

## Chapter 0 - Introduction

HTML → Hyper Text Markup Language

HTML is the language of the web. It is used to create websites.

We use HTML tags to define look & feel of a website.

With understanding of these tags and how to put them together, we can create beautiful websites easily!

Then why CSS & JavaScript?

HTML is used for defining layout of a page - A barebone page structure

CSS is used to add styling to that barebone page created using HTML

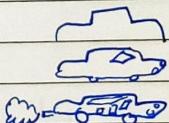
JavaScript is used to program logic for the page layout eg. what happens when a user hovers on a text, when to hide or show elements etc.

A Beautiful analogy

HTML = Car body (only metal)

CSS = Car paint, decoration etc.

JavaScript = Car engine + Interior logic



We will start learning how to build beautiful layouts in this course.

## Installing VS Code

We can use any text editor of our choice. Here I am using VS Code because it is light weight, open source & from Microsoft.

Go to google, type VS Code & install it

Note : You can write HTML even in Notepad. Text editors like VS Code just makes these things easier

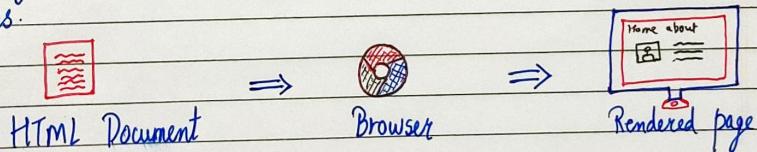
## Chapter 1 - Creating our first website

We start building a website by creating a file named index.html  
index.html is a special filename which is presented when the website root address is typed.

### A Basic HTML Page

```
<!DOCTYPE html> → Specifies this is an HTML5 doc
<html> → Root of an HTML page
<head> → Contains page metadata
<title> Harry's Website </title> → Contains title
</head>
<body> → The main body of the page (rendered by the browser)
<h1> This is a heading </h1> → heading tag
<p> My paragraph </p> → paragraph tag
</body> → Closing body tag
</html>
```

A tag is like a container for either content or other HTML tags.



### Imp Notes

- Head & body tags are children of HTML tag.
- HTML is the parent of Head & Body tags.
- Most of the HTML elements have opening & closing tag with content in between opening & closing tags.
- Some HTML tags have no content. These are called Empty elements eg <br>

- We can either use .htm or .html extension  
→ You can use "Inspect Element" or "View Page Source" option from chrome to look into a website's HTML code.

HTML element = Start tag + Content + End tag

### Comments in HTML

Comments in HTML are used to mark text which should not be parsed. They can help document the source code.

<!-- HTML Comment -->

### Case Sensitivity

HTML is a case insensitive language. <H1> and <h1> tags are the same.

## Chapter 1 - Practice Set

- 1 Inspect your favorite website and change something on the page which is displayed.
- 2 Go to your favorite website and try to view the page source and write the exact lines of code. Does it clone the website? why?
- 3 Write any HTML code inside a text file. Does it work if you write it using notepad?

## Chapter 2 - Basic HTML Tags

We can add elements inside the body tag to define the page layout.

### HTML Element

Everything from starting to the ending tag.

<body> → Opening tag  
→ Content ←  
</body> → Closing tag

### HTML Attributes

Used to add more information corresponding to an HTML tag.

Example : <a href="https://codewithharry.com/"> Harry </a>  
  
↓  
href attribute

We can either use single or double quotes in attributes

### The Heading Tag

Heading tag is used to mark headings in HTML. From h1 to h6, we have tags for the most important to the least important heading.

<h1> Most Important heading </h1>  
<h2> Another heading H2 </h2>  
<h3> Another heading H3 </h3>  
<h4> Another heading H4 </h4>  
<h5> Another heading H5 </h5>  
<h6> Another heading H6 </h6>

Note: We should not use HTML headings to make text thick or bold.

## The Paragraph Tag

Paragraph tags are used to add paragraphs to an HTML page.

<p> This is a paragraph </p>

## The Anchor Tag

The Anchor tag is used to add links to an existing content inside an HTML page.

<a href="https://google.com"> Click me </a>

## The img Tag

img tag is used to add images in an HTML page

  
↳ relative url of an image

## Bold, italic and underline tags

We can use bold, italic and underline tags to highlight the text as follows:

<b> This is bold </b>  
<i> This is italic </i>  
<u> This is underline </u>

## br tag

The br tag is used to create line breaks in an HTML document.

## big and small tags

We can make the text a bit larger and a bit smaller using big and small tags respectively.

## hr tag

<hr> tag in HTML is used to create a horizontal ruler often used to separate the content.

