HTML → markup language

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↳ SKELETON OF A WEBSITE

INTRODUCTION

HTML → Hyper Text Mark up 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 & JAVA SCRIPT

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

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

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

HTML = car body (only metal)
CSS = car paint, decoration etc
JAVA SCRIPT = car engine + Interior logic

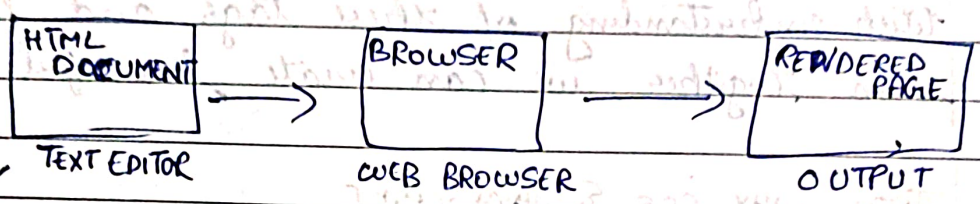
HTML consists of a set of tags contained within an HTML document and the associated files typically have either a ".html" or ".htm" extension.

HTML is the practice of displaying text, graphics, audio, video etc.. in a certain way using special tags.

HOW DO WEBSITES WORK?

An HTML document is created by writing code with specific tags in a code editor of your choice.

The document is then saved with the '.html' extension. Once saved, the browser interprets the HTML document, reads it, and renders the web page.



has the HTML code of a website

HOW DOES A BASIC WEBSITE WORK?

Web browser (client) requests websites like www.codewithharry.com from the web server.

Web server in return sends HTML, CSS and JavaScript files to it.

HTML, CSS and Java Script files are parsed by a web brower which is responsible for showing you a beautiful website.

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OPENING TAG

<a href="http://www.google.com/"> Go to Google </a>

CLOSING TAG

ATTRIBUTE

ELEMENT

BUILDING BLOCKS → TAGS, ATTRIBUTES, ELEMENTS

TAGS

Tags are like instructions for the browser and are enclosed in angle brakets, like <tagname>

Tags tell the browser how to display content on the web page.

ATTRIBUTES

HTML attributes are used to provide additional information about HTML elements.

They are always ~~special~~ specified in the opening tag of an element and typically consist of a name-value pair.

ELEMENTS

Elements are made up of tags, with an opening tag <tagname> and a closing tag </tagname>

The opening tag marks the beginning of an element and the closing tag marks the end.

<P> is opening tag </P> is closing tag

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A BASIC HTML PAGE

```
<!DOCTYPE html>      -> specifies this is an HTML 5 doc
<html>               -> root of an HTML page
<head>               -> contains page meta data
<title>Deepak's website</title>  -> contains title
</head>
<body>               -> The main body of the page
<h1> This is a heading </h1> -> heading tag
<p> My paragraph tag </p> -> Paragraph tag
</body> -> closing body tag
</html>
```

HTML STRUCTURE

```
<!DOCTYPE html>
<html lang="en">
    <head>
        <title> HTML Structure </title>
    </head>

    <body>

    </body>
</html>
```

TEXT FORMATING COMMENTS IN HTML

This is a part of code that should not be parsed

```
<!-- This is an HTML COMMENT -->
```

__/__/__

HTML IS NOT CASE SENSITIVE

<html> = <HTML>
<p> = <P>
<head> = <HEAD>
<body> = <BODY>

HTML ATTRIBUTES

Attributes are used to add more information to the tag

<html lang = "en">
↳ language → english (" " or ' ')
(attribute name) (attribute value)

HEADING TAG

Used to display headings in HTML

h1
h2
h3
h4
h5
h6

SIZE decreases (Importance decreases)

PARAGRAPH TAG

Used to add paragraphs in HTML

<p> This is a para </P>

ANCHOR TAG

Used to add links to your page

<a href = "https://google.com" > Google </a>
↳ our link ↳ display

The work of anchor tag is to add links to pages

__/__/__

br tag (
)

It is used to take links to next line

Ex:- <a href = "https://www.google.com/" > Google </a>

<a href = "https://code.visualstudio.com/download" > VS Code
</a>
↳ ABSOLUTE LINKS

OUTPUT:- GOOGLE
VS CODE } links

<a href = "https://Hello.html" > Go To Hello </a>
↳ RELATIVE LINK

IMAGE TAG (<img />

Used to add images to your page

<img SRC = "/image.png" alt = "Random Image" >
↓
SOURCE ATTRIBUTE
↳ gives us alternative name for the image.
(display only when image link is wrong

We can save the image and give relative link in the tag.

For the size use attribute

height = " "

__/__/__

BOLD, ITALIC & UNDERLINE TAGS

Used to highlight text in your page

 Bold
 Italic
<u> Underline </u>

→ We can use tags in another tags

BIG & SMALL TAGS

Used to display big & small text on your page

<big> Big </big>
<small> Small </small>

Hr Tag (<hr>)

Used to display a horizontal ruler, used to separate content.

