Day 2: HTML Forms and Advanced Topics

1. HTML Forms

HTML forms allow users to input data, which is then sent to a server for processing. Forms are crucial for creating interactive websites, enabling user registration, login, feedback submission, and more.

Structure of a Form

<form action="submit_form.php" method="post">

  <!-- Form elements go here -->

</form>

- **action**: Specifies the URL where form data will be sent.

- **method**: Determines how data is sent (e.g., GET or POST).

Common Form Elements

1. **Text Fields** Used to input single-line text.

2. <label for="username">Username:</label>

3. <input type="text" id="username" name="username">

4. **Password Fields** Masks input for secure data entry.

5. <label for="password">Password:</label>

6. <input type="password" id="password" name="password">

7. **Checkboxes** Allow selection of multiple options.

8. <label><input type="checkbox" name="interests" value="coding"> Coding</label>

9. <label><input type="checkbox" name="interests" value="sports"> Sports</label>

10. **Radio Buttons** Restrict selection to one option in a group.

11. <label><input type="radio" name="gender" value="male"> Male</label>

12. <label><input type="radio" name="gender" value="female"> Female</label>

13. **Select Lists** Drop-down menus for multiple or single selections.

14. <label for="country">Country:</label>

15. <select id="country" name="country">

16.   <option value="usa">USA</option>

17.   <option value="canada">Canada</option>

18. </select>

19. **Text Areas** For multi-line text input.

20. <label for="message">Message:</label>

21. <textarea id="message" name="message" rows="4" cols="50"></textarea>

22. **Submit Buttons** Send the form data to the server.

23. <input type="submit" value="Submit">

24. **Reset Buttons** Clear all input fields in the form.

25. <input type="reset" value="Reset">

Example: A Simple User Registration Form

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

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

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

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

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

 <label for="password">Password:</label>

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

 <label for="gender">Gender:</label>

```
<label><input type="radio" name="gender" value="male"> Male</label>

<label><input type="radio" name="gender" value="female"> Female</label><br><br>


<label for="hobbies">Hobbies:</label>

<label><input type="checkbox" name="hobbies" value="reading"> Reading</label>

<label><input type="checkbox" name="hobbies" value="traveling">
Traveling</label><br><br>


<label for="country">Country:</label>

<select id="country" name="country">

  <option value="usa">USA</option>

  <option value="canada">Canada</option>

</select><br><br>


<input type="submit" value="Register">

<input type="reset" value="Clear">

</form>
```

2. Frames

Frames divide a browser window into multiple sections, each displaying a different document. However, **frames are deprecated** and rarely used in modern web development.

Example: Frameset

```
<frameset cols="50%, 50%">

  <frame src="page1.html">

  <frame src="page2.html">

</frameset>
```

3. Iframes

Iframes allow embedding another HTML document inside a page.

Example: Embedding Google

```
<iframe src="https://www.google.com" width="600" height="400" style="border:1px solid black;"></iframe>
```

4. Working with Colors

Using Color Names

```
<p style="color: red;">This text is red.</p>
```

Using Hexadecimal Codes

```
<p style="color: #00FF00;">This text is green.</p>
```

Using RGB

```
<p style="color: rgb(0, 0, 255);">This text is blue.</p>
```

5. Working with Fonts

Specify font families, sizes, and weights:

```
<p style="font-family: Arial, sans-serif; font-size: 18px; font-weight: bold;">This is styled text.</p>
```

6. Basic Styling with Inline CSS

Inline CSS allows you to apply quick styles directly to an element.

Example: Styling a Paragraph

```
<p style="color: purple; font-size: 16px; text-align: center;">This is a styled paragraph.</p>
```

Interactive Example

Login Form with Styling

```html
<!DOCTYPE html>

<html lang="en">

<head>

 <title>Login Form</title>

 <style>

  body {

   font-family: Arial, sans-serif;

   margin: 50px;

  }

  form {

   width: 300px;

   margin: auto;

   border: 1px solid #ccc;

   padding: 20px;

   border-radius: 8px;

  }

  label {

   display: block;

   margin-bottom: 5px;

  }

  input[type="text"], input[type="password"] {

   width: 100%;

   padding: 8px;

   margin-bottom: 10px;

   border: 1px solid #ccc;
```

```
    border-radius: 4px;

    }

    input[type="submit"] {

    background-color: blue;

    color: white;

    border: none;

    padding: 10px;

    width: 100%;

    border-radius: 4px;

    cursor: pointer;

    }

    input[type="submit"]:hover {

    background-color: darkblue;

    }

  </style>

</head>

<body>

  <form action="login.php" method="post">

    <label for="username">Username:</label>

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


    <label for="password">Password:</label>

    <input type="password" id="password" name="password" required>


    <input type="submit" value="Login">

  </form>
```

```
</body>

</html>
```