**Html Forms**

**Theory Assignment 2**

**Q.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 data from the web page like login form, signup form, registrations.  
 The purpose of the **Input** element is used to create various types of controls depending on its type attributes.

· **Textarea** element is used for collecting longer text inputs like comments, messages, or reviews.

· **Select** This element lets you create a drop-down or multi-select list. It shows a set of predefined options, and users can pick one or more choices from it.

· **Button** This element is used to create a clickable button. It’s commonly used to submit a form (`type="submit"`).

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

**Ans:** The main difference between GET and POST methods in form submission is:

* **GET method:**
  + Data is sent in the url:
    - The form data is appended to the url as a query string.
  + Visible to everyone (not secure):
    - It’s visible in the browser’s address bar and can be bookmarked or cached.
  + Limited data length:
    - URL length is limited, usually around 2048 characters, so GET should not be used for sending large amounts of data.
  + Ideal for:
    - Retrieving or querying data, ex: search forms or public data request.
* **POST method:**
  + Data is sent in the request body:
    - The form data is hidden from the URL and sent in the body of the HTTP request.
  + More Secure:
    - The data is not visible in the URL, so it’s better for sending sensitive information like password.
  + No size limitation (Practically):
    - You can send a large amount of data like upload or detailed form input.
  + Ideal for:
    - Actions that modify server data ex; registration, login, feedback submission.

When we use GET and POST method:

* For GET:
  1. You don’t need to send sensitive data.
  2. The action doesn’t change anything on the server.
  3. You want the data to be bookmarkable or shareable via URL.
* For POST:
  1. You are sending sensitive or confidential data.
  2. The action updates or adds something to the server.
  3. You’re submitting large or complex forms.

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

**Ans:** The <label> element in a form is used to define a caption for an input field. Its main purpose is to tell users what each form field is for. When a label is properly linked to an input (using the for attribute), clicking the label will focus the corresponding input field.

This improves accessibility because screen readers can read out the label along with the input, helping visually impaired users understand the form better. It also makes forms easier to use for everyone by increasing the clickable area.