**HTML Basics**

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

Ans. **HTML (HyperText Markup Language)** is the standard language used to create and structure web pages.

**Purpose in Web Development:**

* Structures content (text, images, links, etc.)
* Forms the backbone of all web pages
* Enables navigation through hyperlinks
* Works with CSS and JavaScript for design and interactivity

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

Ans. **Basic HTML Structure**

**Mandatory Tags and Their Purpose:**

* **<!DOCTYPE html>** – Defines the document as HTML5
* **<html>** – Root of the HTML document
* **<head>** – Contains page metadata (like title, links)
* **<title>** – Sets the browser tab title
* **<body>** – Holds the visible page content

**Ex:-**  
 <!DOCTYPE html>

<html>

<head>

<title>Page Title</title>

</head>

<body>

<!-- Page content goes here -->

</body>

</html>

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

Ans. **Block-level elements** start on a new line and take up the full width (e.g., <div>, <p>, <h1>).  
**Inline elements** stay within the line and take up only as much width as needed (e.g., <span>, <a>, <strong>).

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

Ans. Here's a concise version suitable for your **assignment**:

**Role of Semantic HTML**

**Semantic HTML** uses tags that clearly describe the meaning of the content (e.g., <article>, <nav>, <footer>). It improves both accessibility and SEO.

**Importance**

* **Accessibility**: Helps screen readers and assistive tools interpret content correctly.
* **SEO**: Enhances search engine understanding and improves visibility.
* **Clarity**: Makes code easier to read and maintain.

**Examples of Semantic Elements**

* <header> – Page or section header
* <nav> – Navigation links
* <main> – Main content
* <section> – Thematic group
* <article> – Standalone content
* <aside> – Sidebar
* <footer> – Footer info

**Conclusion**: Semantic HTML creates well-structured, accessible, and SEO-friendly web pages.

**HTML Forms**

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

Ans.

HTML forms are used to **collect user input** and send it to a web server. They are commonly used for tasks like **login, registration, searching, and submitting feedback**.

**Purpose of Form Elements**

* **<input>**:  
  Collects various types of user input such as text, email, password, checkbox, etc.
* **<textarea>**:  
  Allows users to enter **multi-line text**, like comments or messages.
* **<select>**:  
  Creates a **dropdown menu** where users can choose one or more options.
* **<button>**:  
  Triggers actions like **submitting** or **resetting** the form.

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

Ans.

**GET vs. POST :**

* **GET** sends form data in the URL. It’s used for retrieving data, like search queries. Data is visible, limited in size, and can be bookmarked.
* **POST** sends data in the request body. It’s used for submitting or updating data, like login forms. Data is hidden, can be large, and is more secure.

**Use GET** for reading data.  
**Use POST** for sending or changing data.

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

Ans.

The <label> tag links text to a form input, making it easier to understand. It improves accessibility by helping screen readers identify fields and allows users to click on the label to focus the input.

**Example:**

<label for="name">Name:</label>

<input type="text" id="name">

**HTML Tables**

**1.Explain the structure of an HTML table and the purpose of each of the following.**

**elements: <table>, <tr>, <th>, <td>, and <thead>**

Ans.

**HTML Table Elements:**

* **<table>** – Starts the table.
* **<tr>** – Creates a row.
* **<th>** – Header cell (bold text).
* **<td>** – Data cell.
* **<thead>** – Groups header rows.

**Example:**

<table>

<thead>

<tr><th>Item</th><th>Price</th></tr>

</thead>

<tr><td>Pen</td><td>$1</td></tr>

</table>

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

Ans.

**Difference Between colspan and rowspan :**

* **colspan**: Merges **columns** (cells across).
* **rowspan**: Merges **rows** (cells down).

**Examples:**

**colspan Example (merge 2 columns):**

<tr>

<td colspan="2">Merged Cell</td>

</tr>

**rowspan Example (merge 2 rows):**

<tr>

<td rowspan="2">Merged Cell</td>

<td>Row 1</td>

</tr>

<tr>

<td>Row 2</td>

</tr>

**Summary:**

* Use colspan to join columns.
* Use rowspan to join rows.

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

Ans.

**Why Tables Should Be Used Sparingly for Layout:**

* Tables were once used for page layout, but they are **not flexible** and **hard to maintain**.
* They are **not accessible** for screen readers and **don’t work well on mobile** devices.
* They mix **content with design**, which is bad practice.

**Better Alternative:**  
Use **CSS (Cascading Style Sheets)** for layout. CSS is more flexible, responsive, and accessible.

**Example:**  
Use div + CSS Grid or Flexbox instead of tables.