

## \* Client-Server Architecture :-

**Client** :- Client is a host (any computer or a device that is connected to a computing network) that receives some service from certain service providers (servers).

**Server** :- Client requests some information, and the server responds by serving it to the client. Servers store and retrieve the information from the databases.



## \* Static VS Dynamic Websites :-

- Static websites is a website that displays the same content to each ~~other~~ user.
- Dynamic website displays different content to different users depending on user data and preferences and provided user interaction.

## \* What happens when you visit a website?

- User enters the URL (Uniform Resource Locator) to the website. The browser then requests the DNS (Domain Name system) Server.

DNS Server looks up for the address of web server using UDP (User Datagram protocol, it is connection less protocol) and responds with the IP address of the web server if establish a new TCP (Transmission Control protocol) connection between the browser & server.

- Browser sends HTTP/ HTTPS request to web servers IP.
- Server sends the necessary files of the website.
- Browser renders the files of website is displayed.

## HTML

Hypertext  
+  
(links)

Markup language.

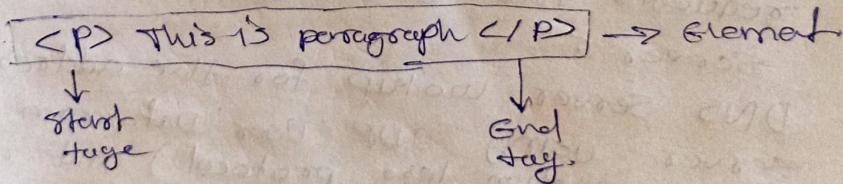
|  
(will able to show content in paragraph, heading,  
buttons, etc.)

- Boilerplate :- Boilerplate code in HTML is required to setup the basic web structure.

```
<html>
  <head>
    <title> </title>
  </head>
  <body>
    Body content
  </body>
</html>
```

- \* tag name should either start with alphabet or underscore
- \* Comment :- <!-- xyz -->
- \* title tag → toolbar
 

```
<title> Title Name </title>
```
- \* Heading tags :- There are 6 Heading tags h1 to h6
  - h1 is high importance,
  - h6 is least imp.
- \*nbsp :- to add space in webpage, (no break space) similarly &lt;(<), &gt;(>), &apos;('), &quot;(")
- \* HTML Element



- \* tags are case insensitive.
- \* list tag
  - 1. Ordered list
  - 2. Unordered list.
- \* Unordered list :- Default bullet type is 'disc'. for o:- ~~<ul>~~ <ul type='circle'> attribute.
 

```
<ul> --- </ul>
        <i> --- </i>
        <i> --- </i>
```

for: □. square </ul>

\* Ordered list . Default 1.2.

- <ol type = "A">  
  <li> ... </li>  
  <li> ... </li>  
</ol>

- <ol type = "A" start = "10">

\* img tag.

<img src = "path" height = "200" width = "100%" alt = "alt text">  
• p - percentage of screen.

\* Anchor tag. ↗ link / path

<a href = "https://google.com" target = "\_blank"> google </a>

Internal links . use # to goto top

<a href = "#lesson1"> lesson 1 </a>

<a id = "lesson1"> Intro lesson 1 </a>

\* to go to lesson give id same as href val.

\* <!DOCTYPE html> — specifies HTML version used to create page . HTML recommends

\* <dl> tag - definition list .

<dt> tag - definition list term

<dd> tag - definition list definition .

<dl>

<dt> Coffee </dt>

  <dd> black hot drink </dd>

<dt> Milk </dt>

  <dd> white cold drink </dd>

Displays :-

Coffee

black hot drink

Milk

white cold drink

## \* File Path :-

A file path specifies the location of file on the web site's folder structure.

1. Relative      2. Absolute

1. Relative file path points to location of file in the root folder of particular web page with reference to the current working file.

2. Absolute path means the file path always starts from the root element or root folder and includes all the folder lists to locate the file.

