1. HTML Introduction

HTML **(HyperText Markup Language)** is the backbone of web pages. It is the standard language used to create and structure web pages. HTML is not a programming language. it is a markup language that defines the structure of a web page using elements like headings, paragraphs, images, and links.

Why is HTML important?

- HTML is the foundation of every website.
- It is easy to learn and use.
- It works on all browsers.
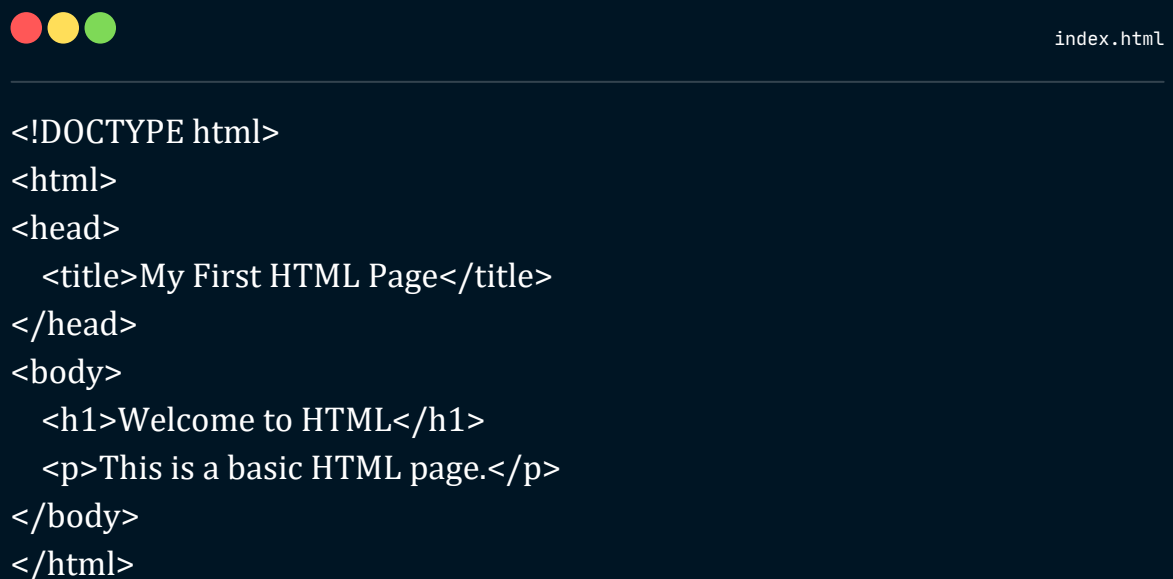- It is SEO-friendly, helping search engines understand web content.

2. What is HTML?

HTML stands for HyperText Markup Language, and it is used to define the structure of web pages.

Breaking Down the Term

- HyperText → Links that connect web pages together.
- Markup Language → Uses tags (<h1>, <p>, <img>) to format content.

Basic HTML Example

```
index.html

<!DOCTYPE html>
<html>
<head>
   <title>My First HTML Page</title>
</head>
<body>
   <h1>Welcome to HTML</h1>
   <p>This is a basic HTML page.</p>
</body>
</html>
```

Explanation

- **<!DOCTYPE html>** → Declares HTML5 version.
- **<html>** → The root of an HTML document.
- **<head>** → Contains meta-information and title.
- **<body>** → Contains visible page content.
- **<h1>** → Defines a heading.
- **<p>** → Defines a paragraph.

3. Features of HTML

HTML has many features that make it an essential tool for web development.

Key Features of HTML

- **Simple & Easy to Learn** → Basic syntax, easy for beginners.
- **Platform-Independent** → Works on any browser and operating system.
- **Supports Multimedia** → Embeds images, videos, and audio.
- **Hyperlinking** → Connects multiple web pages with <a> tags.
- **SEO Friendly** → Helps improve search engine rankings.
- **Extensible** → Works with CSS and JavaScript to enhance functionality.

A Beautiful Analogy to Understand HTML, CSS, and JavaScript

Car Skeleton (only body) is HTML   Car Painted or Decorated is CSS   Car Engine and Internal logic is JS

- HTML → The Structure (Like the skeleton of a car)
- CSS → The Styling (Like interior design and decoration)
- JavaScript → The Functionality (Like engine and other car features)

Example in Code

Step 1: HTML (Structure)

```
index.html

<h1>Welcome to My Website</h1>
<p>This is a sample paragraph.</p>
<button>Click Me</button>
```

Step 2: CSS (Style)

```
style.css

h1 {
    color: blue;
    font-size: 30px;
}
p {
    font-family: Arial, sans-serif;
    font-size: 16px;
}
```

Step 3: JavaScript (Interactivity)

```
script.js

document.querySelector("button").addEventListener("click", function() {
    alert("Button Clicked!");
});
```