

Prepared By: Prof. N. K. Pandya Kamani Science College, Amreli(BCA/BSC)

- An asterisk (*), which means "as much space as possible," which is the space left over after space has been allocated to all columns that specify their width as pixel value or a percentage value.
- The total available leftover space is divided equally between all columns that use an asterisk.

ROWS="rowHeightList"

- Specifies a comma-separated list of values giving the height of each frame in the frameset.
- If one of the values is missing, the corresponding frame is sized to fit the space available.

BORDER="pixWidth"

- specifies the thickness of frame borders for all frames in an outermost frameset.
- A setting of 0 causes all frames in the frameset to have no border between them.
- A setting of 3 causes a border of 3 pixels.
- If no BORDER tag is present, the default is 5 pixels.

BORDERCOLOR="color"

- specifies the color of a frame's borders.

FRAMEBORDER

- Determines how frame borders are displayed.
- YES results in an outline-3D border.
- NO suppresses the 3D border.

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" >
```

BORDERCOLOR="color"

- Specifies the color of the frame's borders.

FRAMEBORDER

- Determines whether or not the frame has visible borders.
- YES results in an outline-3D border.
- NO suppresses the 3D border.

MARGINHEIGHT="marginHeight"

- Specifies a margin, in pixels, between the top and bottom edges of the frame and the frame contents.

MARGINWIDTH="marginWidth"

- Specifies a margin, in pixels, between the left and right edges of the frame and the frame contents.

NAME="frameName"

- Specifies the name of the frame.
- The value of the NAME attribute must begin with an alphanumeric character.

Prepared By: Prof. N. K. Pandya Kamani Science College, Amreli(BCA/BSC)

NORESIZE

- Specifies that users cannot resize the frame.
- If a frame adjacent to an edge is not resizable, the entire edge is not resizable, and
