FULLSTACK HTML

HTML BASICS: - html is stands form Hypertext Markup language. It is used for structure web page. It is platform independent and interpreted and scripting language. Used for display information on internet through web browsers. Html code can enter in any note editor and its file store with .html extension. And see output to web browsers. Html document contains elements (tags) to format and design html page.

STRUCTURE AND ELEMENTS OF HTML DOCUMENT: -

Structure of HTML: -

```
<html>
      <head>
            <title>Basics</title>
      </head>
      <body>
      ...
      ...
      ...
      <body>
<html>
```

Elements of HTML: -
Html: - <html>……</html>
Head: - <head>…..</head>
Title: - <title>……</title>
Body: - <body>…..</body>
Body attribute: - bgcolor="color_name"

Writing paragraph on html: -

Header tags:-
```
      <h1>…..</h1>
      <h2>…..</h2>
      <h3>…..</h3>
      <h4>…..</h4>
      <h5>…..</h5>
      <h6>…..</h6>
```
Paragraph: - <p>…</p>
Paragraph attribute: - align=right, left, center, justify
Space elements: -
Typewriter text: - <tt>……</tt>
Bold: - …..
Italic: - <i>……</i>
Underline: - <u>…</u>

Break row: -
 <br clear="all">
Paragraph with space: - <pre>   good   </pre>
Small: - <small>……<small>

Styling HTML: -

Subscript: - _…
Superscript: - […]
Center: - <center>…. </center>
Strikethrough: - <s>…. </s>
Font: - ….
Font attribute: - color, size= 1 to 7, +1 to +4, face=style of font (times new roman)
Horizontal rule: - <hr>
Html comment: - <!-- …. -->
Marquee: - <marquee>…</marquee>
Marquee attribute: - direction="value" right, left, up, down, height="distance", width="distance", behavior="value ", alternate, slide, scroll, scrollamount="value",

CREATING LIST AND LINKS IN HTML: -

List: -
Unordered list: - …
Unordered list attribute: - type= disk (default), circle, square
Ordered list: - …
Ordered list attribute: - type= 1 (default), a, A, i, I., start='5' //start order list from given number.
Listed items: - … (used in ol or ul)

Nested list:-
```
<ul>
      <li>1</li>
      <ul>
        <li>a</li>
        <li>b</li>
      </ul>
      <li>2</li>
      <li>3</li>
</ul>
```

Links: -
Anchor tag: - <a>…
Anchor tag attribute: - href="path/link" create hyperlink, target="_blank" open link in another tag.

Image: - <img>
Image attribute: - src="path of image\image_name.extension", width="distance", height="distance", alt="text"

Icon for webpage: - <link rel="icon" href="favicon.ico"> href="icon image path.ico" rel="icon"

Creating Table in Html: -

Distance can be in pixel (px) or percentage (%)

Table: - <table>…</table>

Table attribute: - border="1px" (width), bordercolor="color_name", width="table width", height="table height", cellspacing="distance", cellpadding="distance"

Table row: - <tr>…</tr> (used in table)

Table row attribute: - bgcolor="color_name"

Table data: - <td>…</td> (used in tr)

Table data attribute: - width="distance", height="distance", bgcolor="color_name"

Table header: - <th>…</th> (used in th, make text bold and center)

Table header attribute: - width="distance", height="distance", bgcolor="color_name"

Table section: -

Table caption: - <caption> here it is</caption> // it set descriptive text or title about table

Table head: - <thead> … </thead> //it encapsulate heading rows

Table body: - <tbody> … </tbody> //it encapsulate body content rows

Table foot: - <foot> … </foot> //it encapsulate footer rows

Ex: -
```
<table border="1px">
  <thead>
     <tr>… … …</tr>
     <tr>… … …</tr>
  </thead>
  <tbody>
     <tr>… … …</tr>
     <tr>… … …</tr>
     <tr>… … …</tr>
     <tr>… … …</tr>
  </tbody>
  <tfoot>
     <tr>… … …</tr>
     <tr>… … …</tr>
  </tfoot>
</table>
```

Table merging:-

Table data attribute: - colspan="count", rowspan="count"

Nested table:-

```
<table>
   <tr>
     <td colspan="3">
        <table border="green" width="100%" height="100%">
```

```
            <tr>
               <td>end</td>
               <td>null</td>
               <td>0</td>
            </tr>
         </table>
      </td>
   </tr>
</table>
```

Creating Form in Html: -

Form tag: - <form>...</form>
Input: - <input> (used in form)
Input attribute: - type="value" placeholder="text" value="value"
Basic Type:-
<input type="text" placeholder="enter" maxlength="10"> set limit for enter characters
<input type="password" placeholder="enter">
<input type="submit" value="Ok">

Label: - <label>... </label>
Label attribute: - for="id";
Ex: - <label for="name">Name</label>
       <input type="text" id="name">

Action and method: -
Action: - it set file path for transfer form data to that file
Method: - it set http method for transfer form data to another file, there are two methods as "get" and "post".
Get: - this method transfer data to page through the URL.
Post: - this method transfer data as encoded and embedded in the body of the HTTP request.
Name: - it identifies transferred data by given name to input.

