

## HTML

- HTML is the language in which most websites are written.
- HTML is used to Create Pages and Make them Functional.

### History

⇒ was first Created by Tim Berners-Lee, Robert Cailliau and others Started in 1989

Stands for → Hypertext Markup Language

The documents contains links that allows the reader to jump to other places in the document or to another documents

The way that computers speak to each other to control how text is processed and presented.

Latest Version of HTML ⇒ HTML5

To do HTML uses two things

→ tags

→ attributes

→ Tags and attributes are the basis of

HTML

→ They work together but perform different functions.

## Tags

→ Tags are used to mark up the start of an HTML element and they are usually enclosed in angle brackets '`<>`'.

→ Most tags must be opened `<hi>` and closed `</hi>` in order to function.

→ Attributes contain additional pieces of information.

→ Attributes take the form of an opening tag and additional info is placed inside.

e.g.: - ``

## Golden Rules To Remember:

1.) The vast majority of tags must be (opened `<tag>`) and (closed `</tag>`) with the element information. Such as a title or text existing between the tags.

2.) When using multiple tags, the tags must be closed in the order in which they were opened.

for e.g.: `<strong><em> This is really important! </em> </strong>`

## Attributes

→ Attributes contain additional pieces of information.

→ Attributes take the form of an opening tag and additional info is placed inside.

e.g.: - ``

In this instance, the image (Source (src)) and alt (text (alt)) are attributes of the `<img>` tag.

letters of the word remember  
strawberr

## HTML Editors

→ We must ensure that we have the right tools. Most important, we need an HTML editor.

