

# HTML

Source video 1 : Apna College : <https://youtu.be/HcOc7P5BMi4>

Source video 2 : Sheriyans : <https://youtu.be/4dprtEzunlk>

Source video 3 : edX cs50 : <https://learning.edx.org/course/course-v1:HarvardX+CS50+X/block-v1:HarvardX+CS50+X+type@sequential+block@638af9550b164582b9bc6c1b0e562881/block-v1:HarvardX+CS50+X+type@vertical+block@63f49aa6b56b4262a0a16617dd7c5415>

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## Basics :

- Install `live server` extension in vs code to host the project live
- Name the file as `index.html` = home page (generally it takes index name as home page)
- Type `!` mark and we get boiler plate code
- Use `Lorem` inside a tag , it's an Emmet abbreviation which when used writes random words automatically
- HTML TAG : a container for some content or other html tags
- Example tags & tips :
  - structure is as follows : opening tag + our content + closing tag = html element
  - `<p> "This is a paragraph tag" </p>`
  - use `toggle word wrap` from command palette if we write many things in paragraph tag then it fits in existing screen so that we don't have to side scroll
  - `<h1> "Something like heading tag" </h1>`

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## Basic HTML Page anatomy :

```
<!DOCTYPE HTML>                                <!-- tells browser u r using HTML5 -->
<html>                                           <!-- root of an html document -->
  <head>                                         <!-- container for meta data -->
    <title> My first page </title>              <!-- page title -->
  </head>
  <body>                                         <!-- contains all data rendered by browser -->
    <p> Hello World! </p>                       <!-- paragraph tag -->
  </body>
</html>
```

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## Basic quick tips :

- Html tag is parent of head and body tag
- Most of html elements have opening & closing tags with content in between
- Some tags have no content in between in them , eg : `<br>` (used to go to next line)
- We can use inspect element / view page source to edit html of any page
- Html is not case sensitive. means smalls & caps are treated same unlike other languages as C, Python, Java etc
- Comments in html :
  - comment is a part of code but it wont get executed. It is written as below
  - shortcut to comment out any thing . press `ctrl + /`
  - `<!-- This is a html comment -->`
- Attributes in html :
  - attributes are used to add more information to the tag
  - `<html lang = "en">` this is an attribute. lang is a language attribute which takes something as a value

## Heading Tags :

- Used to display headings. It has 6 levels in it

```
<h1>Heading 1</h1>                <!-- Middle content can be anything -->

<h2>Heading 2</h2>

<h3>Heading 3</h3>

<h4>Heading 4</h4>

<h5>Heading 5</h5>

<h6>Heading 6</h6>
```

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## Anchor Tags :

- Used to add links to your page. Examples can be given as . .

```
<a href = "https://www.google.com/"> Google </a> <!-- this is "absolute link" -->

<br />                                <!-- this is a tag to add next line or line breaks -->

<a href = "https://youtu.be/HcOc7P5BMi4"> HTML lecture apna college </a>

<a href = "Hello.html"> go to hello </a>          <!-- this is relative link -->
```

- Here `href` is one of the type of attribute, and it is taking google link as a value
- Absolute link - going to other different page/ website/ link from our page
- Relative link - going to our own different page or website from our page

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## Image & Video Tags :

- Used to add images & videos to your page. Examples can be given as . .

```
<img src = "/image.png" alt = "Random image"/>

<br />

<img src = "https://m.media-amazon.com/images/I/41e3YGKg-3L._AC_UF1000,1000_QL80_.jpg" height = "100" />

<video autoplay loop muted width = "1280">

    <source src = "Example video.mp4" type = "video/mp4">

</video>
```

- Here `src` is one type of attribute called source and is taking image link as a value. `alt` is also attribute can be used to describe what is in the picture in case if we don't have internet and the image doesn't load then it displays text written in `alt` attribute.
- To change size we use attributes like `height = "any value"` and `width = "any value"` and `autoplay`, `loop`, `muted` etc these are some of the attributes which are related to the video settings like whether if we want our video to loop or it should be muted like stuff

