Exp no: 02 Date:	**Client-Side Form Validation Using JavaScript for a User Registration Page**

Aim:

To write JavaScript code that performs client-side validation for the fields of a registration page, ensuring the user inputs correct and complete information before form submission.

Algorithm:

Start the HTML document with a form containing input fields such as:

- Name
- Email
- Password
- Confirm Password
- Phone Number
- Gender (radio buttons)
- Terms & Conditions (checkbox)
- Assign a unique id or name to each input field.
- Create a JavaScript function (e.g., validateForm()) that:
- Retrieves input values using document.getElementById() or form.field.value.
- Checks:
  - If Name is not empty.
  - If Email matches a valid format using a regex.
  - If Password meets minimum length (e.g., 6+ characters).
  - If Confirm Password matches the Password.
  - If Phone number contains exactly 10 digits.
  - If Gender is selected.
  - If Terms and Conditions are accepted.
- If any validation fails:
- Display an error message using alert() or inner HTML.
- Prevent form submission using return false.
- Attach the validateForm() function to the form's onsubmit event.

- Test the form in a browser with various input cases.
- End.

HTML CODE:

Index.html:

```html
<!DOCTYPE html>
<html lang="en">
<head>
  <meta charset="UTF-8">
  <meta name="viewport" content="width=device-width, initial-scale=1.0">
  <title>Registration Form</title>
  <link rel="stylesheet" href="styles.css">
  <script src="script.js" defer></script>
</head>
<body>
  <div class="container">
    <h2>Registration Form</h2>
    <form onsubmit="return validateForm()">
      <input type="text" id="firstName" placeholder="First Name">
      <div class="error" id="firstNameError"></div>

      <input type="text" id="lastName" placeholder="Last Name">
      <div class="error" id="lastNameError"></div>

      <input type="password" id="password" placeholder="Password">
      <div class="error" id="passwordError"></div>

      <input type="email" id="email" placeholder="Email">
      <div class="error" id="emailError"></div>

      <input type="text" id="mobile" placeholder="Mobile Number">
      <div class="error" id="mobileError"></div>

      <input type="text" id="address" placeholder="Address">
      <div class="error" id="addressError"></div>

      <button type="submit">Register</button>
    </form>
  </div>
</body>
</html>
```

CSS CODE:

```css
body {
  font-family: Arial, sans-serif;
```

```css
    background-color: #f4f4f9;
    display: flex;
    justify-content: center;
    align-items: center;
    height: 100vh;
    margin: 0;
    color: #333;
}

.container {
    background-color: #ffffff;
    padding: 30px;
    border-radius: 15px;
    box-shadow: 0 8px 16px rgba(0, 0, 0, 0.2);
    max-width: 400px;
    width: 100%;
    text-align: center;
    transition: transform 0.3s;
}

.container:hover {
    transform: translateY(-5px);
}

h2 {
    margin-bottom: 20px;
    color: #4a4a4a;
    font-size: 1.8em;
    font-weight: 600;
}

input {
    width: 100%;
    padding: 12px;
    margin: 10px 0;
    box-sizing: border-box;
    border: 1px solid #ccc;
    border-radius: 8px;
    outline: none;
    transition: border-color 0.3s, box-shadow 0.3s;
    font-size: 1em;
    color: #333;
}

input:focus {
    border-color: #28a745;
    box-shadow: 0 0 8px rgba(40, 167, 69, 0.3);
}
```
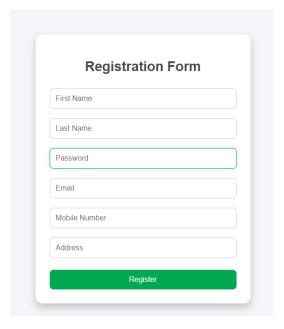
```css
button {
    background-color: #28a745;
    color: white;
    padding: 12px;
    width: 100%;
    border: none;
    border-radius: 8px;
    cursor: pointer;
    font-size: 1em;
    margin-top: 15px;
    transition: background-color 0.3s, transform 0.3s;
}

button:hover {
    background-color: #218838;
    transform: translateY(-2px);
}

button:active {
    background-color: #1e7e34;
    transform: translateY(0);
}

.error {
    color: red;
    font-size: 0.9em;
    margin-top: -8px;
    margin-bottom: 8px;
    text-align: left;
    padding-left: 5px;
}
```

