

## What is HTML?

*Inventor Tim Berners-Lee*

HTML = Hyper text markup language

HTML is originally based on the Standard Generalized Markup language (SGML)

SGML = SGML describes the general structure of the content inside document.

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

### Basic Structure of HTML

<!DOCTYPE html> → Document type is html5

<html> → Opening Html Tag

<head> → Opening Head Tag

<title> Page Title </title> → Title of web

</head> → Closing Head Tag

<body> → Opening Body Tag

<p> Content </p> → Inside body Tag your content is written

</body> → Closing Body Tag

</html> → Closing HTML Tag

TCC \* HTML is used for defining layout of a page - A barebone page structure.

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

TCC \* JavaScript is used program logic for page layout.

A beautiful analogy

HTML ⇒ Car structure ⇒ 

CSS ⇒ Car style ⇒ 

JS (JavaScript) ⇒ Car Engine ⇒ 

## Q & A (Written)

- Q1 who is inventor of HTML?
- Q2 HTML and SGML stands for?
- Q3 Why HTML, CSS and JS is used?

Ans.1 Tim Berners-Lee

Ans.2 HTML stands for Hyper text Markup language  
SGML stands for Standard Generalized Markup language.

Ans.3 HTML is used for defining Layout of page  
CSS is used to design a page  
JS is used to add logic to page.

## Creating our first website.

We start building a website by creating a file named `index.html`.

`index.html` is a filename which is presented when the website root address is typed.

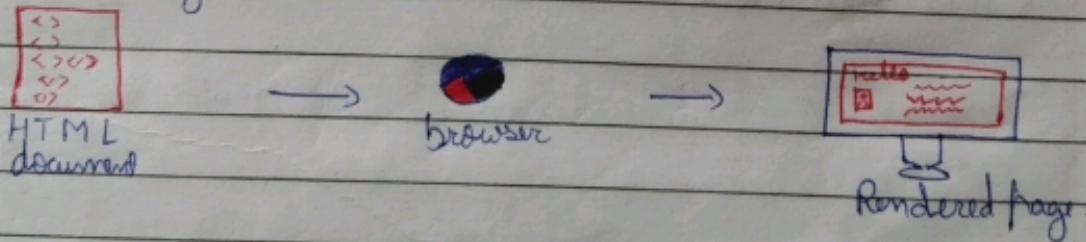
### A Basic HTML Page

```

<!DOCTYPE html> → Specifies this is an HTML5 document
<html> → root of an HTML Page
<head> → it contains page metadata
<title> page title </title> → it contains title
</head>

<body> → The main body of page (rendered by browser)
<h1> This is heading </h1> → heading tag
<p> This is paragraph </p> → paragraph tag
</body> → Closing body tag
</html> → Closing HTML tag.
    
```

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



### Important notes

TCC \* Head and body tags are children of `html` tag and `html` tag is parent of both tags.

TCC \* Most of the `HTML` element have opening and closing tag with content in between opening and closing tag e.g. - `<p>` then is para `</p>` → Closing tag

Opening tag      Content

- TCC \* Some tags have no content. These are called Empty elements.  
eg. - <br>, <br>
- TCC \* We can either use .htm or .html extension of for html file.
- TCC \* 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.

What are comments and how to use them in HTML?

Comments are code that is ignored by browsers.

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 ~~sensitivity~~ insensitive language.

<H1> and <h1> are same.

## Q &amp; A (written)

- Q1 ~~What~~ HTML tag is parent of which tag?
- Q2 Give 5 examples of tag which needs a closing tag?
- Q3 What is Empty tags? Give 2 examples of it?
- Q4 How many HTML extension is used to make HTML file?  
Name them also?

## Q &amp; A (Practical)

- Q1 Write a comment in HTML file?

- Ans.1 HTML tag is parent of head and body tag.
- Ans.2 HTML tag, Head tag, body tag, div tag and span tag.
- Ans.3 The tag that does not have closing tag is called empty tags. (Ex hr and br tag)
- Ans.4 2 HTML extensions is used to make HTML file.  
Extensions are .HTML and .HTM

## Practical

Ans.1 <!-- Hello, this is comment -->

## Basic HTML tags

We can add element 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

Ex = `<a href="Simplilearn.com">CC</a>`

anchor tag href attribute

We can either use single or double quotes in attributes.

### The Heading tag

Heading tag is used to mark heading in HTML.

From h1 to h6, we have tags for the most important to the least important heading.

`<h1> Most Important heading </h1>`

`<h2> Heading h2 </h2>`

Note: We should not use

`<h3> Heading h3 </h3>`

HTML heading to make text big thick or bold.

`<h4> Heading h4 </h4>`

`<h5> Heading h5 </h5>`

`<h6> Heading h6 </h6>`

### The Paragraph tag

Paragraph tags are used to add paragraph 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://your-link.com" > Click me </ a >

### The image tag

Image tag is used to add images in an HTML page.

