Batch:A2   **Roll No:16010421063**   **Experiment No:**

Aim: To plan and design Home page for Website using HTML5 tags.

Resources needed: Notepad++, Bracket, Sublime Text, any Web Browser and Internet.

Theory:

HyperText Markup Language, commonly referred to as HTML, is the standard markup language used to create web pages. HTML describes the structure of a website semantically along with cues for presentation, making it a markup language, rather than a programming language. HTML is the Web's core language for creating documents and applications for everyone to use, anywhere.

The language is written in the form of HTML elements consisting of *tags* enclosed in angle brackets (like <html>). Browsers do not display the HTML tags and scripts, but use them to interpret the content of the page. HTML can embed scripts written in languages such as JavaScript which affect the behavior of HTML web pages. HTML can be edited by using professional HTML editors like: Microsoft WebMatrix, Sublime Text etc. However, for learning HTML we recommend a text editor like Notepad (PC) or TextEdit (Mac).

All HTML documents must start with a type declaration: **<!DOCTYPE html>**.

The HTML document itself begins with **<html>** and ends with **</html>**.

The visible part of the HTML document is between **<body>** and **</body>**.

Sample HTML Document

```html
<!DOCTYPE   html>
<html>
<head>
<title>PageTitle</title>
</head>
<body>
<h1>MyFirstHeading</h1>
<p>Myfirstparagraph.</p>

</body>
</html>
```

HTML Tags

The basic structure of an HTML document includes tags, which surround content and apply meaning to it. HTML tags are **keywords** (tag names) surrounded by **angle brackets.**
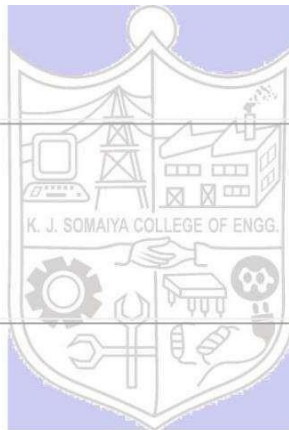
 Attributes

Tags can also have **attributes**, which are extra bits of information. Attributes appear inside the opening tag and their values sit inside quotation marks. They look something like <tag attribute="value">Margarine</tag>.

Heading Tags
Any document starts with a heading. HTML also has six levels of headings, which use the elements **<h1>, <h2>, <h3>, <h4>, <h5>, and <h6>**
Format: <h1> A Heading </h1>

Body Tags

Paragraph Tag

The **<p>** tag offers a way to structure your text into different paragraphs. Each paragraph of text should go in between an opening <p> and a closing </p> tag
Format: <p> Some text </p>

Font Tag
The FONT tags allow you to set the color and size of a specific piece of text. Unlike the BODY tag the FONT tag only changes the text between the opening <FONT> and closing </FONT> tag.

COLOR	The COLOR attribute allows you to set the color of the text: <FONT Color=red>Red Text </FONT>
SIZE	The SIZE attribute allows you to set the size of the text: <FONT SIZE=6>Big Text </FONT>

Line Break Tag
The BR tag inserts a line break in the page.

Format:
Some text

Centering Content
The CENTER tags align the text between them in the center of the page

Format: <center>Some text</cent

Horizontal Lines

Horizontal lines are used to visual   a document. The **<hr>**tag creates a line from the current pos   o the right margin and breaks the line accordingly.
Format: <hr> Some text

Links
The A tag is used for links and and   nother page HREF is set equal to the URL of that page. If the NAME attribute is included instead of the HREF attribute then the A tag is being used to mark a spot in the page that can later be pointed to by a link.
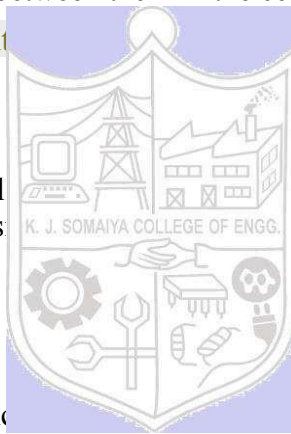*Format:* <a HREF="a URL">the link
       <a NAME=ANCHORNAME>

Images
This tag is used to insert an image into a page. The image is displayed where the <IMG> tag is inserted. The SRC tag tells the browser what image to insert. The width tag tells the browser what the dimensions of the image should be. If the dimensions of the image are different than what is given the browser stretches the image to make it fit. The height tag tells the browser what the dimensions of the image should be. If the dimensions of the image are different than what is given the browser stretches the image to make it fit.
Format: <img src="photo.jpg">

Tables
The <table> tag must surround an entire table. It's attributes determine how the table looks.

BORDER	This defines how big the borders of a table will be.
CELLPADDING	This defines how far from the edge of a cell the content in that cell will be
CELLSPACING	This defines how far apart the cells of the table will be.
WIDTH	This defines the width of the table
BGCOLOR	This defines the background color of the table. If a color is specified in the TR or TD tags BGCOLOR is ignored for that row, or cell respectively.

