

## DAY 2 - HTML Forms and Input Validation

1. **Introduction about form tag:** The ``<form>`` tag is an HTML element used to create a container for input elements within a web page, allowing users to submit data to a server.
2. **Purpose of form tag:** The main purpose of the ``<form>`` tag is to collect user input and send it to the server for processing or further actions, such as submitting a contact form or logging in.
3. **Introduction about label and Input:** ``<label>`` is an HTML element used to create a label for an associated form input element. The ``<input>`` element is used to create various types of input fields within a form.
4. **Types of Input** (text, password, email, checkbox, radio, button, number, date, time, color, textarea):
  - ``<input type="text">`` creates a single-line text input field.
  - ``<input type="password">`` creates a password input field where the characters are masked.
  - ``<input type="email">`` creates an email input field that ensures a valid email format.
  - ``<input type="checkbox">`` creates a checkbox allowing users to select one or multiple options.
  - ``<input type="radio">`` creates a radio button allowing users to select one option from a set of choices.
  - ``<input type="button">`` creates a button that can trigger custom JavaScript functions.
  - ``<input type="number">`` creates a numeric input field that restricts input to numeric values.
  - ``<input type="date">`` creates a date picker for selecting a date.

- ``<input type="time">`` creates a time picker for selecting a time.
- ``<input type="color">`` creates a color picker for selecting a color.
- ``<textarea>`` creates a multi-line text input field.

5. **Introduction about validation:** Validation refers to the process of ensuring that user input meets specified requirements or constraints before it is submitted. It helps prevent errors, improve data accuracy, and provide a better user experience.

6. **Validation** - required, Pattern, min, max, minlength, maxlength:

- ``required`` attribute ensures that a field must be filled out before the form can be submitted.
- ``pattern`` attribute allows you to specify a regular expression pattern that the input value must match.
- ``min`` and ``max`` attributes define the minimum and maximum values for numeric or date input fields.
- ``minlength`` and ``maxlength`` attributes specify the minimum and maximum lengths of text input fields.

Hands on project: Created Contact form using form, label and input added validation

Task - Create contact form using all input type

Todos

1. Date and time
2. Validation for date and time min and max
3. textarea length validation(under 200 words)
4. Try checkbox radio dropdown color

## Example

```
<!DOCTYPE html>
<html>

<head>
  <title>Form Example</title>
</head>

<body>
  <h2>Form Example</h2>
  <form>
    <label for="name">Name:</label>
    <input type="text" id="name" required pattern="[A-Za-z]+"
title="Only Alphabets" placeholder="Enter your name:">

    <label for="password">Password:</label>
    <input type="password" id="password" required>

    <label for="email">Email:</label>
    <input type="email" id="email" required>

    <label for="checkbox">Select Options:</label>
    <input type="checkbox" id="checkbox1" name="options"
value="option1">
    <label for="checkbox1">Option 1</label>
    <input type="checkbox" id="checkbox2" name="options"
value="option2">
    <label for="checkbox2">Option 2</label>

    <label for="radio">Select One:</label>
    <input type="radio" id="radio1" name="selection" value="option1">
    <label for="radio1">Option 1</label>
    <input type="radio" id="radio2" name="selection" value="option2">
    <label for="radio2">Option 2</label>

    <input type="button" value="Submit" onclick="submitForm()">

    <label for="number">Enter a Number:</label>
    <input type="number" id="number" min="1" max="10">
```

```
<label for="date">Select a Date:</label>
<input type="date" id="date">

<label for="time">Select a Time:</label>
<input type="time" id="time">

<label for="color">Select a Color:</label>
<input type="color" id="color">

<label for="message">Enter a Message:</label>
<textarea id="message" rows="4" cols="30" minlength="10"
maxlength="100"></textarea>
</form>
</body>

</html>
```