

HTML

`<!DOCTYPE html>` → declaration represents the document type, and helps browsers to display web page correctly.

`
` line break
`` which makes text bold (use ``)

`` This will display if the image is not displayed

`<hr>` which is used to get horizontal line

`<big>` `</big>` This is used to get big size text

`<small>` `</small>` This is used to get small size text

` ` `<u>` `` `<ins>`

`` order list → ``

`` unordered list → ``

`` ``

`` ``

`` ``

``

`<div>` used to divide the page

↓
division

<form> tag is used to create an user html form for user input.

In form we have so many tags they are

- ① Here we have to use label and then input
- <input type="text" name="first" placeholder="" />
- <label for="first"> First Name: </label>

- ② ③

```
<input type="radio" name="gender-choice" value="1"/>
<input type="radio" name="gender-choice" value="2"/>
<input type="radio" name="gender-choice" value="3"/>
male ① Female ② Other ③
```

We have to give same name for all the three inputs because we need to select only one option // otherwise we will get 3 can be selected

- ④
- ⑤
- ⑥ ☐
- ⑦
- ⑧
- ⑨

<select> tag

If we use `multiple="multiple"` then we can select multiple options.

`<select name="month">`
`<option value="0"> Selected </option>` `<option value="1"> January </option>`
`<option value="5"> May </option>`

<select>

if we want to add a button then add `<button type="submit"> Submit </button>`

<table> tag

used for styling purpose

<table>

<thead>

`<th> Dog </th>`

`<th> Name </th>`

<thead>

<tr>

data

`<td>`

`<td>`

empty html element

html elements with no content are called empty

elements, `
` is an empty without a closing tag, it can close like `
`, `
`

* html is not case sensitive

Attributes

- All the html element's will have attributes because it provide additional information about an element.
- In the href attribute the href attribute is used in the `<a>` tag ` `
- src attribute this attribute is mostly used in ``
- alt attribute this attribute will give info when the img was not displayed on the web page.
- Style Attribute This attribute is used style an element like color, size etc.
`<p style="color:red">`
- In html5 standard does not require quotes around the attribute value. But, using the quotes is the good programming practice.

single (or) double quotes

→ Both quotes can be used in the html5
but some situations, when the attribute
value itself contains double quotes, it is
necessary to use single quotes

`<p title='john "shotgun" nelson'>`

(②) vice versa

<pre> tag

→ this element defines pre-formatted text
→ the text inside `<pre>` element is
displayed in a fixed-width font, and it
preserves both spaces.

Ex:- If we use `<p>` tag and if we write
any poem with line break and space
while displaying in the webpage it will
remove all new line and spaces but if
we use `<pre>` it will display as it is
in the webpage.

Background color

it will define the background color

for an html element

`<body style="background-color:blue;">`

Text color

`<h1 style="color:red">` This is how we do `<h1>`

Block-level and Inline HTML elements

In block level tag for the default display and styling purpose in html, all the elements are divided into two categories.

- Block-level
- inline-level

Block-level

- which structure main part of web page, by dividing the page into coherent block
- It always starts with new line and takes the full width of up from left to Right
- This elements can contain both block-level and inline-level

ex:-
address, article, aside
blockquote, canvas, dd, div
dl, dt, fieldset, figcaption
figure, footer, form, h1-h6
header, hr, li, math, nav, ol
output, noscript, p, pre, section
table, tfoot, ul and video

inline-level

- which differentiate the parts of a given text and provides it a particular function
- It does not start with new line and take width as per requirement
- inline elements are mostly used with other elements

q, abbr, acronym, b
bdo, br, br, button, cite
code, dfn, em, i, img
input, kbd, label, map
object, q, samp, script
del, small, span,
strong, sub, sup, u,
var, time and
textarea.

Formatting

This is a process of formatting text for better look and feel. without using the CSS we can get the formatting the text.

