Tutorial No. 07

Title: Form validation with JavaScript.

Batch: A1 **Roll No.: 16010422013** **Tutorial No.: 6**

Aim: Design a web page containing a form and perform appropriate client side validation on that form

Theory

What is form validation:- Form validation helps us to ensure that users fill out forms in the correct format, making sure that submitted data will work successfully with our applications. When you don't enter your data in the format they are expecting. You'll get messages such as:

- "This field is required" (you can't leave this field blank)
- "Please enter your phone number in the format xxx-xxxx" (it enforces three numbers followed by a dash, followed by four numbers)
- "Please enter a valid e-mail address" (if your entry is not in the format of "somebody@example.com")
- "Your password needs to be between 8 and 30 characters long, and contain one uppercase letter, one symbol, and a number"

Client-side validation is validation that occurs in the browser before the data has been submitted to the server. This is more user-friendly than server-side validation as it gives an instant response. This can be further subdivided:

- JavaScript validation is coded using JavaScript. It is completely customizable.
- Built-in form validation using HTML5 form validation features. This generally does not require JavaScript. Built-in form validation has better performance, but it is not as customizable as JavaScript**.**

Activity

Apply validation in form using Regex/Built in validation/Event handling. Choose appropriate techniques

Results: (Program printout with output)

```
<!DOCTYPE html>
<html lang="en">
<head>
    <meta charset="UTF-8">
    <meta name="viewport" content="width=device-width, initial-scale=1.0">
    <title>Form Validation</title>
    <style>
        .error {
            color: red;
        }
    </style>
</head>
<body>

    <form id="myForm">
        <label for="name">Name:</label>
```

```
        <input type="text" id="name" name="name" onblur="validateName()"
required>
        <span id="nameError" class="error"></span><br>

        <label for="email">Email:</label>
        <input type="email" id="email" name="email" onblur="validateEmail()">
        <span id="emailError" class="error"></span><br>

        <label for="age">Age:</label>
        <input type="number" id="age" name="age" onblur="validateAge()">
        <span id="ageError" class="error"></span><br>

        <label for="phone">Phone:</label>
        <input type="tel" id="phone" name="phone" onblur="validatePhone()">
        <span id="phoneError" class="error"></span><br>

        <input type="button" value="Submit" onclick="validateForm()">
    </form>

    <script>
        function validateName() {
            var name = document.getElementById("name").value;
            var nameRegex = /^[A-Za-z]+$/;

            if (!name || !nameRegex.test(name)) {
                document.getElementById("nameError").innerText = "Please enter a
valid name with only alphabets.";
            } else {
                document.getElementById("nameError").innerText = "";
            }
        }

        function validateEmail() {
            var email = document.getElementById("email").value;
            var emailRegex = /^[a-zA-Z0-9._%+-]+@[a-zA-Z0-9.-]+\.[a-zA-Z]{2,}$/;

            if (email && !emailRegex.test(email)) {
                document.getElementById("emailError").innerText = "Please enter
a valid email address.";
            } else {
                document.getElementById("emailError").innerText = "";
            }
        }

        function validateAge() {
            var age = document.getElementById("age").value;

            if (isNaN(age) || age < 2 || age > 200) {
                document.getElementById("ageError").innerText = "Please enter a
valid age between 2 and 200.";
            } else {
                document.getElementById("ageError").innerText = "";
            }
        }

        function validatePhone() {
            var phone = document.getElementById("phone").value;

            if (isNaN(phone) || phone.length !== 10) {
```

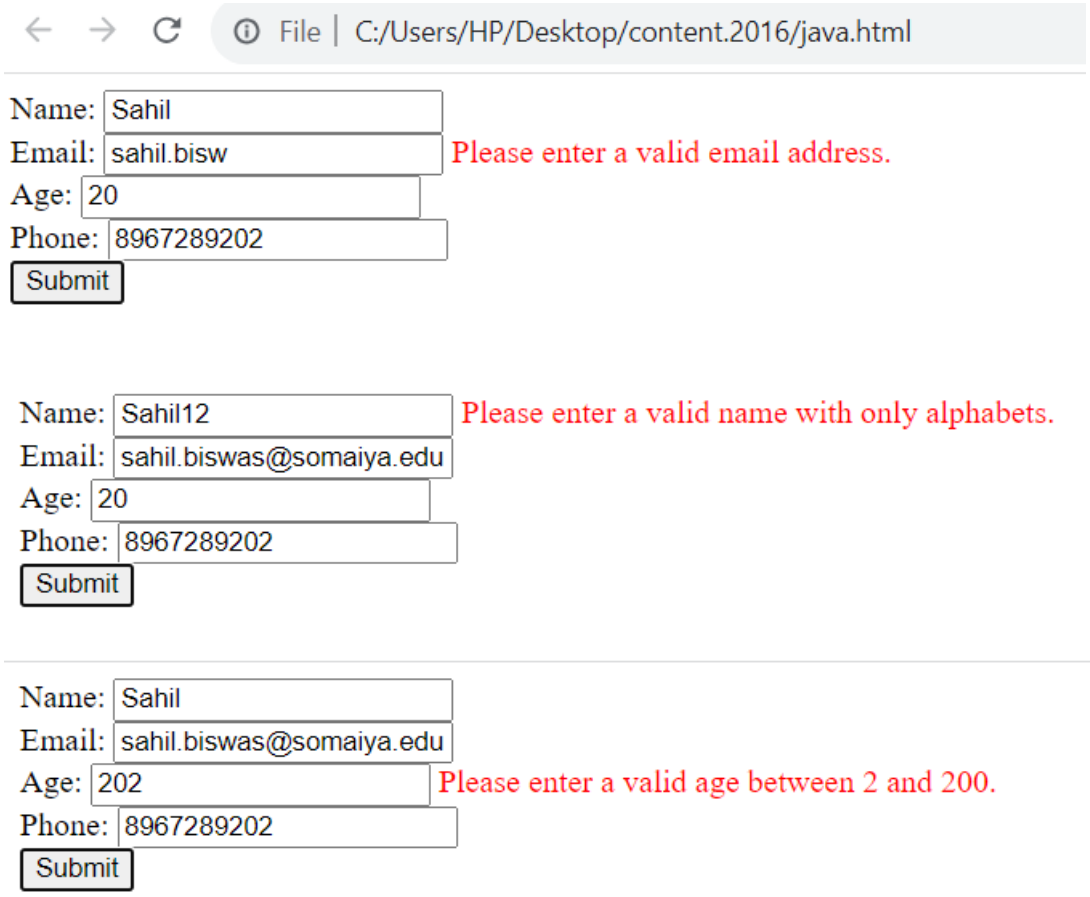
```
                document.getElementById("phoneError").innerText = "Please enter
a valid 10-digit phone number.";
            } else {
                document.getElementById("phoneError").innerText = "";
            }
        }

        function validateForm() {
            validateName();
            validateEmail();
            validateAge();
            validatePhone();


        }
    </script>

</body>
</html>
```

TEST CASES OF OUTPUT –



Name: Sahil
Email: sahil.biswas@somaiya.edu
Age: 20
Phone: 896728s Please enter a valid 10-digit phone number.
Submit

Outcomes:

Apply Javascript for web designing.

Conclusion: (Conclusion to be based on the outcomes achieved)

Thus, we have successfully implemented form validation at client side using javascript and made our form more efficient.

Grade: AA / AB / BB / BC / CC / CD /DD

Signature of faculty in-charge with date

References:

Books/ Journals/ Websites:

- "Web technologies: Black Book", Dreamtech Publications
- http://www.w3schools.com