

Ex.no: 4 b)	Form Validation using javascript
Date: 28/1/2025	

**AIM:**

To create a Form Validation form using javascript.

**DESCRIPTION:**

Form validation in JavaScript ensures that user input meets specified criteria before being submitted the form. This process enhances data accuracy, improves security, and provides a better user experience by catching errors early.

**PROCEDURE;**

Tags used	Description
<HTML>	Represents the root of an HTML document.
<head>	Defines a title in the browser toolbar.
<body>	It contains all the contents of an HTML document.
<h1> to <h6>	Used to define the HTML headings.
<p>	Used to define a paragraph.

Javascript keywords	Description
document.getElementById()	Accesses the HTML element with the id
innerHTML	a property that allows you to get or set the HTML content inside an element. When used to set content, it interprets any HTML tags as part of the content
createElement("tag")	Creates a new HTML element (e.g., li, button).
textContent	Sets or gets the text inside an element.
remove()	Deletes an element from the DOM
innerHTML	Sets or gets the HTML inside an element.
event.preventDefault	Prevents the default action associated with the event from occurring.
addEventListener	Attaches an event handler to a specified element without overwriting existing event handlers.

**CODE:**

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

  <style>
form {
  max-width: 500px;
  margin: 0 auto;
  padding: 20px;
  border: 1px solid #ccc;
  border-radius: 5px;
  background-color: #f9f9f9;
}

form h1 {
  text-align: center;
  font-size: 24px;
  margin-bottom: 20px;
}

label {
  display: block;
  margin-bottom: 5px;
  font-weight: bold;
}

input[type="text"],
input[type="date"],
input[type="email"],
input[type="password"],
select {
  width: 100%;
  padding: 10px;
  margin-bottom: 15px;
  border: 1px solid #ccc;
  border-radius: 4px;
  box-sizing: border-box;
}

button[type="submit"] {
  width: 100%;
  padding: 10px;
  background-color: #4CAF50;
```

```
color: white;
border: none;
border-radius: 4px;
font-size: 16px;
cursor: pointer;
}

button[type="submit"]:hover {
  background-color: #45a049;
}

.error {
  color: red;
  font-size: 14px;
  margin-bottom: 10px;
}

</style>
</head>
<body>
  <form id="userform">
    <h1>Use data entry</h1>
    <label for="name">Name</label>
    <input type="text" name="name" id="name"><br>
    <span class="error" id="nameError"></span><br>

    <label for="reg">Reg No.</label>
    <input type="text" name="reg" id="reg"><br>
    <span class="error" id="regError"></span><br>

    <label for="mail">mail Id</label>
    <input type="email" name="mail" id="mail"><br>
    <span class="error" id="mailError"></span><br>

    <label for="dept">Dept</label>
    <select name="dept" id="dept" required>
      <option value="" disabled selected>Select Department</option>
      <option value="cse">CSE</option>
      <option value="ece">ECE</option>
      <option value="eee">EEE</option>
      <option value="civil">Civil</option>
      <option value="mech">Mech</option>
      <option value="aids">AIDS</option>
      <option value="it">IT</option>
    </select><br>
    <span class="error" id="deptError"></span><br>
```

```
<label for="num">Mobile NO.</label>
<input type="text" name="num" id="num"><br>
<span class="error" id="numError"></span><br>
```

```
<button type="submit">Submit</button>
</form>
```

```
<script>
document.getElementById('userform').addEventListener("submit",function(event){
    event.preventDefault();

    document.querySelectorAll('.error').forEach(function(e){
        e.textContent="";
    });
    let isValid=true;

    const nameInput=document.getElementById('name');
    const namePattern = /^[a-zA-Z]+$/;
    if (nameInput.value.trim() === "") {
        document.getElementById('nameError').textContent = 'Name is required.';
        isValid = false;
    } else if (!namePattern.test(nameInput.value)) {
        document.getElementById('nameError').textContent = 'Name must contain only letters.';
        isValid = false;
    }

    const reg=document.getElementById('reg');
    const regPattern = /^\\d{7}$\\;/;
    if (reg.value.trim() === "") {
        document.getElementById('regError').textContent = 'Registration number is required.';
        isValid = false;
    } else if (!regPattern.test(reg.value)) {
        document.getElementById('regError').textContent = 'Registration number must be exactly 7
digits.';
        isValid = false;
    }

    const dept=document.getElementById("dept");
    if(dept.value===""){
        document.getElementById('deptError').textContent= 'Please select the department';
        isValid=false;
    }

    const mailInput = document.getElementById('mail');
    const mailPattern = /^[a-zA-Z0-9._%+-]+@[a-zA-Z.]+\\.[a-zA-Z]{2,6}$\\;/;
    if (mailInput.value.trim() === "") {
        document.getElementById('mailError').textContent = 'Email is required.';
    }
}
```

```

        isValid = false;
    } else if (!mailPattern.test(mailInput.value)) {
        document.getElementById('mailError').textContent = 'Invalid email format.';
        isValid = false;
    }

    const numInput = document.getElementById('num');
    const numPattern = /^[6-9]\d{9}$/;
    if (numInput.value.trim() === "") {
        document.getElementById('numError').textContent = 'Mobile number is required.';
        isValid = false;
    } else if (!numPattern.test(numInput.value)) {
        document.getElementById('numError').textContent = 'Invalid mobile number. Must be a
10-digit number starting with 6-9.';
        isValid = false;
    }

    if (isValid) {
        alert('Form submitted successfully!');
        document.getElementById('userform').reset();
        dept.selectedIndex = 0;
    }

});
</script>
</body>
</html>

```

**OUTPUT:**

**Use data entry**

Name

Name is required.

Reg No.

Registration number is required.

mail Id

Email is required.

Dept

Mobile NO.

Mobile number is required.

Submit

**Use data entry**

Name

Name must contain only letters.

Reg No.

mail Id

Dept

Mobile NO.

Invalid mobile number. Must be a 10-digit number starting with 6-9.

Submit

**Use data entry**

Name  
sankareswari

Name must contain only letters.

Reg No.  
2212097

mail Id  
abc@gmail

127.0.0.1:5500  
Form submitted successfully!

Dept  
CSE

Mobile NO.  
9123456607

Invalid mobile number. Must be a 10-digit number starting with 6-9.

Submit

Problem Understanding (5)	Implementation & Output (5)	Time Management (5)	Viva (5)	Total (20)

**Result:**

Thus the form is created , validated and verified successfully.