

WEEK 3

Lab Activity: Structuring Web Applications with HTML

Objective: The objective of this self-paced lab is to understand the fundamentals of HTML (Hypertext Markup Language) and how it is used to structure web pages.

Materials Needed:

1. Computer with Internet access
2. Web browser (e.g., Chrome, Firefox)
3. Text editor (e.g., Notepad, Visual Studio Code)

Duration: Self-paced

Instructions:

Part 1: Introduction to HTML

1. **What is HTML?:**
 - a. Start by researching what HTML is and why it's crucial in web development. You can find introductory articles and videos online.
2. **Basic Structure of an HTML Document:**
 - a. Explore the basic structure of an HTML document, which includes HTML, head, and body elements. You can find examples and explanations in online tutorials.

Part 2: Creating an HTML Document

1. **Setting Up a Text Editor:**
 - a. If you don't already have a preferred text editor, choose one (e.g., Visual Studio Code, Sublime Text) and install it on your computer.
2. **Create a New HTML File:**
 - a. Open your text editor and create a new file with the **.html** extension (e.g., **index.html**).
3. **HTML Boilerplate:**
 - a. Use the HTML5 boilerplate code as a starting point for your HTML document. This includes the **<!DOCTYPE html>** declaration and the basic structure with **<html>**, **<head>**, and **<body>** elements.
4. **Adding Content:**
 - a. Inside the **<body>** element, add some basic content. This can include headings, paragraphs, and lists. Experiment with different HTML tags.

Part 3: HTML Elements and Attributes

1. Text Formatting:

2. Explore HTML text formatting elements such as ``, ``, `<u>`, and `
`. Use these elements to format your text within the document.

3. Images:

- a. Learn how to insert images using the `` element. Include an image in your HTML document and provide alternative text using the `alt` attribute.

Part 4: Creating a Simple Web Page

1. Linking Pages:

- a. Create a new HTML file (e.g., `about.html`) and link it to your main HTML file using the `<a>` element.

2. Lists and Tables:

- a. Experiment with creating ordered lists (``), unordered lists (``), and tables (`<table>`) within your HTML document.

3. Validation:

- a. Use online HTML validation tools to check the correctness of your HTML code.

Part 5: Recap and Assignment

1. Recap and Assignment:

- a. Summarize what you've learned about HTML in this lab.
- b. As an assignment, create a simple webpage (e.g., a personal bio or a hobby page) using HTML. Incorporate text, images, links, lists, and tables as needed.

Conclusion:

This self-paced lab activity provides you with hands-on experience in structuring web applications using HTML. You'll learn about the basic structure of an HTML document, common HTML elements, and how to create a simple web page. Completing this activity will set the foundation for your web development skills as you progress in the course.