- consequently other frames adjacent to that edge are not resizable.

SCROLLING

- Specifies whether scrollbars are available on a frame:
- YES specifies that scrollbars are always available.
- NO specifies that scrollbars are never available.
- AUTO specifies that the browser determine whether to display scroll bars based on the size of the frame and its content.
- If you do not specify a value for SCROLLING, the default value is AUTO.

SRC="URL"

- Specifies the URL for the document to be displayed in the frame.
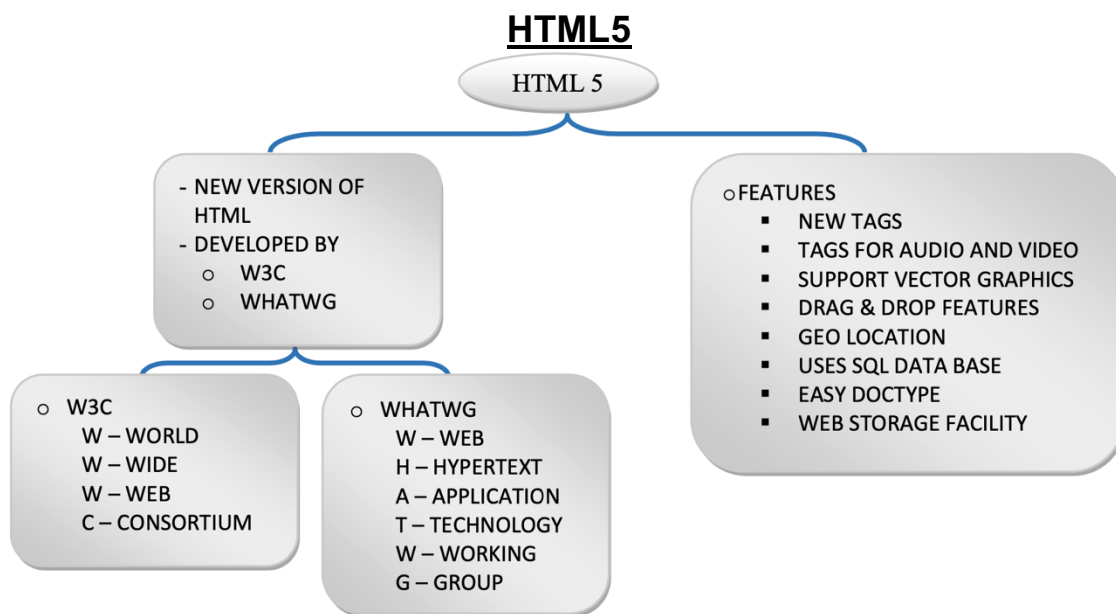
HTML5

- 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).

Feature:

- 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- The user can grab an object and drag it further dropping it on a new location.
- Geo-location services- It helps to locate the geographical location of a client.
- Web storage facility which provides web application methods to store data on web browser.
- Uses SQL database to store data offline.
- Allows to draw various shapes like triangle, rectangle, circle, etc.

Prepared By: Prof. N. K. Pandya Kamani Science College, Amreli(BCA/BSC)

- Easy DOCTYPE declaration i.e. <!doctype html>

Content structure

In HTML 4 there is no structure specialized tags, the content is structured with <div> <span> and other containers. 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. We can put it at the end of a section or page, but also anywhere in the section. For example it contains a link on the index, which can be placed below the title.

<section>
- Sections mark out parts of content. It is then up to the webmaster to associate a style sheet or using them dynamically in scripts. Very basically, we can frame a section with a border, or separate it from the above by a space.
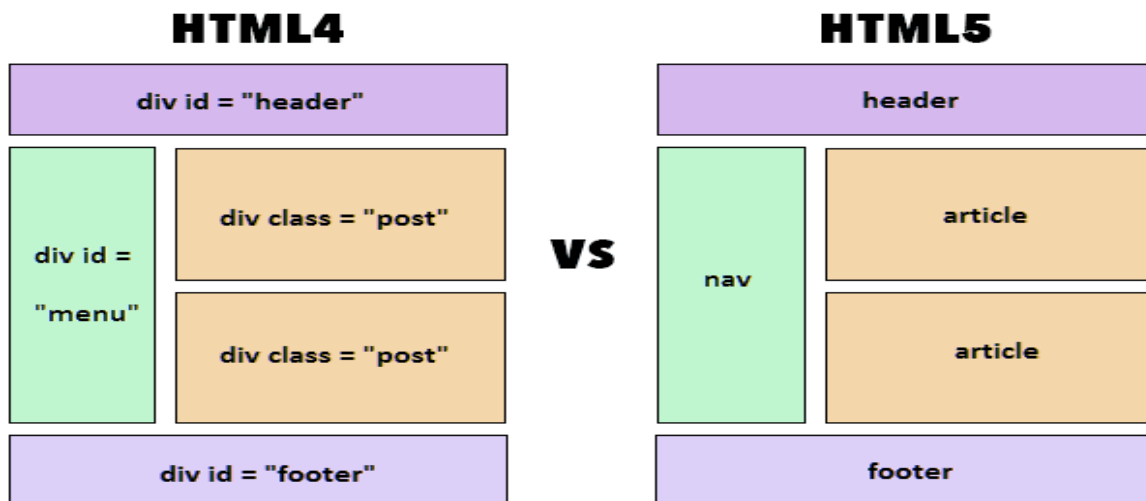
<nav>
- This container is intended to enclose a group of links.

<article>