## Subscript & superscript

We can add subscript and superscripts in HTML as follows:

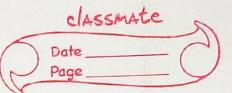
<sub> this </sub> is subscript  
<sup> this </sup> is superscript

## pre tag

HTML always ignores extra spaces and newlines. In order to display a piece of text as is, we use pre tag

<pre>  
This is written  
using pre  
tag  
</pre>

⇒ Rendered as - is



## Chapter 2 - Practice Set

1 Create an HTML page with a heading (title heading), a primary heading and a sub-heading.  
Which tags did you use?

2 Create a page with 5 wallpaper images taken from the internet

3 Use br and hr tags to display a piece of text with linebreaks.

4 Try to write the following chemical equation using HTML.



5 Try to write a wikipedia article using HTML.

## Chapter 3 - Creating a page layout

When we use the right tag in right place, it results in a better page layout, better indexing by search engines and better user experience.

We use the following tag to get the job done

```
<header> } Contains nav tag  
<main> } Website layout  
<footer>
```

Inside the main tag we insert the following tags:

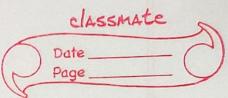
```
<main> → The main opening tag  
<Section> → A page section  
<article> → a self contained content  
<aside> → Content aside from the content (eg. Ads etc.)  
</main> → The main closing tag
```

Creating a page like this is not necessary but it creates a readable & structured layout.  
Also they are useful for SEO.

Link attributes

```
<a href = "/contact"> Contact us </a> → Contact page opens in same tab  
<a href = "/contact" target = "-blank"> Contact us </a>  
→ opens in a new tab
```

We can put any content inside an anchor tag (images, headings etc are all allowed)



If the page is inside a directory, we need to make sure that we link to the correct page.

↳ Same applies to img tag as well

We can add links to images like this

```
<a href="/about"><img src='a.jpg' width="120"></a>
```

↳ Height will be set automatically

The Div tag

div tag is often used as a container for other elements  
div is a block level element.

↳ Always takes full width

The Span tag

Span is an inline container.

↳ Takes as much width as necessary

## Chapter 3 - Practice Set

- 1 Create an SEO friendly website using HTML.
- 2 Create an HTML page which opens google when clicked on an image.
- 3 Create a website which has your 5 top used websites bookmarked. The links should open in a new tab.

## Chapter 4 - Lists, tables & forms

### Lists

Lists are used to display content which represents a list.

Unordered list: Used to list unordered items

```
<ul>
  <li> Home </li>
  <li> About </li>
  :
</ul>
```

Ordered list: used to list ordered items

```
<ol>
  <li> Phone </li>
  <li> PC </li>
  <li> Laptop </li>
</ol>
```

### Tables

The `<table>` tag is used to define tables in HTML. It is used to format & display tabular data.

`tr` tag: used to display table row

`td` tag: used to display table data

`th` tag: used in place of table data for displaying table headers

We can define as many table rows as we want.

To add a caption to the table, we use `<caption>` tag inside table.

`thead` tag: Used to wrap table head (Caption & `<tr>` with `<th>`)

`tbody` tag: Used to wrap the table body.

### Colspan attribute

This attribute is used to create cells spanning multiple columns.

```
<th Colspan = "3"> Harry </th>
  ↳ Spans 3 columns
```

### HTML forms

An HTML form is used to collect input from the user. `form` tag is used for the same.

```
<form>
  -- Element of the form --
</form>
```

There are different form elements for different kinds of user input.

→ `input` element: Can be of type text, checkbox, radio, button and submit. We also have a 'file' type.

→ `textarea` element: Defines a multi line text input. `Cols` and `rows` attributes can be used to size the textarea.

→ `Select` element: Defines a drop down list.

Note : you don't have to remember all the tags, you will automatically memorize them with practice

### Embedding Videos

Video tag is used to play videos in HTML

```
<video src='harry.mp4'> Error </video>
```

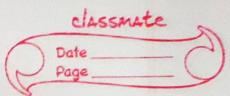
### Attributes for video

We can use :

- Width : To adjust width of a video (Height automatically adjusts)
- We can use autoplay/loop to autoplay or loop the video.

### Chapter 4- Practice Set

- 1 Create an HTML page with video embedded inside it.
- 2 Replace this video in 1 with a YouTube video.
- 3 Create an HTML form for a travel website to book a vacation
- 4 Create a table displaying score of cricket players in a match using HTML.



## Chapter 5 - SEO

We will focus only on HTML standpoint of SEO. We will not be looking into keyword building and content optimization aspect of SEO.

### Types of SEO

- On page SEO → can be done by HTML developers
- Off page SEO

### HTML SEO

HTML developers can implement SEO using the following techniques:

1. Set the title very nice & to the point

2. Set the meta description

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

3. Set a nice URL slug

4. Set the meta keywords tag.

```
<meta name="author" content="Harry">>
```

5. Set the meta author tag.

```
<meta name="author" content="Harry">>
```

6. Set a favicon

7. Compress images & other resources

8. Remove unused HTML/css & Js files + Compress them

9. Add alt text to images