### ① Sublime Text 3

- i) Free
- ii) Platform Independent

### ② Notepad ++

- i) Not Supported by MAC.
- ii) Auto Completion Feature

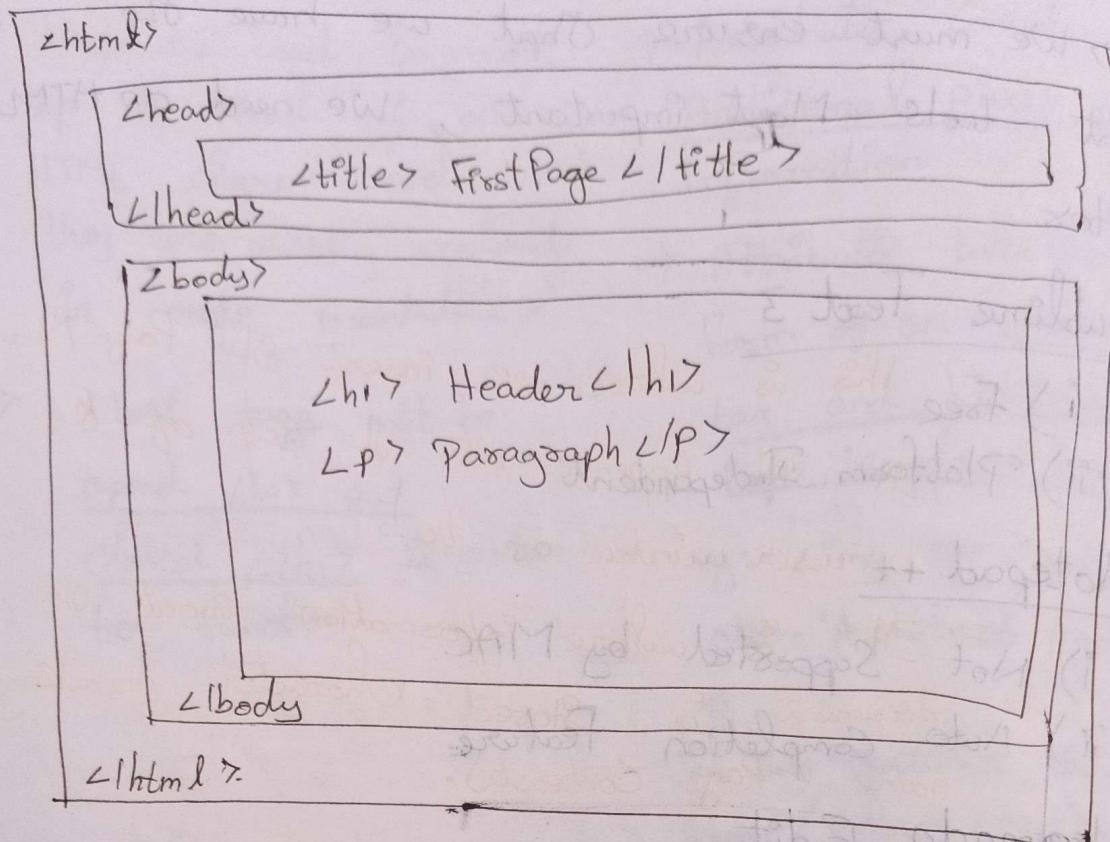
### ③ Komodo Edit

- i) Simple to use
- ii) Platform Independent
- iii) Open - Source editor with a variety of extensions and language support

## To Avoid

- Do not use Microsoft Word or any other word processor when writing HTML code.
- Ensure that you've installed a number of different browsers such as chrome and Firefox in order to preview your HTML codes.

# Basic Construction of an HTML Page



<!DOCTYPE html> → This tag Specifies the language you will write on the page.

In this case, the language is HTML5

<html> → This tag Signals that from here on we are going to write in HTML code.

<head> → This is where all the Metadata for the page goes.  
Stuff mostly meant for Search engines and other Computer programs.

<body> → This is where the Content of the page where written.

## Further Tags

Inside the <head> tag, there is one tag that is always included <title>, But there are other that are just as important:-

<title> → This is where we insert the Page Name.  
→ It will appear at the top of the browser window or tab.

<meta> → This is where information about the document is stored: character encoding, name (Page Context).

Let's toy out a basic <head> Section.

<head>  
<title> My first Webpage </title>

<meta charset = "UTF-8">

<meta name = "description" Content = "The Field contains information about your page. It is usually around two sentences long.">

<meta name = "author" Content = "Conor Sheils">

</head>

## Adding Content

→ The HTML <body> is where we add the content which is designed for viewing by human eyes.

→ This includes text, images, tables, forms and everything else that we see on the internet each day.

# How to Add HTML Headings To your Web Page

In HTML, headings are written in the following elements

- `<h1>` } -> used for most important titles
- `<h2>` }
- `<h3>` }
- `<h4>` } -> used for Sub headings and.
- `<h5>` }
- `<h6>` } less important text

Here → Search engine bots use this order

when deciphering which information is most important on a page.

## How To Add Text in HTML

→ Adding text to our HTML Page is

Simple using an element opened with the tag `<p>` which creates a new paragraph.

→ We place all of our Regular text inside the element `<p>`

→ When we write text in HTML, we also have a number of other elements we can use to control the text or make it appear in a certain way.

## Other key Elements:-

Element	Meaning	Purpose
<code>&lt;b&gt;</code>	- bold -	Highlight important information
<code>&lt;strong&gt;</code>	- Strong -	Similar to bold, to highlight key text
<code>&lt;i&gt;</code>	- Italic -	To denote Text
<code>&lt;em&gt;</code>	- Emphasised Text	Usually used as image-Caption.
<code>&lt;mark&gt;</code>	- Marked Text	Highlight the background of the text
<code>&lt;small&gt;</code>	- Small Text	To shrink the text
<code>&lt;strike&gt;</code>	- Strikethrough Text	To place a horizontal line across the text
<code>&lt;u&gt;</code>	- Underlined Text	Used for links or text highlights
<code>&lt;ins&gt;</code>	- Inserted Text	Displayed with an underline to show an inserted text
<code>&lt;sub&gt;</code>	- Subscript Text	Typographical Stylistic choice.
<code>&lt;sup&gt;</code>	- Superscript Text	Another Typographical presentation Style.

