HTML Introduction and HTML tags

HTML Introduction

Hypertext Markup Language (HTML) is the language in which most websites are written. HTML is used to create pages and make them functional.

The latest version is known as **HTML5**.

A Markup Language is a way that computers speak to each other to control how text is processed and presented. To do this HTML uses two things: **tags** and **attributes**.

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** and **closed** in order to function.

```
<tag></tag>
```

Attributes contain additional pieces of information. Attributes take the form of an opening tag and additional info is placed inside.

```
<img src="image1.png" alt="image">
```

Rules To Remember

The vast majority of tags must be opened <tag> and closed </tag> with the element information such as a title or text resting between the tags.

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

Creating your 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.

Underneath the HTML we will open two further elements: **<Head>** and **<Body>**

The content placed inside the **<Head>** tag is mostly designed to be read by **search engine**.

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.

<Title> This is where we insert the page name as it will appear at the top of the browser window.

Next, we will add the **metadata**, which is the information that search engines read about your site.

This should follow the following **format**:

```
<meta charset="UTF-8">
<meta name="description" content="This field contains information about your page.">
```

Try it yourself

Create a sample HTML file with doctype, HTML, HEAD, TITLE and BODY tags.

HTML Tags

The things wrapped in triangular braces (the < ... > characters) are called tags.

Most tags must have two parts, an opening and a closing part. For example, <html> is the opening tag and </html> is the closing tag. Note that the closing tag has the same text as the opening tag, but has an additional forward-slash (/) character. I tend to interpret this as the "end" or "close" character.

There are some tags that are an exception to this rule, and where a closing tag is not required. The <img> tag for showing images is one example of this.

Each HTML file must have the essential tags for it to be valid, so that web browsers can understand it and display it correctly.

Heading Tags

Any document starts with a **heading**. You can use different sizes for your headings. HTML also has six levels of headings, which use the elements <h1>, <h2>, <h3>, <h4>, <h5>, and <h6>.

Paragraph Tag

The tag offers a way to **structure your text** into different paragraphs. Each paragraph of text should go in between an opening and a closing tag.

These are few basic tags; you can see list of all html tags from below URLs:

https://www.w3schools.com/tags/
https://html-css-js.com/html/tags/

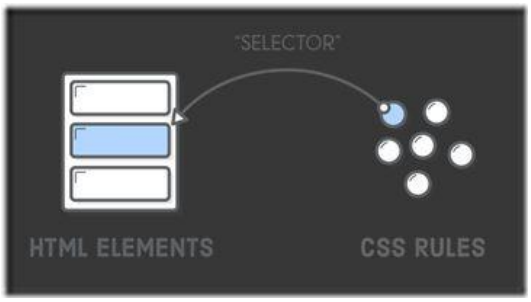
We will learn about <table> tag, <form> tags and HTML5 tag in next few mails.

Try it yourself

Create a sample HTML file with given HTML tags like heading tags and paragraph tags, see how changing heading tags changes font sizes.

CSS Selectors

"CSS selectors" let us **map a single CSS rule** to a **specific** HTML element. This makes it possible to **selectively style** individual elements while ignoring others.

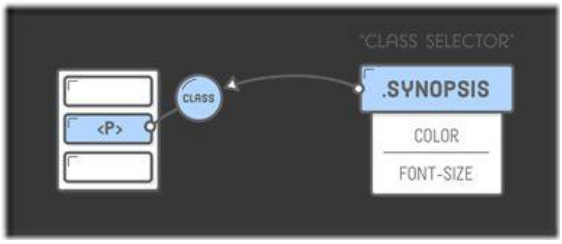


The only CSS selector we've seen so far is called the "type selector", which targets all the matching elements on a page.

```
p {
    color: red;
}
```

Class selectors

"Class selectors" let you apply CSS styles to a **specific HTML element**. They let you **differentiate** between HTML elements of the same type, like when we have **two <p>** elements but only want to style **one of them**.



Now, we can pluck out that <p class='synopsis'> element in our CSS with the following (add this to styles.css):

```
.synopsis {
    color: #7E8184;
    font-style: italic;
}
```

id selectors

"ID selectors" are a more **stringent alternative** to class selectors. They work pretty much the **same way**, except you can only have **one element** with the **same ID per page**, which means you **can't reuse** styles at all. Instead of a class attribute, they require an id attribute on whatever HTML element you're trying to select.

The corresponding CSS selector must begin with a hash **sign (#)** opposed to a **dot**.

```
<a id='button-2' class='button' href='nowhere.html'>Button Two</a>
#button-2 {
    color: #5D6063;
}
```

Rules To Remember

The problem is, if we wanted to share this style with another button, we'd have to give it another unique id attribute. For this reason, ID selectors are generally frowned upon. Use class selectors instead for apply styling. So, use **id** when you want show element **uniquely** and use **class** when element is **common**.

Try it yourself

Try to apply CSS styles via tag selector, class selector and ID selector for previously created paragraph and heading tag HTML file. You may add different classes and ids to number of elements for practicing.