

## HTML

- ⇒ comment line is `<!-- -->` (short cut key `ctrl + /`)
- ⇒ Hyper Text Markup Language. Same as for uncomment
- ↓                    ↓                    ↓  
link/reference      Pre-defined      communication  
data/information

- ⇒ Discovered 1993, Tim Berner's Lee.
- ⇒ Used to design structure of web Page/web APP.
- ⇒ A Page which is created using HTML is a static Page.
- \* HTML-4  $\Rightarrow$  2000
- \* HTML-5  $\Rightarrow$  2012

### features of HTML:

- Semantic Tag's.
- Audio and video Tag's.
- $\rightarrow$  for logo's.
- SVG and canvas.  $\rightarrow$  used for shapes.
- Geo-location.
- storage.

### Heading - Tag's

Used to provide heading/title for an web-Page.

- \* Paired - Tag's.
- \* Block-level-element

`h1`  $\rightarrow$  most priority

`h2`

`h3`

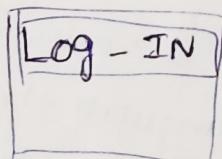
`h4`

`h5`

`h6`  $\rightarrow$  least priority

e.g: `<h1> Log-IN </h1>`

o/p:-



## Paragraph tag :-

- Used to provide plain text / content.
- Paired tag.
- Block-level-element.
- Represented using P tag.

## Structure of HTML :-

<!doctype html> → will tell's to browser which version of html programmer is used.

<html> → Root element

<head>

<title> </title> → Page reference

<meta> → used for responsiveness. And it stores browser info  
it is a unpaired tag

<body> → main tag

→ html --- tag's ---

</body>

</html>

## Tags in HTML :-

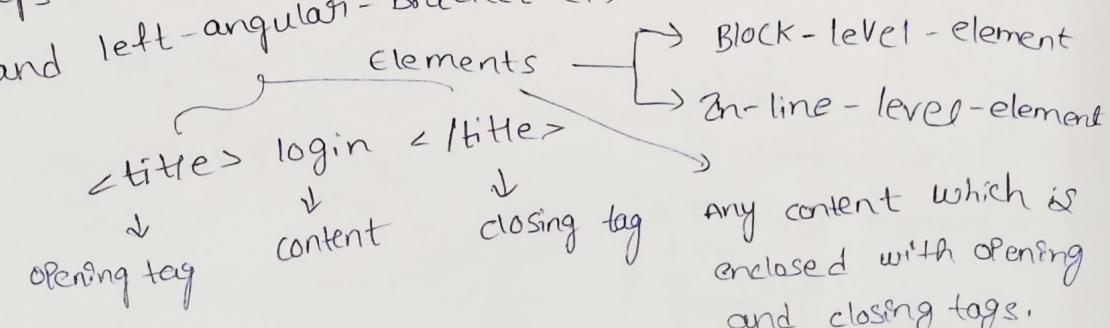
→ It is a pre-defined reserved word's.

→ Used to create an element.

→ Used to create an element.

→ Tag's should be written inside right - angular-bracket (>)

and left-angular-bracket (<).



## Type's of tag's

Paired tag / container tag

→ Any tag which has been opened and closed.

e.g.: html, head, title, body, heading tag's, Paragraph tag's.

Unpaired tag / empty tag / self - closing tag

→ tag's which has been open's their only and close's their only.

e.g.: meta, br, hr, input, img, source tag's.

## Grouping elements :-

Div (block-level-ele)

Span (in-line-level-ele)

non-semantic tags (it means doesn't have any meaning). which can't be understand by Programmer & Browser.

### Div

→ Block-level-element  
(By default it will takes entire width of web page).

→ will accept height and width property.

→ Span can be written inside a Div tag.

→ Nested div tag.

→ Paired tag.

### Span

→ In-line-level-ele (because its takes width of an particular content only).

→ will not accept any height & width property.

→ Div can't be written inside Span tag.

→ Nested Span tag.

→ Paired tag.

