HTML

-> Html Is Standard markup language for web pages.
-> Html stands for Hyper Text Markup Language.
-> HTML Document :

```
<!DOCTYPE html>
<html>
<head>
<title>Page Title</title>
</head>
<body>

<h1>My First Heading</h1>
<p>My first paragraph.</p>

</body>
</html>
```

- The <!DOCTYPE html> declaration defines that this document is an HTML5 document
- The <html> element is the root element of an HTML page
- The <head> element contains meta information about the HTML page
- The <title> element specifies a title for the HTML page (which is shown in the browser's title bar or in the page's tab)
- The <body> element defines the document's body, and is a container for all the visible contents, such as headings, paragraphs, images, hyperlinks, tables, lists, etc.
- The <h1> element defines a large heading
- The <p> element defines a paragraph

1) HTML TAG

-> HTML tags are like keywords which defines that how web browser will format and display the content.
-> With the help of tags, a web browser can distinguish between an HTML content and a simple content.
-> HTML tags contain three main parts: opening tag, content and closing tag. But some HTML tags are unclosed tags.
-> EX:
  ,

A) HTML Meta Tags
- <!DOCTYPE html>
- <title>
- <link>
- <meta>
- <style>

B) HTML Text Tags
-
- <h1>, <h2>, <h3>, <h4>, <h5>, <h6>
-
-
- <cite>

C) HTML Unclosed Tags
-
- <hr>

2) HTML Element

-> These elements are responsible for creating web pages and define content in that webpage.

-> An element is a collection of start tag, attributes, end tag, content between them

->

A) Void Element

- All the elements in HTML do not require to have start tag and end tag, some elements does not have content and end tag such elements are known as Void elements or empty elements.
- Ex :
 ,<hr>

B) Block-level element

- A block-level element always start with new line and takes the full width of web page, from left to right.
- EX:- ,<h1>-<h6> ,<hr>

C) inline elements

- These elements does not start with new line and take width as per requirement.
- EX:- <a>, <label> ,<b>

3) Class & id

A) Class

-> Assing one or more class names to an HTML element. classes are typically used to aplly styles and for grouping siilar elemnts.

-> multiple elements can share the same classes.

-> EX:

```
<p class="container> main </p>
.container {
        width: 100px;
    }
```

B) ID

-> The id attribute is used to specify the unique ID for an element of the HTML document.

-> Ex:

```
<p id='main> this main</p>
#main {
    color: pink;
    padding: 10px
  }
```

4) Attributes & Text Formatting

-> Attributes should always be applied with start tag.
-> The Attribute should always be applied with its name and value pair
-> Syntax :-

```
<element attribute_name="value">content</element>
```

-> EX:-

```
<h1 title="This is heading tag">Example of title
 attribute</h1>
```

-> What is Formatting :

HTML Formatting is a process of formatting text for better look and feel. HTML provides us ability to format text without using CSS.

-> Categories:

Physical tag: These tags are used to provide the visual appearance to the text.

Logical tag: These tags are used to add some logical or semantic value to the text.

-> Formatting Text :

A) Bold Text: <b> and
B) Italic Text: <i > and
C) Marked Formatting: <mark>
D) Underlined Text: <u> and <ins>
E) Strike Text: <strike> and <del>

F) Monospaced Font: <tt>
G) Superscript Text: <sup>
H) Subscript Text: <sub>
I) Larger Text: <big>
J) Smaller Text: <small>

-> HTML Phrase tag :
A) Abbreviation: <abbr title = ""> </abbr>
B) Marked: <mark>
C) Strong:
D) Emphasized:
E) Definition: <dfn>
F) Quoting: <blockquote cite="">, <cite>
G) Short: <q>
H) Code: <code>
E) Keyboard: <kbd>
F) Address: <address>

-> HTML Comments :
Syntax:
<!-- Write commented text here -->

5) HTML HEAD

-> The HTML <head> element is used as a container for metadata (data about data). It is used between <html> tag and <body> tag

-> Tags

- <title>
- <link>
- <style>
- <script>
- <meta>
- <base>

6) HTML Layout

->

<header>:

It is used to define a header for a document or a section.

<nav>:

It is used to define a container for navigation links

<section>:

It is used to define a section in a document

<article>:

It is used to define an independent self-contained article

<aside>:

It is used to define content aside from the content (like a sidebar)

<footer>:

It is used to define a footer for a document or a section

<details>:

It is used to define additional details

<summary>:

It is used to define a heading for the <details> element

7) HTML Entities

-> HTML character entities are used as a replacement of reserved characters in HTML. You can also replace characters that are not present on your keyboard by entities.

