Lecture 6
Topics: Form

An HTML form is a section of a webpage that **allows users to enter and submit data**. Forms are used for tasks like **signing up** for a newsletter, **logging in, submitting feedback, or placing an order.** When a user submits a form, the data is se
nt to a server for processing.

Basic Structure of an HTML Form

An HTML form is created using the <form> element, which can contain various input elements like text fields, radio buttons, checkboxes, and submit buttons.

Example of a Simple HTML Form:

```html
<!DOCTYPE html>
<html>
<head>
    <title>Simple HTML Form</title>
</head>
<body>

    <h1>Contact Us</h1>

    <!-- Form starts here -->
    <form action="submit_form.php" method="post">

        <!-- Text input field -->
        <label for="name">Name:</label>
        <input type="text" id="name" name="name"><br><br>

        <!-- Email input field -->
        <label for="email">Email:</label>
        <input type="email" id="email" name="email"><br><br>

        <!-- Radio buttons for selecting gender -->
        <label>Gender:</label>
        <input type="radio" id="male" name="gender" value="male">
        <label for="male">Male</label>
        <input type="radio" id="female" name="gender" value="female">
        <label for="female">Female</label><br><br>

        <!-- Checkbox for agreeing to terms -->
        <input type="checkbox" id="agree" name="agree">
        <label for="agree">I agree to the terms and conditions</label><br><br>

        <!-- Submit button -->
        <input type="submit" value="Submit">

    </form>
    <!-- Form ends here -->

</body>
</html>
```

- **\<input type="text"\>**: Single-line text input.

- **\<input type="password"\>**: Single-line text input that masks characters for privacy.

- **\<input type="email"\>**: Email input with validation for proper email format.

- **\<input type="number"\>**: Numeric input, allowing only numbers.

- **\<input type="radio"\>**: Radio button for selecting one option from a group.

- **\<input type="checkbox"\>**: Checkbox for selecting or deselecting an option.

- **\<input type="submit"\>**: Button to submit the form data to the server.

- **\<textarea\> \</textarea\>**: Multi-line text input.

- **\<select\>\</select\>**: Dropdown menu for selecting one option from a list.

HTML Form Attributes:

HTML form attributes are used to configure the behavior and functionality of forms. These attributes are added to the \<form\> element to control how the form data is processed, validated, and submitted. Below are the key attributes commonly used with HTML forms, along with explanations and examples.

1. **action**:

   - Specifies the URL of the server-side script that will handle the form data when the form is submitted.

   - If the action attribute is not specified, the form will submit to the same URL as the current page.

   - Example: \<form action="submit_form.php" method="post"\>

2. **method**:

   - Defines the HTTP method to be used when submitting the form.

   - Common values: POST and GET

   - *GET*:

     o Appends the form data to the URL, in name/value pairs
     o NEVER use GET to send sensitive data! (the submitted form data is visible in the URL!)
     o The length of a URL is limited (2048 characters)
     o Useful for form submissions where a user wants to bookmark the result
     o GET is good for non-secure data, like query strings in Google

   - *POST*:

     o Appends the form data inside the body of the HTTP request (the submitted form data is not shown in the URL)
     o POST has no size limitations, and can be used to send large amounts of data.
     o Form submissions with POST cannot be bookmarked

HTML Input Types:

- `<input type="text">`
- `<input type="number">`
- `<input type="password">`
- `<input type="date">`
- `<input type="email">`
- `<input type="file">`
- `<input type="checkbox">`
- `<input type="radio">`
- `<input type="reset">`
- `<input type="search">`
- `<input type="submit">`
- `<input type="button">`
- `<input type="hidden">`
- `<input type="color">`
- `<input type="datetime-local">`
- `<input type="image">`
- `<input type="month">`
- `<input type="range">`
- `<input type="tel">`
- `<input type="time">`
- `<input type="url">`
- `<input type="week">`

Attributes of Input Element:

1. **type**

   - **Description**: Specifies the type of input element. Common values include text, password, email, number, checkbox, radio, file, submit, etc.
   - Example: `<input type="text" name="username">`

2. **name:**

   - **Description**: Defines the name of the input element, which is used to identify the data when the form is submitted.
   - **Example:** `<input type="text" name="username">`

3. **value:**
   - **Description**: Specifies the initial value of the input field or the value submitted with the form.
   - **Example:** `<input type="text" name="username" value="JohnDoe">`

4. **placeholder:**
   - **Description**: Provides a short hint that describes the expected value of the input. The hint is displayed in the input field when it is empty.
   - **Example**: `<input type="text" name="username" placeholder="Enter your username">`

5. **required:**
   - **Description**: Indicates that the input field must be filled out before the form can be submitted.
   - **Example**: `<input type="text" name="username" required>`

1. **What does the <html> tag represent in an HTML document?**
   - A) The document's title
   - B) The body content of the document
   - C) The root element of an HTML document
   - D) A paragraph element
   - **Answer**: C) The root element of an HTML document
2. **Which of the following is the correct way to add an attribute to an HTML element?**
   - A) <p class="text">This is a paragraph.</p>
   - B) <p class=text>This is a paragraph.</p>
   - C) <p.class="text">This is a paragraph.</p>
   - D) <p (class="text")>This is a paragraph.</p>
   - **Answer**: A) <p class="text">This is a paragraph.</p>
3. The <head> element in an HTML document is where the metadata and links to external resources like stylesheets are placed.

   - **Answer**: True
4. The id attribute is used to define a unique identifier for an HTML element and can be used multiple times in a document.
   - **Answer**: False (The id attribute must be unique within a document)