List

The LI tag creates a new element in an ordered or unordered list. The OL tags start and end an ordered list. All of the elements in the list must be inside these two tags.
Format:
 <OL>
<LI>element one.
<LI>element two.
</OL>

HTML 5 is latest version of HTML standard and is currently under development. HTML is mark-up language – provides a way to describe structure of   text and graphics on a web page using its set of elements and   attributes, deals with alignment of elements on the web page too, derived from SGML

HTML 5.0 was started by World Wide Consortium (W3C) and the Web Hypertext Application Technology Working Group (WHATWG). HTML 5.0 reduces the need for external plug-ins.
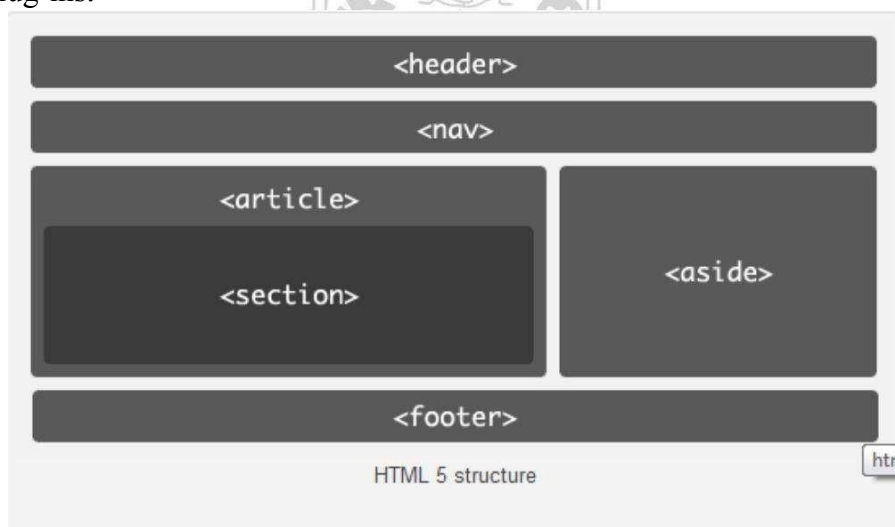

Fig 1. HTML 5 structure

New features in HTML5.0

New content specific Structural elements like article, footer, header, nav

, section…etc

New Form elements and attributes like calendar, date, time, email, url, search

Canvas Element to draw graphic on a web page using JavaScript

Video and Audio elements for media playback

Geo Location

Browser support: HTML5 is not yet an official standard, and no browsers have full HTML5 support. But all major browsers (Safari, Chrome, Firefox, Opera, Internet Explorer) continue to add new HTML5 features to their latest versions.

Video Tag

Video element is used for playing videos or movies. HTML 5 video element is a standard way to include video. You can play the video without the help of external plug-ins like flash player.

Syntax:

    <video src="myvideo.mp4" controls="controls">
        Your Browser wont support this tag
    </video>

Video Attributes:

Attributes	Value	Description
src	url	Specify the location of the video file
height	pixels	Sets the height of the video player
width	pixels	Sets the width of the video player

Audio Tag

Audio element is used for playing audio files.Audio element represents a audio or sound stream HTML 5 audio element is a standard way to include audio You can play the audio without the help of external plug-ins like flash player. Content can be given between the opening and closing of the audio tag. This content should not be shown by the user agents and is intended for the older browsers which do not support audio tag.

Syntax:

    <audio src="myvideo.mp3" controls="controls">
        Your Browser wont support this tag
    </audio>

1. src attribute is used to identify the media
2. controls attribute is used to specify whether or not to display audio controls.

Audio attributes:

Attributes	Value	Description
src	url	Specify the location of the video file
controls	Boolean- any value sets this to true	If present, then the browser will display the default media controls

The different types of input types for selecting date and time are:

Input Types	Description
date	Selects date, month and year
month	Selects month and year
week	Selects week and year
Time	Selects time (hour and minute)
datetime	Selects time, date, month and year(UTC time)

Search:

Search input is used for search fields like Yahoo search, Google search or Site search. **Syntax:**

      <input type="search" >

      Color:

Color input type is used for input fields that should contain a color. If you use color type , it will allow you to pick a color from the color picker. **Syntax:**

      <input type="color" >

Activities:

      To design a web page illustrating the following tags heading, content, background color, table, list and image, HTML structural elements tags, audio and video tags,

      To set the values of minimum three attributes for the above mentioned tags.

   Results: (Document printout as per the format discussed by the faculty *t*)

      Display of the designed webpage along with the code.