<span>

<span>

<span>

</span>

## Editors:-

notepad, notepad++, vs-code, atom, sublime.

### vs-code :-

- It developed in 2015, by microsoft.
- Technologies used to develop vs-code are HTML, CSS, JS, Type-Script.
- It can install three extensions.
  - \* live-server
  - \* prettier
  - \* vs-code icons.

angular - google

Project ZDX - google

VS-Code - Microsoft

Bun.io - Apple

Bootstrap - Twitter

React - fb

## Attributes :-

- \* It is used to provide additional information.
- \* Should be written in opening tag.
- \* Key and value pair.

### Core - Attributes

It is used to provide functionality for HTML.

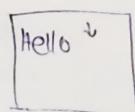
- \* ID → always unique, # (hash)
- \* class → same name, . (dot)
- \* style → design web-page
- \* title → page reference

style = "border: 2px solid;  
            ↑                  ↓  
            key                value

< h1 > Hello </h1 >

assign = center

    ↑                  ↓  
    key                value



```

id = "Demo1"
↑
<hi> Recet </hi> → bg-color: Red
<hi> web-Page </hi> → bg-color: blue
↓
id = "Demo1"
class = "Demo2"
↑
<h2> Java </h2> → bg-color: Green
<h3> SQL </h3> → bg-color: Green
↓
class = "Demo2"

```

cg:  
<head>  
<style>  
#Demo1 {  
 bg-color: Red;  
}  
#Demo1 {  
 bg-color: blue;  
}  
#Demo2 {  
 bg-color: Green;  
}  
</style>  
</head>

## Formatting Tags:-

— Used to change format of plain-text / content.

\* Paired-tag's,

bold	→ HTML-4	BOLD
bold	→ <b> </b>	
similar	→ HTML-5	strong
strong	→ <strong> </strong>	

Big → <big> Big </big>

Small → <small> small </small> → H <sub>2</sub> O <sub>1</sub>

sub-script → <sub> H<sub>2</sub> O<sub>1</sub></sub>

super-script → <sup> X<sup>2</sup> Y<sup>3</sup> Z<sup>4</sup> → <sup> X<sup>2</sup> Y<sup>3</sup> Z<sup>4</sup> </sup>

italic → <i> italic </i>

emphis → <em> emphis </em>

→ HTML-4

Delete → <del> delete </del>

→ HTML-5

Strike → <del> Strike </del>

Underline → <u> underline </u>

insert → <ins> insert </ins>

⇒ Blockquote → <blockquote> It provides indentation

& in the starting of the page. </blockquote>

⇒ quote → <q> It gives double quotes </q>

⇒ Pre-formating → <pre> It has been printed as it is in the web page </pre>

⇒ Marquee → <marquee> It gives content from one side to another side. </marquee>

\* It contains 3 attributes:-

✓ Behaviour ⇒ "scroll, slide, alternate"

✓ Direction ⇒ "up, down, left, right"

✓ scrollamount ⇒ It will increase (or) decrease the speed of content scrolling.

Lists in html :-

It is used to arrange an item's in a ordered (or) un-ordered way. It has 3 types

1. Ordered list

2. Un-ordered list

3. Definition/Description list.

i) Ordered list :-

\* It is used to arrange items in a ordered way.

\* It is a block-level-element.

\* It is a Paired tag.

eg:-

```

    type = "1, A, a, I, i"
    start = "100" → it is default
    reversed "4"
    <ol>
        <li> Java </li>
    1. SI
    2. <li> web-Tec </li>
    created to
    create items <li> Python </li>
    <li> SQL </li>
    </ol>

```

1	Java	a	I	f
2	web	b	II	ii
3	Python	c	III	iii
4	SQL	d	IV	iv
100	100	D	X	A
99	101	E	XI	B
98	102	F	XII	C
				D

type: A  
 start: 2  
 reversed: 2

### 2) un-ordered list :- <ul> </ul>

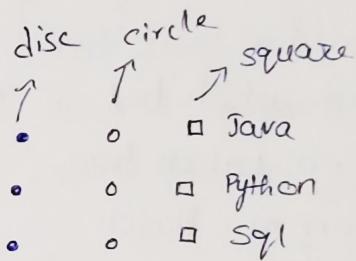
- \* It is used to arrange item's in a un-ordered way.
- \* It is a block-level-element.
- \* It is a Paired tag.

