

# HTML

HTML (HyperText Markup Language) is the language used to create web pages. It's a way to structure content on the web by using tags. "HyperText" refers to text with links that lead to other pages, while "Markup" refers to the tags or codes used to define the structure of a document. "Language" refers to the set of rules used to format this content.

HTML (HyperText Markup Language) is the foundation of every web page. Writing a simple "Hello, World!" program is the best way to start learning HTML. Let's dive into the essential components of an HTML document, its basic structure, and how to write your very first program.

## Basic Syntax:

HTML is made up of tags, which define the structure and content of a webpage. Tags are written in angle brackets `< >` and usually come in pairs:

- **Opening Tag:** `<tag>`
- **Closing Tag:** `</tag>`

For example:

`<p>Hello, World!</p>`

The `<p>` tag denotes a paragraph, and the text "Hello, World!" is displayed on the page.

## Structure of an HTML Document:

An HTML document follows a specific structure to ensure web browsers correctly interpret and display the content. Below is an explanation of each key part of an HTML document.

# Understanding HTML, `<head>`, and `<body>` Elements

## 1. `<!DOCTYPE html>` (Document Type Declaration)

The very first line in an HTML file is the **DOCTYPE declaration**:

```
<!DOCTYPE html>
```

- It tells the browser that the document follows **HTML5** rules.
- It is not an HTML tag but an instruction to ensure proper rendering.

## 2. `<html>` (Root Element)

```
<html>
```

- The `<html>` tag wraps the entire webpage content.
- All elements of the page go inside this tag.
- The **lang** attribute (optional) can specify the language:

```
<html lang="en">
```

## 3. `<head>` (Head Section: Metadata & External Resources)

```
<head>  
  <meta charset="UTF-8">  
  <title>My Webpage</title>  
  <meta name="description" content="This is a sample webpage">  
  <link rel="stylesheet" href="styles.css">  
</head>
```

The `<head>` section contains **information about the page** that is not displayed on the screen. It may include:

- `<title>`: The title of the page (shown in the browser tab).
- `<meta>`: Metadata such as character encoding and page description.
- `<link>`: Used to link external CSS stylesheets.
- `<script>`: Can be used to add JavaScript files.

#### 4. `<body>` (Body Section: Visible Content)

```
<body>  
  <h1>Welcome to My Webpage</h1>  
  <p>This is a paragraph of text.</p>  
    
  <a href="https://example.com">Visit Example</a>  
</body>
```

- The `<body>` tag contains all the **visible content** of the webpage, such as:
  - Headings (`<h1>`, `<h2>`, etc.)
  - Paragraphs (`<p>`)
  - Images (`<img>`)
  - Links (`<a>`)
  - Lists (`<ul>`, `<ol>`)

#### 5. Closing the Document

Finally, we close the `<html>` tag:

```
</html>
```

#### Complete HTML Document Example

```
<!DOCTYPE html>
```

```
<html lang="en">
<head>
  <meta charset="UTF-8">
  <title>My First Webpage</title>
  <meta name="description" content="This is my first HTML
document">
  <link rel="stylesheet" href="styles.css">
</head>
<body>
  <h1>Welcome!</h1>
  <p>This is a simple HTML page structure example.</p>
</body>
</html>
```

## Writing Your First Program:

### Open VS Code:

- After installation, open **Visual Studio Code** by finding it in your start menu (Windows) or applications folder (Mac).  
Create a new file and save it as `index.html`.
- Write the following code.

### Create a New File:

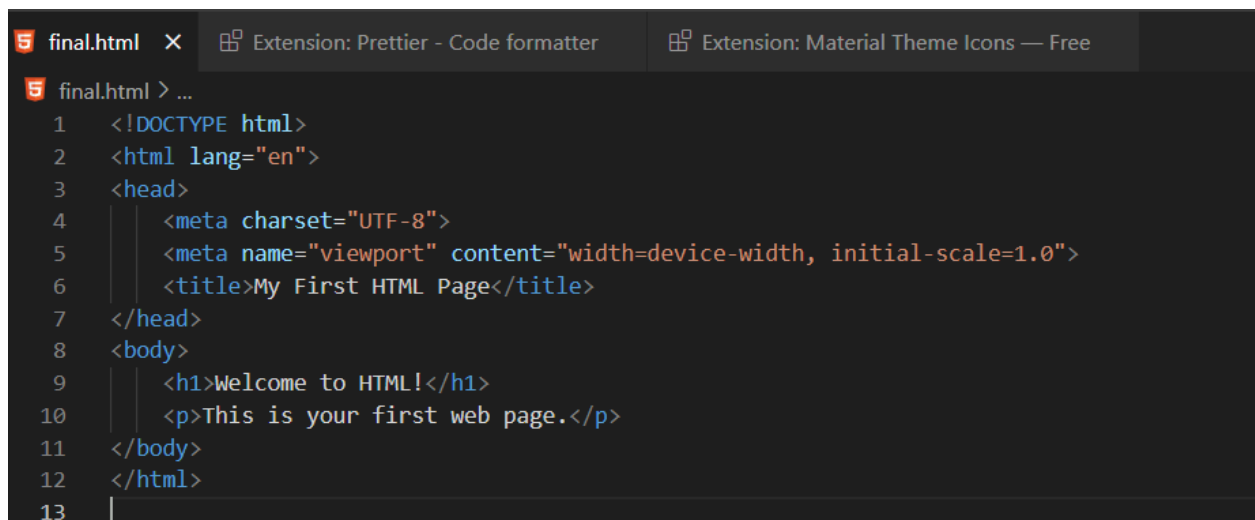
- Click on **File** in the top menu, then select **New File**, or press **Ctrl + N** (Windows/Linux) or **Cmd + N** (Mac).
- This opens a blank editor window where you can start writing your code.

## Save the File:

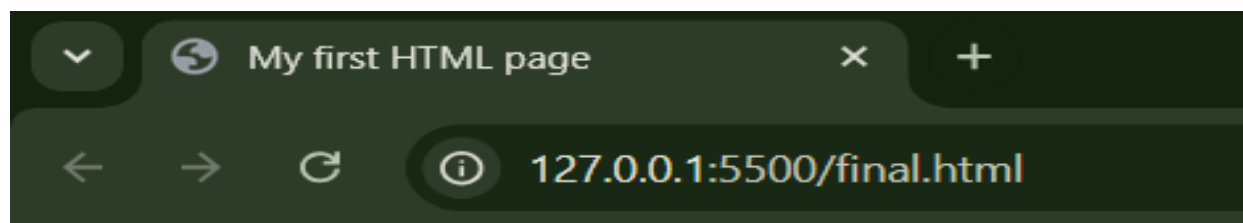
- Save your file by clicking **File > Save** (or press **Ctrl + S** or **Cmd + S**).
- Name the file **index.html**. **Make sure to use .html as the file extension** so it is recognized as an HTML file.
- Choose a folder where you want to save it (e.g., Desktop or a folder for projects).

## See the Magic!

Your browser will display the heading **Welcome to HTML!** and the paragraph **This is your first web page.**



```
final.html x  Extension: Prettier - Code formatter  Extension: Material Theme Icons — Free
final.html > ...
1  <!DOCTYPE html>
2  <html lang="en">
3  <head>
4      <meta charset="UTF-8">
5      <meta name="viewport" content="width=device-width, initial-scale=1.0">
6      <title>My First HTML Page</title>
7  </head>
8  <body>
9      <h1>Welcome to HTML!</h1>
10     <p>This is your first web page.</p>
11 </body>
12 </html>
13
```



# Welcome to HTML!

Welcome to your first webpage