These tags must be opened and closed around the text in question

## How to Add links in HTML

As you may have noticed, the internet is made up of lots of links.

Almost Everything you click on while surfing the web is a link takes you to another page within the website you are visiting or to an external site.

Links are included in an

attribute opened by the <a> tag,

This element is the first that we've met which uses an attribute and it looks different to Previously Mentioned tags

### The Anchor Tag

The <a> (or anchor) opening tag is written in the format :-

`<a href="http://blogging.com/"> Your Link`

Text Here <a>

⇒ The first part of the attribute points to the page that will open once the link is clicked.

⇒ The second part of the attribute contains the text which will be displayed to a visitor in order to entice them to click on that link.

If you are building your own website  
you will most likely host all of your  
pages on professional web hosting.

## How to Add Images in HTML To your Websites

In today's modern digital world, Images are everything. The Image tag has everything you need to display images on your site.

Much like the `<a>` anchor element, `<img>` also contains an attribute.

The attribute features information for your computer regarding the source, height, width and alt text of the image.

## Styling and Formats

→ You can define borders and other styles around the image using the class attributes.

→ The file types generally used for image files online are .jpg, .png, and (.gif and .css).

Alt text is important to ensure that your site is ranked correctly on search sites and also for visually impaired visitors to your site.

The `<img>` tag normally is written as follows:-

```

```

## How To Make an HTML List

In Web design, there are 3 Different types of lists which you may wish to add to your site.

→ Ordered List

→ Unordered List

→ Definition List

### i) Ordered List

The first is an `<ol>`: This is an

#### Ordered list of Contents

For example :-

1. An item

2. An other item.

3. Another goes here.

⇒ Inside the `<ol>` tag we list each item on the list inside `<li></li>` tags

for example:-

<ul>  
<li> An item </li>  
<li> Another item </li>  
<li> Another goes here </li>  
</ul>

ii) Unordered List

The Second type of list that you may wish to include is an <ul> unordered list

⇒ This is better known as a bullet point list and contains no numbers.

for example:-

<ul>  
<li> This is </li> ("stop eldot" > , <br> )  
<li> An Unordered </li> (<br> )  
<li> List </li> (MTT)   
</ul>

ii) Definition Lists

⇒ The third type of list that you may wish to include a definition list <dl> on.

Your page.

for example:-

```
<dd>  
<dt> Item </dt>  
<dd> The definition goes here </dd>  
</dd>
```

Eg:- HTML

HTML is a programming language used to create web pages and is rendered by a web browser.

### How to add Tables In HTML

→ A table is defined using the <table> element, and contains a number of table cells (<td>, for "table data") which are organized into table rows (<tr>).

→ The markup (HTML code) for a table is always based on row, never columns.

→ Table Cells which act as Column.  
headers or row headers should use the <th> (table header) element.

→ Table cells can be merged using the colspan and rowspan attributes

- Tables can be broken into sections using the following elements
  - `<thead>` Table header
  - `<tbody>` Table body
  - `<tfoot>` Table footer

- A Caption can be added to a `<table>` using the `<Caption>` element
- You can use `<col>` and `<col groups>` to define table columns for styling

## Table Code Sample : Simple Table

```

<table>
  <thead>
    <tr>
      <th> Name </th>
      <th> Favorite Color </th>
    </tr>
  </thead>
  <tbody>
    <tr>
      <td> Bob </td>
      <td> Yellow </td>
    </td> <td>
      <td> Michelle </td>
      <td> Purple </td>
    </td>
  </tbody>
</table>

