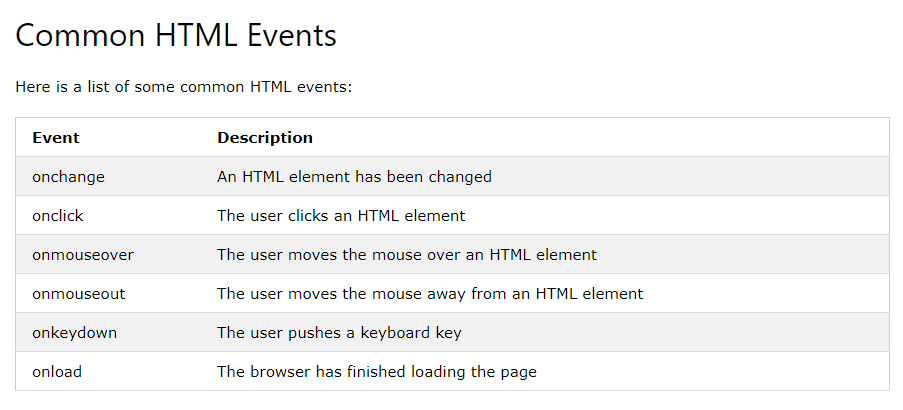
|  |  |  |
| --- | --- | --- |
| **SVKM’sNMIMS**  **MukeshPatelSchoolofTechnology Management &EngineeringMumbaiandShirpurCampus** | | |
| **ITDepartment** | | |
| **ManualPreparedby**  **Prof.SulalahMirkar** | **Lab Manual** | **AcademicYear-2024-25** | |
| **Year:-** | **Subject:-WebProgramming** | **Semester:-** | |

|  |  |  |
| --- | --- | --- |
|  | Experiment#7 |  |
|  |  | DateofConduction:- / /2024 |
| Class:-B.TechIT/MBA.TechIT/B.Tech(CS) | | Division:- |

Aim:-

1. Eventhandling
2. ValidationsandQuery



Prerequisites:-

- OOPSconceptandHTMLSbasictags

* 1. Example11

<html>

<body>

<h2>JavaScriptArrays</h2>

<p>JavaScriptarrayelementsareaccessedusingnumericindexes(startingfrom0).</p>

<pid="demo"></p>

<script>

varcars=["Saab","Volvo","BMW"];document.getElementById("demo").innerHTML=cars[0];

</script>

</body>

</html>

ChangetheArrayValue

* varcars=["Saab","Volvo","BMW"];cars[0] ="Opel";

document.getElementById("demo").innerHTML=cars[0];

* 1. Example11

<html>

<body>

<h2>JavaScriptArrays</h2>

<p>JavaScriptarrayelementsareaccessedusingnumericindexes(startingfrom0).</p>

<pid="demo"></p>

<script>

varcars=["Saab","Volvo","BMW"];document.getElementById("demo").innerHTML=cars[0];

</script>

</body>

</html>

ChangetheArrayValue

* varcars=["Saab","Volvo","BMW"];cars[0] ="Opel";

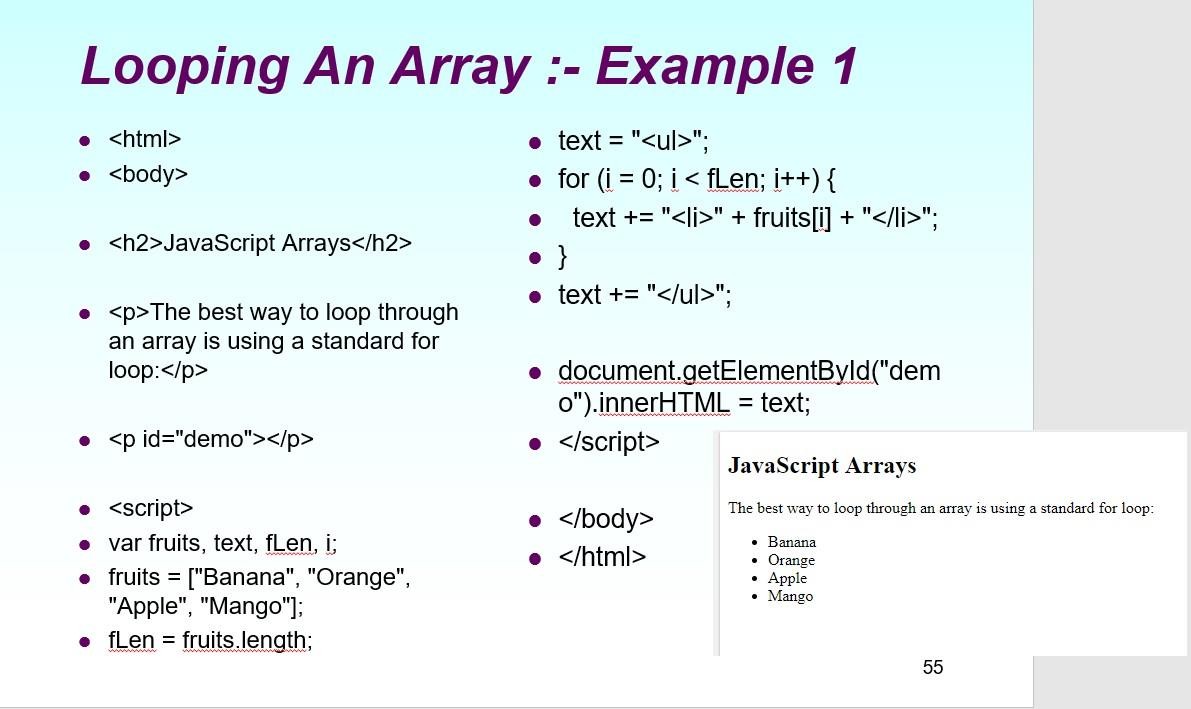
document.getElementById("demo").innerHTML=cars[0];

Length()function

varfruits= ["Banana","Orange","Apple","Mango"];document.getElementById("demo").innerHTML=fruits.length;

AccessthefirstandlastelementofanArray

* fruits=["Banana","Orange","Apple","Mango"];varfirst =fruits[0];
* fruits=["Banana","Orange","Apple","Mango"];varlast =fruits[fruits.length-1];



9.Example12

1. Example13

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
|  | | | | | |
|  | | **SVKM’sNMIMS**  **MukeshPatelSchoolofTechnology Management &EngineeringMumbaiandShirpurCampus** | | | |
| **ITDepartment** | | | |
| **ManualPreparedby**  **Prof.SulalahMirkar** | | | **Lab Manual** | **AcademicYear-2023-24** | |
| **Year:-** | | | **Subject:-WebProgramming** | **Semester:-** | |
|  |  | | | |  |