Arya Nair

Arya Nair

Arya Nair

wow bhaiyaaaa

Red

Center

lorem	ipsum	dolor
sit	amet	dolor
sit	amet	dolor

1. item
2. item
3. item
4. item

- item
- item
- item
- item

Weehee

lorem	ipsum	dolor
sit	amet	dolor
sit	amet	dolor

1. item
2. item
3. item
4. item

- item
- item
- item
- item

Weehee

0:00 / 1:04

0:00 / 0:03

mm/dd/yyyy   datetime   Week --, ----   text   email   number   search

```html
<!DOCTYPE html>
<html lang="en">
    <head>
        <meta charset="UTF-8" />
        <meta http-equiv="X-UA-Compatible" content="IE=edge" />
        <meta name="viewport" content="width=device-width, initial-scale=1.0" />
        <title>Arya Nair</title>
    </head>
    <body bgcolor="#D4F1F4" text="#05445E">
        <h1>Arya Nair</h1>
        <h2>Arya Nair</h2>
        <h3>Arya Nair</h3>
        <p>wow bhaiyaaaa</p>
        <font color="red" size="6">Red</font>
        <br />

        <center>Center</center>
        <hr />
        <a href="https://github.com/Arya-A-Nair" target="_blank">Github</a>
        <hr />
        <img src="https://picsum.photos/200" alt="Random Image" />
        <table border="2px" bgcolor="#189AB4" cellpadding="5px"
cellspacing="10px">
            <tr>
                <th>lorem</th>
                <th>ipsum</th>
                <th>dolor</th>
            </tr>
            <tr>
                <th>sit</th>
                <th>amet</th>
                <th>dolor</th>
            </tr>
            <tr>
                <th>sit</th>
                <th>amet</th>
                <th>dolor</th>
            </tr>
        </table>
        <ol>
            <li>item</li>
            <li>item</li>
            <li>item</li>
            <li>item</li>
        </ol>
        <ul>
            <li>item</li>
            <li>item</li>
            <li>item</li>
            <li>item</li>
        </ul>
        <marquee >Weehee</marquee>
        <video
            src="./Website-Promo.mp4"
            controls="controls"
```
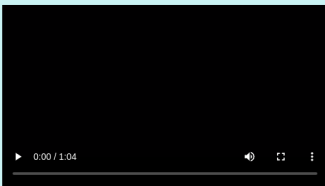
```
        width="500px"
      >
        ...Loading
    </video>
    <br>
    <audio  controls="controls">
        <source src="./sample.mp3" type="audio/mpeg">
    </audio>
    <div>
        <input type="color" placeholder="red"/>
        <input type="date" placeholder="date" />
        <input type="datetime" placeholder="datetime"/>
        <input type="week" placeholder="week"/>
        <input type="text" placeholder="text"/>
        <input type="email" placeholder="email"/>
        <input type="number" placeholder="number"/>
        <input type="search" placeholder="search"/>
    </div>
  </body>
</html>
```

Questions:

1. What is the difference between HTML and HTML5 tags.
    HTML5 introduces new tags and attributes that are not present in HTML, making it easier for developers to create modern and dynamic web pages. HTML5 also includes improved support for multimedia, graphics, and mobile devices, as well as new APIs for creating web applications. Some of the new tags introduced in HTML5 include <video>, <audio>, <canvas>, <article>, <header>, <footer>, and <section>. These new tags allow for better semantic organization of web page content, which can improve accessibility and search engine optimization. Overall, HTML5 offers a more robust and versatile set of tools for creating web pages and applications compared to HTML.

2. Write the HTML code to nest tables within a table?
In HTML, it is possible to nest tables within a table by using the <table> tag to create the parent table and adding <tr> (table row) and <td> (table data) elements to create the table cells. To nest a table, simply create a new <table> element within a <td> element of the parent table, and add new <tr> and <td> elements to create the cells of the nested table.

```
<table>
  <tr>
    <td>Cell 1</td>
    <td>
      <table>
        <tr>
          <td>Cell 2.1</td>
          <td>Cell 2.2</td>
        </tr>
        <tr>
```

```
        <td>Cell 3.1</td>
        <td>Cell 3.2</td>
      </tr>
    </table>
  </td>
</tr>
<tr>
  <td>Cell 4</td>
  <td>Cell 5</td>
</tr>
</table>
```

3. What are the different ways to organise web page contents?

There are several ways to organize web page content, including:

- Using headings and subheadings: Headings are used to organize content into sections and provide a hierarchy of information. Subheadings can be used to break down sections further.
- Using lists: Lists can be used to organize content into ordered or unordered lists, which can make it easier to read and understand.
- Using tables: Tables can be used to organize data and content into columns and rows, which can help to present information in a clear and structured way.
- Using divs and spans: Divs and spans are HTML elements that can be used to group content together and apply styling to specific sections of a web page.
- Using multimedia: Multimedia elements such as images and videos can be used to break up text and provide visual interest to a web page.

Outcomes:
CO 1 Comprehend basics of Web Technology

Conclusion:
(Conclusion to be based on objectives and outcomes achieved)
Creating basic webpage

Grade: AA/AB/BB/BC/CC/CD/DD/FF
Signature of faculty in-charge with date

References: Books/ Journals/ Websites:
- "Web Technologies: Black Book", Dreamtech publication
- ☐ http://www.w3schools.com/