

What is HTML

- **HTML** stands for **H**ypertext **M**arkup **L**anguage, and it is the most widely used language for the development of Web Pages.
- As its name suggests, HTML is a Markup Language which means you use HTML to simply "mark up" a text document with tags that tell a Web browser how to structure it to display.
- Markup languages use sets of markup tags to characterize text elements within a document, which gives instructions to web browsers on how the document should appear.

Development

- HTML was originally developed by Tim Berners-Lee in 1990. He is also known as the father of the web. In 1996, the World Wide Web Consortium (W3C) became the authority to maintain the HTML specifications.
- HTML also became an international standard (ISO) in 2000.
- HTML5 is the latest version of HTML. It provides a faster and more robust approach to web development with new page structure elements such as `<main>`, `<section>`, `<article>`, `<header>`, `<footer>` and `<nav>`.

Tags

- HTML is written in the form of HTML elements consisting of markup tags. These markup tags are the fundamental characteristic of HTML. Every markup tag is composed of a keyword, surrounded by angle brackets, such as `<html>`, `<head>`, `<p>`, and so on.
- HTML tags normally come in pairs like `<html>` and `</html>`. The first tag in a pair is often called the opening tag (or start tag), and the second tag is called the closing tag.
- In between the start and end tags you can place appropriate content. For example, a paragraph, which is represented by the `p` element, would be written as:

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

- An opening tag and a closing tag are identical, except for the slash / after the opening angle bracket of the closing tag, to tell the browser that the command has been completed.

Structure

- An HTML Document is mainly divided into two parts:
- **Head** - contains the information about the HTML document. For Example, the title of the page, version of HTML, Meta Data, etc.
- **Body** - contains everything you want to display on the Web Page.

Comments

- Comments are a piece of code that is ignored by web browsers. The purpose of comments is to help you and others understand your code while increasing code readability.
- It is a good practice to add comments to your HTML code, especially in complex documents, to indicate sections of a document, and any other notes to anyone looking at the code.
- HTML comments are placed in between `<!-- -->` tags.

Elements vs Tags

- An HTML element is an individual component of an HTML document. It represents semantics or meaning. For example, the title element represents the title of the document.
- Most HTML elements are written with a start tag and an end tag, with content in between. Elements can also contain attributes that define additional properties. For example, a paragraph, which is represented by the p element, would be written as:

Headings

- All documents start with a heading. Headings help you define the hierarchy and the structure of the web page content.
- Developers can use different sizes for your headings. HTML has 6 levels of headings, which use the elements `<h1>`, `<h2>`, `<h3>`, `<h4>`, `<h5>` and `<h6>`.

`<h1>`Heading level 1`</h1>`

`<h2>`Heading level 2`</h2>`

`<h3>`Heading level 3`</h3>`

`<h4>`Heading level 4`</h4>`

```
<h5>Heading level 5</h5>
```

```
<h6>Heading level 6</h6>
```

Heading Importance

- Websites should prioritize headings as they play a crucial role in the indexing of your website (SEO). Additionally, users tend to skim web pages by their headings.
- Therefore, `<h1>` headings should be used for the main headings, followed by `<h2>` headings, then the less important `<h3>`, and so on.
- Heading size
- HTML headings have default sizes, but they can be altered by the developers with the help of the style attribute, using the CSS font-size property. Like so:

```
<h1 style="font-size: 60px;">Heading 1</h1>
```

Paragraph

- The `<p>` tag offers a way to structure your text into different paragraphs. Each paragraph of text should go in between an opening `<p>` and a closing `</p>` tag as demonstrated in the example below:

```
<body>
```

```
<p>First paragraph</p>
```

```
<p>Second paragraph</p>
```

```
<p>Third paragraph</p>
```

```
</body>
```

- Paragraphs always tend to start on a new line, and are usually depicted as blocks of standard code.

Horizontal lines

- Developers can use the `<hr>` tag to create horizontal rules or lines to visually separate content sections on a web page. Like `
`, the `<hr>` tag is also an empty element, i.e. it doesn't have an end tag.

`<p>`This paragraph should be on top`</p>`

`<hr>`

`<p>`This paragraph should be at bottom`</p>`

Preserv Formating

- Sometimes, you want your text to follow the exact format of how it is written in the HTML document. In these cases, you can use the preformatted tag `<pre>`.
- By wrapping text in HTML `<pre>` tags, you can preserve its format with all the whitespace and line breaks you intend to use:

`<pre>`

Fun fact: most of the fun
facts on the Internet are
not actually fun.

`</pre>`

Bold Tag

- A bold tag in HTML is used to highlight a marked portion of the text in bold. The bold tag differentiates the marked area from the rest.
- The bold tag have one starting `` tag and one ending `` tag.

`<p>`this is ``bold`` text`</p>`

Italic Tag

- You can use the `<i>` tag to make the text italic.
- Anything that appears within `<i>` and `</i>` elements is displayed in italicized as shown below:

`<p>`Normal text and `<i>`italic text`</i><p>`

Em Tag

- Both `` and `<i>` tags render the enclosed text in italic type by default, but the `` tag indicates that its contents have stressed emphasis compared to surrounding text, whereas the `<i>` tag is used for marking up text that is set off from the normal text for readability reasons, such as a technical term, an idiomatic phrase from another language, a thought, etc.

`<p>`This text is ``emphasized`</p>`

- Use the `` tag when the content of your page requires that certain words or phrases should have strong emphasis or importance.

Underline tag

- While `<u>` was called HTML underline tag before, it is now officially known as the unarticulated annotation tag. Thus, you shouldn't use it for simple styling purposes. It is meant to indicate non-textual annotations.
- When you use the `<u>` tag, its content receives a simple solid underline in HTML:

`<p>`Here is some `<u>`underlined`</u>` text.`</p>`

Abbreviation

- An abbreviation is a shortened form of a word, phrase, or name. You can use the `<abbr>` tag to denote an abbreviation.
- The title attribute is used inside this tag to provide the full expansion of the abbreviation, which is displayed by the browsers as a tooltip when the mouse cursor hovers over the element.

`<p>`

```
<abbr title="Hypertext Markup Language">HTML</abbr>
```

is a markup language.

```
</p>
```

Mark tag

- The `<mark>` tag in HTML is used to highlight the text. This practice indicates the special relevance of texts in a given document. The texts within the `<mark>` tag typically has a yellow background color.

```
<h3>This is <mark>Marked</mark> text</h3>
```

- `<mark>` tag and `<mark>` element are interchangeably used.

Subscript

- The `<sub>` tag renders enclosed text as a subscript. Subscript text appears half a character's height below the baseline.
- It is most often used in mathematical or chemical formulas.

```
<p>The chemical formula of Water is: H<sub>2</sub>O</p>
```