

# **HYPER TEXT MARKUP LANGUAGE**

# WHAT IS HTML

**Hyper Text:** HyperText simply means "Text within Text." A text has a link within it, is a hypertext.

**Markup language:** A markup language is a computer language that is used to apply layout and formatting conventions to a text document.

<!DOCTYPE>

<html>

<head>

<title>Web page title</title>

</head>

<body>

<h1>Write Your First Heading</h1>

<p>Write Your First Paragraph.</p>

</body>

</html>

**<!DOCTYPE>**: It defines the document type or it instruct the browser about the version of HTML.

**<html >**: This tag informs the browser that it is an HTML document. Text between html tag describes the web document. It is a container for all other elements of HTML except <!DOCTYPE>

**<head>**: It should be the first element inside the <html> element, which contains the metadata (information about the document). It must be closed before the body tag opens.

**<title>**: As its name suggested, it is used to add title of that HTML page which appears at the top of the browser window. It must be placed inside the head tag and should close immediately. (Optional)

**<body>**: Text between body tag describes the body content of the page that is visible to the end user. This tag contains the main content of the HTML document.

**<h1>**: Text between <h1> tag describes the first level heading of the webpage.

**<p>**: Text between <p> tag describes the paragraph of the webpage.

# VISUAL STUDIO CODE

- Visual Studio Code is a source-code editor developed by Microsoft for Windows, Linux and macOS.
- It includes support for debugging, embedded Git control and GitHub, syntax highlighting, intelligent code completion and code refactoring.
- It is highly customizable, allowing users to change the theme, keyboard shortcuts, preferences, and install extensions that add additional functionality.
- The source code is free and open-source, released under the permissive MIT License.

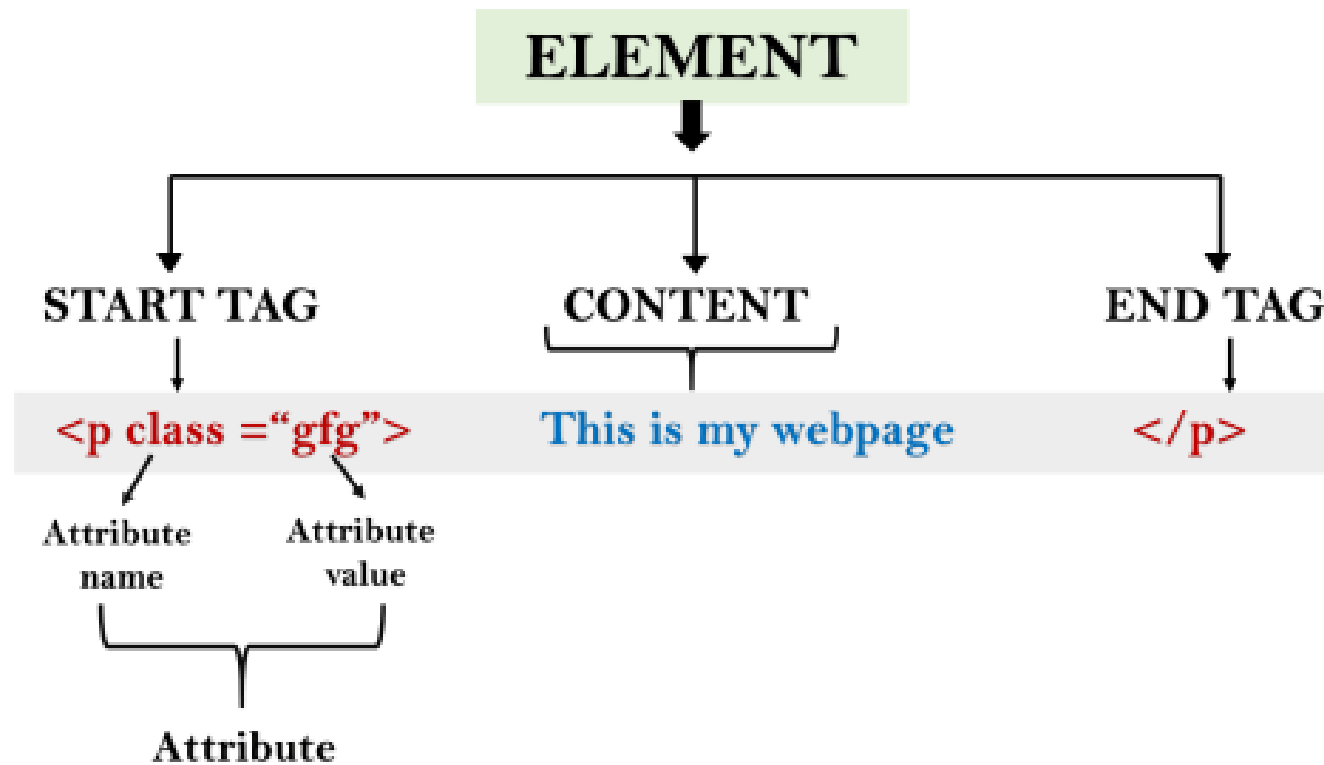
<https://code.visualstudio.com/Download>

