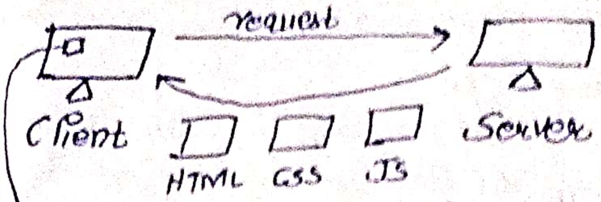
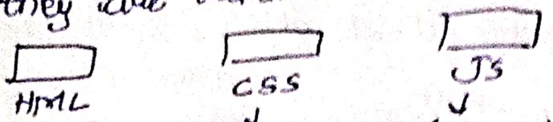
HTML - HyperText Markup Languge.



↳ The web-browser recieves these 3 files, they are rendered.



↳ Structure   Styling   Interaction.

- In 1990's we needed to remember the url of website. Then, Hyperlink was introduced.

Hyperlink ↓ Connect web-pages.

↳ Made it easy to visit pages.
↳ HyperText in HTML means Hyperlink.

Markup - It refers to the way text and other contents are structured, using tags.

- Hosting our code in a server is a long process, so we host it in our m/c.

↳ https://127.0.0.1:Port No/index.html

127.0.0.1 ↓ Loop-Back Address

html ↓ Extension

HTML Tags

1) Heading Tag.

↳ Ranges from h1 to h6, based on importance.

<h1> Shriyash Patil </h1>

Opening Tag   Content   HTML Element   Closing Tag

- Use only <h1> tag for a web-page.
- Always use h1 for SEO.
- Use heading tags in sequence.

2) Paragraph Tag [<p>]

↳ Define a paragraph of text.

↳ <p> lorem10 </p>

↳ Dummy paragraph of 10 word.

3) Horizontal Rule Tag [<hr>]

- Creates a horizontal rule/line.
- It is a self-closing tag.

4) Line Break Tag [
]

- Used to go to the next line.
- It is a self-closing tag.

5) Pre-Formatted Text [<pre>]

- It is used to define pre-formatted text. It preserves both spaces & line breaks.

HTML Lists

Un-ordered [<ul>]

↓

- Order does not matter.
- Marked with bullet pointed.

↓

```
<ul>
  <li> - - - </li>
  <li> - - - </li>
</ul>
```

Bulleted List

↓

Can we change it?

↳ Yes, use attributes

↳ Described property of an element. Defined in Key-value pair.

<ul style="list-style-type : Square;">

Disc, circle, none can also be used.

Ordered [<ol>]

- Order matters.
- Holds semantic meaning.

↓

```
<ol>
  <li> - - - </li>
  <li> - - </li>
</ol>
```

Numbered List.

↓

<ol type="a, A, 1, I, i">

lowercase   upper case   default   roman

There is an attribute for Starting number

↓

<ol start="10">

Starts from 10.

Nested Lists

LIST YOUR PATH & WIN!

```
- <ol>
    <li> Array
      <ul>
        <li> 1D Array </li>
        <li> 2D Array </li>
      </ul>
    </li>
```

Nested List

↳ You can use all properties & attributes in nested lists as well.

7) Anchor Tag [<a>]

↳ Used to create Hyperlinks.

<a href="- - - -" target = "blank">

hypertext reference attribute — href

link — "- - - -"

open link in new tab — target = "blank"

- Self-Closing Tag → X.

8) Image Tag [<img>]

- Display image on webpage.

<img src="- - - - -" alt = "Shriyash">

url or ~~file~~ file path — src

alternative text — alt

<img src="- - -" height="—" width="- - -">

set height & width

<a href="- - - -"><img src = "- . ." alt=". ."> — </a>

↖ Clickable Image

CRACK IT!

Absolute Path → C/ web Dev/ Day 3/ Do.Png

Relative Path → ./Do.png (Same level)
↳ ../Day 2/ do.png (parent folder)

↳ Does not work!
↳ Servers can collect my data, to use it without my permission.

Comments in HTML

↳ <!-- Comment -->

MAKE PEOPLE COMMENT

HTML Boiler - Plate.

<!DOCTYPE html> → HTML Version 5.

<html lang = "en">

↳ Content of html is english, but we can change it. This is usually done for SEO.

ALL THE BEST

<head>

↳ Holds data about data.

information about data in body tag. — data

data in body tag. — data

<meta charset = "UTF-8">

↳ Whenever you write in english, or other language it will be convert to binary. It is an encoding method.

ASCII/English → 1 byte.
Latin → 2 byte.
Asian languages → 3 byte.
} Memory allocation in UTF-8.
Emoji's → 4 byte

- UTF-8 Byte Structure.

1 byte → Starts with 0xxxxxxx, where x is data. (ASCII → 128 characters).

2 bytes → 110xxxxx 10xxxxxx, where x is data.

3 bytes → 1110xxxx 10xxxxxx 10xxxxxx.

4 byte → 11110xxx 10xxxxxx 10xxxxxx 10xxxxxx.

- This is how data is determined by UTF-8.

<meta name = "viewport" content = "width = device - width, initial-scale = "1.0">

viewport → Area where web content is seen.

width = "device - width", initial - scale = "1.0"

adjusts to device width — width = "device - width"

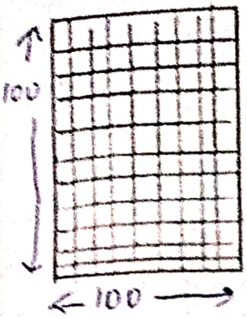
zoom-level. — initial - scale = "1.0"

<title> — </title> → Title of web - page.