ARRAYMETHODS

* varfruits =["Banana","Orange","Apple","Mango"];document.getElementById("demo").innerHTML=fruits.toString();
* varfruits = ["Banana","Orange","Apple","Mango"];document.getElementById("demo").innerHTML=fruits.join(" \*");
* OUTPUT:---Banana\*Orange\*Apple\*Mango
* varfruits=["Banana","Orange","Apple","Mango"];

fruits.pop(); //Removesthelastelement("Mango")fromfruits

* varfruits=["Banana","Orange","Apple","Mango"];fruits.push("Kiwi"); //Adds anewelement("Kiwi")tofruits
* varfruits=["Banana","Orange","Apple","Mango"];

fruits.shift(); //Removesthefirstelement"Banana"fromfruits

* varfruits=["Banana","Orange","Apple","Mango"];

fruits[0]="Kiwi"; //Changes thefirstelementoffruits to"Kiwi"

1. Example14



Concatenates

varmyGirls=["Cecilie","Lone"];

varmyBoys=["Emil","Tobias","Linus"];

varmyChildren=myGirls.concat(myBoys); //Concatenates(joins)myGirlsandmyBoysdocument.getElementById("demo").innerHTML=myChildren

Slice

varfruits=["Banana","Orange","Lemon","Apple","Mango"];varcitrus=fruits.slice(1);

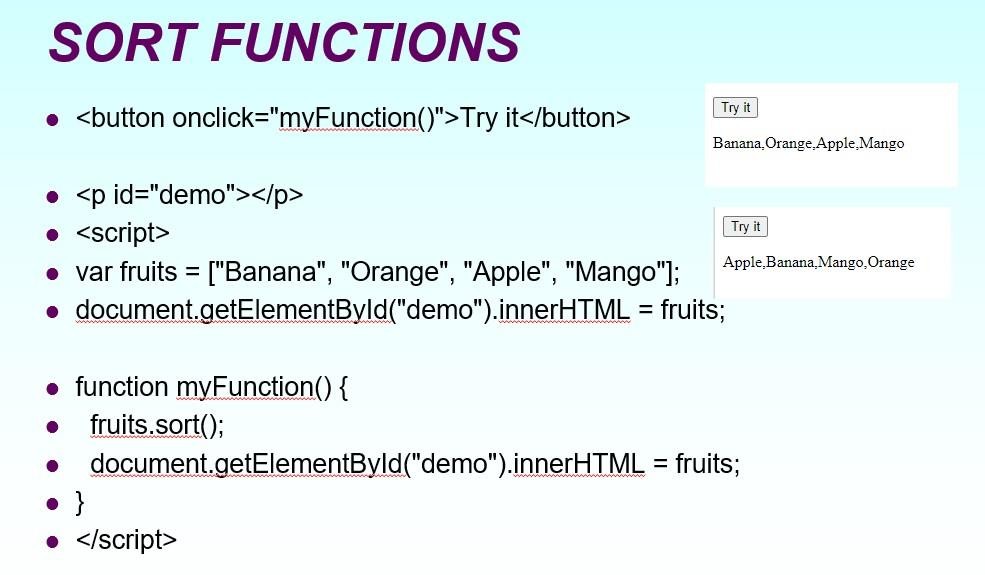
document.getElementById("demo").innerHTML=fruits+"<br><br>"+citrus;

/\*\*\*\*output\*\*\*\*\*/

* Banana,Orange,Lemon,Apple,Mango

Orange,Lemon,Apple,Mango

1. Example15

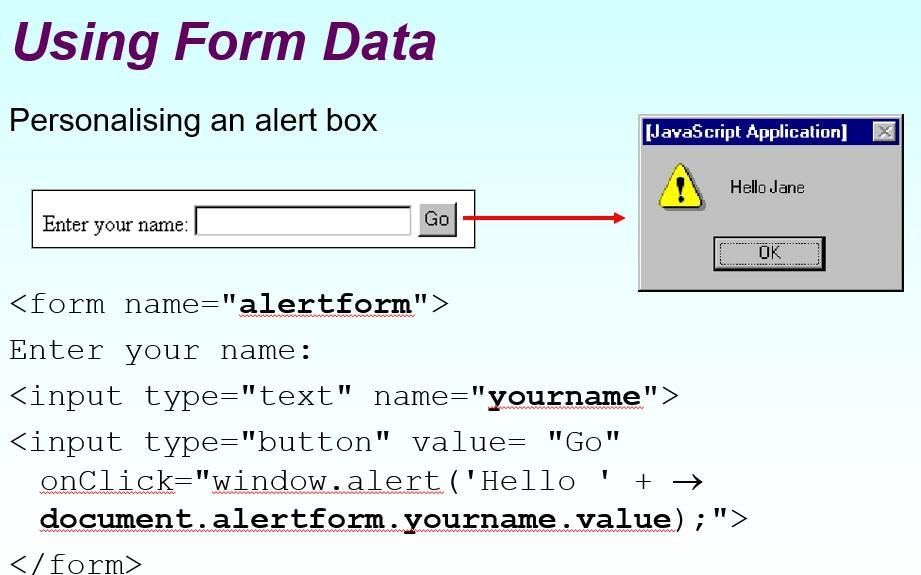


JavaScriptFormValidation

* + Formdatathattypicallyare checkedbyaJavaScriptcouldbe:
  + hastheuserleftrequiredfieldsempty?
  + hastheuserenteredavalide-mailaddress?
  + hastheuserenteredavaliddate?
  + hastheuserenteredtextinanumericfield?