# BUILDING BLOCKS OF HTML

- **Tags:** An HTML tag surrounds the content and apply meaning to it. It is written between < and > brackets.
- **Attribute:** An attribute in HTML provides extra information about the element, and it is applied within the start tag. An HTML attribute contains two fields: name & value.

<tag name attribute\_name= " attr\_value"> content </ tag name>

- **Elements:** An HTML element is an individual component of an HTML file. In an HTML file, everything written within tags are termed as HTML elements.



# EXAMPLE:

```
<!DOCTYPE html>
```

```
<html>
```

```
<head>
```

```
<title>The basic building blocks of HTML</title>
```

```
</head>
```

```
<body>
```

```
<h2>The building blocks</h2>
```

```
<p>This is a paragraph tag</p>
```

```
<p style="color: red">The style is attribute of paragraph tag</p>
```

```
<span>The element contains tag, attribute and content</span>
```

```
</body>
```

```
</html>
```



# UNCLOSED HTML TAGS ( EXCEPTION )

- **<br> Tag:** br stands for break line, it breaks the line of the code.
- **<hr> Tag:** hr stands for Horizontal Rule. This tag is used to put a line across the webpage.

# HTML FORMATTING

## 1) Bold Text

HTML<b> and <strong> formatting elements

See this example:

<p> <b>Write Your First Paragraph in bold text.</b></p>

<p><strong>This is an important content</strong>, and this is normal content</p>

# EXAMPLE

```
<!DOCTYPE html>
```

```
<html>
```

```
<head>
```

```
  <title>formatting elements</title>
```

```
</head>
```

```
<body>
```

```
  <h1>Explanation of formatting element</h1>
```

```
  <p><strong>This is an important content</strong>, and this is normal content</p>
```

```
</body>
```

```
</html>
```

## 2) Italic Text

### HTML `<i>` and `<em>` formatting elements

`<p> <i>Write Your First Paragraph in italic text.</i></p>`

`<p><em>This is an important content</em>, which displayed in italic font.</p>`

### 3) HTML Marked formatting

If you want to mark or highlight a text, you should write the content within `<mark>.....</mark>`

`<h2>` I want to put a `<mark>` Mark`</mark>` on your face`</h2>`

## 4) Underlined Text

If you write anything within `<u>.....</u>` element, is shown in underlined text.

`<p> <u>Write Your First Paragraph in underlined text.</u></p>`

## 5) Strike Text

Anything written within `<strike>.....</strike>` element is displayed with strikethrough. It is a thin line which cross the statement.

See this example:

`<p> <strike>Write Your First Paragraph with strikethrough</strike>.</p>`  
>

## 6) Superscript Text

If you put the content within `<sup>.....</sup>` element, is shown in superscript; means it is displayed half a character's height above the other characters.

See this example:

`<p>Hello <sup>Write Your First Paragraph in superscript.</sup></p>`

Output :

Hello <sup>Write Your First Paragraph in superscript.</sup>



## 7) Subscript Text

If you put the content within `<sub>.....</sub>` element, is shown in subscript ; means it is displayed half a character's height below the other characters.

See this example:

`<p>Hello <sub>Write Your First Paragraph in subscript.</sub></p>`

Output :

Hello <sub>Write Your First Paragraph in subscript.</sub>

# HTML HEADING

A HTML heading or HTML h tag can be defined as a title or a subtitle which you want to display on the webpage.