SUBSCRIPT & SUPERSCRIPT TAG

Used to display a horizontal ruler, used to separate content

_{subscript}
H_2O

^{superscript}
$A^n + B$

__/__/____

PRE TAG

Used to display text as it is (without ignoring spaces and next line)

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

PAGE LAYOUT TECHNIQUES

SEMANTIC NON SEMANTIC

Using Semantic tags for layout

Using the Right tags

```
<header>
<main>
<footer>
```

INSIDE MAIN TAG

SECTION TAG For a section on your page
<section>

ARTICLE TAG For an article on your page
<article>

ASIDE TAG For content aside main content (ads)
<aside>

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REVISITING ANCHOR TAG

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

FOR NEW TAG

<a href="https://google.com"><img src="link"></a>

CLICKABLE PIC

alt="google"
height="100"

DIV TAG → NON-SEMANTIC

Div is a container used for other HTML elements
Block element (takes full width)
Ex:- [bye]

SPAN TAG

Span is also a container used for other HTML elements
Inline element (takes width as per size)
Ex:- [BYE]

1) <address>
2) <article>
3) <aside>
4) <blockquote>
5) <canvas>
6) <dd>
7)
8) <dl>
9) <dt>
10) <fieldset>
11) <figcaption>
12) <figure>
13) <footer>
14) <form>
15) <h1>–<h6>
16) <li>
17) <hr>
18) <main>
19) ~~
~~
20) <nav>
21) <noscript>
22) <ol>
23) <p>
24) <pre>
25) <section>

1) <a> ✓
2) <abbr>
3) <acronym>
4) <b>
5) <bdo>
6) <big>
7)
 ✓
8) <button>
9) <cite>
10) <code>
11) <dfn>
12)
13) <i> ✓
14) <img> ✓
15) <input>
16) <kbd>
17) <label>
18) <map>
19) <object>
20) <tt>
21) <var>
22) <output>
23) <q>
24) <samp>
25) <script>
26) <select>
27) <small>
28)
29)
30) <sub> ✓
31) <sup> ✓
32) <time>
33) <textarea>

LIST IN HTML

Lists are used to represent real life list data

unordered	ordered
<ul>	<ol>
list item ← <li> Apple </li>	<li> Apple </li>
<li> Mango </li>	<li> Mango </li>
</ul>	</ol>

TABLES IN HTML

Table 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

```
<table>
    <tr>
        <th> Name </th>
        <th> Rollno. </th>
    </tr>
    <tr>
        <td> Deepak </td>
        <td> CS24B1044 </td>
    </tr>
</table>
```

Name	Roll No.
Deepak	CS24B1044

CAPTION IN TABLES

```
<caption> Student Data </caption>
```

STUDENT DATA

NAME	ROLL NO.
DEEPAK	1044

thead & tbody in Tables

<thead> to wrap table head
<tbody> to wrap table body

colspan (colspan = " ")

How many columns do these headers replace?

The information is given at the top of both the columns has come to the centre of both the columns

INFORMATION	
DEEPAK	2007
KALA	1980
UJJWALI	2010

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FORM IN HTML

Forms are used to collect data from the user.

Eg:- sign up/ login / help requests / contact me.

```
<form>
    form content
</form>
```

ACTION IN FORM

Action attribute is used to define ~~it~~ what action needs to be performed when a form is submitted

```
<form action = "/action.php">
```

FORM ELEMENT : INPUT

```
<input type = "text" placeholder = "Enter name">
```

↑ INPUT TYPE ↓ BACKGROUND TEXT

LABEL

TO SELECT SINGLE OPTION

label

```
<label for = "id1">
    <input type = "radio" value = "class X" name = "class" id = "id1">
</label>
```

○ class X ○ class X1

```
<label for = "id2">
    <input type = "radio" value = "clasx" name = "class" id = "id2">
</label>
```

CLASS & Id

```
<div id="id1" class="group1">
</div>

<div id="id2" class="group1">
</div>
```

CHECKBOX → TO SELECT MULTIPLE OPTIONS

```
<label for="id1">
    <input type="checkbox" value="class X" name="class" id="id1">
</label>

<label for="id2">
    <input type="checkbox" value="class X" name="class" id="id2">
</label>
```

TEXTAREA

```
<textarea name="feedback" id="101" placeholder="please give
your feedback" row "5" ></textarea>
```

INCREASE THE SIZE

SELECT

```
<select name="city" id="city">
    <option value="Delhi">Delhi</option>
    <option value="Mumbai">Mumbai</option>
    <option value="Banglore">Banglore</option>
</select>
```

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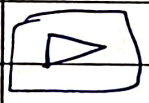
<iframe> Tag

website inside website



<iframe src="link">

Video tag

<video src="myVid.mp4">My Video</video>

Attributes

auto play loop = " "

- controls
- height
- width
- loop
- autoplay