Java Script Code:

```css
body {
    font-family: Arial, sans-serif;
    background-color: #f4f4f9;
    display: flex;
    justify-content: center;
    align-items: center;
    height: 100vh;
    margin: 0;
    color: #333;
}

.container {
    background-color: #ffffff;
    padding: 30px;
```
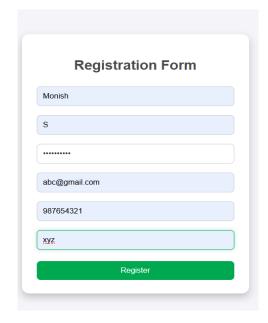
```css
    border-radius: 15px;
    box-shadow: 0 8px 16px rgba(0, 0, 0, 0.2);
    max-width: 400px;
    width: 100%;
    text-align: center;
    transition: transform 0.3s;
}

.container:hover {
    transform: translateY(-5px);
}

h2 {
    margin-bottom: 20px;
    color: #4a4a4a;
    font-size: 1.8em;
    font-weight: 600;
}

input {
    width: 100%;
    padding: 12px;
    margin: 10px 0;
    box-sizing: border-box;
    border: 1px solid #ccc;
    border-radius: 8px;
    outline: none;
    transition: border-color 0.3s, box-shadow 0.3s;
    font-size: 1em;
    color: #333;
}

input:focus {
    border-color: #28a745;
    box-shadow: 0 0 8px rgba(40, 167, 69, 0.3);
}

button {
    background-color: #28a745;
    color: white;
    padding: 12px;
    width: 100%;
    border: none;
    border-radius: 8px;
    cursor: pointer;
    font-size: 1em;
    margin-top: 15px;
    transition: background-color 0.3s, transform 0.3s;
```

```css
}

button:hover {
    background-color: #218838;
    transform: translateY(-2px);
}

button:active {
    background-color: #1e7e34;
    transform: translateY(0);
}
```
```javascript
function validateForm() {
    let valid = true;

    // First Name Validation
    const firstName = document.getElementById('firstName').value;
    if (!/^[A-Za-z]{6,}$/.test(firstName)) {
        document.getElementById('firstNameError').innerText = 'First name must be at least 6 alphabets.';
        valid = false;
    } else {
        document.getElementById('firstNameError').innerText = '';
    }

    // Last Name Validation
    const lastName = document.getElementById('lastName').value;
    if (lastName === '') {
        document.getElementById('lastNameError').innerText = 'Last name cannot be empty.';
        valid = false;
    } else {
        document.getElementById('lastNameError').innerText = '';
    }

    // Password Validation
    const password = document.getElementById('password').value;
    if (password.length < 6) {
        document.getElementById('passwordError').innerText = 'Password must be at least 6 characters long.';
        valid = false;
    } else {
        document.getElementById('passwordError').innerText = '';
    }

    // Email Validation
    const email = document.getElementById('email').value;
    const emailPattern = /^[a-zA-Z0-9._%+-]+@[a-zA-Z0-9.-]+\.[a-zA-Z]{2,}$/;
    if (!emailPattern.test(email)) {
        document.getElementById('emailError').innerText = 'Invalid email format.';
        valid = false;
    } else {
```

```
            document.getElementById('emailError').innerText = '';
        }

        // Mobile Number Validation
        const mobile = document.getElementById('mobile').value;
        if (!/^[0-9]{10}$/.test(mobile)) {
            document.getElementById('mobileError').innerText = 'Mobile number must be 10 digits.';
            valid = false;
        } else {
            document.getElementById('mobileError').innerText = '';
        }

        // Address Validation
        const address = document.getElementById('address').value;
        if (address === '') {
            document.getElementById('addressError').innerText = 'Address cannot be empty.';
            valid = false;
        } else {
            document.getElementById('addressError').innerText = '';
        }

        return valid;
}


.error {
    color: red;
    font-size: 0.9em;
    margin-top: -8px;
    margin-bottom: 8px;
    text-align: left;
    padding-left: 5px;
}
```

Output:

Result:

Thus the required web page has been successfully implemented using HTML and CSS.