- Denotes a typical content that can be found on different pages, or even different sites.
- This can be a forum post, a newspaper article and this is for tools to extract more easily the content (by separating the unnecessary data such as navigation menus).

<aside>
- Contains contact information, eg name of the author.

HTML 5 ATTRIBUTES
- Elements may contain attributes that are used to set various properties of an element.
- Some attributes are defined globally and can be used on any element, while others are defined for specific elements only. All attributes have a name and a value and look like as shown below in the example.
- Following is the example of an HTML5 attributes which illustrates how to mark up a div element with an attribute named class using a value of "example" −a value of "example" <div class="example">...</div>
- Attributes may only be specified within start tags and must never be used in end tags.

Prepared By: Prof. N. K. Pandya Kamani Science College, Amreli(BCA/BSC)

- HTML5 attributes are case insensitive and may be written in all uppercase or mixed case although the most common convention is to stick with lowercase.
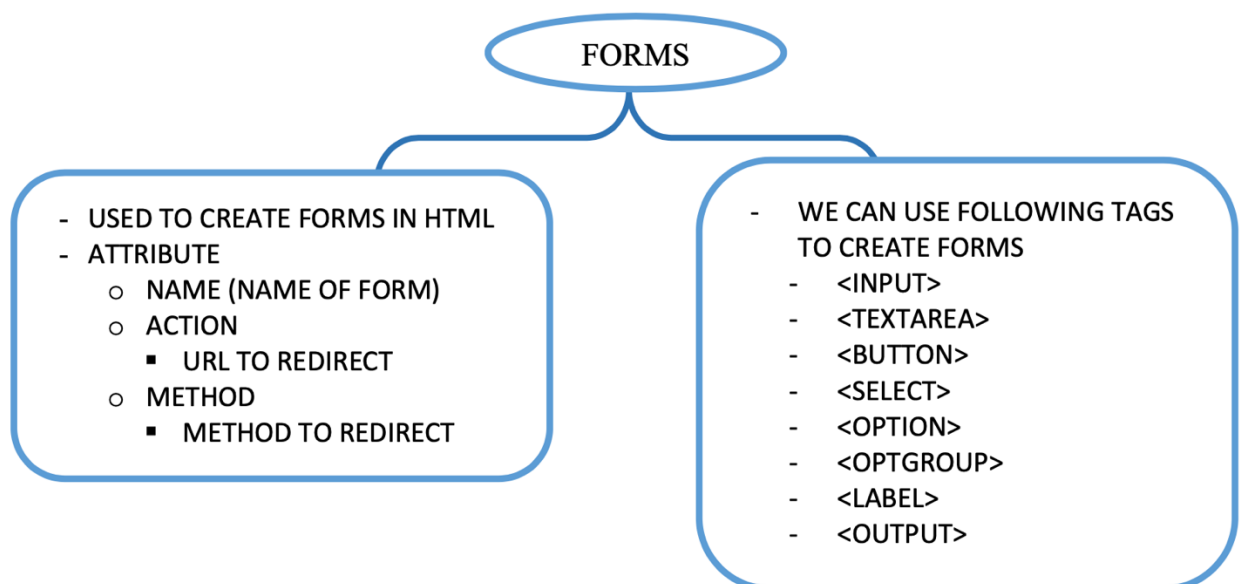
Standard Attributes

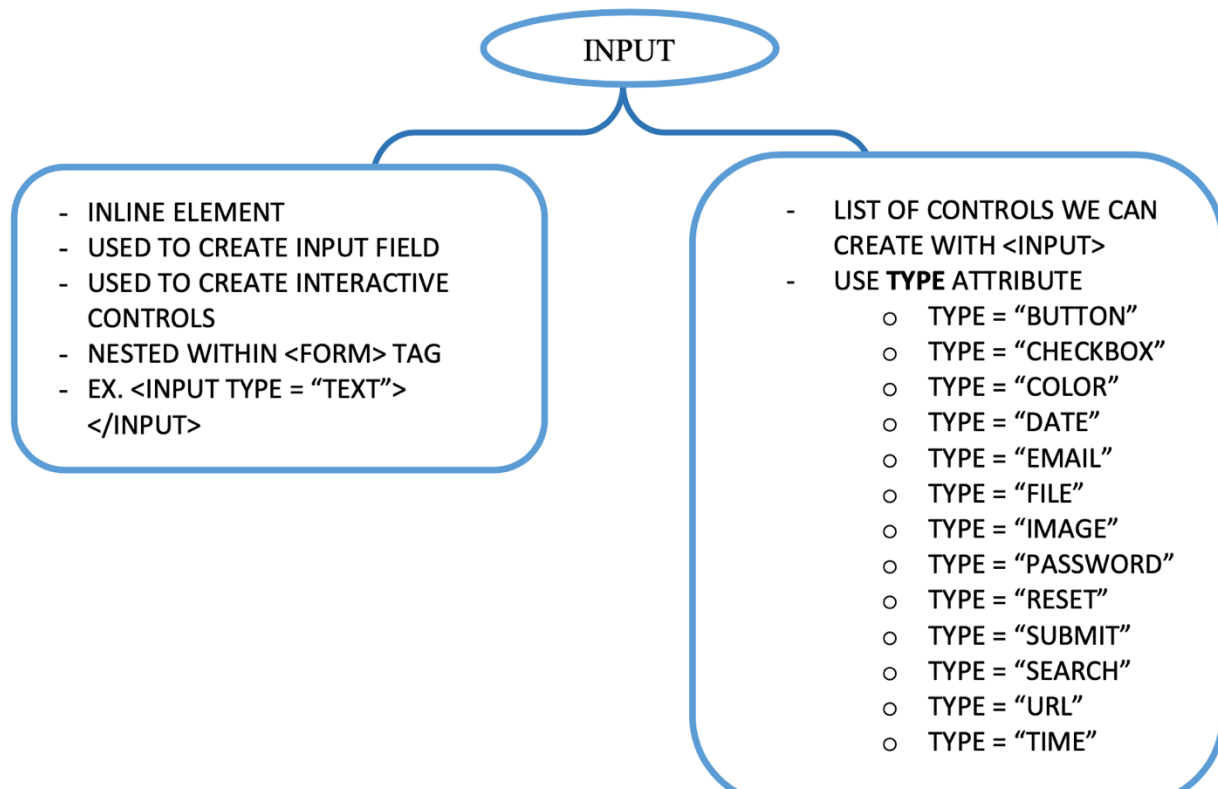- The attributes listed below are supported by almost all the HTML 5 tags.

Attribute	Options	Function
accesskey	User Defined	Specifies a keyboard shortcut to access an element.
align	right, left, center	Horizontally aligns tags
background	URL	Places an background image behind an element
bgcolor	numeric, hexidecimal, RGB values	Places a background color behind an element
contenteditable	true, false	Specifies if the user can edit the element's content or not.
contextmenu	Menu id	Specifies the context menu for an element.
Height	Numeric Value	Specifies the height of tables, images, or table cells.
Hidden	hidden	Specifies whether element should be visible or not.