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
|  | | | | | |
|  | | **SVKM’sNMIMS**  **MukeshPatelSchoolofTechnology Management &EngineeringMumbaiandShirpurCampus** | | | |
| **ITDepartment** | | | |
| **ManualPreparedby**  **Prof.SulalahMirkar** | | | **Lab Manual** | **AcademicYear-2023-24** | |
| **Year:-** | | | **Subject:-WebProgramming** | **Semester:-** | |
|  |  | | | |  |

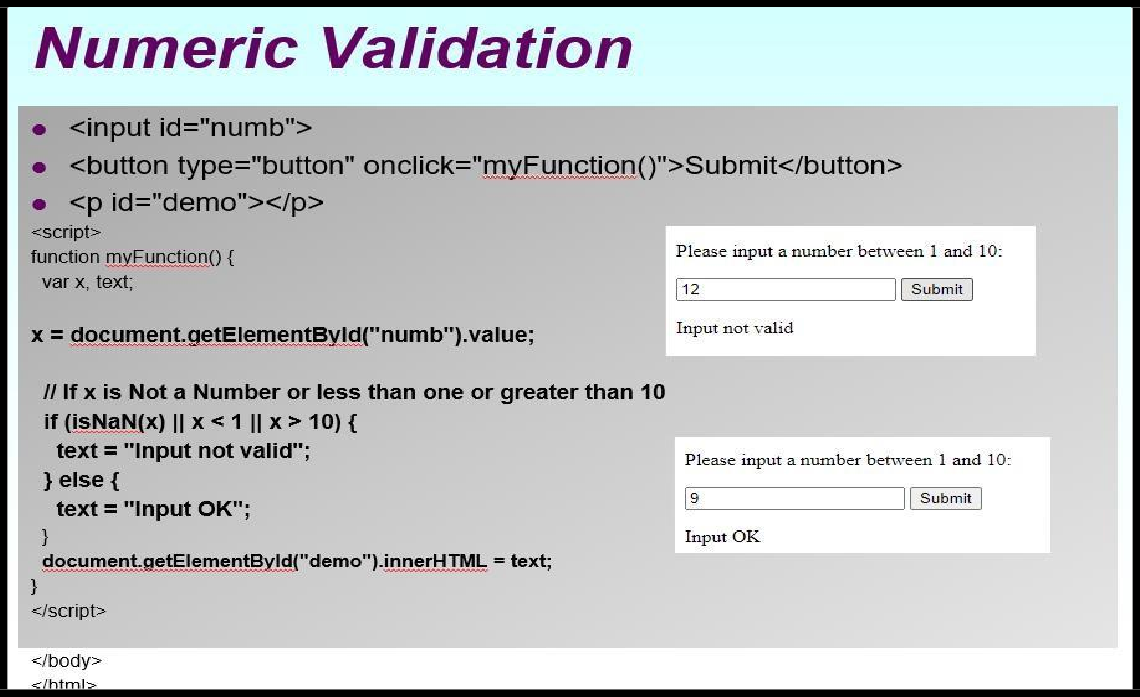
1. Example16



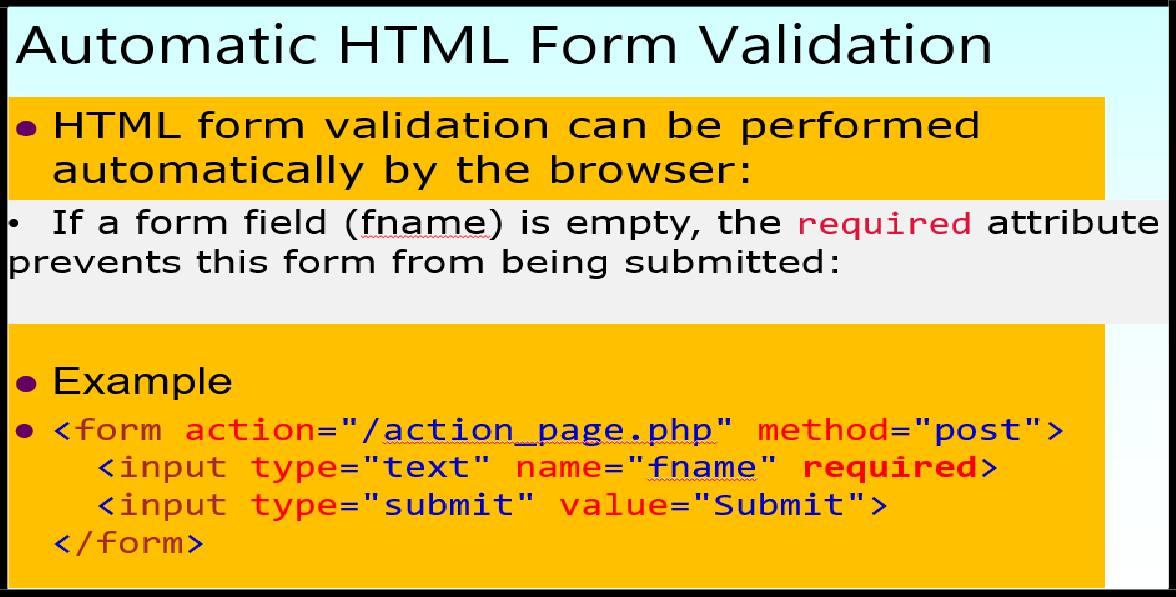
1. Example17

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
|  | | | | | |
|  |  | **SVKM’sNMIMS**  **MukeshPatelSchoolofTechnology Management &EngineeringMumbaiandShirpurCampus** | | | |
| **ITDepartment** | | | |
| **ManualPreparedby**  **Prof.SulalahMirkar** | | | **Lab Manual** | **AcademicYear-2023-24** | |
| **Year:-** | | | **Subject:-WebProgramming** | **Semester:-** | |
|  | | | | |  |