```

Name	Favorite Color
Bob	Yellow
Michelle	Purple

# Table Code Sample: Complex Table

<table>

<caption> A Complex Table </caption>

<thead>

<tr>

<th colspan="3"> Invoice # 123456789 </th>

<th> 14 January 2025 </th>

<tr>

<td colspan="2">

<strong> Pay to: </strong> <b>

Acme Billing Co. </b>

123 Main St. </b>

Cityville, NA 12345 </td>

<td colspan="2">

<strong> Customer: </strong> <b>

John Smith </b>

321 Willow Way </b>

Southeast Northwest Shire, MA 54321 </td>

</tr>

<thead>

<tbody>

<tr>

<th> Name | Description </th>

<th> Qty. </th>

<th> @ </th>

<th> Cost </th>

</tr>

<td> Paperclips </td>	elot regha
<td> 1000 </td>	per meter # elot
<td> 0.01 </td>	300
<td> 10.00 </td>	elot, elot
<td>	elot, elot
<td> Staples (box) </td>	elot, elot
<td> 100 </td>	2nd AM
<td> 1.00 </td>	elot
<td> 100.00 </td>	elot, elot
<td>	elot, elot
<td> 00.01 10.0 0001 0001	elot, elot
<td> 00.001 00.1 001 001	elot (elot)
<td> 00.011	elot, elot
<th> Colspan = "3" > Subtotal </th>	elot
<td> 110.00 </td>	elot of know

<th> Colspan = "2" > Total </th>		<th> Colspan = "2" > Total </th>
<th> Colspan = "2" > Total </th>		elot
<td> 8% </td>		elot
<td> 8.80 </td>		elot, elot
<th> Colspan = "3" > Grand Total </th>		elot, elot
<td> \$ 118.80 </td>		elot, elot
<td> elot - rebat </td>		elot
<td> elot - rebat </td>		elot
<td> elot - rebat </td>		elot

Q/P

### A Complex Table

Invoice # 123456789		14 January 2025	
Pay to:			Customer:
Acme Billing Co. 123 Main St. Cityville, NA 12345			John Smith 321 Willow Way Southeast Northwestshire, MA 54321
Name/ Description	Qty.	@	Cost
Paperclips	1000	0.01	10.00
Staples (box)	100	1.00	100.00
Subtotal			110.00
Tax		8%	8.80
Grand Total.			\$118.80

### Table Tags:-

Table Tag	Meaning	Location
<thead>	Table Head	- Top of the table.
<tbody>	Table body	- Content of the table
<tfoot>	Table foot	- Bottom of the table
<colgroup>	Column Group	- Within the table
<th>	Table Header	- Data Cell for the table headers

## Forms

The HTML form tag is required when you want to collect information that visitors provide.

The HTML <form> tag is used to create a form.

The <form> Tag

A form is essentially a container for inputs.

<form>

The input elements goes here.

</form>

There are two attributes of the form tag that we should be familiar with.

→ The action attribute points to the back-end.

of our web page, which handles the form.

Submission → The method attribute is used to upload.

the data. The most commonly used attributes are the GET and POST methods.

<form action = "Server URL" method = "GET | POST" > </form>

Notes : The form won't function until the

<"a href="#"> background is created.

noted above a window

plus new line is noted above all

the below ad at above notes apart

notes nothing needs to be done

## The <input> Element

The HTML <input> is a fundamental form element.  
It can be displayed in many ways depending on its attributes.

i) Input Type Text  $\Rightarrow$  <input type = "text">

$\Rightarrow$  Defines a Single-Line text input field.

Eg:- <form>

```
First name: <input type = "text" name = "firstname"/>
</form>
```

ii) Input Type Password  $\Rightarrow$  <input type = "password">

$\Rightarrow$  Defines a Password field.

Eg:-

```
<form>
```

```
password: <input type = "password" name = "password"/>
</form>
```

iii) Input Type Submit  $\Rightarrow$  <input type = "Submit">

$\Rightarrow$  Defines a button for Submitting form data to a Server Page.

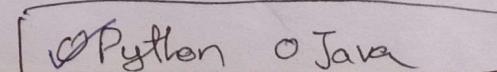
Eg:- <form>

```
<input type = "Submit" name = "Submit" Value = "Submit"/>
</form>
```

iv) Input Type Radio  $\Rightarrow$  <input type = "radio">

$\Rightarrow$  Defines a Radio button.