Formatting tags are divided into two type

- physical tag → provide visual appearance to the text
- logical tag → add some logical (or) semantic value

elements name

- ① bold the text (phy tag)
- ② tells browser that the text is imp (logical tag)
- ③ <i> which is used to make text italic (phy tag)
- ④ display content in italic (log tag)
- ⑤ <mark> highlight text
- ⑥ <u> underline the text
- ⑦ <tt> text in teletype text having same width & height
- ⑧ <strike> draw a strike through on a section of text
- ⑨ <sup> it display the content slightly above the normal line.
- ⑩ <sub> it display the content slightly below the normal line.

- ① ` content` display deleted content
② `<ins> content` display the content which is added

italic text (`<i> content`)

`<p> <i> content </i> </p>` using `<i>` is good programming practice

marked Formatting

`<h2> content <mark> highlighted content </mark> </h2>`

Monospaced font

If you want that each letter has the same width then you should write the content within `<tt> </tt>` element

"w" is wider than "i", monospaced font provides similar space among every letter

Superscript text

`⁻⁻⁻`

Subscript text

`₋₋₋`

Inserted text anything that puts within `<ins>`

is displayed as inserted text

 Delete content <ins> Lines inserted
content <ins> content

Deleted content inserted content

phrase tag who add meaning
which defines the structural meaning
of a block of text or semantic of text

① Text abbreviation tag

this tag is used to abbreviate a text

ex

<abbr title="hyper text markup lang"> html
</abbr> lang is used to create webpage </p>
output will display given by this way

An html lang is used to create webpage
hyper text markup lang

② marked tag, ③ strong tag ④ emphasized tag (em)

⑤ definition tag
When a term is wrapped in <dfn> tags, browsers will understand that nearby texts contains a definition of the term

<p> <dfn> HTML </dfn> is a markup lang </p>
output HTML is a markup lang

Quoting text

The Html <blockquote> element

shows that the enclosed content is quoted from another source . the source URL can be given using the cite attribute, and text representation of the source can display using <cite> & <|cite> element

Ex

```
<blockquote cite = " " > <p> ] content ? </p>
</blockquote>
```

<cite> - mark caire </cite>

Short Quotations :- if you will put any content b/w <q> </q> tags then it will enclose the content in double quotations.

code tags

This element is used to display the computer code and it will also display the content in monospaced font

Keyboard tag

This tag indicate that section of content is a user input from keyboard.

<p> please press <kbd> **ctrl** </kbd> + <kbd> **shift** </kbd> + <kbd> **t** </kbd> to reload the page </p>

Address tag

tag defining the content inform about the author of the content. It will be displaying in italic font.

Anchor tag

Anchor tag is nothing but "a href"

img

How to get img from another director

use tag tag link

Table

- It is used to display data in tabular form.
- <tr> table row
 - <td> table data
 - <th> table header
 - <caption> defines the table caption
 - <colgroup> It specifies a group of one or more columns in a table
 - <table> It represent the, how many columns you need effect the style
 - <colgroup> <col span="2" style="background-color: red;">
 - <col span="3" style="background-color: blue;">
 - <col> It is used with <colgroups> element to specify column property for each column
 - <tbody> It is used to group the body content in a table
 - <thead> It is used to group the header content in a table
 - <tfoot> It is used to group the footer content in a table

colspan

it will divide one cell / row into multiple columns, and the number of columns depends on the value of colspan attribute.

<tr>

<th> Name </th>

<th> colspan = "2" & mobile no. </th>

</tr>

| Name | mobile no | |
|-------|-----------|-----------|
| Ajeet | 984815577 | 984815577 |

rowspan

it will divide one cell into multiple rows, and it will start from that cell.

ex:

<tr> <th> Name </th> <td> Ajeet </td> <td>

<tr> <th rowspan = "2" > mobile no </th> <td> </td>

<tr> 984815577 </td> </tr>

The first cell has rowspan = 2 and it is divided into two rows. It has an header of mobile no and it is followed by any odd no of rows.

styling table

```
table #alter tr:nth-child(even){}
```

```
background-color: #eee;
```

```
}
```

```
table #alter tr:nth-child(odd){}
```

```
background-color: #FFF;
```

```
}
```

```
table #alter th{}
```

```
background-color: gray;
```

```
}
```

| |
|------------|
| gray color |
| #eee color |
| #FFF color |
| #eee color |
| #FFF color |