`<h1>Heading no. 1</h1>`

`<h2>Heading no. 2</h2>`

`<h3>Heading no. 3</h3>`

`<h4>Heading no. 4</h4>`

`<h5>Heading no. 5</h5>`

`<h6>Heading no. 6</h6>`

# HTML PARAGRAPH

HTML paragraph or HTML p tag is used to define a paragraph in a webpage.

`<p>This is first paragraph.</p>`

`<p>This is second paragraph.</p>`

`<p>This is third paragraph.</p>`

# HTML ANCHOR

The **HTML anchor tag** defines *a hyperlink that links one page to another page*. It can create hyperlink to other web page as well as files, location, or any URL.

## href attribute of HTML anchor tag

The href attribute is used to define the address of the file to be linked. In other words, it points out the destination page.

`<a href="second.html">Click for Second Page</a>`

# HTML IMAGE

**HTML img tag** is used to display image on the web page. HTML img tag is an empty tag that contains attributes only, closing tags are not used in HTML image element.

`<h2>HTML Image Example</h2>`

``

# ATTRIBUTES OF HTML IMG TAG

## 1) src

It is a necessary attribute that describes the source or path of the image. It instructs the browser where to look for the image on the server.

The location of image may be on the same directory or another server.

## 2) alt

The alt attribute defines an alternate text for the image, if it can't be displayed. The value of the alt attribute describe the image in words. The alt attribute is considered good for SEO prospective.

## 3) width

It is an optional attribute which is used to specify the width to display the image. It is not recommended now. You should apply CSS in place of width attribute.

## 4) height

It h3 the height of the image. The HTML height attribute also supports iframe, image and object elements. It is not recommended now. You should apply CSS in place of height attribute.

# HTML TABLE

**HTML table tag** is used to display data in tabular form (row \* column). There can be many columns in a row.

We can create a table to display data in tabular form, using `<table>` element, with the help of `<tr>`, `<td>`, and `<th>` elements.

In Each table, table row is defined by `<tr>` tag, table header is defined by `<th>`, and table data is defined by `<td>` tags.

`<table>`

`<tr><th>First_Name</th><th>Last_Name</th><th>Marks</th></tr>`

`<tr><td>Sonoo</td><td>Jaiswal</td><td>60</td></tr>`

`<tr><td>James</td><td>William</td><td>80</td></tr>`

`<tr><td>Swati</td><td>Sironi</td><td>82</td></tr>`

`<tr><td>Chetna</td><td>Singh</td><td>72</td></tr>`

`</table>`

# HTML LISTS

HTML Lists are used to specify lists of information. All lists may contain one or more list elements. There are three different types of HTML lists:

- Ordered List or Numbered List (ol)
- Unordered List or Bulleted List (ul)
- Description List or Definition List (dl)



# HTML ORDERED LIST | HTML NUMBERED LIST

**HTML Ordered List** or Numbered List displays elements in numbered format. The HTML ol tag is used for ordered list. We can use ordered list to represent items either in numerical order format or alphabetical order format, or any format where an order is emphasized. There can be different types of numbered list:

- Numeric Number (1, 2, 3)
- Capital Roman Number (I II III)
- Small Roman Number (i ii iii)
- Capital Alphabet (A B C)
- Small Alphabet (a b c)

# HTML ORDERED LIST | HTML NUMBERED LIST

Example :

```
<ol>
```

```
<li>HTML</li>
```

```
<li>Java</li>
```

```
<li>JavaScript</li>
```

```
<li>SQL</li>
```

```
</ol>
```

# HTML UNORDERED LIST | HTML BULLETED LIST

**HTML Unordered List** or Bulleted List displays elements in bulleted format . We can use unordered list where we do not need to display items in any particular order. The HTML ul tag is used for the unordered list. There can be 4 types of bulleted list:

- disc
- circle
- square
- none

# HTML UNORDERED LIST | HTML BULLETED LIST

**HTML Unordered List** or Bulleted List displays elements in bulleted format . We can use unordered list where we do not need to display items in any particular order. The HTML ul tag is used for the unordered list. There can be 4 types of bulleted list:

- disc
- circle
- square
- none

# HTML DESCRIPTION LIST | HTML DEFINITION LIST

**HTML Description List** or Definition List displays elements in definition form like in dictionary. The `<dl>`, `<dt>` and `<dd>` tags are used to define description list.