eg:-

```

    type = "circle"
    "square"
    "disc" → it is default
    <ul>
        <li> Java </li>
        <li> Python </li>
        <li> SQL </li>

```



### 3) definition / description list :- <dl> </dl>

- \* It is used to create by dt (Definition term) DD (Definition description). It is also Paired tag and block-level-element.

eg:- <dl>

<dt>

Note:

</dt>

<dd>

lorem...

</dd>

</dl>

dp: Note:

lorem...

## Image-tag in HTML:

- used to embed images on a web-page.
- Unpaired Tag.
- In-line-level-element.

Two attributes:-

\* Src (source)

\* Alt (alternate)

<img src = "Path" alt = " " />

internal Path /  
Relative Path  
or

Path which has  
been taken from  
current folder

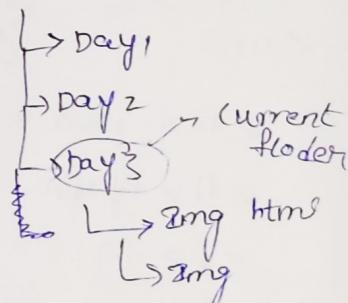
if we taken from  
root folder to  
target file

External Path /

Absolute Path

.. / ex: ..

www > root



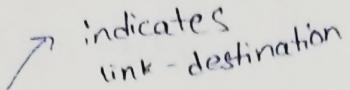
Alternate attribute will work when the image is not displayed on the web-page.

## Anchor-tag:-

- \* <a> stand's for anchor tag which is used to link one web-page to another page.
- \* In-line-level-element.
- \* It is a Paired tag.

two attributes

\* href (hyper reference)

\* target 

<a href="Path" target=" " > content </a>

Internal  
Path

External  
Path

Tells to programmer in

tab link should open.

It have 4 types

1. self :- opens link in a same tab. Default value for target.

2. blank :- opens link in a new -tab.

3. top :- opens link/tab in window.

4. Parent :- opens link in a Parent tab. } these two are not used in html.  
Bec it behave's same like self.

⇒ anchor tag have 3 default colors.

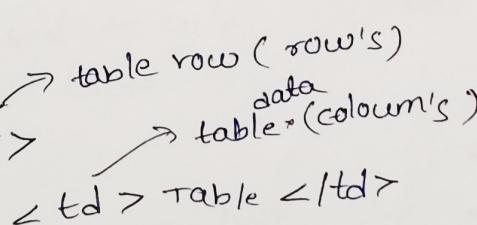
Blue → un-visited link

Red → active state

Purple → visited link

Table in HTML :-

It used to store data in the form of rows & column's.

<table>   
<tr>  
<td> Table </td>

</tr>

</table>

4 Attributes in table :-

row-span  
col-span  
cell padding  
cell spacing

cell :- cell is a intersection of rows & column's.

Ex:- <table>

<tr>

<td> A </td>

<td> B </td>

<td> C </td>

<td> D </td>

</tr>

<tr>

<td> E </td>

<td> F </td>

<td> G </td>

<td> H </td>

</tr>

<tr>

<td> I </td>

<td> J </td>

<td> K </td>

<td> L </td>

</tr>

<tr>

<td> M </td>

<td> N </td>

<td> O </td>

<td> P </td>

</tr>

</table>

O/P -

A	B	C	D
E	f	G	H
I	J	K	L
M	N	O	P

attribute of td-tag.

rowSpan :- used to merge more than one-row.

(Below row td should be removed)

colSpan :- used to merge more than one column.

