

1. HTML cr.Prasanna Acharya

Hyper Text Markup Language is the backbone of every websites. It is not a programming language. It is a **scripted language**. HTML5 is the latest version. HTML is a **case and white space insensitive language**.

Syntax of HTML

<element attribute="attribute here">some texts here</element>

VS Code and Live Server Extension are required to use HTML and run the codes on browser.

[Codepen.io](#), [w3school.com](#), [devdocs.io](#), [mdn](#) are useful websites to copy codes as well as test them and for the documentations of HTML respectively.

Emmet Plugin makes it easy in VS Code to write codes for HTML. It is the auto-complete feature of VS Code.

html:5 or **!** and then its emmet will give the codes of doctype, metadata, title, body,....

Emmet of h1,h2,.....,h6 will give headings and that of p will give paragraph.

HTML consists of **elements**(like h1,p,hr,br,a,.....), **tags**(like <h1></h1> tag, <p></p> tag,.....) and **attributes**(like href,id,width,.....). **Attributes give more information to the browser to specify modification to elements.**

<> and </> represent opening and closing tag respectively.

Some are self closing tag like <hr>,
,etc. hr for horizontal rule and br for break.

Emmet plugin using html:5 or ! will generate codes template which is called as boilerplate code.

What Makes Up an HTML Document?

The following tags define the basic HTML document structure:

- **<html>** tag – This tag acts as a container for every other element in the document except the **<!DOCTYPE html>** tag.
- **<head>** tag– Includes all the document's metadata.

- `<title>` tag – Defines the title of the document which is displayed in the browser's title bar.
- `<body>` tag – Acts as a container for the document's content that gets displayed on the browser.

Here's what all that looks like:

```
<!DOCTYPE html>
<html lang="en">
  <head>
    <title> My HTML Cheat Sheet </title>
  </head>
  <body></body>
</html>
```

`<!DOCTYPE html>` specifies that we are working with an HTML5 document.

The following tags give additional information to the HTML document:

- `<meta>` tag – This tag can be used to define additional information about the webpage.
- `<link>` tag – Used to link the document to an external resource.
- `<style>` tag – Used for defining styles for the document.
- `<script>` tag – Used to write code snippets (usually JavaScript) or to link the document to an external script.

```
<head>
  <meta charset="UTF-8" />
  <meta http-equiv="X-UA-Compatible" content="IE=edge" />
  <meta name="viewport" content="width=device-width, initial-scale=1.0" />
  <link rel="stylesheet" href="style.css" />
  <title>My HTML Cheat Sheet</title>

  <style>
    * {
      font-size: 100px;
    }
  </style>

  <script>
    alert('This is an alert');
  </script>
</head>
```

Formatting

For making texts bold

Texts here or tag

For making texts italics

<i>Texts here</i> or tag

For underlining the texts

<u>Texts here</u>

b, i and u tags are deprecated or downgraded. The term 'deprecated' can be understood by the analogy that CD, cassette, cartridge, floppy disk, etc. has now been deprecated.

Anchor tag

Text which directs or the hyperlink

a is for anchor and href for hyperlink reference

For opening new tab from hyperlink, use:

Text which directs or the hyperlink

Images

For inserting image in website:

For giving width(height optional because it distorts ratio of image):

For mentioning also the name of the image:

Image tag is a self closing tag.

Height is not necessary to be given as attribute because it will be self adjusted.

If the browser can't render image, it will simply display alternative text to the user to describe what the image was about.

Listing

For ordered list i.e. list ordered with number

Use **** **** and nest the list items using **** ****

For unordered list i.e. list ordered with number

Use **** **** and nest the list items using **** ****

Example:

```
<ol>
  <li>Name</li>
  <li>Class</li>
  <li>Roll no.</li>
</ol>
<ul>
  <li>Name</li>
  <li>Class</li>
  <li>Roll no.</li>
</ul>
```

Commenting

<!-- Texts to be commented here **-->** *is used for commenting in HTML.*

Keyboard shortcut Ctrl+/

Tabling

<table> **</table>** tag for creating table view.

border="pixel" and **width="percentage"** are the attributes that can be given for optimizing view.