<template> tag

this will hold the html code

From the client side will activate only when we should call from JavaScript unbill they it won't visible in the webpage.

ex:-

```
<template>
```

```
<h2> Flower </h2>
```

```

```

```
</template>
```

This code will execute only when we call it from the Java script.

javascript code to call template
<script> after clicking the button, the
function showContent() will be called

```
var temp = document.getElementById("Template")  
var clone = temp.content.cloneNode(true);  
document.body.appendChild(clone);  
});  
</script>
```

Text area tag

It is used to define a multi-line text input control. The size of text area can be done by <cols> and <rows> attribute.

e.g:- <textarea rows="9" cols="70"></textarea>

content

</textarea> has placeholder - text, wrap

autofocus - automatically focused when page is loaded

form - it specifies one (or) more forms the text area belongs to

maxlength, placeholder, required (text area must be filled)

wrap - how the text in the textarea are wrapped at the time of submission of the form

Time tag

outside this element can also be used to encode dates and times in a machine-readable way so that user agents can

readable way so that user agents can

track tag

which is used to add subtitle and caption (or) any other form of text which displayed when a media file plays.

<var> To represent variables in an equation $(x + b)^2 = a^2 + b^2$

< Samp > To represent the text as sample output

<u> tag (8) underline is suggested to

<Style>

of text - decoration : red wavy underline }

unordered list

• this will use when we don't want to display items in any particular order

There can be 4 types of bulleted list

- disc (o)
- circle (o)
- square (□)
- none

ex:-

`<ul type="square">`

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

video tag

There are 3 video formats mp4, ogg, webm
will support for all the three formats

ex:- `<video controls>`

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

`<video>` specific image will load when
video was not playing

attributes → controls, height, width, poster,
autoplay, loop, muted, preload, src

→ video controls which is displayed
with play/pause buttons

SVG

Scalable Vector Graphics.

SVG is mostly used for vector type diagram like pie charts, 2-dimensional graphs in XY coordinates system etc.

<svg> is root for SVG fragment

<svg width="100" height="100">

<circle cx="50" cy="50" stroke="yellow" stroke-width="4" fill="red"/>

</svg>



Canvas Tag

This tag is used to draw graphics using scripting lang like JS

<canvas id="myCanvas" width="200" height="100"> </canvas>

<script>

```
var e = document.getElementById("myCanvas");
var cctx = e.getContext("2d");
cctx.fillStyle = "#FF0000";
cctx.fillRect(0,0,200,100);
```

</script>

Drag and Drop

it is a powerful user interface concept which is used to copy the image and past it on the particular location by using the mouse. In these we need to follow some steps. They are:

- ① make an element dragable
``
- ② what to drag
use ondragstart and setdata() method to specify what should happen when the element is dragged
- ③ where to drop
use ondragover event
- ④ do the drop
use ondrop event

```
<script>
    function allowDrop(ev) {
        ev.preventDefault();
    }

    function drag(ev) {
        ev.dataTransfer.setData ("text/html", ev.target.id);
    }

    function drop(ev) {
        ev.preventDefault();
        var data = ev.dataTransfer.getData("text/html");
    }
</script>
```

```
ev.target.appendchild(dragData);  
} else {  
    alert("File type not allowed");  
}  
</script>  
<p> Drag the image </p>  
<div id="div1" style="border: 1px solid black; width: 200px; height: 150px; margin: 20px auto; position: relative; overflow: hidden; border-radius: 10px; background-color: #f0f0f0; text-align: center; font-size: 14px; color: #ccc; padding-top: 10px;">  
    <br>  
      
</div>
```

Geolocation

Geolocation API provides information about the user's location.

The Geolocation API consists of two main parts:

- Geolocation Object:** Provides methods to get the user's current location.
- PositionError:** Represents errors that occur during the geolocation process.

The Geolocation API uses the following methods:

- getCurrentPosition()**: Returns the user's current position.
- watchPosition()**: Returns the user's position at regular intervals.
- clearWatch()**: Cancels the position watch.

