Introduction to Web Development – HTML Basics

Welcome to your first web development class! Today, we will embark on a journey into the world of creating websites, starting with the cornerstone of the web – **HTML (HyperText Markup Language)**. This lesson will cover both the theory and hands-on practice with HTML to ensure you feel confident building your first webpage.

Part 1: What is HTML?

HTML stands for **HyperText Markup Language**:
- **HyperText**: Refers to the ability to link different pages/documents together.
- **Markup Language**: A language used to structure content and make it readable/displayable in a specific format (like a webpage).

Why is HTML Important?

HTML is like the skeletal structure of a webpage:
- It defines how content like text, images, links, and other elements are organized.
- Every browser understands HTML, so it is the foundation of every website.

How HTML Works

1. HTML uses "tags" to tell the browser how content should be displayed.
For instance:

    <h1>This is a Heading</h1>

1. **Tags** usually come in pairs, with:
    - An opening tag: `<tag>`
    - A closing tag: `</tag>`

For example, the `<p>` tag is used for paragraphs:

<p>This is a paragraph of text.</p>

1. Key concepts include:
   - **Elements**: The combination of a tag, its attributes, and the enclosed content.
   - **Attributes**: Additional information within a tag, like:

<img src="image.jpg" alt="An example image">

Structure of an HTML Document

An HTML file has a standard structure:

```
<!DOCTYPE html>
<html>
<head>
    <title>Your First Webpage</title>
</head>
<body>
    <h1>Hello, World!</h1>
    <p>This is your first webpage.</p>
</body>
</html>
```

Key elements include:
- `<!DOCTYPE html>`: Tells the browser this is an HTML5 document.
- `<html>`: The root of the document.
- `<head>`: Contains meta-information about the document (e.g., the title).
- `<body>`: Contains everything displayed on the webpage.

Part 2: Practical – Building Your First Webpage!

Step 1: Setting Up Your Environment

1. Install a **code editor** such as **Visual Studio Code** (VS Code) or **Notepad++**.
2. Create a new folder to store your project (e.g., "MyFirstWebsite").

Step 2: Writing Your First HTML File

1. Open your code editor and create a new file: `index.html`.
2. Type the following code:

```
<!DOCTYPE html>
<html>
<head>
   <title>My First Webpage</title>
</head>
<body>
   <h1>Welcome!</h1>
   <p>This is my very first webpage.</p>
</body>
</html>
```

1. Save the file.

Step 3: Viewing Your Webpage

1. Open the folder where you saved `index.html`.
2. Double-click the file – it will open in your default web browser.
   Now, you should see the heading "Welcome!" and a paragraph beneath it.

Practice HTML Tags

:
1. **Headings**:

```
<h1>Big Heading</h1>
<h3>Smaller Heading</h3>
```

2. **Links**:

```
<a href="https://google.com" target="_blank">Visit Google</a>
```

3. **Lists**:
   - Unordered List:

```
<ul>
   <li>Item 1</li>
   <li>Item 2</li>
</ul>
```

   - Ordered List:

```
<ol>
   <li>First</li>
   <li>Second</li>
</ol>
```

4. **Images**:

```
<img src="https://via.placeholder.com/150" alt="Placeholder Image">
```

5. **Formatting Text**:

```
<b>Bold Text</b> and <i>Italic Text</i>
```

Mini Project: Create Your Own Profile Page

1. Create a new file named `profile.html` and display basic information like:
   - A heading with their name.

- A paragraph describing their favorite hobby.
- An image (can be sourced from the internet).
- A list of their favorite books, movies, or games.

Example:

```
<!DOCTYPE html>
<html>
<head>
    <title>My Profile</title>
</head>
<body>
    <h1>John Doe</h1>
    <p>I love playing football and coding!</p>
    <img src="https://via.placeholder.com/200" alt="Placeholder
Profile Picture">
    <h2>My Favorites</h2>
    <ul>
        <li>Harry Potter</li>
        <li>Inception</li>
        <li>Chess</li>
    </ul>
</body>
</html>
```