<thead> **</thead>** and **<tbody>** **</tbody>** tags can be nested inside **<table>** **</table>** tag for separating head and body of the table.

<tr> **</tr>** tag is for table row, that is for mentioning the names in a row of a table.

<td> **</td>** is tag for table data, that is a data in a cell of a table.

<th> **</th>** that is for table header can be used instead of **<td>** **</td>** for specifying the data as header data and aligning the data at the centre of the table cell. **colspan** and **rowspan** are attributes used to adjust the span of table cell over columns or rows.

Example:

```
<table border="2" width="100%">
  <thead>
    <tr>
      <th colspan="3">Name</td>
      <th>Class</td>
```

```

        <th>Roll no.</th>
    </tr>
</thead>
<tbody>
    <tr>
        <td>Prasanna</td>
        <td colspan="6">Acharya</td>
    </tr>
</tbody>
</table>

```

Forms

<form> </form> is the tag for creating form.

method="get or post" the attribute of form.

The types of elements of form are:

- **input element:** can be of type **text, password, email, radio, button, checkbox, submit, file**, etc.

value and **placeholder** attributes can be used. **required name** attribute can be used instead of only name for making it complementary for the user to fill the given space or box. id and name attributes of input tag are further used in backend and are very important.

Example:

```

<input name="full name" type="text" value="Prasanna Acharya" placeholder="Enter your name">
<input required name="email" type="email" placeholder="Enter your email">
<input required name="password" type="password" placeholder="Enter your password">

```

- **textarea element:** defines a multi line text input. cols and rows attributes can be used to size the text area.

Example:

```

<textarea name="opinion" id="opinion of enthusiast" cols="30" rows="10"
placeholder="Your opinion here!">Beause ....</textarea>

```

- **select element:** defines a drop down list.

Example:

```

<label for="grade">
    Which bachelor semester are you currently studying in?

```

```

</label>
<select name="grade" id="current grade">
    <option value="default-is-selected" selected="selected">
        1st semester
    </option>
    <option value="Option1">
        2nd semester
    </option>
    <option value="Option2">
        3rd semester
    </option>
    <option value="Option3">
        4th semester
    </option>
    <option value="Option4">
        5th semester
    </option>
    <option value="Option5">
        6th semester
    </option>
    <option value="Option6">
        7th semester
    </option>
    <option value="Option7">
        8th semester
    </option>
    <option value="disabled" disabled="disabled">
        +2
    </option>
</select>

```

Embedding Video:

iframe and **video** are the elements used with attributes like **src(mandatory)**, **width(almost mandatory)**, **height**, **control**, **autoplay**, **loop**, **type**, **frameborder**, etc. that are used in embedding videos in HTML.

Example:

```

<div>
    <video width="650" src="./BSc CSIT Physics.mp4" controls loop type="video/mp4">
</video>
</div>
<div>
    <iframe width="560" height="315"
src="https://www.youtube.com/embed/4l3bTD1t6ZI" title="YouTube video player"

```

```
    frameborder="0"
    allow="accelerometer; autoplay; clipboard-write; encrypted-media; gyroscope;
picture-in-picture"
    allowfullscreen></iframe>
</div>
```

Others:

- Tag for aligning texts in the centre:

<center> </center>

Text embeded in between,that is nested will he center aligned.

- Attributes are **href= "#id" {(say)href= "#bottom"}**for giving hyperlink to jump to another place and **id= "(say)bottom"**
- **link:favicon** and then emmet for rendering code for entering image into favicon.
- **<hr>** for giving a horizontal rule(i.e. line)
- **
** for breaking lines
- **audio** tag can be used for adding audio file
- **HTML entities** give extra formatting like super-script, sub-script and so on.