

HTML - Hyper Text Markup language  
A text that contains link to some other text. It also contains images, videos etc. If a language in that tag's are used to write the code is called markup language.

Tag - Are used to provide some like specified formating to the text.

Types of Tag -  
1) Contains of paired Tag  
i.e. `<tagname> Text </tagname>` or `<tagname>`

## Basic Tags of HTML / Structure of HTML document

```
<!DOCTYPE html> <html> </html>  
<html> <head> <title> my web page </title>  
</head> - title, content of website  
<body> - visual elements  
<!--  
--> - Content of web page - visual content  
<!--  
--> - visual effect  
</body> - visual effect  
</html> - visual effect
```

HTML tags are case-insensitive

<!DOCTYPE html>	HTML
<html>	HTML
<head>	HTML
<title>	HTML
<body>	HTML
<p>	HTML
<h1>	HTML
<h2>	HTML
<h3>	HTML
<h4>	HTML
<h5>	HTML
<h6>	HTML

Headings in HTML - <h1> ... <h6> (or 1, 2, 3, 4, 5, 6)

- We have to use heading tag or `h1-h6` tag only when it's needed.
- It's a block-level element.
- Headings by default contains some margin & padding that can be controlled using of CSS.

Paragraph in HTML - <p> --- </p>

It's also a block-level element.

Breaking new line character

<br> It used to provide new line character

Attribute of tag - Attribute's are used to provide some additional functionality for the tag's.

Syntax - <tagname>

Stagename attributes = Value of attributes = Values

- Text </tagname>

<p align="center">Hello </p>

List HTML - List is used to represent multiple elements of same type like numbers, words etc.

Type's of List - 1) Ordered list

2) Unordered list 3) Definition list.

1) Unordered list - <ul>

<ul> <li> element 1 </li> <li>  
<li> element n </li>

<body>

<ul>

<li> Fruits list </li>

<li>

<ul>

<li> Apple </li>

<li> Orange </li>

<ul>

</body>

<html>

Attribute of Unordered list - <ul type="disc">

Value "disc" means "bullet" symbol & value "circle" or "square".

2) Ordered list - <ol>

<ol> <li> element 1 </li>

<li> element 2 </li>

<ol> <li> what symbols </li>

Attribute of Ordered list - <ol type="1" start="3">

<ol type="1/2/3/4/5/6/7/8>

3) Definition List -  $\langle dd \rangle$  - ref. to student b  
(Header)  $\langle dt \rangle$  HTML  $\langle dd \rangle$   
(description)  $\langle dd \rangle$  HTML stands for HTML  $\langle dd \rangle$   
 $\langle dt \rangle$  CSS  $\langle dd \rangle$  -  
stands for CSS  $\langle dd \rangle$   
 $\langle dd \rangle$  CSS stands for CSS  $\langle dd \rangle$   
 $\langle dd \rangle$   $\langle dd \rangle$  text  
 $\langle dd \rangle$   $\langle dd \rangle$  English Q.

A Link in HTML - Link's main use to set the  
navigation control system from one page to  
another web page or from one page to  
another place with in a same web page

$\langle html \rangle$  Front web page  $\langle /html \rangle$   
 $\langle head \rangle$   
 $\langle body \rangle$  -  $\langle h3 \rangle$  - ref. to student b  
 $\langle h3 \rangle$  This is a Front web page  $\langle /h3 \rangle$   
 $\langle a href = "b.html" \rangle$  Go to First  $\langle /a \rangle$   
 $\langle /body \rangle$   
 $\langle /html \rangle$  -  $\langle h3 \rangle$  - ref. to student b  
 $\langle h3 \rangle$

In same page use link  $\langle a \rangle$   $\langle /a \rangle$   
 $\langle p id = "top" \rangle$  TOP  $\langle /p \rangle$  - ref. to student b  
 $\langle p \rangle$   
- - - - -  
 $\langle /p \rangle$   
 $\langle a href = "#top" \rangle$  Go to TOP  $\langle /a \rangle$

Attribute  $\langle a href = "b.html" target = "blank" \rangle$  Second

A Text Formatting Tag - (For bold text)  
 $\langle b \rangle$   
 $\langle p \rangle$  Welcome to India  $\langle /b \rangle$   $\langle /p \rangle$

$\langle p \rangle$  Welcome to strong India  $\langle /strong \rangle$   $\langle /p \rangle$   
(For strong text)  
Functionality of some basic tags

## (Italic Fontnote)

1.  $\langle i \rangle = \langle b \rangle$  (Functionality = Same of)  $\langle em \rangle = \langle em \rangle$  both tag.