(same row td should be removed)

Ex:-

<table>

<tr> <sup>rowSpan=3</sup>

<td> A </td>

<td> B <sup>colSpan=2</sup> </td>

<td> C </td>

<td> D </td>

</tr>

<tr>

<td> E </td>  
 ↗ col-Span = 3  
<td> F </td>  
<td> G </td>  
<td> H </td>  
</tr>

Q/P:- + ↓ ↓ ↓

A	B	C	D
C	F	G	H
I	J	K	L
M	N	O	P

<tr>

<td> I </td>  
<td> J </td>  
<td> K </td>  
<td> L </td>

</tr>

<tr>

<td> M </td>  
<td> N </td>  
<td> O </td>  
<td> P </td>

</tr>

</table>

attribute of table tag.

→ cell-padding :- Provides space b/w content and cell-border.

→ cell-spacing :- Provides space b/w two or more adjacent cell's.

HTML 5 Table :-

The version 5 table can be easy to understand by Programmers & browser.

It is a Paired tag.

caption is also Paired tag.

And it is used to give name to the table.

caption ← time-table

bold ←

Mon	Tue	Wed
web	EQL	web
web	SQL	Java
Java	web	SQL

thead ←

tbody ←

tfoot ←

<table>

<caption> Time-table </caption>

<thead>

<tr>

<th> Mon </th>

```
<th>Tue</th>  
<th>Wed</th>  
<br>  
</thead>  
<tbody>  
<tr>  
<td> <td>  
<td> <td>  
</tr>  
</tbody>  
<tfoot>  
<tr>  
<th>@copyright</th>  
</tr>  
</tfoot>  
<table>
```

### forms :-

→ form is used to collect data from the end user.

→ Data is collected in a electronic-way.

→ It is a Paired tag.

<form> → action = "url"  
              → method = "GET"  
                                Post

<label>  
    ↓  
    for = ""  
</label>  
<input type = " " id = " " name = " "/>  
  
it is a unpaired tag.  
</form>

## Reg-form

Name :

Last name :

Phno :

Age :

Gmail :

Password :

Address :

Course :

Gender :  male  female

Hobbies :

Range :

File :  choose file

Search :  month :

URL :  Date-time-location :

Week :  DOB :

Img :

Ex:- *The `<form>` element is used to group several controls as well as label (`<label>`) within a web form. Data will be stored in the server.*

`<form>` *action = "url"*  
*method = "GET" → un-secured and it is default.*  
*"POST" → secured*

*It is used for security purpose.*

`<label> Name : </label>`

`for = "name"`

`<input type = "text" id = "name" name = "name" />`

```
<label for="Lname"> Lname : </label>
<input type="text" id="Lname" name="Lname"
<label for="Phone"> Phone : </label>
<input type="tel" id="Phone" name="Phone"
<label for="age"> Age </label>
<input type="number" id="age" name="age"
when it is used we get up & down arrows
```

```
<label for="mail"> Email </label>
```

```
<input type="email" id="mail" name="mail"
```

~~</form>~~

~~<fieldset>~~

```
<label> Address : </label>
for="address"
```

```
<input type="text" id="address" name="address" rows="10" cols="30"/>
for="Gen"
```

```
<label> Gender : </label>
```

```
<input type="radio" id="Gen" name="Gen" /> Male
```

```
<input type="radio" id="Gen" name="Gen" /> Female
```

```
<label> Course : </label>
```

```
<select id="course" name="course">
```

```
<option> B.Tech </option>
value="B.Tech"
```

"

"

"

```
</select>
```

```
<label> Hobbies </label>
<input type = "checkbox" id = "name" /> Playing
<input type = "checkbox" id = " " name = " " /> singing
</form>
```

### form validation attributes:-

- autocomplete
- value
- autofocus
- placeholder
- required
- Read only
- Disabled
- min-length
- max-length
- checked → Radio  
checkbox
- hidden
- Pattern → Just a rule created by Programmer.

## Multi-media Tag's :-

→ Audio Tag

→ video tag

1. Audio Tag:-

\* It is a Paired Tag.

\* It is used to embed

audio files on a web-Page.

