



ASSIGNMENT

HTML



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Module 2 – Frontend – HTML

HTML Basics

1) Define HTML. What is the purpose of HTML in web development?

- **HTML** (Hyper Text Markup Language) is the standard markup language used to create and design documents on the web.
- It structures content on the web by using a system of tags and attributes to define elements such as text, images, links, forms, and multimedia.
 - **Purpose :**
 - **Structure content:** HTML provides the skeleton of a web page, organizing text, media, and interactive elements.
 - **Display content:** It enables browsers to render and display the content properly on web pages.
 - **Facilitate navigation:** HTML defines the structure of links, creating the navigational flow across websites.
 - **Enhance accessibility:** HTML includes features like headings, lists, and tables that assist both users and search engines in understanding content.

2) Explain the basic structure of an HTML document. Identify the mandatory Tags and their purposes.

- `<!DOCTYPE html>`: Specifies the document type and version of HTML (HTML5 here).
- `<html>`: The root element that wraps the entire document.
- `<head>`: Contains meta-information such as the document title, character set, and external links.
- `<meta charset="UTF-8">`: Declares the character encoding for the document, ensuring proper text display.
- `<title>`: Sets the title of the document, which appears in the browser tab.
- `<body>`: The content of the document that is visible to users, including text, images, and interactive elements.

3) What is the difference between block-level elements and inline elements in HTML? Provide examples of each.

- **Block-level elements:**
 - **Definition:** Block-level elements take up the full width of their parent container and start on a new line. They stack vertically.
 - **Examples:** `<div>`, `<p>`, `<h1>`, `<UI>`, `<section>`, `<footer>`.
- **Inline elements:**
 - **Definition:** Inline elements only take up as much width as necessary and do not start on a new line. They flow inline with the content.

- **Examples:** , <a>, , , .

4) Discuss the role of semantic HTML. Why is it important for accessibility and SEO? Provide examples of semantic elements.

➤ **Role of Semantic HTML:**

- Semantic HTML refers to using HTML tags that clearly describe their meaning in a human- and machine-readable way.
- These tags not only define the structure of the content but also help search engines and accessibility tools understand the context and importance of the content on a page.

➤ **Importance for Accessibility:**

- Screen readers
- Navigation

➤ **Importance for SEO:**

- Search engine rankings
- Content relevance

➤ **Examples of Semantic Elements:**

- <article>
- <aside>
- <details>
- <figcaption>
- <figure>
- <footer>
- <header>
- <main>
- <mark>
- <nav>
- <section>
- <summary>
- <time>

HTML FORMS

5) What are HTML forms used for? Describe the purpose of the input, text area, select, and button elements.

- **HTML Forms** are used to collect user input and send it to a server for processing.
- **<input> element:**
 - The <input> element is used to create interactive controls in a form, allowing the user to enter data.
 - For example, <input type="text"> is used for text input, while <input type="checkbox"> allows for checkbox selection.
- **<text area> element:**
 - The <text area> element allows users to enter multi-line text.
- **<select> element:**
 - The <select> element creates a dropdown menu, allowing users to choose one or more options from a list.
- **<button> element:**
 - The <button> element creates a clickable button that can be used to submit a form or trigger an action in JavaScript.

6) Explain the difference between the GET and POST methods in form submission. When should each be used?

➤ DIFFERENCE:

GET Method	POST Method
→ The GET method appends the form data to the URL in the form of a query string.	→ The POST method sends the form data in the body of the request, so the data is not visible in the URL.
→ The form is used for search queries or filtering data.	→ The form includes sensitive information.

→ The data is not sensitive and can be included in the URL.	→ The data is too large to be included in a URL.
→ The data does not change the server's state and is read-only.	→ The data is intended to be processed or stored on the server

- GET should be used for non-sensitive data retrieval where the data does not change the server's state, while POST should be used when submitting sensitive data or changing the server's state.

7) What is the purpose of the label element in a form, and how does it improve accessibility?

- The <label> element is used to define labels for form controls, such as <input>, <text area>, or <select>.
- **Purpose:** The <label> element connects a textual description with a specific form control, making it clear what the user is expected to input.
- **Improving Accessibility:**
 - Screen Readers.
 - Clickable Labels.
 - Clearer Instructions.

HTML TABLES

8) Explain the structure of an HTML table and the purpose of each of the following elements: `<table>`, `<Tr>`, `<Th>`, `<td>`, and `<thead>`.

- An HTML table is used to organize data into rows and columns.
- It is typically used to display tabular information like schedules, statistics, and comparisons.

❖ Here are the elements used in an HTML table:

- **`<table>`:** This is the container element that defines the entire table. It holds all other table-related elements such as rows and columns.
- **`<tr>`:** The `<tr>` (table row) element is used to define a row within a table. A row can contain multiple cells, which can either be headers or data cells.
- **`<th>`:** The `<th>` (table header) element defines a cell as a header. Header cells are usually bold and centered by default, and they help label the data in the columns or rows they are part of.
- **`<td>`:** The `<td>` (table data) element defines a regular cell in a table row, which holds the actual data.
- **`<thead>`:** The `<thead>` element is used to group the header content in a table. It is typically used to define the rows of header cells, which provide context for the data in the table.

9) What is the difference between `colspan` and `rowspan` in tables? Provide examples.

- **`colspan`:** The `Colspan` attribute is used in a table cell (usually `<th>` or `<td>`) to span across multiple columns. It allows the cell to extend horizontally across several columns.
- **`rowspan`:** The `rowspan` attribute is used in a table cell to span across multiple rows. It allows the cell to extend vertically over several rows.

10) Why should tables be used sparingly for layout purposes? What is a better alternative?

- Tables should be used sparingly for layout purposes because they were originally designed for displaying tabular data, not for creating page layouts.

- When tables are used for layout, they can create complex, hard-to-manage HTML structures that are not flexible or responsive.
- A better alternative is using **CSS (Cascading Style Sheets)** for layout purposes.
- CSS provides more flexibility and control over page design and allows for responsive layouts, making it easier to adapt content for different screen sizes and devices.