The Geolocation API also includes the following properties:

- position**: Represents the user's current position.
- timestamp**: Represents the timestamp of the position.
- accuracy**: Represents the accuracy of the position.
- altitude**: Represents the altitude of the position.
- altitudeAccuracy**: Represents the accuracy of the altitude.
- heading**: Represents the heading of the device.
- speed**: Represents the speed of the device.

Geolocation API is used to provide location-based services such as:

- Showing nearby places based on location.
- Showing weather information based on location.
- Showing traffic conditions based on location.
- Showing directions based on location.
- Showing news based on location.
- Showing local events based on location.

web storage

with the web storage feature,
the web application can locally store data within
the browser on the client side. Web storage
is also called as DOM storage.

Type of web storage

local storage :- which stores data and avail
for every page. But data
persist even if the browser
closed and reopened.

session storage :- stores the data for one
session and data will be
lost when the window
is closed.

ex:-

```
<script>
  if (localStorage) {
    localStorage.setItem("name", "harshita");
    localStorage.setItem("country", "India");
    document.write("Hi " + localStorage.name + " from " + localStorage.country);
  }
</script>
```

Remove Local Storage

After closing window the data will still be avail in the local storage. So if we want to remove data then we should call two methods they are

- localStorage.removeItem('key');

- localStorage.clear();

Form Input

⑤ input type = "file" >

<form>

 <label> Select file to upload </label>

 <input type = "file" name = "new file">

 <input type = "submit" value = "Submit">

</form>

⑥ <input type = "color" >

 <input type = "color" name = "upclick"

 value = "#a52a2a" > upclick color

 ↑
 accepts only hexa decimal format

 <input type = "color" name = "downclick"

 value = "#f5f5dc" > downclick

⑦ date

<Form>

```
<input type="date" name="startdate"> ⑧  
</form> ⑨
```

⑩ month

```
<input type="month" name="newmonth"> ⑩
```

⑪ number

⑫ url ⑬ where user enter address of the

⑭ week ⑮ and displaying that month weekly

⑯ Search

it allows a user to enter a search string.

⑰ tel ⑱ with it add option like this
this input filed is used to enter the
telephone number and provide validation

⑲ <input type="tel" name="tel" ⑳
and add (⑳) validate the pattern and
pattern = "[0-9]{3}-[0-9]{3}-[0-9]{4}" required.
(⑳)

pattern = "[0-9]{11} [0-9]{11}" required

we can also add validate function
like this

we added base on where and
minimum and maximum value
and possible don't make it too much

Form element

① Action attribute

This attribute helps the form to redirect into the link (or) the script after submitting the form.

```
< form action = "action.html" >
```

If the action attribute value is blank then form will process to the same page.

② method attribute

This method attribute is used only one purpose that is, after entering the data in the form and submitting.

here we use method attribute whether to display the data (or) hide the data from the client.

→ For the method attribute there are two possible values where are

① Post

This value is used when we want to process the sensitive data as it does not display the submitted data in URL.

ex

< form action = " " method = " post " >

② get :- It is opposite to the post method

the get value of method attribute is
of both methods. The value of method is
default value while submitting the form.
But the is not secure as it displays data
in URL after submitting the form.

ex :-

< form Action = " action.html " method = " get " >

when submitting the data it will show like
these address you can see

file:///D:/HTML/action.html?name=Shiv&pass=1234

③ target Attribute

this attribute will defining where
to open the response the data after
submitting the data form

for these there are two possible
values where are

- ① - self → response will open in same page
- ② - blank → response will open in another page

④ Auto complete Attribute

This attribute enables an input field to complete automatically. It can have two values "on" and "off". Default value of on, can be specified with the attribute <form> action = "a" autocomplete = "on" It can be used for both <form> and <input> element.

⑤ enctype Attribute

The enctype attribute specifies how the form data should be encoded when submitting it to the server.

NOTE:- This attribute used only when method = "post".

For the enctype we have 3 values
They are

⑥ application/x-www-form-urlencoded

Default, All characters are encoded before sent (spaces → + & special char or → ASCII HEX value)

⑤ multipart/form-data

→ all no char are encoded. The value is reqd when you are using forms that have a file uploaded control.

