MODULE 2-FRONTEND-HTML

HTML BASIC

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

✅**HTML** stands for **HyperText Markup Language**.  
It is the **standard language** used to create and structure content on the web.

#### ✅ **Purpose of HTML:**

* Defines the **structure** of a web page using **tags** (like headings, paragraphs, links, images, etc.)
* Acts as the **skeleton** of a web page.
* Allows web browsers to understand and display text, images, videos, and links properly.

📌 In simple words: HTML tells the browser what to show on a web page.

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

#### 🔶 Basic Structure of an HTML Document:

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<!DOCTYPE html>

<html>

<head>

<title>My First Web Page</title>

</head>

<body>

<h1>Hello, World!</h1>

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

</body>

</html>

#### ✅ **Mandatory Tags and Their Purposes:**

| **Tag** | **Purpose** |
| --- | --- |
| <!DOCTYPE html> | Declares the document type and version of HTML (HTML5) |
| <html> | Root element that wraps the entire HTML document |
| <head> | Contains meta-information (title, styles, scripts) that is not displayed directly |
| <title> | Sets the page title shown in browser tabs |
| <body> | Contains the content that is displayed on the web page (text, images, etc.) |

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

#### 🔶 **Block-Level Elements:**

* Start on a **new line** and take up the **full width** of the page/container.
* Used for **structuring** content.

##### Examples:

* <div>, <p>, <h1>, <ul>, <li>, <section>, <article>

#### 🔶 **Inline Elements:**

* Do **not start** on a new line.
* Only take up as much **width** as needed.
* Used for **styling or linking small parts** of content.

##### Examples:

* <span>, <a>, <img>, <strong>, <em>

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

#### 🔶 What is Semantic HTML?

Semantic HTML uses **meaningful tags** that describe the **purpose** of the content inside them.

Instead of using generic tags like <div> or <span>, you use tags like <article>, <header>, <footer> which **explain the content's role**.

#### ✅ **Importance:**

1. **Accessibility**:
   * Screen readers and assistive technologies can **understand the page structure** better.
   * Improves the experience for users with disabilities.
2. **SEO (Search Engine Optimization)**:
   * Search engines use semantic tags to **understand and rank** your content.
   * Helps with **better visibility** in search results.

#### ✅ **Examples of Semantic Elements:**

| **Tag** | **Meaning** |
| --- | --- |
| <header> | Represents a header section of a page or section |
| <nav> | Represents a section with navigation links |
| <main> | Main content of the document |
| <article> | Independent, self-contained content |
| <section> | A section of related content |
| <footer> | Footer of a page or section |

HTML FORMS

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

#### 🔶 **What are HTML forms used for?**

HTML **forms** are used to **collect user input** and send it to a server for processing.

Forms are commonly used for **login pages**, **search bars**, **feedback forms**, **registrations**, etc.

#### ✅ **Important Form Elements:**

| **Element** | **Purpose** |
| --- | --- |
| <input> | Used to take **single-line input** like text, email, password, checkbox, etc. Example: <input type="text"> |
| <textarea> | Used for **multi-line text input**, like comments or messages. Example: <textarea></textarea> |
| <select> | Creates a **drop-down list** of options. Often used for choosing items. Example: <select><option>Option 1</option></select> |
| <button> | Used to create a **clickable button**, typically to **submit** or **reset** a form. Example: <button type="submit">Submit</button> |

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

#### 🔶 **GET Method:**

* Sends data through the **URL**.
* Form data is visible in the browser address bar.
* Limited data length.
* Not secure for sensitive data.

✅ **Use GET when:**

* You want to bookmark or share the result (e.g., search queries)
* You are sending **non-sensitive** data (like filters)

html

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<form method="GET" action="search.php">

#### 🔶 **POST Method:**

* Sends data in the **body** of the HTTP request (not visible in URL).
* **More secure** for private data (like passwords).
* No size limit on the form data.

✅ **Use POST when:**

* Sending **sensitive information**
* Submitting **form data to be stored or processed**

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<form method="POST" action="register.php">

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

#### 🔶 **Purpose of** <label>**:**

The <label> element **describes what a form input is for** by giving it a **text label**.

#### 🔶 **How it improves accessibility:**

* Helps **screen readers** read out labels clearly for users with visual impairments.
* Increases **clickable area**: Clicking on a label selects the related input (e.g., checkbox).
* Makes forms **easier to navigate** and understand.

#### ✅ Example:

html

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<label for="email">Email:</label>

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

The for="email" in <label> connects it to the <input id="email">.