

## HTML Basics

### Theory Assignment

**Question 1:** Define HTML. What is the purpose of HTML in web development?

**Answer:** HTML stands for Hyper Text Markup Language. It is used to create and structure web pages. It tells the browser what to show and how to show text, images, videos, links, etc.

**Question 2:** Explain the basic structure of an HTML document. Identify the mandatory tags and their purposes.

**Answer:**

Basic structure of an HTML page:

```
<!DOCTYPE html>
<html>
  <head>
    <title>My Page</title>
  </head>
  <body>
    <h1>Welcome!</h1>
    <p>This is my website.</p>
  </body>
</html>
```

Mandatory tags:

- <!DOCTYPE html> – Declares HTML5 version
- <html> – Root container of the document
- <head> – Contains metadata and title
- <title> – Displays page title in browser tab
- <body> – Contains all visible page content

**Question 3:** What is the difference between block-level elements and inline elements in HTML? Give examples.

**Answer:**

- Block-level elements start on a new line and take full width. Examples: <div>, <p>, <h1>, <section>
- Inline elements stay on the same line and take only as much space as needed. Examples: <span>, <a>, <img>, <strong>

**Question 4:** What is semantic HTML? Why is it important for accessibility and SEO? Give examples.

**Answer:** Semantic HTML uses meaningful tags that help search engines and screen readers understand content.

Importance:

- Improves SEO (Google ranking)
- Helps screen reader users

- Makes code cleaner and more readable

Examples: <header>, <footer>, <nav>, <main>, <section>, <article>

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## HTML Forms

### Theory Assignment

**Question 1:** What are HTML forms used for? Describe the purpose of the input, textarea, select, and button elements.

**Answer:** HTML forms are used to collect user input like name, email, messages, choices, etc.

- <input> – Single-line input (text, number, email, etc.)
- <textarea> – Multi-line input (comments/messages)
- <select> – Dropdown menu for options
- <button> – Used to submit the form or trigger actions

**Question 2:** Explain the difference between the GET and POST methods in form submission. When should each be used?

**Answer:**

- GET Method: Sends data in URL, visible, used for search/filter forms
- POST Method: Sends data in background, hidden from URL, used for login, sign-up, or sensitive data

Use GET for small public data and POST for private or large data

**Question 3:** What is the purpose of the label element in a form, and how does it improve accessibility?

**Answer:**

- <label> defines a caption for form fields
  - Helps screen readers associate labels with inputs
  - Clicking the label focuses the input field, improving usability
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## HTML Tables

### Theory Assignment

**Question 1:** Explain the structure of an HTML table and the purpose of each of the following elements: <table>, <tr>, <th>, <td>, and <thead>.

**Answer:**

HTML tables display data in rows and columns.

- <table> – Table container
- <tr> – Table row
- <th> – Table header (bold/centered by default)

- <td> – Table data cell
- <thead> – Groups the header rows

Example:

```
<table>
  <thead>
    <tr>
      <th>Name</th>
      <th>Age</th>
    </tr>
  </thead>
  <tr>
    <td>John</td>
    <td>25</td>
  </tr> </table>
```

**Question 2:** What is the difference between colspan and rowspan in tables? Provide examples.

**Answer:**

- colspan merges multiple columns
- rowspan merges multiple rows

Example of colspan:

```
<td colspan="2">Merged Columns</td>
```

Example of rowspan:

```
<td rowspan="2">Merged Rows</td>
```

**Question 3:** Why should tables be used sparingly for layout purposes? What is a better alternative?

**Answer:**

- Tables are not flexible, hard to maintain, and not mobile-friendly
- Bad for accessibility and SEO

Better alternative: Use <div> with CSS layout techniques like Flexbox or Grid

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