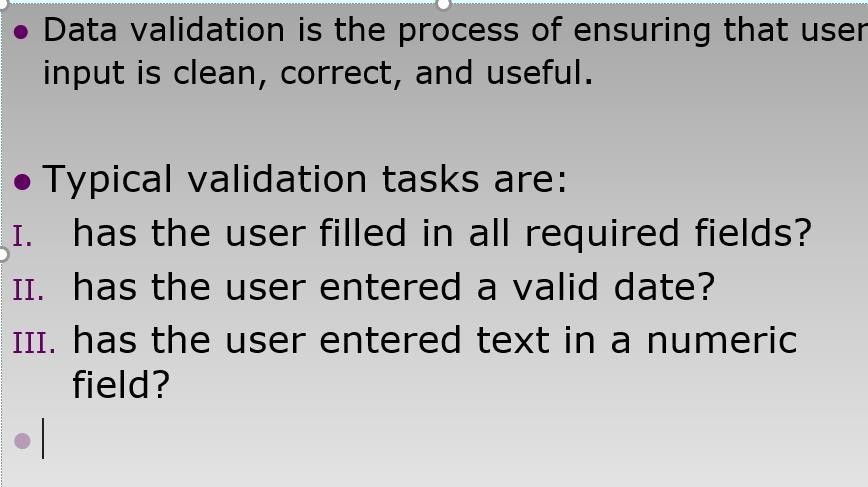
1. Example18



HTMLformvalidation



DataValidation

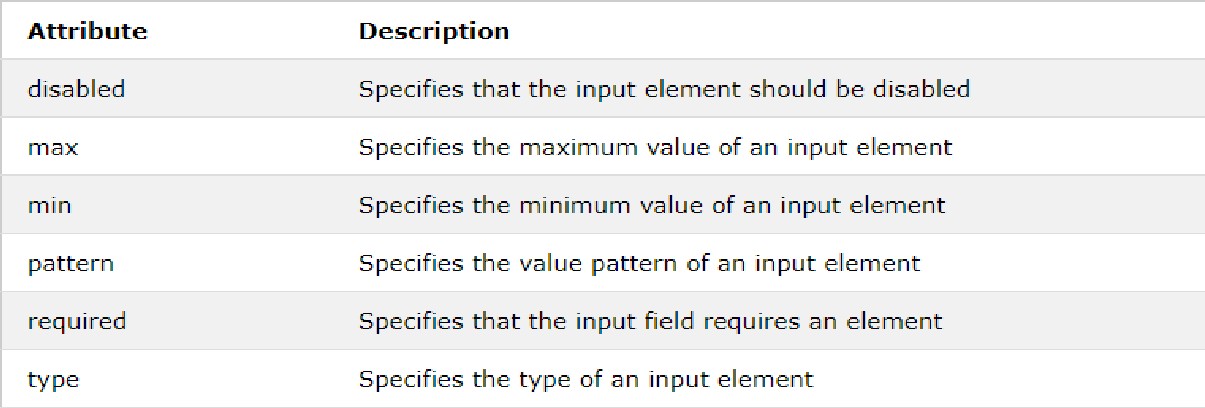


HTMLValidations

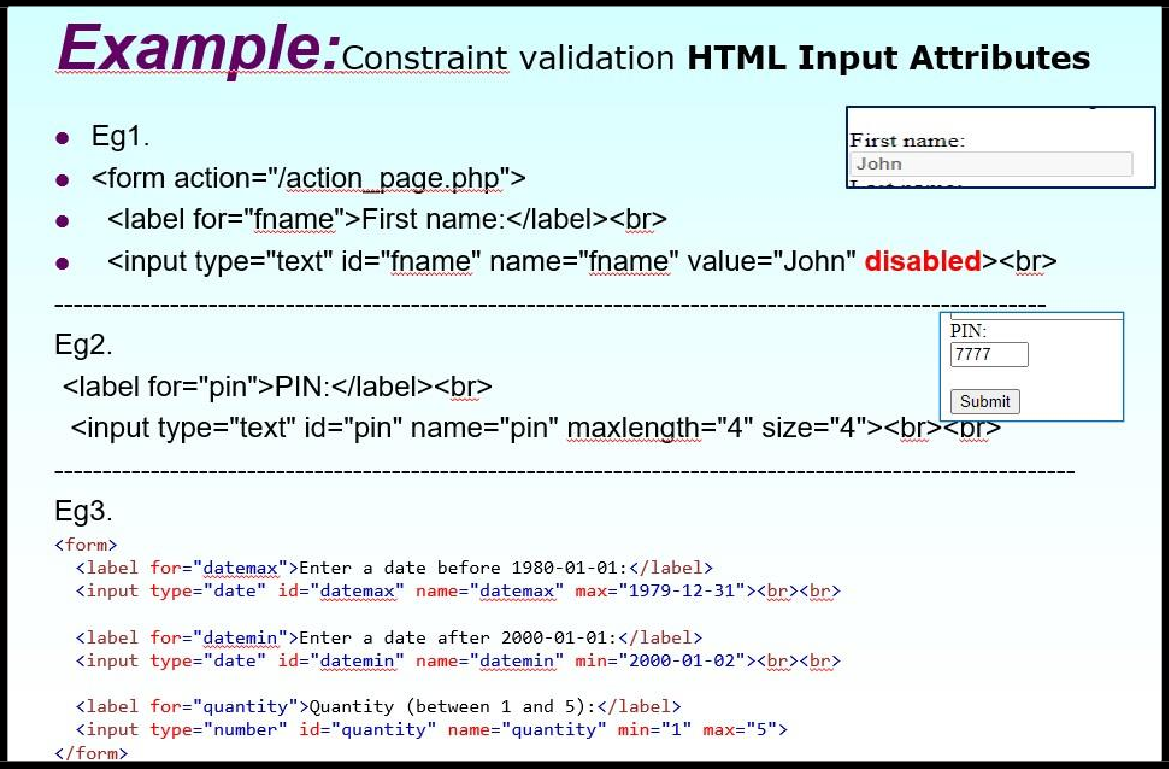
* HTMLconstraintvalidationisbasedon:

1. Constraintvalidation**HTMLInputAttributes**
2. Constraint validation**CSSPseudoSelectors**
3. Constraintvalidation**DOMPropertiesandMethods**

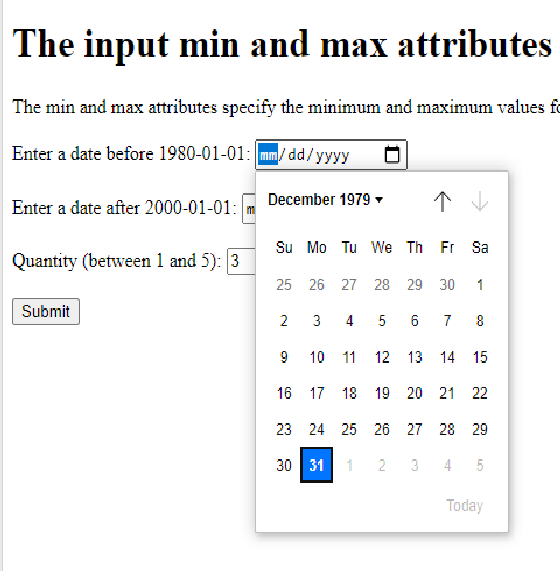
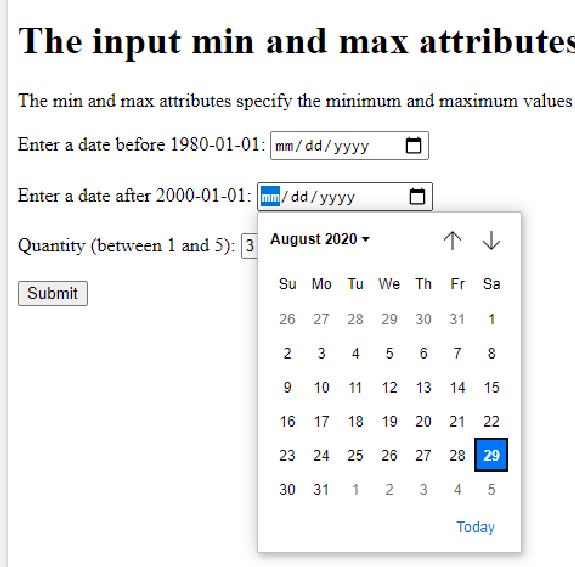
Constraintvalidation**HTMLInputAttributes**