spellcheck	true, false	Specifies if the element must have it's spelling or grammar checked.
tabindex	Tab number	Specifies the tab order of an element.
title	User Defined	"Pop-up" title for your elements.
valign	top, middle, bottom	Vertically aligns tags within an HTML element.
width	Numeric Value	Specifies the width of tables, images, or table cells.

Custom Attributes

- A new feature being introduced in HTML 5 is the addition of custom data attributes.
- A custom data attribute starts with data- and would be named based on your requirement.
- Following is the simple example: <div class="example" data-subject="physics" data-level="complex">----</div>
- The above will be perfectly valid HTML5 with two custom attributes called data-subject and data-level. You would be able to get the values of these attributes using JavaScript APIs or CSS in similar way as you get for standard attributes.

FORMS

- USED TO CREATE FORMS IN HTML
- ATTRIBUTE
  - NAME (NAME OF FORM)
  - ACTION
    - URL TO REDIRECT
  - METHOD
    - METHOD TO REDIRECT

- WE CAN USE FOLLOWING TAGS TO CREATE FORMS
  - <INPUT>
  - <TEXTAREA>
  - <BUTTON>
  - <SELECT>
  - <OPTION>
  - <OPTGROUP>
  - <LABEL>
  - <OUTPUT>

WEB FORM

Prepared By: Prof. N. K. Pandya Kamani Science College, Amreli(BCA/BSC)

INPUT

- INLINE ELEMENT
- USED TO CREATE INPUT FIELD
- USED TO CREATE INTERACTIVE CONTROLS
- NESTED WITHIN <FORM> TAG
- EX. <INPUT TYPE = "TEXT"> </INPUT>

- LIST OF CONTROLS WE CAN CREATE WITH <INPUT>
- USE **TYPE** ATTRIBUTE
  - o TYPE = "BUTTON"
  - o TYPE = "CHECKBOX"
  - o TYPE = "COLOR"
  - o TYPE = "DATE"
  - o TYPE = "EMAIL"
  - o TYPE = "FILE"
  - o TYPE = "IMAGE"
  - o TYPE = "PASSWORD"
  - o TYPE = "RESET"
  - o TYPE = "SUBMIT"
  - o TYPE = "SEARCH"
  - o TYPE = "URL"
  - o TYPE = "TIME"

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, submit buttons and more.
- A forms can also contain select menus, textarea, fieldset, legend, and label elements. Forms are used to pass data to a server.