Ex:-
```
<form action="#" method="get">
   <input type="text" name="userId">
   <input type="submit">
</form>
```

HTML Form Controls: -

Checkbox:-
<input type="checkbox">

Checked: - this attribute set checked for input, also work with radio button
Ex: - <input type="checkbox" checked>

Radio button:-

```
<input type="radio" name="gender" value="m">male
<input type="radio" name="gender" value="f">female
```

Set name for grouping

List:-

```
<input list="ch">
<datalist id="ch">
   <option value="ch1">
   <option value="ch2">
   <option value="ch3">
</datalist>
```

Select list:-

```
<select size="2">
   <option>op1</option>
   <option>op2</option>
   <option selected>op3</option>
   <option>op4</option>
</select>
```

Selected: - it show option as selected in list
Ex: - <option selected>op3</option>
Size: - it set size of slect list to show
Ex: - <select size="2">

Multiple select: - select multiple option by hold ctrl key

```
<select size="4" multiple>
   <option>op1</option>
   <option>op2</option>
   <option>op3</option>
   <option>op4</option>
</select>
```

Multiple: - it set select list for multiple argument

Date-time:-

```
<input type="date">
<input type="time">
<input type="datetime-local">
```

Textbox:-

```
<textarea rows="5" cols="30">
</textarea> rows="count", cols="count"
```

Types:-
```
<input type="email" placeholder="enter" >
<input type=reset value="re">
<input type="button" value="open">
<input type="number" max="10" min="0"> set min and max
<input type="text" maxlength="10"> set maxlength of numbers
<input type="file" accept="image/jpeg">
<input type="range" max="30" min="0" step="5"> set min and max and step
<input type="color" >
<input type="hidden">
<input type="url">
```

Single form attributes: -
Autofocus: - this attribute for autofocus on input when form load
Ex: - <input type="text" autofocus>

Disabled: - this attribute for disable input.
Ex: - <input type="text" disabled>

Required: - this attribute for require input.
Ex: - <input type="text" required>

Readonly: - this attribute for readonly input.
Ex: - <input type="text" readonly>

Fieldset: - this tag is used to group related elements in a form. It draws a box around the related elements.
Ex: -
```
<form>
    <fieldset>
      <legend>user</legend>
      <input type="text">
    </fieldset>
</form>
```

Legend: - The <legend> tag defines a caption for the <fieldset> element.

Adding Media in Webpage: -

Video in html: -
```
<video>
       <source src="C:\Users\IANT\Downloads\sample.mp4">
</video>
```

Video attribute: - controls, loop, width="video width", height="video height", poster="img address"

Auto play video: -
```
<video height="200px"  autoplay="autoplay" loop muted>
        <source src="address of file">
</video>
```

Audio in html: -

```
<audio controls>
        <source src="C:\Users\IANT\Downloads\sampleaudio.mp3">
</audio>
```

Audio attribute: - controls, loop, muted

Auto play audio: - some time it does not work
```
<audio controls loop autoplay="autoplay">
        <source src="C:\Users\IANT\Downloads\sampleaudio.mp3">
</audio>
```

Iframe in html: - it stands for inline frame. It is used for display video, image or other html pages etc.

```
<iframe src="2media.html" width="590px" height="500px"></iframe>
```

Iframe attribute: - src="address or path" width="frame width" height=" frame height" name="name for target" frameborder="0"

Show image or video in iframe when click on link: -

```
<iframe  width="400px" height="300px" name="myframe"></iframe>
<br>
<a href="video path" target="myframe">Earth Video</a>
<br>
<a href="image path" target="myframe">Earth Image</a>
```

Embed youtube video in webpage with iframe: -

- Go to youtube find and open video that will need to show in webpage.
- Click on share and select embed option.
- Copy iframe code and paste it in webpage. It will open video on webpage.

Ex: -
```
<iframe width="560" height="315"
src="https://www.youtube.com/embed/T5PD8ofhiug?si=ZlNvg0fIvn64S85b" title="YouTube video
player" frameborder="0" allow="accelerometer; autoplay; clipboard-write; encrypted-media;
gyroscope; picture-in-picture; web-share" referrerpolicy="strict-origin-when-cross-origin"
allowfullscreen></iframe>
```

CORE STRUCTURE OF HTML: - part of structure and elements of HTML document

Doctype: - it is define type of document, without defining doctype webpage may enable in quirks mode. Because of quirks mode page layout may be unexcepted.

Syntax: -
<!DOCTYPE html>

Example: -
```
<!DOCTYPE html>
<html>
   <head>
      <title>Table</title>
      <meta name="viewport" content="width=device-width, initial-scale=1.0">
   </head>
   <body>
      <!-- html code -->
   </body>
</html>
```

Quirks mode: - this mode used for supports older webpages to display in modern browsers, even these pages did not supports modern web standards. Quirks mode can be disabled by defining doctype in html page.

Meta tags: - The <meta> element is typically used to specify the character set, page description, keywords, author of the document, and viewport settings.