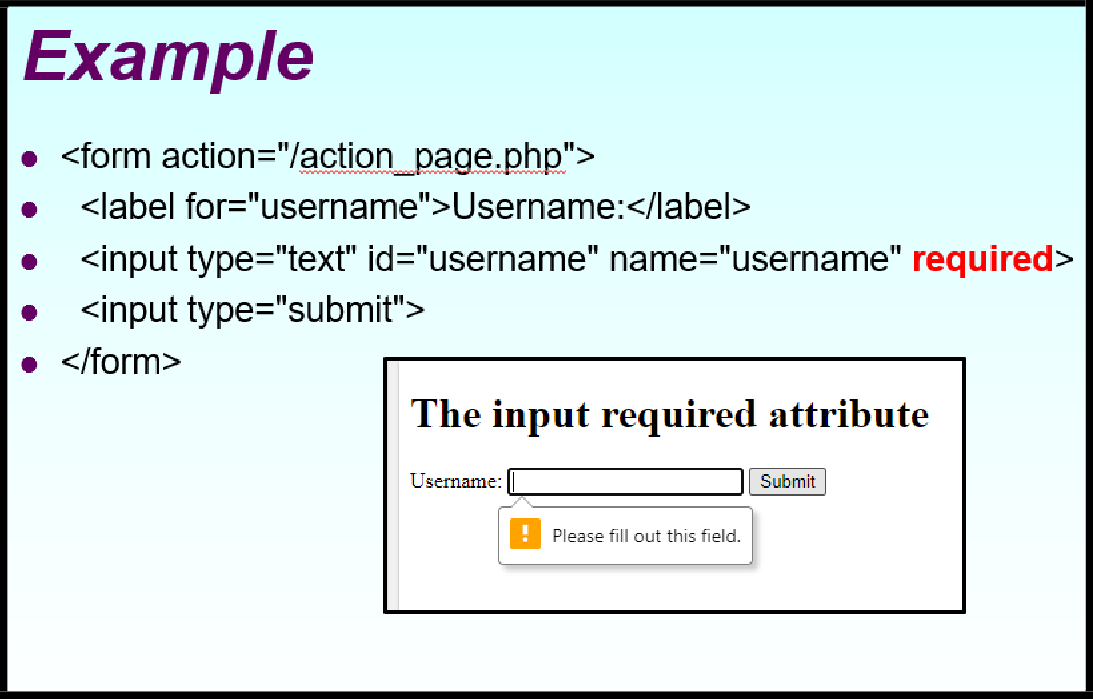
1. Example19



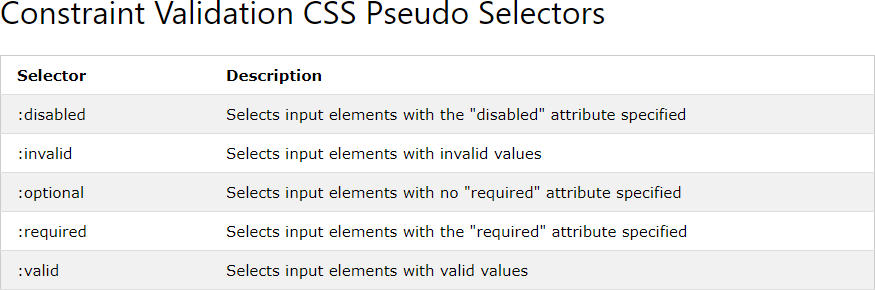
Output



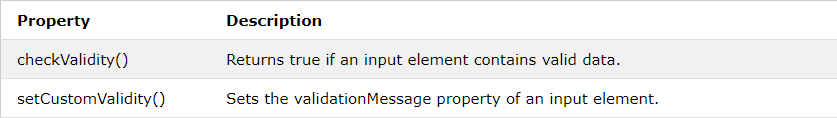
1. Example20



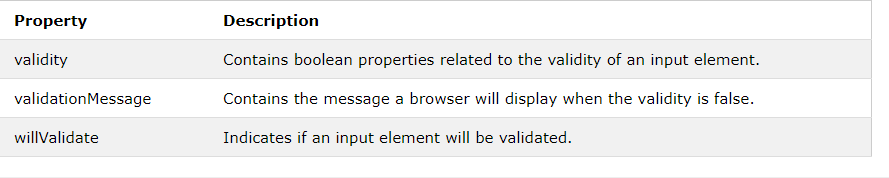
* 1. Constraintvalidation**CSSPseudoSelectors**