⑥ text/plain

space → +, no special char ↗ ASCII

⑦ no validate attribute

If we apply this attribute in form then it does not perform any type of validation

and submit the form

```
<form action="" method="get" novalidate>
```

value attribute

This attribute is used in the <input> element, which defines initial value (or) default value of a input field

required attribute

This specifies that user must fill that field before submitting the form.

autofocus

attribute which enables a field automatically focused when a webpage loads

disabled attribute

disabled attribute when applied then it disable that input field. The disabled field does not allow the user to interact with that field.

size

by using this we can manage the size of input box

form

This attribute allows a user to specify an input field outside the form field.

classes

This attribute is used to specify the single (or) multiple class names for an html element. This attribute is mainly used for styling and used with in the style field.

(i) character is used for classes attribute

id Attribute

The id attribute is used to specify the unique id for each element of HTML doc.

- It allocates the unique identifier which is used by the CSS and JS for performing certain task.

is used for id attribute

With id comes id selector and its

Button type

<button type="submit/reset/button">

- ① button → is used for clickable button
- ② submit → is used for submitting the form-data
- ③ reset → is used to reset the form-data

Hide element

You can hide an element by using the Boolean attribute "hidden" with the element. If we use this attribute then browser won't display that element.

<element hidden> content </element>

We can use this hidden attribute for <input> element also.

<Input> disabled Attribute

When we disable a attribute then that input box is unusable and unclickable. Unlike it is enabled using JS.

This attribute mainly used to stop or user restrict the user to submit the button with clicking on T&C.

Syntax → <input type="button" value="Submit" disabled>

No elements can be click when the value "disabled" is added in attribute with type="button".

It is used in forms to prevent user from filling the form.

It is also used in login forms to prevent user from entering wrong password.

It is also used in forms to prevent user from entering wrong password.

Layouts

Layouts provide a way to arrange web page in well-mannered, well-structured

Responsive

Responsive web design uses HTML and

CSS to resize, hide, shrink, enlarge,

Responsive Image

① ``

This is one type but if we do this, image will be enlarged too much and it reduces the image clarity.

② ``

This is best way to use img because by using this, the browser automatically resize the image according to the web page. This makes the image look as it is.

Responsive Text-size

we can make text-size responsive by using the "vw" unit. It means viewport width. we can make the text size to follow the browser window screen.

```
<h1 style="fontSize:10vw;">
```

Note:- Viewport specifies the browser width. $1\text{vw} = 1\%$ of viewport width. Means if the viewport is 100cm wide, 1vw is 1cm.

Charset

it is used to display an html page properly and correctly.

There are various types of character encoding.

- ① ASCII character set
- ② ANSI character set (limited)
- ③ ISO-8859-1 character set (limited)
- ④ UTF-8 character set

This character encoding which covers almost all of the characters and symbols in the world.

center tag

The content which is written inside the center tag will be displayed in the center of the web page.

committting code \rightarrow code won't display
syntax $\text{<div style="text-align: center;">}$ \rightarrow code on page

meta tag \rightarrow metadata

$\langle \text{meta} \rangle$ tag provides metadata about the HTML Document. metadata is data (info) about data

① charset attribute

charset = "UTF-8" it will support to display any language

② name & content attribute

This name attribute has 4 values which plays major role in specifying the list of keywords which is used by search engine.

③ keywords attribute \rightarrow keyword which is used by search engine.

$\langle \text{meta name = "Keywords" content = "HTML, CSS, JS, Tutorials"} \rangle$

④ description → it defines the website.
description which is useful
to provide relevant search
performed by search eng.

⑤ author → it specifies the author
of the page

⑥ refresh → it specifies to provide
instruction to browser to
automatically refresh the
content management
After every 5 sec (or any
given time)

③ http-equiv

It gives the information about
<meta http-equiv="refresh" content="5;url="

If we use these, then the browser
will automatically redirect to the url which
was written in the content in the particular
span of time written in content.

⑦ base → it defines the base url

→ address defined

→ document's address defined

④ <meta name="viewport" content="width=device-width, initial-scale=1.0">

The viewport to control the page

- dimension and scaling so that our website looks good on all devices on all devices.

If this tag is present, it indicates that this page is mobile device supported.