-> Syntax :

&entity_name;

-> Example :

	non-breaking space	
<	less than	<
>	greater than	>
&	ampersand	&
"	double quotation mark	"
'	single quotation mark	'
¢	cent	¢
£	pound	£
¥	yen	¥
€	Euro	€
©	copyright	©
®	registered trademark	®

8) HTML Table

-> HTML table tag is used to display data in table form
-> EX:

```
<table>
 <tr>
   <th>1 header</th>
   <th>1 header</th>
   <th>1 header</th>
 </tr>
 <tr>
  <td>1data</td>
  <td>1data</td>
  <td>1data</td>
</tr>
</table>
```

-> Table tags :

<table>
<tr>
<th>
<td>
<caption>
<tbody>
<thead>
<tfooter>

Attributes:

rowspan
colspan

9) Html List

-> HTML Lists are used to specify lists of information.

-> There are three different types of HTML lists:

A) Ordered List or Numbered List (ol)

- All the list items are marked with numbers by default.
- Ex:

```
<ol>
  <li>Aries</li>
  <li>Bingo</li>
  <li>Leo</li>
  <li>Oracle</li>
</ol>
```

B) Unordered List or Bulleted List (ul)

- All the list items are marked with bullets.
- EX:

```
<ul>
  <li>Aries</li>
  <li>Bingo</li>
  <li>Leo</li>
  <li>Oracle</li>
</ul>
```

C) Description List or Definition List (dl)

- Entries are listed like a dictionary or encyclopedia
- EX:

```
<dl>
  <dt>HTML</dt>
   <dd>is a markup language</dd>
  <dt>Java</dt>
   <dd>is a programming language and
       platform</dd>
  <dt>JavaScript</dt>
   <dd>is a scripting language</dd>
  <dt>SQL</dt>
   <dd>is a query language</dd>
  </dl>
```

10) HTML File Path and Iframe Tag

-> A) File Path

- An HTML file path is used to describe the location of a file in a website folder. Used to link images, file, CSS file, JS file, video, etc
- Attribute: src
- EX :

```
<img src="picture.jpg">
```

B) IFrames

- HTML Iframe is used to display a nested webpage
- Used to embed Webpage or a YouTube video.
- Syntax:

```
<iframe src="URL"></iframe>
```

- Attributes :

src, width, height, frameborder, allowfullscreen

11) HTML Form

-> An HTML form is a section of a document which contains controls such as text fields, password fields, checkboxes, radio buttons, submit button, menus etc.

-> Syntax :

<form action="server url" method="get/post"> </form>

-> Form Elemnets :

<form>, <input>, <textarea>, <label>, <fieldset>, <legend>

-> input types :

A) text:

Defines a one-line text input field

B) password:

Defines a one-line password input field

C) submit :

Defines a submit button to submit the form to server

D) reset:

Defines a reset button to reset all values in the form.

E) radio:

Defines a radio button which allows select one

F) checkbox:

Defines checkboxes which allow select multiple options form.

G) button:

Defines a simple push button, which can be programmed to perform a task on an event

H) file:

Defines to select the file from device storage.

I) image:

Defines a graphical submit button.

12) HTML Form , Keyboard and Mouse Event Attributes

-> When a browser reacts on user action, then it is called as an event

A) Form Event Attributes :

1) onblur
   - Executed the script when form element loses the focus.
2) onchange
   - Executed the script when the value of the element is changed.
3) onfocus
   - Trigger an event when the element gets focused.
4) oninput
   - Executed the script when the user enters input to the element.
5) oninvalid
   - Executed the script when the element does not satisfy its predefined constraints.
6) onreset
   - Triggers the event when user reset the form element values.

7) onsubmit
- Triggerstheeventwhenaformissubmitted.

B) Keyboard Event Attributes:
1) onkeydown
- Triggers the event when the user presses down a key on the keyboard.
2) onkeypress
- Trigger the event when the user presses the key which displays some character.
3) onkeyup
- Trigger the event when the user releases the currently pressed key

C) Mouse Event Attributes
1) onclick
- Trigger the event when the mouse clicks on the element.
2) ondblclick
- Trigger the event when mouse double-click occurs on the element.
3) onmousedown
- Trigger the event when the mouse button is pressed on the element.
4) onmousemove
- Trigger the event when the mouse pointer moves over the element.
5) onmouseout
- Trigger the event when the mouse moves outside the element.
6) onmouseover
- Trigger the event when the mouse moves onto the element.
7) onmouseup
- Trigger the event when the mouse button is released