2.  $\langle u \rangle$  (For highlight text)  $\langle mark \rangle = \langle ins \rangle$

3.  $\langle p \rangle x \langle sup \rangle 2 \langle sub \rangle < /sup > < /sub >$

(Superscripted text)

(Subscripted text)

$\langle p \rangle x \langle sub \rangle 2 \langle sup \rangle < /sub > < /sup >$

5.  $\langle p \rangle$  Color is  $\langle col \rangle$  Red  $\langle /col \rangle$   $\langle col \rangle$  Black  $\langle /col \rangle$

6.  $\langle p \rangle \langle u \rangle$  Hello  $\langle /u \rangle < /p \rangle$

7.  $\langle p \text{ style} \rangle$  (Pre-formatted text)  $\langle p \text{ style} \rangle$   $\langle p \text{ style} \rangle$   $\langle p \text{ style} \rangle$

Hello

Hi

$\langle p \text{ style} \rangle$   $\langle p \text{ style} \rangle$   $\langle p \text{ style} \rangle$

(India's neighbor India's)

$\langle p \text{ style} \rangle$

$\langle p \text{ style} \rangle$   $\langle p \text{ style} \rangle$   $\langle p \text{ style} \rangle$

$\langle p \text{ style} \rangle$   $\langle p \text{ style} \rangle$   $\langle p \text{ style} \rangle$

$\langle p \text{ style} \rangle$   $\langle p \text{ style} \rangle$   $\langle p \text{ style} \rangle$

$\langle p \text{ style} \rangle$   $\langle p \text{ style} \rangle$   $\langle p \text{ style} \rangle$

~~Content related~~

\* SPAN = <P> Welcome to <span> Radio </span> <span>

\* div Tag - It is use to represent rectangular area in web page

\* Forms in HTML - We want to create control in our web page then we should go for the control of form.

```
<form action="#">
  <table> Name: <table>
    <input type="text" name="n">
  </table>
</form>
```

```
<label> Gender: <label>
<input type="radio" name="gender" value="Male"> male
<input type="radio" name="gender" value="Female"> female
<label> Hobbies: <label>
<input type="checkbox" name="hobbies" value="Coding" checked="checked"> Coding
  (When select multiple values)
```

```
<label> City <label> multiple or, <option selected>
<select name="city"> or, <option value="delhi">
  <option> Agartala <option>
  <option> Lucknow <option>
</select>
  <optgroup label="UP">
    <optgroup>
```

## CSS

platfrom

### 1. Internal CSS -

1) <html>

<head>

<title> CSS Demo </title>

<style type="text/css"> .title { color: red; }

h2

{ color: green; }

</style>

<body>

<h2> Hello </h2>

<p> Hi! </p>

</body>

</html>

h2

{ color: red; }

### 2. External CSS -

1) <html>

<head> { color: red; }

<title> CSS Demo </title>

<link href="style.css" rel="stylesheet" type="text/css" />

</head>

<body>

<h2> Hello </h2>

<p> hi </p> next </p> (next returned)