<body>

↳ Display all content of website.

How Images are Stored in System?



Total Pixels = 10,000.

- Each pixel's colour is stored.
- RGB is used to make any colour.

R = 0-255 - 8 bit
G = 0-255 - 8 bit
B = 0-255 - 8 bit
} → 24 Bit → 3 bytes

- Total Size = 10,000 * 3 = 30000 byte = $\boxed{30KB}$

Keep Going !

HTML Tables

thead → Define heading row

tbody → Define the table data.

tfoot → Draw conclusion about table.

-<tr> → defines the row of a table.

In <tr>, we could either put th or td.

th → table heading → Define the heading of table

td → table data → define the data of table.

- Colspan & rowspan are attributes used in th or td, to control how many rows/columns should span.
- If span in thead is used, then it will span till thead only.
- Same for tbody.
- <caption> used to caption the table.
- We can also create nested tables, so a table inside a table.

```
<tr>
    <td> - - </td>
    <td> <table border="1">
              <tr>
                  <td - - </td>
              ⋮
</table>
```

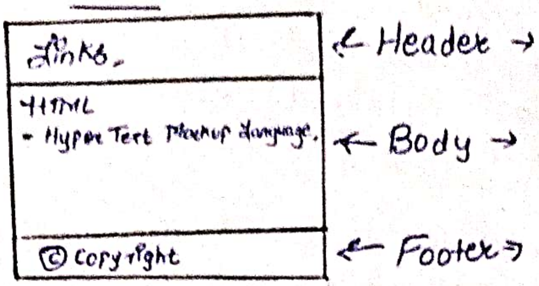
Applies border to the table.

9) Navigation Tag

```
<nav>
    <a href="....">Home</a>
    ⋮
</nav>
```

Multi-Page website.

Website Structure.



CLASS	ID
1) Multiple elements can be given same name.	1) A unique name is assigned to each element.
2) To refer to a group, we use class.	2) To refer to single element, we use id.
Eg → <h1 class="first">	Eg → <h1 id="first">

.class { - - { Use case } }
}
	#id { - - { use case }
	}

10) Section Tag

- We can create multiple sections in a website, and could assign id or class.

* Emmet Abbreviation

1) li*5 → It creates 5 lists items
2) ul>li*5 → unordered list of 5 lists.
3) p>p>p → Creates nested paragraphs.
4) (ul>li*5)*3 → Creates '2' 3 times.
5) $p>\underbrace{nav>}_{\text{nested}}\underbrace{(ol>li*4)}_{\text{Repeated 3 times.}}*3$
6) p+nav → Creates tag as siblings.
7) h1{Hello} → <h1> Hello </h1>
8) p.shriyash → Creates p & gives it class = "shriyash".
9) p.first{Hello} → <p class="1st">Hello</p>
10) h2#second → <h2 #second> </h2>
11) p.first#tempo → <p id="tempo class= "first">.

HTML - Multi - Media.

-Audio File

<audio src="---" controls> </audio>

<audio controls>
<stource src="---"> } Method 2
⋮
</audio.

Suppose audio didn't play, we could give alternate file.

-Video File

<video src="--" height="--" width="--"
controls > </video>

<video controls height="---" width='--'
autoplay muted >
<source src="..." type="video.mp4">
⋮
</video>

Go for it!

-YouTube Video

<iframe src="https://www.youtube.com/embed/video id.
frame border = "0" allowfullscreen >

↑ use this.

Elements

Inline

Only takes width that is necessary.

- Doesn't start from new line.
- Eg - <span>, <a>, <strong>, <img> etc.

Block

- Takes entire block space / full width.
- Starts from new line.
- Eg → <div>, <p>, <h1>, <ul>, <header> etc.

-We can also change block element into inline element.

<p style="display:inline;"> - - - </p>.

<h2 style="display:inline;"> - - - </h2>.

HTML Forms,

Login id : □
Pass : □
Submit
} Forms.

- Use form tag to create a form

<label for=" "> Login id:</label>
<input type= "text"> ← Text
<label for=" "> Pass: </label>
<input type= "password"> → ••••••
<button> Submit </button>

<label for="first"> Name; </label>
<input type="text" id="first">

- Both must be same, if we click on label then we go to input box directly.

<input type="text" required>
↑ mandatory to Fill.

<input type="text" name="fname">
↳ This is stored in Back-end.

Message : □

So, here use textarea →
<textarea name="m". id="m"
rows="5" cols="30"></ta>.

Gender : ○ Male ○ Female.
<label> Gender: </label>
<input type="radio" id= "male" name= "gen" value="m">
<label for="male"> Male </label>

- Same for female, just make sure to write name="gen" to select one value & value attribute goes in the backend.

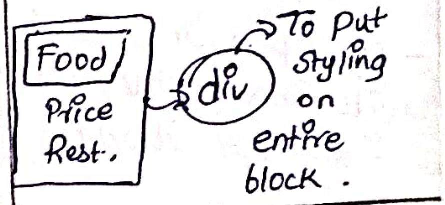
use fieldset to use, and select sections in forms, use legend in fieldset to set a title.

Placeholder attribute will set a text on input.

Dept: Select ∨ ← Drop down menu.

<label for="dept"> -- </label>
<select name="dept" id="dept" req>
<option value=" "
disabled selected> -- </option>
<option value="eng" -- </option>

Div tag is a block level element that is used to group content for styling in a container.



Span tag is an inline element, used to style or group small portions of text or other inline elements.

<p> -- <span style="--">
Highlight </span> </p>.

--- Highlight → Output