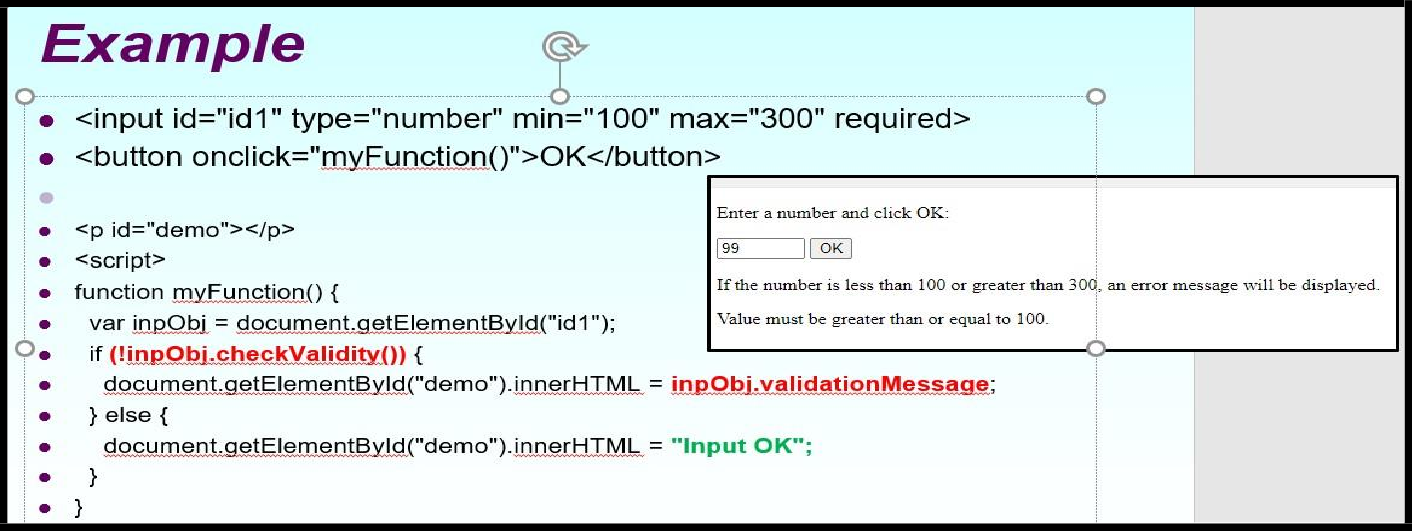
* 1. ConstraintValidationDOMMethods



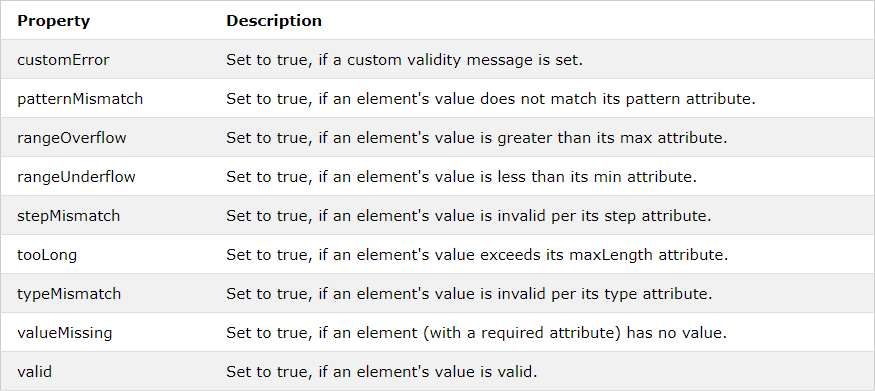
ConstraintValidationDOMProperties



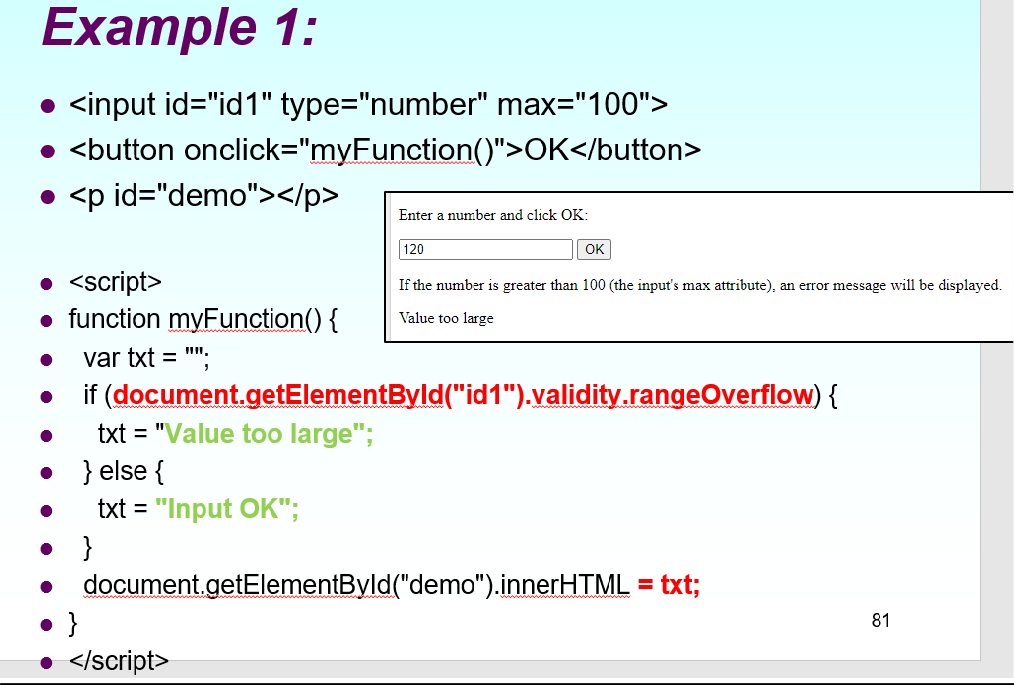
1. Example21



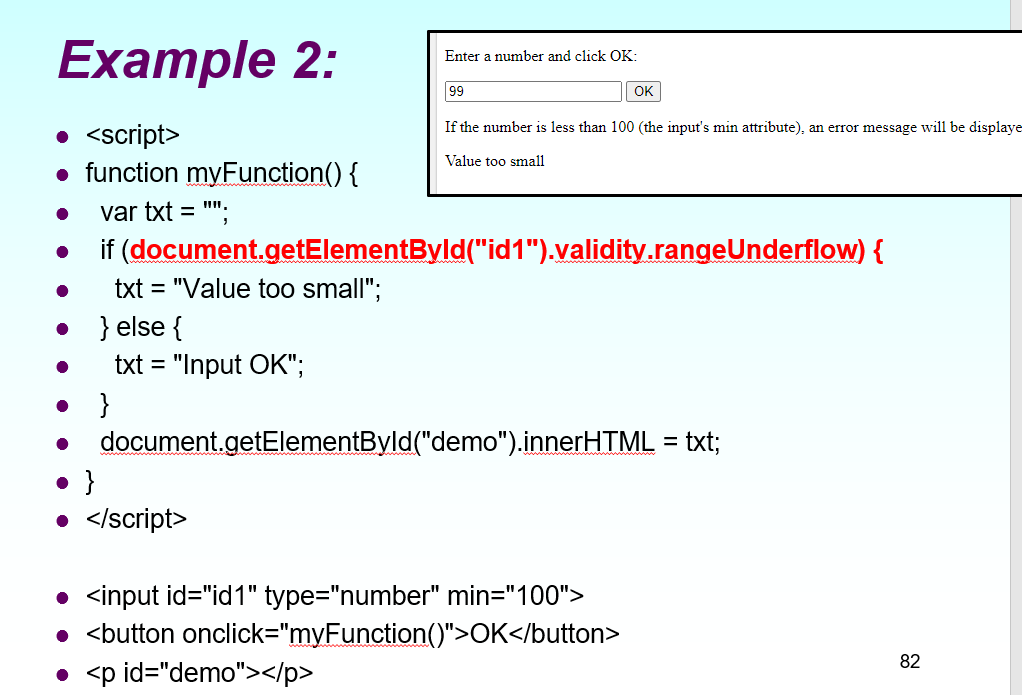
*ValidityProperties*



1. Example22



1. Example23



1. Write a program to search for the @ position in the given mail id onsubmit buttonevent.
2. Write a program to compare password and confirm password onmouse downevent
3. Write a program to accept the input from html form and slice the 3 characters using onsubmit Event.
4. Write a program to accept the user first name and last name and return only first name on using substring function on on change event using document ObjectModel.
5. Write a program to replace the old password with new password on button click event and display output using alert.
6. Write a program to concatenate user first name with last name and convert it into uppercase on onkeydown & onkeyup event and display at the textbox.
7. Validations for html form using javascript

* Write a Program to Accept UserName, UserAge, UserPhoneNumber and UserEmailID.
* Check, No user input is left or blank.
* User Name length should be 10 char long.
* User Age should be more than 20 and less than 90.
* User Phone length should be 10 digit long.
* Also check for email id verification.
* Note:-User inner html for displaying an error message.

Code:-

<!DOCTYPE*html*>

<html>

<head>

    <title>Email Validation</title>

</head>

<body>

    <h2>Email Validation</h2>

    <input*type*="text"*id*="email"*placeholder*="Enter your email">

    <button*onclick*="validateEmail()">Submit</button>

    <p*id*="result"></p>

    <script>

        functionvalidateEmail()

        {

            varemail = document.getElementById("email").value;

            varpos = email.indexOf('@');

            if (pos!==-1)

            {

                document.getElementById("result").innerHTML = "Position of @: "+pos;

            }

            else

            {

                document.getElementById("result").innerHTML = "Email is invalid.";