The 3 HTML description list tags are given below:

**`<dl>` tag** defines the description list.

**`<dt>` tag** defines data term.

**`<dd>` tag** defines data definition (description).

# HTML DESCRIPTION LIST | HTML DEFINITION LIST

<dl>

<dt>HTML</dt>

<dd>is a markup language</dd>

<dt>Java</dt>

<dd>is a programming language and platform</dd>

<dt>JavaScript</dt>

<dd>is a scripting language</dd>

<dt>SQL</dt>

<dd>is a query language</dd>

</dl>

# HTML FORM

An **HTML form** is *a section of a document* which contains controls such as text fields, password fields, checkboxes, radio buttons, submit button, menus etc.

## HTML Form Syntax

```
<form action="server url" method="get|post">
```

```
//input controls e.g. textfield, textarea, radiobutton, button
```

```
</form>
```

# HTML <INPUT> ELEMENT

The HTML <input> element is fundamental form element. It is used to create form fields, to take input from user. We can apply different input filed to gather different information form user. Following is the example to show the simple text input.

```
<body>
```

```
<form>
```

```
  Enter your name <br>
```

```
  <input type="text" name="username">
```

```
</form>
```

```
</body>
```



# HTML TEXTFIELD CONTROL

The type="text" attribute of input tag creates textfield control also known as single line textfield control. The name attribute is optional, but it is required for the server side component such as JSP, ASP, PHP etc.

**<form>**

First Name: **<input type="text" name="firstname"/>** **<br/>**

Last Name: **<input type="text" name="lastname"/>** **<br/>**

**</form>**

# HTML <TEXTAREA> TAG IN FORM

The <textarea> tag in HTML is used to insert multiple-line text in a form. The size of <textarea> can be specify either using "rows" or "cols" attribute or by CSS.

```
<!DOCTYPE html>
```

```
<html>
```

```
<head>
```

```
  <title>Form in HTML</title>
```

```
</head>
```

```
<body>
```

```
  <form>
```

```
    Enter your address:<br>
```

```
    <textarea rows="2" cols="20"></textarea>
```

```
  </form>
```

```
</body>
```

```
</html>
```

# HTML PASSWORD FIELD CONTROL

The password is not visible to the user in password field control.

```
<form>
```

```
  <label for="password">Password: </label>
```

```
    <input type="password" id="password" name="password"  
  /> <br/>
```

```
</form>
```

# HTML 5 EMAIL FIELD CONTROL

The email field is new in HTML 5. It validates the text for correct email address. You must use @ and . in this field

**<form>**

**<label for="email">Email: </label>**

**<input type="email" id="email" name="email"/> <br/>**

**</form>**

# RADIO BUTTON CONTROL

The radio button is used to select one option from multiple options. It is used for selection of gender, quiz questions etc.

**<form>**

**<label for="gender">Gender: </label>**

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

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

**</form>**

# CHECKBOX CONTROL

The checkbox control is used to check multiple options from given checkboxes.

**<form>**

Hobby:**<br>**

**<input type="checkbox" id="cricket" name="cricket" value="cricket"/>**

**<label for="cricket">Cricket</label> <br>**

**<input type="checkbox" id="football" name="football" value="football"**

**/>**

**<label for="football">Football</label> <br>**

**<input type="checkbox" id="hockey" name="hockey" value="hockey"/**

**>**

**<label for="hockey">Hockey</label>**

**</form>**

# SUBMIT BUTTON CONTROL

HTML `<input type="submit">` are used to add a submit button on web page. When user clicks on submit button, then form get submit to the server.

`<form>`

`<label for="name">Enter name</label><br>`

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

`<label for="pass">Enter Password</label><br>`

`<input type="Password" id="pass" name="pass"><br>`

`<input type="submit" value="submit">`

`</form>`

# HTML FORM INPUT TYPES



# SUBMIT BUTTON CONTROL

HTML `<input type="submit">` are used to add a submit button on web page. When user clicks on submit button, then form get submit to the server.

`<form>`

`<label for="name">Enter name</label><br>`

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

`<label for="pass">Enter Password</label><br>`

`<input type="Password" id="pass" name="pass"><br>`

`<input type="submit" value="submit">`

`</form>`