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## Bold, Italic & Underline Tags :

- Used to highlight text in your page

```
<b>BOLD</b>                                <!-- as we say middle content can be anything of our wish -->

<br/>

<i>Italic</i>

<br/>

<u>Underline</u>
```

## Big & Small & Ruler Tags :

- Used to display big and small texts on your page
- Used to display a horizontal ruler, to separate content

```
<big>This tag shows big text</big>

<hr>                                <!-- This tag adds a seperating line -->

<small>This tag shows small text</small>
```

## Id Tags :

- Naming a tag using id tag
- Id tag can never be repeated
- Id tag can be called by using # (hash) class tag can be called by using . (dot) like in example #abc , #xyz

```
<style>
  #xyz {
    color : red;
  }
  #abc {
    color : blue;
  }
</style>

<p id="xyz" > paragraphhhhhhhh </p>                                <!-- This will turn red color -->

<p id="abc" > ahjgagfgfghvghgfhg </p>                                <!-- This will turn blue color -->
```

## Class Tag :

- Naming a tag using class tag
- Class tag can be repeated and comes in handy when we want to set some things as a group and give changes to them at once like giving it a color
- Class tag can be called by using . (dot) like in the example .xyz

```
<style>
  .xyz {
    color : red;
  }

</style>
```

```
<p class="xyz" > paragraphhhhhhhh </p> <!-- here both will turn red -->

<p class="xyz" > ahjgagfgfghvghgfhg </p>
```

## Subscript & Superscript Tags :

- For example if we wish to write a chemical formula as H<sub>2</sub>O we use subscript tag
- For example if we wish to write a math formula as 3<sup>2</sup> = 9 we use superscript tag

```
<p>H<sub>2</sub>O</p>

<P>3<sup>2</sup>=9</P>
```

## Pre Tag :

- Used to display as it is (without ignoring spaces & next line)

```
<pre> This
      is a sample
      text.
</pre>
```

## Page Layout Techniques :

- Using *Semantic* tags for layout, here semantic tags means kind of like readable tags
- Using the *Right* tags
- Some useful semantic tags :
  - header tag (contains header of the page)
  - main tag
  - footer tag (contains footer of the page)

```
<header> </header>

<main>

</main>

<footer> </footer>
```

## Inside Main Tag :

- Section tag - for a section on your page
- Article tag - for an article on your page
- Aside tag - for content aside main content, such as (ads etc..)
- Revisiting anchor tag :
  - To open the link in new tab we use this feature. In anchor tag write `target="_main"`
- Clickable image :
  - For using an image which can open link we use `
```

```

<section>Education : College (LBRCE) | School (NVHS)</section>

<section>Experience : Fresher | Zero exp</section>

<article>My story : blah blah blah</article>

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

    </a>

  <aside>this is an ad</aside>

</main>

```

## Div Tag :

- Div is a container used for other HTML elements
- Div is one of the type of *non semantic tags*
- It is a Block Element (takes full width of the screen)

```

<div>

<p> can be anything </p>
<p> any content</p>
<p> example </p>          <!-- we can use multiple div blocks to seperate block wise -->

</div>          <!-- any changes done inside div block applies to all elements in that div -->

```

## Span Tag :

- Span is also a container used for other HTML elements
- It is an Infinite Element (takes width as per size or content)

```

<span>

<p> can be anything </p>
<p> any content</p>
<p> example </p>

</span>

```

## Lists in HTML :

- Lists are used to represent real life list data
- Unordered lists :

```

<ul>                                <!-- unordered list -->
  <li>Mango</li>                    <!-- li - list item -->

  <ul>                                <!-- sub list in the above list -->
    <li>color : yellow</li>          <!-- sub list items -->
  </ul>
</ul>

```

```

        <li>season : summers</li>

    </ul>

    <li>Apple</li>

    <ul>

        <li>color : red</li>

        <li>season : winters</li>

    </ul>

    <li>lemon</li>

</ul>

```

- Ordered lists :