<a href="bbb.html"> Next </a>

</body>

</html>

<tr> <td> abt </td> abt </td> abt </td> abt </td> abt </td>

### 3. Table CSS -

th2 style="color: red;" > Hello </th2>

tr { border-top: 2px solid black; border-bottom: 1px solid black; }

th2 { color: red; } tr { border: 1px solid black; }

## Types of Selector -

### 1. Universal Selector - '\*'

<html>

<head>

<title> Selection Demo </title>

<style>

\*

{ color: red; }

<style>

<head>

<body>

<p> Hello </p>

<h2> Hi! </h2>

<h3> Hey </h3>

<body>

</html>

{ color: red; }

<style>

<body>

<style> color: red; </style>

<style> color: red; </style>

<style>

{ color: red; }

-> Important

### 2. Element Selector - h2

{ color: red; }

### 3. Group Selector (element, element) - p, h2

p, h2

{ color: red; }

<style> color: red; </style>

### 4. Child Selector (element > element) - <?>

p > span { color: red; } -> red or

{ color: red; }

<body>

<body>

<p> Welcome to <span> India </span> </p>

<h2> Welcome to <span> Agro </span> </h2>

<span style="color: red;"> Agro </span> -> style: SNT

### 5. Descendent Selector (element element) -

div span { color: red; }

<body>

<div>

Hello, How are <span> you </span>

<P> Welcome to <span> India </span> </P>  
<h3> Welcome to <span> Africa </span> </h3>  
</body>

#### b) Adjacent selector - (element + element) -

Path  
{ color: red; }  
<body> <h1> Hi </h1>  
<p> Hello </p>  
<h3> bye </h3>  
</body>

#### c) ID Selector - (starts with #) -

# a  
{ color: red; }  
<body> <h1 id="a"> Hello </h1>  
<p> Hello </p>  
<p id="a"> India </p>  
</body>

#### d) class Selector - (starts with .) -

. a { font-family: Arial; }  
. b { color: red; }  
<body>  
<p class="a"> Hello </p>  
<h2 class="a b"> Hey </h2>  
</body>

#### e) n<sup>th</sup> child Selector -

:nth-child(3)  
{ color: red; }  
<P> Hello </P>  
<P> Hey </P>  
<P> Hi </P>  
<P> bye </P>

10. odd-even Selector - one at a time  
even - every 2nd child (odd) color:red  
E color:red; 3

11. Attribute selector -

<P align="right"> value required  
E color:red; 3

<P align="right"> Hello </P> 3

<P align="center"> Hi! </P> value  
<H1> All H </H1>

12. Attribute with value selector = value  
P align="right" value  
E color:red; 3

13. class with element selector = class  
P a  
E color:red; 3

<P class="a"> Hello </P>

<H2 class="a"> Hi! </H2> value  
<H1> All H <"/> 3

14. ID with element selector = value  
P #a

E color:red; 3

<P id="a"> Hello </P> 3

<H2 id="b"> Hi! </H2> 3

<H1> All H <"/> 3

\* styling text P H <"d" n> value  
E color:rgb(0,0,0); 3

⇒ Net red 2.55+red

2. background-color  
color:#ff0000; background-color  
E background-color: 3

\* Text-align - P E text-align:left/right/justify.  
3

<H1> All H

<H1> Red H

2. P { text-indent: 40px; } → Read right

3. P { text-decoration: underline / overline / line-through none; } → Read right

E.g. a { text-decoration: none; } → Read right

2a href="#" style="text-decoration: none;">click here

4. P { text-transform: lowercase / uppercase / capitalize; } → Read right

5. P { letter-spacing: 5px; } → Extra space

6. P { word-spacing: 20px; } → Large space

7. P { line-height: 40px; } → Height

8. P { direction: rtl / ltr; } → Right-left / Left-right

A. Styling-Font- → weight, size, font-family

1. P { font-family: Arial; } → word

2. P { font-size: 20px; } → Height

3. body { font-size: 20px; } → Height

P { font-size: 1em; } → Height

Note - 1 cm = Outer container of the body tag default

4. P { font-style: italic; } → bold

5. P { font-weight: bold; } → bold

6. P { font-variant: small-caps; } → small caps

## \* styling links - ~~4 types of links~~

unvisited ordered

active visited unvisited

hovered invalid vi

visited no ac

Eg -

```
<style> { margin: 10px auto; width: 300px; border: 1px solid black; padding: 10px; } a { text-decoration: none; font-size: 18px; color: red; } a:hover { text-decoration: underline; color: green; } a:link { color: blue; } a:visited { color: purple; } a:active { color: yellow; } a:disabled { color: gray; }
```

E-color: green; font-size: 18px; color: red;

a-hover

E-color: green; font-size: 18px; color: green;

E-color: yellow; }

a-active

E-color: red; }

a-visited

E-color: purple; }

E-color: cyan; }

```
</style> { background-color: white; border: 1px solid black; padding: 10px; }
```

\* Box-model is used. It is something so that element has width, height, border, margin, padding.