$\Rightarrow$  The Radio button is used when only a single option needs to be selected out of several offered options



i) Input Type checkbox `<input type="checkbox">`

↳ Defines a checkbox

↳ Checkboxes are used when one or more than one option is required to be selected.

eg:- `<input checked="" type="checkbox" name="language"> Python <input checked="" type="checkbox" name="language"> Java`

The `<label>` Element

↳ A label can be assigned with a `<label>`

elements

↳ The `<label>` element makes the browser user-friendly and provides a focus when you click on a label tag.

eg:- `<form>`

`<label> <input type="checkbox" name="language" value="Python"> Python </label>`

`<label> <input type="checkbox" name="language" value="Java"> Java </label>`

`</form>`

Multiple-Line Text Input Control

This is used when the user has to enter details that may exceed a single sentence.

eg:- `<form> Description: <br/>`

`<textarea rows="5" cols="50" name="Description">`

`Enter description here`

`</textarea>`

`</form>`

Diagram illustrating the multiple-line text input control:

The form contains a label "Description" above a text area. The text area has the placeholder "Enter description here".

Annotations:

- A bracket labeled "TOP" points to the top edge of the text area.
- A bracket labeled "MID" points to the middle edge of the text area.

## HTML Form Example

<form>

<fieldset>

<legend> User Registration Page </legend>

<label> Enter your full name </label> <br>

<input type="text" name="name" > <br>

<label> Enter your email </label> <br>

<input type="email" name="email" > <br>

<label> Enter your password </label> <br>

<input type="password" name="password" > <br>

<label> Enter your Gender </label> <br>

<input type="radio" id="gender" name="gender" value="male"/> Male <br>

<input type="radio" id="gender" name="gender" value="female"/> Female <br>

<input type="radio" id="gender" name="gender" value="others"/> others <br>

<label> Enter your Address </label>

<textarea> </textarea> <br>

<input type="submit" value="Sign-up" >

</fieldSet>

</form>

# User Registration Page

Enter your full name

Enter your Email

Enter your Password

Enter your Gender

Male

Female

others

Enter your Address

about you

about you

about you

## Tags

1.) !DOCTYPE html.  $\Rightarrow$  Document type Declaration

$\langle !DOCTYPE\ html \rangle$

2.) abbreviation  $\Rightarrow$  A Short form of an element

$\langle abbr\ title = " " \rangle \dots \langle /abbr \rangle$

3.) acronym  $\Rightarrow$  Gives usefull information to browsers, translation System and Search engine

$\langle acronym\ title = " " \rangle \dots \langle /acronym \rangle$

4.) address  $\Rightarrow$  indicates the contact information of a person or an organization.

$\langle address \rangle \dots \langle /address \rangle$

5.) Anchor  $\Rightarrow$  used to create a hyperlink on webpage

$\langle a href = " " \rangle \dots \langle /a \rangle$

6.) Applet  $\Rightarrow$  The applet tag in HTML was used to embed java applets into any HTML document, discontinued starting from HTML 5.

$\langle applet \rangle \dots \langle /applet \rangle$

7.) Area  $\Rightarrow$  Map a portion of an image to make it clickable by the end user

$\langle area \rangle$

8.) Article  $\Rightarrow$  Used to represent an article  
(new)

$\langle article \rangle \dots \langle /article \rangle$

- aside => Shelters way like a highlighter
- <aside> ... </aside>
- audio => To add audio Such as Songs...etc.
- <audio> ... </audio>
- base => used to specify a base URL or URL  
will be the base URL for every link  
on the page.
- <base href=" " >
- basefont => Used to set the Default text-color,  
font-size & font-family of all the  
text in browser. Not Supported in HTML5
- <basefont> </basefont>
- bdi => Bi-Directional