## \* Div tags Group elements together and apply common styling. Define content to be block ~~element~~.

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

header	
nav	
Section	aside
article	
Footer	

## \* Block and Inline Elements :-

- Block - Start in newline & occupy complete width  
h1, h2, p, div, ~~table~~, etc
- Inline - Don't start in newline & don't occupy whole width.  
img, a, span, input

## \* Text formatting tags:-

- Bold tag - **<b> --- </b>** or **<strong> --- </strong>**
- Italic tag - *<i> --- </i>* or *<em> --- </em>*
- Super script - <sup><sup> .. </sup></sup>
- Subscript - <sub><sub> .. </sub></sub>
- Quoted text - <q> --- </q>

## \* Table :

<table border="2"> <caption> Table Name </caption>

```
<tr>
<th> </th> <th>
<th> Name </th>
<th> Surname </th>
</tr>
<tr>
<td> No. </td>
<td> Sandy </td>
<td> kdekar </td>
</tr>
</table>
```

	Name	Surname
No.	Sandy	kdekar

`<th>` - table head tag

`<tr>` - table row tag

`<td>` - table data tag - adds cell

`<caption>` - caption / table name

thead - group table  
head element  
tbody - <tbody>  
tfoot - <tfoot>

- use `'border'` attribute to add borders.

- use `'colspan = "n"'` to span col over n numbers of cols.  
merge.

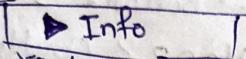
\* Notes :- `<summary>` tag is visible needing for details elements.

`<details>`

`<summary> Info </summary>`

`<p> My name is xyz. .... </p>`

`</details>`

 Info

\* Need to click on it to see detailed.

\* forms :- for data collection.

`<form>`

Used to refer to the id of element (id is associated with)

`<label for = "username"> Username </label>`

`<input type = "text" id = "username" required>`

`</form>`

type of input

field which is compulsory/ required.

- types - text , password, submit , number . time , email , range , etc.

- ~~placeholder~~ attribute to show ~~input~~ input value.

- use name attribute to pass the input.

- value attribute to give default.

- disabled to disable the changing of value.

- Radio button.

`<input type = "radio" name = "gender"> Female <br>`

`<input type = "radio" name = "gender"> Male <br>`

give same name

radio button should have value as well as name to pass value.

checked attribute for default.

- checkbox :- name doesn't work as radio button's name

We are able to select multi options.

## \* Drop Down list:-

<select>

- <select name="month">  
  <option> Jan </option>  
  <option selected> Feb </option>  
</select>

we can select multiple values  
multiple attr.

[Feb]

## \* Textarea = to multiple line input

<textarea name="experience" rows="10" cols="30">  
</textarea>

## \* button

<input type="button" value="Button 1">

→ <button type="button"> Button 2 </button>  
can add  
img also  
button/submit/reset

## \* form attributes :-

<form action="/" method=""/>

pass to  
url

method  
accept  
method  
get / post  
addtive  
data  
request  
method  
HTTP  
method  
network  
reader

## \* HTTP Protocol :-

The Hypertext Transfer protocol (HTTP) establishes communication between client and server.

Your server will receive requests from the client that follow HTTP protocol and then respond with an HTTP response that all browsers can parse.

### HTTP request methods:-

HTTP request methods define how the data is sent. The data can be sent in different ways to the server.

GET, POST, PUT, PATCH, DELETE.

### • GET Method :- To retrieve or get the info from the server.

- GET request is not secured because data is exposed in the URL bar.
- Limited amount of data can be sent bcoz data is sent in the header.
- Idempotent.

### • POST Method :-

- Used when you send the data to the server and want the server to either save it or create some data around it or update existing entry.
- Relatively more secure.
- Large amount of data can be sent because data is sent in the body.
- Non-idempotent.

### • PUT Method :-

- Used to modify resources where the client sends the data that updates the entire resources.

### • PATCH Method :-

- Used for partial update.

### • DELETE Method :-

- Delete a resource from server.

## \* Media Tags.

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

<audio <sup>or</sup> controls>

<source src = "path" type = "audio/mp3">

</audio>

Similarly,

<video height = "200" width = "200" controls>

<source src = "path" type = "video/mp4">

alternative text

</video>

Similarly,

<figure> --- </figure>

## \* Favicon :- In head tag rel = rel<sup>NP</sup> between current page & link resource.

<link rel = "shortcut icon" type = "image/x-icon" href = "path">

## \* Meta tags ; for SEO

<meta name = "description" content = "">

<meta name = "keywords" content = "xyz, xyz">

<meta name = "author" content = "xyz" />