**HTML FORM THEORY ASSIGNMENT**

**Q-1: What are HTML forms used for? Describe the purpose of the input, text-area, select, and button elements.**

**Ans:-** HTML forms are essential for gathering user data on a website. They allow users to enter and submit information such as names, emails, passwords, feedback, and preferences. The collected data is usually sent to a server for further processing, such as storing in a database or handling login credentials.

**Purpose of Elements:**

* **<input>**: Used to get single-line user input like text, email, password, etc.
* **<textarea>**: Used for multi-line text input, like comments or messages.
* **<select>**: Creates a dropdown list for users to choose from multiple options.
* **<button>**: Used to submit the form or trigger actions when clicked.

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

**Ans:- Difference between GET and POST methods in form submission:**

|  |  |  |
| --- | --- | --- |
| **Feature** | **GET Method** | **POST Method** |
| **Data Visibility** | Appends form data to the URL (visible) | Sends data in the request body (hidden) |
| **Security** | Less secure (data shown in URL) | More secure (data not shown in URL) |
| **Data Limit** | Limited data size (depends on URL length) | No significant data size limit |
| **Caching** | Can be cached and bookmarked | Cannot be cached or bookmarked easily |
| **Use Case** | Use for **search**, **filters**, or non-sensitive data | Use for **login**, **registration**, or sensitive data |

**When to Use:**

* **Use GET** when:
* You want to bookmark or share the URL with the data.
* You are retrieving data without changing anything on the server.
* The data is not sensitive.
* **Use POST** when:
* You are sending sensitive or private data (like passwords).
* You are making changes on the server (like submitting a form).
* You are uploading files or large amounts of data.

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

**Ans:- Purpose of the <label> element in a form:**

The <label> element is used to define a caption for a form input element like <input>, <textarea>, or <select>. It helps users understand what data is expected in each field.

**How it improves accessibility:**

* **Screen readers:** Labels help screen readers announce what each form field is for, making the form usable for visually impaired users.
* **Clickable area:** When a label is properly linked to an input using the for attribute, clicking the label focuses the input, improving usability.
* **Clear instructions:** Labels provide a clear, readable instruction next to form fields, helping all users fill out forms correctly.

**Example:**

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

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