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 semantic mark-up than HTML4 and remove a great deal of the need for tedious scripting and styling that was required in HTML4.

The <input> element in HTML4

- HTML4 input elements use the type attribute to specify the data type.
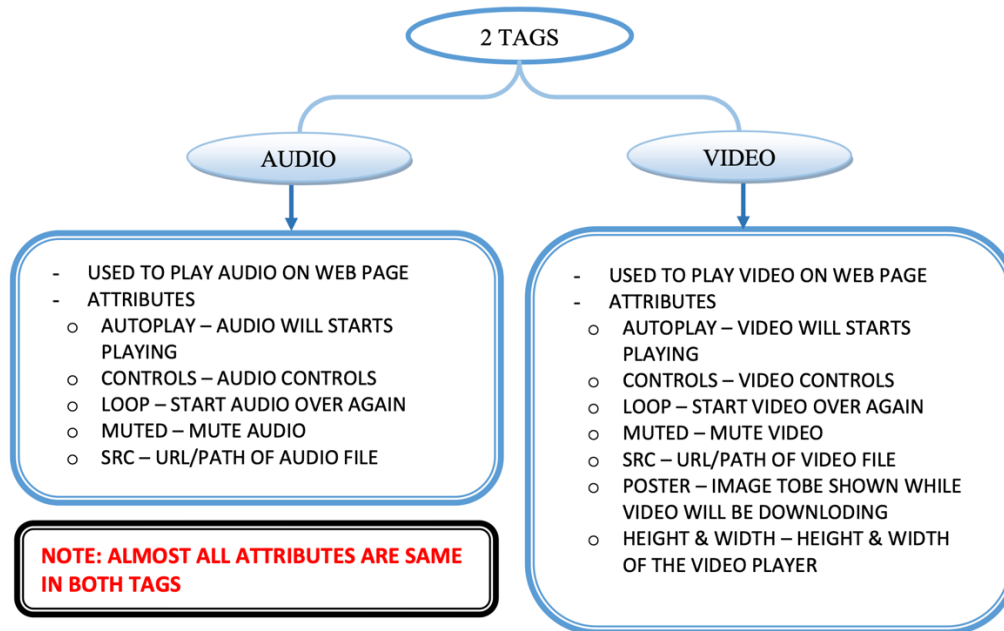
The <input> element in HTML5

- Apart from the above mentioned attributes, HTML5 input elements introduced several new values for the type attribute.

HTML\<input>tag

Definition and Usage

- The \<input> tag is used to select user information.
- An input field can vary in many ways, depending on the type attribute. An input field can be a text field, a checkbox, a password field, a radio button, a button, and more.

Syntax: \<input type="value">

Value	Description
button	Defines a clickable button (mostly used with a JavaScript to activate a script)
checkbox	Defines a checkbox
color	Defines a color picker
date	Defines a date control (year, month, day (no time))
datetime-local	Defines a date and time control (year, month, day, time (no timezone)
email	Defines a field for an e-mail address
file	Defines a file-select field and a "Browse" button (for file uploads)
hidden	Defines a hidden input field
image	Defines an image as the submit button
month	Defines a month and year control (no timezone)
number	Defines a field for entering a number
password	Defines a password field
radio	Defines a radio button
range	Defines a range control (like a slider control)
reset	Defines a reset button
submit	Defines a submit button
tel	Defines a field for entering a telephone number
text	Default. Defines a single-line text field
time	Defines a control for entering a time (no timezone)
url	Defines a field for entering a URL
week	Defines a week and year control (no timezone)

Prepared By: Prof. N. K. Pandya Kamani Science College, Amreli(BCA/BSC)

AUDIO & VIDEO

