WEB PROGRAMMING
LAB 0

DESCRIPTION OF TAGS :

<html>

This is the root tag of the HTML document. All other HTML elements are written inside this tag.

<head>

This tag contains meta information about the webpage such as title, CSS styles, and JavaScript code.

<meta>

This tag provides metadata about the document.
charset="UTF-8" specifies the character encoding used by the webpage.

<title>

This tag defines the title of the webpage which is displayed on the browser tab.

<style>

This tag is used to write internal CSS. It styles the appearance of HTML elements such as layout, colors, font, and spacing.

<script>

This tag is used to write JavaScript code.
In this form, it performs client-side validation before submitting the form.

<body>

This tag contains all the visible content of the webpage that the user sees.

<div>

This is a container element used to group related content.
It helps in layout design and styling the form section.

<h2>

This heading tag is used to display the title "Registration Form" on the page.

<form>

This tag is used to create a form for collecting user input.
The onsubmit attribute calls the validation function when the form is submitted.

<label>

This tag defines a label for an input field.
It improves readability and accessibility.

<span>

This inline tag is used to highlight the * symbol to indicate required fields.

<input>

This tag is used to take user input.
Different type attributes like text and password define the input format.

type

This attribute specifies the type of input field such as text or password.

id

This attribute uniquely identifies an element.
It is used by JavaScript to access and validate input values.

placeholder

This attribute displays hint text inside input fields to guide the user.

<button>

This tag creates a clickable button to submit the form.

<div id="error">

This div is used to display validation error messages dynamically using JavaScript.

SOURCE CODE :

```html
<!DOCTYPE html>
<html lang="en">
<head>
    <meta charset="UTF-8">
    <title>Registration Form</title>

    <style>
        body {
            font-family: Arial;
            background-color: #f2f2f2;
        }

        .container {
            width: 360px;
            margin: 50px auto;
            background: white;
            padding: 20px;
            border-radius: 8px;
        }

        label {
            font-weight: bold;
        }

        .required {
            color: red;
        }

        input {
            width: 100%;
            padding: 8px;
```

```
      margin: 6px 0 12px 0;
    }

    .error {
      color: red;
      font-size: 14px;
    }

    button {
      width: 100%;
      padding: 10px;
      background-color: green;
      color: white;
      border: none;
      cursor: pointer;
    }
  </style>

  <script>
    function validateForm() {
      let name = document.getElementById("name").value.trim();
      let phone = document.getElementById("phone").value.trim();
      let email = document.getElementById("email").value.trim();
      let password = document.getElementById("password").value;

      let error = document.getElementById("error");
      error.innerHTML = "";

      // Patterns
      let namePattern = /^[A-Za-z ]{3,}$/;
      let phonePattern = /^[6-9]\d{9}$/;
      let emailPattern = /^[^\s@]+@[^\s@]+\.[^\s@]+$/;
      let passwordPattern =
/^(?=.*[A-Z])(?=.*[a-z])(?=.*\d)(?=.*[@$!%*?&]).{8,}$/;

      // Required field checks
      if (name === "") {
```

```
            error.innerHTML = "Name is required";
            return false;
         }
         if (!namePattern.test(name)) {
            error.innerHTML = "Name must contain at least 3 characters";
            return false;
         }

         if (phone === "") {
            error.innerHTML = "Phone number is required";
            return false;
         }
         if (!phonePattern.test(phone)) {
            error.innerHTML = "Enter a valid 10-digit phone number";
            return false;
         }

         if (password === "") {
            error.innerHTML = "Password is required";
            return false;
         }
         if (!passwordPattern.test(password)) {
            error.innerHTML = "Password must contain uppercase, lowercase,
number, symbol & min 8 characters";
            return false;
         }

         // Email is optional but validated if entered
         if (email !== "" && !emailPattern.test(email)) {
            error.innerHTML = "Enter a valid email address";
            return false;
         }

         alert("Registration Successful!");
         return true;
      }
   </script>
```

```html
</head>

<body>

<div class="container">
    <h2>Registration Form</h2>

    <form onsubmit="return validateForm()">

        <label>Name <span class="required">*</span></label>
        <input type="text" id="name" placeholder="Enter Name">

        <label>Phone Number <span class="required">*</span></label>
        <input type="text" id="phone" placeholder="Enter Phone Number">

        <label>Email</label>
        <input type="text" id="email" placeholder="Enter Email (Optional)">

        <label>Password <span class="required">*</span></label>
        <input type="password" id="password" placeholder="Enter Password">

        <div id="error" class="error"></div>

        <button type="submit">Register</button>
    </form>
</div>

</body>
</html>
```

OUTPUT :

Registration Form

Name *

Enter Name

Phone Number *

Enter Phone Number

Email

Enter Email (Optional)

Password *

Enter Password

Register

Name

UMA PARVATHI V

Phone Number *

9360393846

Email

umaparvathi0904@gmail.com

Password *

••••••••

Register

Registration Form

Name *

UMA PARVATHI V

Phone Number *

Enter Phone Number

Email

Enter Email (Optional)

Password *

•••••••

Phone number is required

Register