<html>

```
<head> { height: 100px; width: 100px; border: 1px solid black; }
```

```
<title> Box-model demo </title>
```

<head> { style: border: 1px solid black; }

div

```
{ width: 300px; height: 100px; border: 1px solid black; }
```

```
height: 100px; width: 300px; border: 1px solid black; }
```

border: 5px solid red;

padding: 10px; width: 300px; height: 100px; }

margin: 50px; }

```
 } </style> </head> </html>
```

<body>

```
<div> { border: 1px solid black; }
```

Hello </div>

```
</body> </html>
```

```
</html>
```

1. Border - border-style: solid; border-width: 5px; border-color: red; border-radius: 10px; border-bottom-left-radius: none;

border-style: solid, dotted, dashed, groove, ridge, inset, outset, none.

border-left / right / bottom / top = border

2. Border-Width - thin, thick, medium.

3. Padding-left: 100px;

padding-top: 30px;

4. margin-top: 50px;

margin-left: 100px;

For center margin-left: auto; margin-right: auto;

margin-left: auto; margin-right: auto;

5. a { display: block; width: 100px; height: 30px; border: 1px solid red; } (change block)

width: 100px; height: 30px; border: 1px solid red; } (block element)

height: 30px; border: 1px solid red; } (to block element)

border: 1px solid red; } (block element)

<body>

<a href="#"> click </a> ignore

</body>

<html>

<head>

<title> Creative List </title> </head>

<style>

a { display: block; width: 100px; height: 30px; border: 1px solid red; }

width: 100px; height: 30px; border: 1px solid red; }

margin-left: auto; margin-right: auto;

margin-right: auto; margin-left: auto;

margin-top: 100px; margin-bottom: 100px;

text-align: center; background-color: yellow;

padding: 5px; border: 1px solid black; border-radius: 10px;

```
text-decoration: none; color: white; font-size: 22px; border-radius: 10px; } a:link, a:visited, a:hover, a:active { background-color: #5e0639; } a:link, a:visited, a:hover, a:active { background-color: #21cd37; } <html> <head> <body> <a href="#"> click </a> </body> </html>
```

## A Create Menubar - program

```
<html> <head> <title> Box model demo </title> <style> body { width: 100%; height: 100%; margin: 0; padding: 0; } .header { width: 100px; height: auto; margin-left: auto; margin-right: auto; margin-top: 100px; } .header { display: inline-block; text-decoration: none; width: 100px; height: auto; background-color: blue; color: white; text-align: center; font-size: 20px; padding-top: 5px; padding-bottom: 5px; }
```

font-family: Arial;  
margin-left: -3px;  
border-radius: 7px; } border  
</style>  
<head>  
<body>  
<div>  
<a href="#">Home <a href="#">About Us  
<a href="#">Product <a href="#">Services  
<a href="#">Contact Us </div>  
</body>  
</html>

\* Background - body { background-color: black; }  
background-color: black; }  
body { background-image: url(bg.jpg); }  
background-image: url(bg.jpg); }  
background-repeat: no-repeat; }  
repeat-x | repeat-y | both

4. body {  
background-position: top center; }  
bottom left | right center | left center | right center;

5. body {  
background-attachment: fixed; }

\* Grid - <html>  
<head>  
<title> Grid Demo </title>  
<style>

```
# container { margin-left: auto; margin-right: auto; width: 1024px; height: auto; border: 1px solid red; margin-left: auto; margin-right: auto; } .box {
```

```
float: left; display: inline-block; border: 1px solid blue; width: 240px; height: 150px; margin: 4px; }
```

```
</style>
```

```
<head>
```

```
<body>
```

```
<div id="container">
```

```
<div class="Box"></div>
```

```
<div class="box"></div>
```

```
<div style="clear:left"></div>
```

```
</div>
```

```
</body>
```

```
</html>
```

## A Table in HTML

```
<table>
```

```
<tr> <td> Roll No. </td>
```

```
<td> Name </td>
```

```
<td> Marks </td>
```

```
</tr>
```

```
</table>
```