```
                           ( 2 TAGS )
                          /          \
                   ( AUDIO )        ( VIDEO )
```

AUDIO
- USED TO PLAY AUDIO ON WEB PAGE
- ATTRIBUTES
  o AUTOPLAY – AUDIO WILL STARTS PLAYING
  o CONTROLS – AUDIO CONTROLS
  o LOOP – START AUDIO OVER AGAIN
  o MUTED – MUTE AUDIO
  o SRC – URL/PATH OF AUDIO FILE

NOTE: ALMOST ALL ATTRIBUTES ARE SAME IN BOTH TAGS

VIDEO
- USED TO PLAY VIDEO ON WEB PAGE
- ATTRIBUTES
  o AUTOPLAY – VIDEO WILL STARTS PLAYING
  o CONTROLS – VIDEO CONTROLS
  o LOOP – START VIDEO OVER AGAIN
  o MUTED – MUTE VIDEO
  o SRC – URL/PATH OF VIDEO FILE
  o POSTER – IMAGE TOBE SHOWN WHILE VIDEO WILL BE DOWNLODING
  o HEIGHT & WIDTH – HEIGHT & WIDTH OF THE VIDEO PLAYER

VIDEO TAG
- The <video> tag is used to embed video content in a document, such as a movie clip or other video streams.
- The <video> tag contains one or more <source> tags with different video sources. The browser will choose the first source it supports.
- The text between the <video> and </video> tags will only be displayed in browsers that do not support the <video> element.
- There are three supported video formats in HTML: MP4, WebM, and OGG.

SYNTAX
- HTML / XHTML: <video> ... </video>

Attribute	Value	Description
autoplay	autoplay	Specifies that the video will start playing as soon as it is ready
controls	controls	Specifies that video controls should be displayed (such as a play/pause button etc).
height	*pixels*	Sets the height of the video player
loop	loop	Specifies that the video will start over again, every time it is finished
muted	muted	Specifies that the audio output of the video should be muted
poster	*URL*	Specifies an image to be shown while the video is downloading, or until the user hits the play button
preload	auto metadata none	Specifies if and how the author thinks the video should be loaded when the page loads
src	*URL*	Specifies the URL of the video file
width	*pixels*	Sets the width of the video player

Prepared By: Prof. N. K. Pandya Kamani Science College, Amreli(BCA/BSC)

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>
```
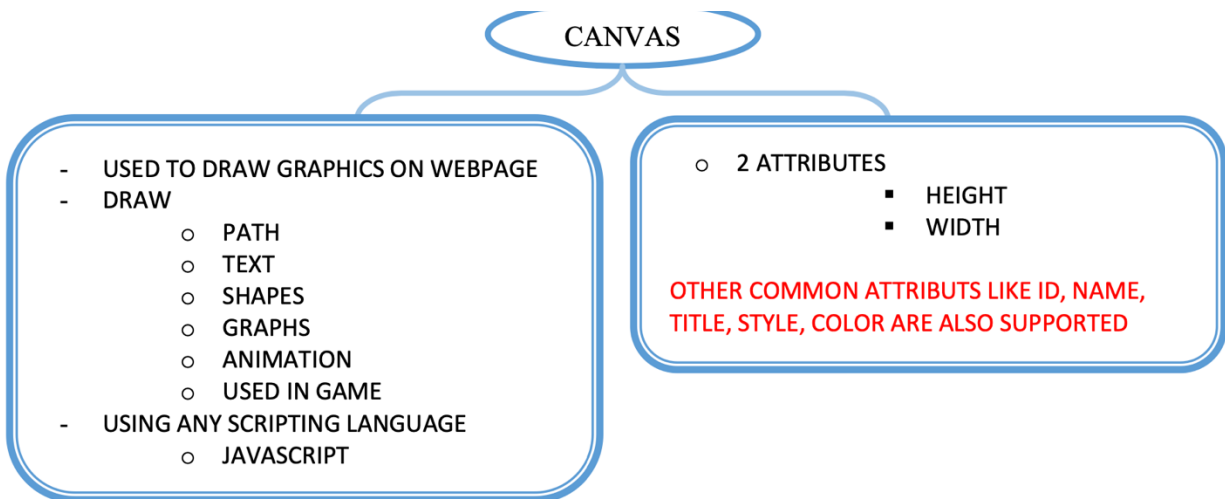
AUDIO TAG
- The <audio> tag is used to embed sound content in a document, such as music or other audio streams.
- The <audio> tag contains one or more <source> tags with different audio sources. The browser will choose the first source it supports.
- The text between the <audio> and </audio> tags will only be displayed in browsers that do not support the <audio> element.
- There are three supported audio formats in HTML: MP3, WAV, and OGG.

Attribute	Value	Description
autoplay	autoplay	Specifies that the audio will start playing as soon as it is ready
controls	controls	Specifies that audio controls should be displayed (such as a play/pause button etc)
loop	loop	Specifies that the audio will start over again, every time it is finished
muted	muted	Specifies that the audio output should be muted
preload	auto metadata none	Specifies if and how the author thinks the audio should be loaded when the page loads
src	URL	Specifies the URL of the audio file

```
<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>
```

CANVAS

CANVAS

- USED TO DRAW GRAPHICS ON WEBPAGE
- DRAW
    - PATH
    - TEXT
    - SHAPES
    - GRAPHS
    - ANIMATION
    - USED IN GAME
- USING ANY SCRIPTING LANGUAGE
    - JAVASCRIPT

- 2 ATTRIBUTES
    - HEIGHT
    - WIDTH

OTHER COMMON ATTRIBUTS LIKE ID, NAME, TITLE, STYLE, COLOR ARE ALSO SUPPORTED

- The <canvas> element defines a region in the document, which can be used to draw graphics on the fly via scripting (usually JavaScript).
- 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:

Basic Canvas Example

<canvas id="myCanvas" width="200" height="100" style="border:1px solid #000000;"> </canvas>