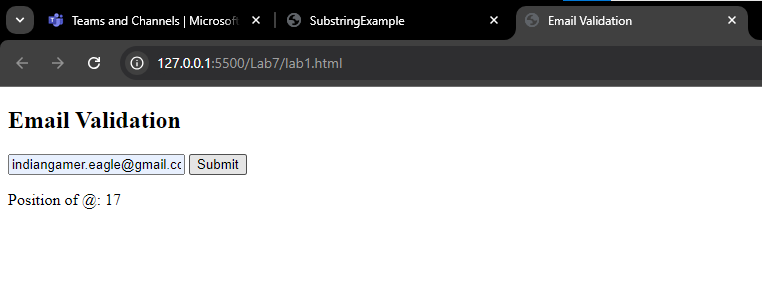
            }

        }

    </script>

</body>

</html>



<!DOCTYPE*html*>

<html>

<head>

    <title>Password Comparison</title>

</head>

<body align="center">

    <h2>Password Comparison</h2>

    <input*type*="password"*id*="password"*placeholder*="Enter password"><br><br>

    <input*type*="password"*id*="confirmPassword"*placeholder*="Confirm password"><br><br>

    <button*onmousedown*="comparePasswords()">Check</button>

    <p*id*="result"></p>

    <script>

        functioncomparePasswords() {

            varpassword = document.getElementById("password").value;

            varconfirmPassword = document.getElementById("confirmPassword").value;

            document.getElementById("result").innerHTML =

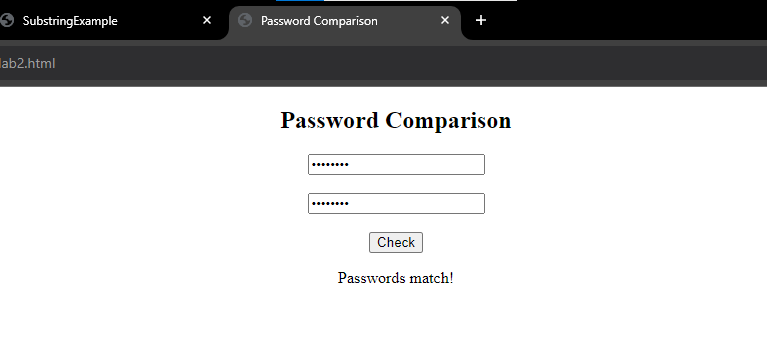
                password===confirmPassword?"Passwords match!":"Passwords do not match!";

        }

    </script>

</body>

</html>



<!DOCTYPE*html*>

<html>

<head>

    <title>Slice Characters</title>

</head>

<body>

    <h2>Slice Characters</h2>

    <input*type*="text"*id*="inputText"*placeholder*="Enter text">

    <button*onclick*="sliceCharacters()">Submit</button>

    <p*id*="result"></p>

    <script>

        functionsliceCharacters() {

            varinput = document.getElementById("inputText").value;

            varsliced = input.slice(0, 3);

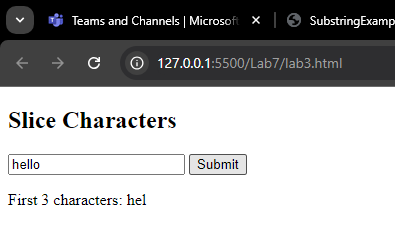
            document.getElementById("result").innerHTML = "First 3 characters: "+sliced;

        }

    </script>

</body>

</html>



<html>

<head>

    <title>SubstringExample</title>

</head>

<body>

    <form>

        <label for="firstName">First Name:</label>

        <input type="text" id="firstName" required>

        <br>

        <label for="lastName">Last Name:</label>

        <input type="text" id="lastName" required>

    </form>

    <script>

        document.getElementById("firstName").onchange = function() {

            let firstName = document.getElementById("firstName").value;

            let result = firstName.substring(0);

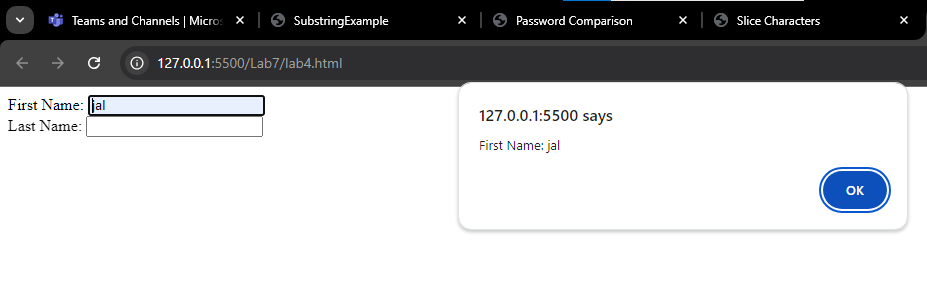
            alert("First Name: " + result);