< img src = "Image-name.Image-extension" >

url of your image (you want to add to your web)

### Bold, italic and underline tags

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

< 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.

< p > here you add < b > break < / p >

### big and small tags

We can make the text a bit longer or larger and a bit smaller using big and small tag.

hr tag

It is used to create a horizontal ruler often used to separate content.

Subscript and superscript tag

We can add subscript and superscript tag in HTML as below:

<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 it is, we use pre tag.

<pre>

This is pre

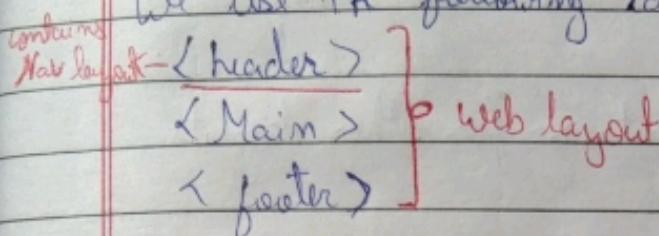
T a g

</pre>

## 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.



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 (e.g. Ads etc)

< /main > → The main closing tag.

Creating a page like this is not necessary but it creates a readable and structured layout.

Also, they are useful for SEO.

### Link attributes

< a href = "www.google.com" > google < /a > → google opens in same tab

< a href = "www.google.com" target = "\_blank" > google < /a >

↳ google opens in new tab.

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

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

↳ same applies to Image tag as well

We can add links to images like this

`<a href="link"> `

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

### Q6 A (Practical set)

- Q1 Create an SEO friendly website using HTML.
- Q2 Create an HTML page which opens google when clicked on an image
- Q3 Create a website which has your 5 top used website bookmarks  
The links should open in a new tab.

## lists, tables and forms.

### List

List are used to display content which represent a list.

unordered list: Used to list unordered items.

<ul> → unordered list Tag

list item ← <li> Home </li>

Tag

<li> About </li>

:

</ul>

Ordered list: Used to list ordered items.

<ol> → ordered list Tag

<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 and 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 and `th`)  
`tbody` tag: Used to wrap table body.

`Colspan` attribute

This attribute is used to create cells spanning multiple columns.

`<th Colspan = "4"> Codes </th>`

↳ Spans 4 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 forms element for different kinds of user input.

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

\* `textarea`: Define a multi-line text input. `cols` and `rows` attributes can be used to size the `textarea`.

\* `Select` element: Define 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 = "video-name.video-extension"> Error </Video>`

### Attributes for video

We can use:

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

### O&D (Practical)

- Q1.) Create an HTML page with video embedded inside it.
- Q2.) Replace this video in Q1) with a youtube video.
- Q3.) Create an HTML form for a travel website to book a vacation
- Q4.) Create a table displaying score of cricket players in a match using HTML.

## SEO (Search Engine Optimization)

We will focus only on HTML standpoint of SEO. We will not be looking into keywords, 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="--content-->`
- 3) Set a nice URL Slug.
- 4) Set the meta keywords tag.
- 5) Set the meta author tag.  
`<meta name="author's-name" content="-->`
- 6) Set a favicon.
- 7) Compress images and other resources.
- 8) Remove unused HTML/CSS and JS files + Compress them.
- 9) Add alt text to images.

Project-1) Create a simple School time table in HTML.  
like this:

Enter your school name: [ ]		Session: 2023/2024								
		1	2	3	4	R	S	6	7	8
Mon	Eng	Gymn	Compu	Sci	E	SST	Lib.	Hindi	Maths	
Tue	Eng	Gymn	Compu	Sci	C	SST	Maths	Hindi	Sansk	
Wed	Eng	Music	SUPW	Sci	E	SST	Maths	Hindi	Sansk	
Thur	Eng	Art/Punj	Gymn	Sci	S	SST	Maths	Hindi	Sansk	
Fri	Eng	Supw/Punj	Art	Sci	S	SST	Maths	Hindi	Hindi	
Satur	Eng	Hindi	Sansk	Sci	S	SST	Maths	CCA	CCA	

\* Eng = English

\* Punj / Pun = Punjabi

\* Sansk = Sanskrit

\* Compu = Computer

\* SST = Social Science

\* Lib = Library

\* Maths = Mathematics

\* Sci = Science

Project-2) Create a HTML website like this:

② Creativity | Create... × +

- Home
- About
- Contact Us
- Blog

SEARCH X

They should redirect on another page

HTML Course by TECHNO CRAP CODES

you can use href=""

Thank you!

Project-3) Create HTML website check Roll no. and admission of a student like this:

Name :	
Class :	
Section :	
Age :	

First six number of unique id : |  |

Your Roll no. is

your admission no. is \_\_\_\_\_