

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

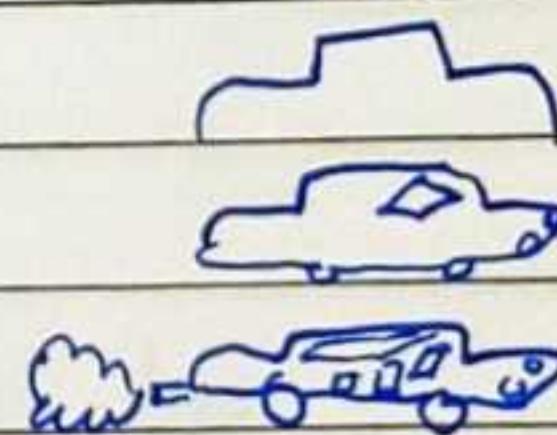
JavaScript is used to program logic for the page layout eg. what happens when a user hovers on a text, when to hide or show elements etc.

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, opensource & 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

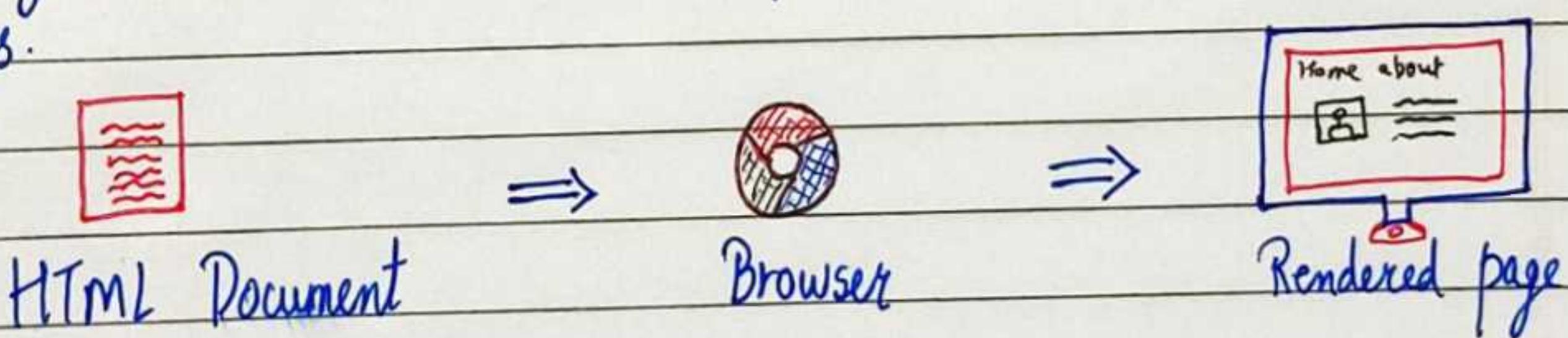
We start building a website by creating a file named index.html
 index.html is a special filename which is presented when the website root address is typed.

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

- 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
 ↑
 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>

Note: We should not use

<h2> Another heading H₂ </h2>

HTML headings to make

<h3> Another heading H₃ </h3>

text thick or bold.

<h4> Another heading H₄ </h4>

<h5> Another heading H₅ </h5>

<h6> Another heading H₆ </h6>

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

The img Tag

img tag is used to add images in an HTML page

< img src="image.jpg" >
 ↳ 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

< 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:

_{this} is subscript

^{this} 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.
 $C + O_2 \rightarrow CO_2$
- 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>
<main>
<footer>
```

} Contains nav tag
} Website layout

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

- Contact us → Contact page opens in same tab
- Contact us
↳ 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

 Home

 About

:

Ordered list: used to list ordered items

 Phone

 PC

 Laptop

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 dont 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

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