→ Attributes are :-

✓ src (source)

✓ controls

✓ autoplay

✓ loop

✓ muted

### 1<sup>st</sup> way

< Audio >

- src = "path"
- controls
- autoplay
- loop
- muted

< /Audio >

### 2<sup>nd</sup> way

< /Audio >

- autoplay
- controls
- loop
- muted

< Source > src = "Path" type = "audio/mpeg" />

< /Audio >

## 2. video Tag:-

→ It is used embed

video - files on a web Page.

→ Paired tag.

→ Attributes are :-

✓ src (source)

✓ controls

✓ Autoplay

✓ loop

✓ muted

✓ height & width

✓ Poster → it is used  
create thumbnails on  
the video.

### 1<sup>st</sup> way

< video >

- src = "path"
- controls
- autoplay
- loop
- muted
- poster = "Path"
- Height & width

< /video >

### 2<sup>nd</sup> way

< video >

- autoplay
- controls
- loop
- muted
- poster = "Path"
- height & width

< Source src = "Path" type = "

"video/mp4" />

< /video >

## Semantic tags → HTML - 5

- Tag's which are understand by Programmer as well as browser.
- Paired tag.
- Block-level-element.
- It have `as height & width` Property.

The semantic tags are :

- \* main
- \* header
- \* nav
- \* section
- \* article
- \* aside
- \* details
- \* summary
- \* figure
- \* figcaption
- \* mark
- \* time
- \* footer

## HTML - 4 (Div & Span)

```
<div> id = "main"
<div> id = "Header"
    <h1> web-Page </h1>

</div>
<div>
    <span> login </span>
    <span> register </span>
</div>
<div> id = "section"
    <div> id = "article"
        <div>
            <div>
                <div> id = "img"
                    <div>
                        <div>
                            <img />
                            <span> </span>
                        </div> <div> id = "footer" </div>
                    </div>
                </div>
            </div>
        </div>
    </div>
</div>
```

## HTML - 5 (semantic tag's)

```
<main>
<header>
    <h1> web-Page </h1>

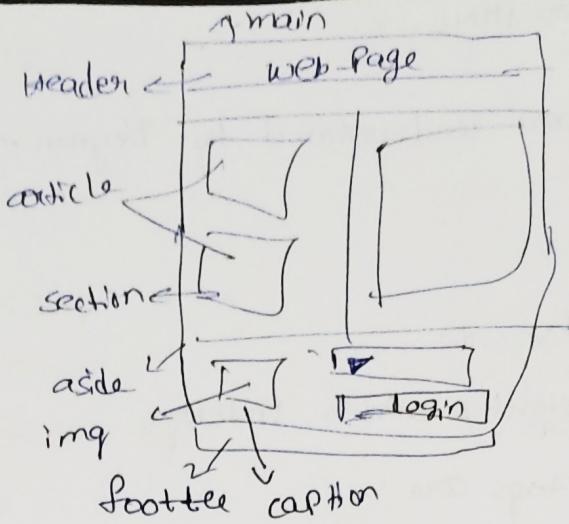
</header>
<nav>
    <span> login </span>
    <span> reg </span>
</nav>
<section>
    <article>
        <img />
        <span> </span>
    </article>
</section>
<aside>
    <figure>
        <img />
        <figcaption> </figcaption>
    </figure>
</aside>
```

</figures>

<footer>

</footers>

</main>



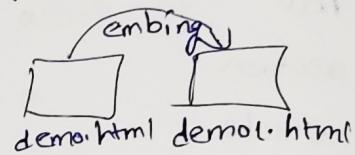
## ② iframe tag :-

→ It is used to embed one web-page into another web page.

→ In-line frame.

→ It has two - attributes

\* src (source)      <iframe src="Path" frameborder="10">  
\* FrameBorder



## HTML Entities :-

→ It is used to create reserved symbol's

&copy; → ©

& Reg; → ®

& lt; → <

& gt; → > (non breaking space)

&nbsp; → one tab space

& Plus; → +

& minus; → -

& phone; →

& mul; →

& euro; → €

& dollar; → \$