```

<ol>                                <!-- orderd list (it comes with numbering) -->
    <li>Mango</li>                    <!-- li - list item -->

    <ol>                                <!-- sub list in the above list -->

        <li>color : yellow</li>        <!-- sub list items -->

        <li>season : summers</li>

    </ol>

    <li>Apple</li>

    <ol>

        <li>color : red</li>

        <li>season : winters</li>

    </ol>

    <li>lemon</li>

</ol>

```

## Tables in HTML :

- Tables are used to represent real life table data
- `<tr>` used to display table row
- `<td>` used to display table data
- `<th>` used to display table header
- Caption in tables :
  - `<caption> Student Data </caption>`
- thead & tbody :
  - `<thead>` to wrap table head
  - `<tbody>` to wrap table body
- `<th colspan="2">` *colspan* is an attribute which comes in handy when we want to give multiple columns under a same name (like when we merge 2 or 3 columns in excel etc when they have same type of data)

```

<table>
  <thead>
    <caption> Student Data </caption>

    <tr>

      <th>Name</th>

      <th>Roll no</th>

    </tr>
  </thead>

  <tbody>
    <tr>

      <td>Akshaya</td>

      <td>24</td>

    </tr>
  </tbody>

</table>

```

## Forms in HTML :

- Forms are used to collect data from the user
- Eg - signup/login/request help/contact me
- `<form> form content </form>` by using this we can create it
- Action in form :
  - Action attribute is used to define what action needs to be performed when a form is submitted
  - `<form action = "/action.php">` example (ignore `action.php` it's comes in backend concepts , it's a file simply)
- Form Element : Input :
  - `<input type = "text" placeholder = "Enter Name"`
  - `<input type = "radio" value = "anything xyz" name = "anything" >anythingxyz` we can only click one button at a time in radio buttons
  - `autofocus` places a cursor blinking in the box, `autocomplete="off"` this does not reveal our past searches or to say so called history that pops up when we start typing something
- Text area input :
  - It means that it creates a text area where user can type whatever they wish to write. This mainly comes in handy in feedback forms (real life example). usually we place it at the end of the form.
  - can be accessed by using `<textarea name = "anything ex: feedback" placeholder ="give feedback"> Feedback </textarea>`

```

<form action = "/action.php">

<input type = "text" placeholder ="Enter Username">    <!-- placeholder can be anything as our wish -->
<input type = "password" placeholder ="Enter Password">

<input type = "radio" value = "class XI" name = "class">classXI
<input type = "radio" value = "class XII" name = "class">classXII

</form>

<form action = "https://www.google.com/search" target="_main">

```

```
<input name = "q" type = "search" autofocus autocomplete="off" placeholder="Type here...">
<input type = "submit">

<textarea name = "feedback" placeholder ="give ur valuable feedback"> </textarea>

</form>
```

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## Responsive to Devices Tag :

- To make our web page or site responsive to any device we use this so called *meta* tag
- `<meta name = "viewport" content = "initial-scale = 1, width = device-width">`

```
<meta name ="viewport" content = "initial-scale = 1, width = device-width">
```

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## Checkboxes in HTML Tag :

- Used when in need to import to do lists etc
- Can check mark multiple boxes

```
<label for  = "id1">

    <input type = "checkbox" value = "classX" name = "class" id = id1>

</label>                                <!-- example below -->

<label for  = "math">

    <input type = "checkbox" value = "math" name = "subject" id = 101>math

</label>

<label for  = "phy">

    <input type = "checkbox" value = "phy" name = "subject" id = 102>phy

</label>
```

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## Dropdown Select Tags :

- It is used when we select a particular thing from the existing list

```
Select your city
<select name = "city" id = "city">

    <option value = "Delhi"> Delhi </option>
    <option value = "Mumbai"> Mumbai </option>
    <option value = "Banglore"> Banglore </option>
    <option value = "Andhra Pradesh"> Andhra Pradesh </option>

</select>
```

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## I Frame Tag :



- Website inside website

```
<iframe src = "link">
```

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