        };

    </script>

</body>

</html>



<html>

<head>

    <title>PasswordReplace</title>

</head>

<body>

    <form>

        <label for="oldPassword">Old Password:</label>

        <input type="password" id="oldPassword" required>

        <br>

        <label for="newPassword">New Password:</label>

        <input type="password" id="newPassword" required>

        <br>

        <button type="button" id="replaceBtn">Replace Password</button>

    </form>

    <script>

        document.getElementById("replaceBtn").onclick = function() {

            let newPassword = document.getElementById("newPassword").value;

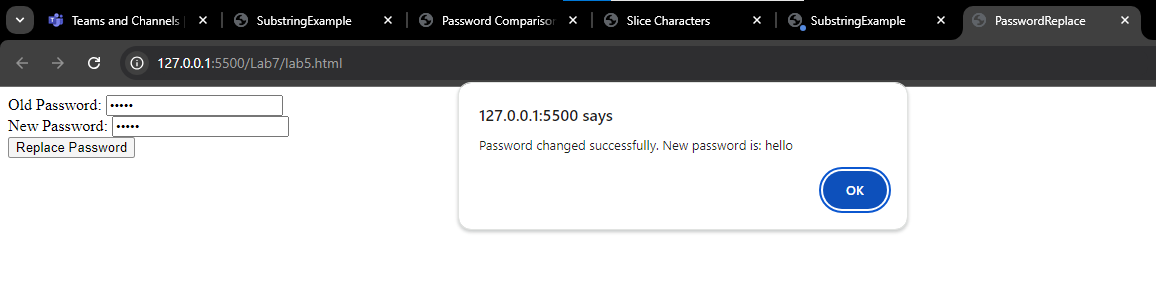
            alert("Password changed successfully. New password is: " + newPassword);

        };

    </script>

</body>

</html>



<html>

<head>

    <title>Concatenate Names</title>

</head>

<body>

    <form>

        <label for="firstName">First Name:</label>

        <input type="text" id="firstName" required>

        <br>

        <label for="lastName">Last Name:</label>

        <input type="text" id="lastName" required>

        <br>

        <input type="text" id="result" readonly>

    </form>

    <script>

        function concatenateNames() {

            let firstName = document.getElementById("firstName").value;

            let lastName = document.getElementById("lastName").value;

            let fullName = (firstName + " " + lastName).toUpperCase();

            document.getElementById("result").value = fullName;

        }

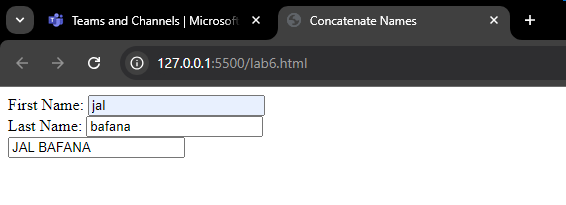
        document.getElementById("firstName").onkeydown = concatenateNames;

        document.getElementById("lastName").onkeyup = concatenateNames;

    </script>

</body>

</html>



<html>

<head>

    <title>Form Validation</title>

</head>

<body>

    <form id="userForm">

        <label for="userName">User Name:</label>

        <input type="text" id="userName" required>

        <span id="userNameError" style="color:red;"></span>

        <br>

        <label for="userAge">User Age:</label>

        <input type="number" id="userAge" required>

        <span id="userAgeError" style="color:red;"></span>

        <br>

        <label for="userPhone">User Phone:</label>

        <input type="text" id="userPhone" required>

        <span id="userPhoneError" style="color:red;"></span>

        <br>

        <label for="userEmail">User Email:</label>

        <input type="email" id="userEmail" required>

        <span id="userEmailError" style="color:red;"></span>

        <br>

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

    </form>

    <script>

        document.getElementById("userForm").onsubmit = function(event) {

            event.preventDefault();

            let userName = document.getElementById("userName").value;

            let userAge = document.getElementById("userAge").value;

            let userPhone = document.getElementById("userPhone").value;

            let userEmail = document.getElementById("userEmail").value;

            // Clear previous error messages

            document.getElementById("userNameError").innerHTML = "";

            document.getElementById("userAgeError").innerHTML = "";

            document.getElementById("userPhoneError").innerHTML = "";

            document.getElementById("userEmailError").innerHTML = "";

            let isValid = true;

            // Name validation

            if (userName.length < 10) {

                document.getElementById("userNameError").innerHTML = "Username should be 10 characters long.";

                isValid = false;

            }

            // Age validation

            if (userAge < 20 || userAge > 90) {

                document.getElementById("userAgeError").innerHTML = "Age should be between 20 and 90.";

                isValid = false;

            }

            // Phone number validation

            if (userPhone.length !== 10) {

                document.getElementById("userPhoneError").innerHTML = "Phone number should be 10 digits long.";

                isValid = false;

            }

            // Email validation

            if (!userEmail.includes("@")) {

                document.getElementById("userEmailError").innerHTML = "Invalid email.";

                isValid = false;

            }

            if (isValid) {

                alert("Form submitted successfully!");

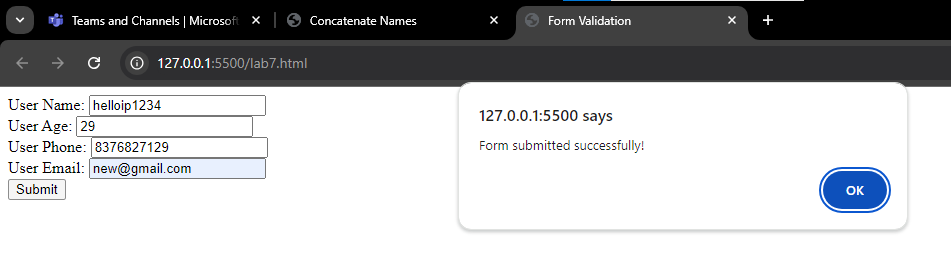
            }

        };

    </script>

</body>

</html>



[Note:-Write your observation and learning]: Form validation enhances data accuracy and user experience, while clear error messages and real-time feedback simplify form corrections, showcasing the importance of clean code structure and JavaScript interaction.

Conclusion:- This experiment helps us understand the importance of real-time form validation for both accuracy and enhancement of user experience.