

## Forms in HTML:

Forms provide a way to collect user input and send it to a server for processing.

They allow users to input various types of data such as text, numbers, selections, checkboxes, and more.

Here's a basic overview of how to create a form in HTML:

```
<!DOCTYPE html>
<html lang="en">
<head>
  <meta charset="UTF-8">
  <meta name="viewport" content="width=device-width, initial-scale=1.0">
  <title>Sample Form</title>
</head>
<body>

  <h2>Sample Form</h2>

  <form action="/submit-form" method="post">
    <!-- Text Input -->
    <label for="name">Name:</label><br>
    <input type="text" id="name" name="name"><br><br>

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

    <!-- Password Input -->
    <label for="password">Password:</label><br>
    <input type="password" id="password" name="password"><br><br>

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

    <!-- Checkbox -->
    <input type="checkbox" id="subscribe" name="subscribe">
    <label for="subscribe">Subscribe to newsletter</label><br><br>

    <!-- Dropdown Select -->
    <label for="country">Country:</label><br>
    <select id="country" name="country">
      <option value="USA">United States</option>
```

```
<option value="UK">United Kingdom</option>
<option value="Canada">Canada</option>
</select><br><br>
```

```
<!-- Textarea -->
<label for="message">Message:</label><br>
<textarea id="message" name="message" rows="4" cols="50"></textarea><br><br>
```

```
<!-- Submit Button -->
<input type="submit" value="Submit">
</form>
```

```
</body>
</html>
```

The key components of this form:

**<form>:** Defines the start and end of the form. It contains all the input elements.

**action:** Specifies the URL where the form data should be sent upon submission.

**method:** Specifies the HTTP method to be used when submitting the form (e.g., "post" or "get").

Within the <form> element, various input elements are used to collect different types of data:

**<input type="text">:** For single-line text input.

**<input type="email">:** For email input, with built-in validation.

**<input type="password">:** For password input, with obscured characters.

**<input type="radio">:** For selecting one option from multiple choices.

**<input type="checkbox">:** For selecting multiple options from a list.

**<select>:** Creates a dropdown list from which users can select an option.

**<textarea>:** For multi-line text input.

**<input type="submit">:** Creates a submit button to send the form data.

Each input element has attributes like id, name, and value that are used to uniquely identify and process the data.

Additionally, labels (<label>) are provided for each input element to improve accessibility and user experience.

When the form is submitted, the data is sent to the server specified in the action attribute, using the HTTP method specified in the method attribute (usually "post" for sending data securely). The server then processes the data and responds accordingly.