The metadata will not be displayed on the page, but is used by browsers (how to display content or reload page), by search engines (keywords), and other web services.

Example: -

Define the character set used: -
<meta charset="UTF-8">

Define keywords for search engines: -
<meta name="keywords" content="HTML, CSS, JavaScript">

Define a description of your web page: -
<meta name="description" content="Free Web tutorials">

Define the author of a page: -
<meta name="author" content="author_name">

Refresh document every 30 seconds: -
<meta http-equiv="refresh" content="30">

Open another web page after 5 seconds: -
<meta http-equiv="refresh" content="5 http://www.google.com">

http-equiv: - The http-equiv attribute provides an HTTP header for the information/value of the content attribute. The http-equiv attribute can be used to simulate an HTTP response header.

Setting the viewport to make your website look good on all devices: -
<meta name="viewport" content="width=device-width, initial-scale=1.0">

Viewport: - The viewport is the user's visible area of a web page. It varies with the device - it will be smaller on a mobile phone than on a computer screen.

Viewport content: - The **width=device-width** part sets the width of the page to follow the screen-width of the device (which will vary depending on the device).
The **initial-scale=1.0** part sets the initial zoom level when the page is first loaded by the browser.

Header: - The <header> element represents a container for introductory content or a set of navigational links.

A <header> element typically contains:
- one or more heading elements (<h1> - <h6>)
- logo or icon
- authorship information

Note: You can have several <header> elements in one HTML document. However, <header> cannot be placed within a <footer>, <address> or another <header> element.
Ex: -
<header>… … … </header>

Nav: - The <nav> tag defines a set of navigation links.
Ex: -
```
<nav>
 <a href="/html/">HTML</a> |
 <a href="/css/">CSS</a> |
 <a href="/js/">JavaScript</a> |
 <a href="/python/">Python</a>
</nav>
```

Footer: - The <footer> tag defines a footer for a document or section.

A <footer> element typically contains:
- authorship information
- copyright information
- contact information
- back to top links
- related documents

You can have several <footer> elements in one document.
Ex: -
<footer>… … …</footer>

Address: - The <address> tag defines the contact information for the author/owner of a document or an article.

The contact information can be an email address, URL, physical address, phone number, social media handle, etc.

The text in the <address> element usually renders in italic, and browsers will always add a line break before and after the <address> element.
Contact information inside a <footer> element should go inside an <address> tag.

Ex: -
<address>
Written by author name.
Visit us at:
Example.com
Box 564, grand road
India
</address>

Main: - The <main> tag specifies the main content of a document.

The content inside the <main> element should be unique to the document. It should not contain any content that is repeated across documents such as sidebars, navigation links, copyright information, site logos, and search forms.
Note: - There must not be more than one <main> element in a document. The <main> element must NOT be a descendant of an <article>, <aside>, <footer>, <header>, or <nav> element.

Ex: - <main> … … … <main>

Section: - The <section> element defines a section in a document.

According to W3C's HTML documentation "A section is a thematic grouping of content, typically with a heading."

Examples of where a <section> element can be used:
Chapters
Introduction
News items
Contact information

A web page could normally be split into sections for introduction, content, and contact information.

Ex: - <section> … … … </section>

Article: - The <article> element specifies independent, self-contained content.

An article should make sense on its own, and it should be possible to distribute it independently from the rest of the web site.

Examples of where the <article> element can be used:
Forum posts
Blog posts
User comments
Product cards
Newspaper articles

Ex: - <article> … … … </article>

Nesting section and article: - these elements can contain in one another.
Ex: -
<section>
   <article>
      <section> … … … </section>
   </article>
</section>

Aside: -
this element defines some content aside from the content it is placed in (like a sidebar). This tag's content should be indirectly related to the surrounding content.
Ex: -
<aside> … … … </aside>

Details: -
The <details> tag specifies additional details that the user can open and close on demand.
     The <details> tag is often used to create an interactive widget that the user can open and close. By default, the widget is closed. When open, it expands, and displays the content within.
Ex: -
<details>
  <summary>good day</summary>
  good day to all
</details>

Summary: - this tag is used in conjunction with <details> to specify a visible heading for the details.

Title: - this attribute specifies extra information about an element.
Ex: - <summary title="about good day">good day</summary>

Figure and figcaption: -
The <figure> tag specifies self-contained content, like illustrations, diagrams, photos, code listings, etc.
     The <figcaption> tag defines a caption for a <figure> element. The <figcaption> element can be placed as the first or as the last child of a <figure> element. The <img> element defines the actual image/illustration.

<figure>

```
  <img src="../3css/res/earthimg.jpg" width="200px">
  <figcaption>earth</figcaption>
</figure>
```

File path: -
Absolute path: - it takes absolute path of file.
Ex: -
href="D:/atulmore/full stack/3css/res/earthimg.jpg"
href="http://www.google.com"

Relative path: - it take relative path to file.
Ex: -
href="res/earthimg.jpg" //when file is same folder
href="../res/earthimg.jpg" //it get one level up in folder and search file.

Go to page section when click: -
```
<a href="#good"> good</a>
<section id="good">
   good
</section>
```