Each row

<tr> - <td> - <td>

<td> - <td>

<table> - <tr> - <td>

### Four First Row -

< thread >

< tr >

< td >

- -

< th >

< 1thead >

### Four Middle Row -

< tbody >

< tr >

< td >

- -

< th >

< 1tbody >

### Four Last Row -

< tfoot >

< tr >

< td >

< 1td >

< tr >

< 1tfoot >

### Row Span

< tr >

< td > Name < 1td >

< 1tr >

< tr >

< td > NameSpan < 1td >

< td > 321 - < 1td >

< 1tr >

< tr >

< td > 245 - < 1td >

< 1tr >

## Column 9 Pcs

<td>

<td colspan="2" > Marks </td>

<td>

<td>

<td> Theory </td>

<td> Practical </td>

<td>

<td>

<td> 73 </td>

<td> 22 </td>

<td>

<td>

## Captions of tables

<caption> student list </caption>

student list

<table>

<tr>

<td>

<td>

<td>

<td>

student list

<tr>

<td> student list </td>

<td>

<td>

student list </td>

<td> student list </td>

<td>

## JS Variables

Create a variable called Car Name, assign the value Volvo to it

```
Var CarName = "Volvo";
```

## JS operators

Multiply 10 with 5, and alert the result:

```
Alert(10 * 5);
```

## JS Data Types

Use Comments to describe the correct data type of the following variables

```
let length = 16; // Number
```

```
let lastname = "Johnson"; // String
```

```
Const x = {
```

```
First name: "John",
```

```
Last Name: "Doe"
```

```
}; // Object
```

## JS Functions

Execute the function named My Function

```
Function My Function() {  
};  
Alert("Hello World!");
```

```
[My function()];
```

## JS objects

Alert "John" by extracting information from the person object

```
const person = {
```

```
    firstName: "John",
```

```
    lastName: "Doe",
```

```
}
```

```
alert (person.firstName);
```

## JS Events

The <button> element should do something when someone clicks on it. Try to fix it!

```
<button onclick="alert('Hello')">Click me.</button>
```

## JS Strings

Use the length property to alert the length of txt.

```
let txt = "Hello World!";
```

```
let x = [txt.length];
```

```
alert(x);
```

## JS String Methods

Convert the txt = "Hello World!"

```
txt = txt.toUpperCase();
```

## JS Arrays

Get the value "Volvo" from the cars array

```
const cars = ["Saab", "Volvo", "BMW"]
```

```
let x = [cars[1]]
```

## JS arrays Methods

Use the correct array method to remove the last item of the fruits array

```
const fruits = ["Banana", "orange", "apple"]  
fruits.pop();
```

## JS array sort

Use the correct array Method to sort the fruits array alphabetically

```
const fruits = ["Banana", "Orange", "apple", "Kiwi"]  
fruits.sort();
```

## JS Dates

Create a Date object and alert the current date and time

```
const d = new Date();  
alert(d);
```

## JS Math

Use the correct Math Method to Create a random number

```
let x = Math.random();
```

## JS Comparisons

Choose the correct Comparison operator to alert true when x is equal to y

```
x = 10;  
y = 10;  
alert(x == y)
```

## JS Conditions

Fix the if statement to alert Hello World if x is greater

```
if [ ] x > y [ ] [ ]
    alert("Hello World");
[ ]
```

## JS Switch

Create a switch statement that will alert "Hello" if fruit is banana; and "Welcome" if fruit is apple

```
Switch (fruit) {
    Case "Banana":
        alert("Hello")
        break;
    Case "apple":
        alert("Welcome")
        break;
```

## JS For Loops

Create a loop that runs from 0 to 9

```
let i;
for (i = 0; i < 10; i++) {
    console.log(i);
}
```

## JS While Loops

Create a loop that runs as long as i is less than 6

```
let i = 0;
while (i < 10) {
    console.log(i);
    i++
```

## JS Break Loops

Make the loop stop when i is 5.

```
for (i=0; i < 10; i++) {  
    console.log(i)  
    if (i == 5) {  
        break;  
    }  
}
```

## JS HTML/DOS

Use the get Element By Id method to find the p element and change its text to Hello

```
<p id="demo"></p>
```

```
<Script>
```

```
[document.getElementById("demo").innerHTML] = Hello  
</Script>
```