

JavaScript Form Validation

Data validation is the process of ensuring that user input is clean, correct, and useful.

- **Basic Validation** – First of all, the form must be checked to make sure all the mandatory fields are filled in. It would require just a loop through each field in the form and check for data.
- **Data Format Validation** – Secondly, the data that is entered must be checked for correct form and value. Your code must include appropriate logic to test correctness of data.

Data Validation

Typical validation tasks are:

- has the user filled in all required fields?
- has the user entered a valid date?
- has the user entered text in a numeric field?

Most often, the purpose of data validation is to ensure correct user input. Validation can be defined by many different methods, and deployed in many different ways.

Server side validation is performed by a web server, after input has been sent to the server.

Client side validation is performed by a web browser, before input is sent to a web server.

EXAMPLE 1 : BASIC CODE TO CHECK IF THE INPUTTED VALUE LIES BETWEEN 1 AND 10

```
<html>
<body>

<h2>JavaScript Can Validate Input</h2>

<p>Please input a number between 1 and 10:</p>

<input id="numb">

<button type="button" onclick="myFunction()">Submit</button>

<p id="demo"></p>

<script>
```

```

function myFunction() {
    var x, text;

    // Get the value of the input field with id="numb"
    x = document.getElementById("numb").value;

    // If x is Not a Number or less than one or greater than 10
    if (isNaN(x) || x < 1 || x > 10) {
        text = "Input not valid";
    } else {
        text = "Input OK";
    }
    document.getElementById("demo").innerHTML = text;
}
</script> </body> </html>

```

EXAMPLE 2

<https://www.javatpoint.com/javascript-form-validation>

In this example, we are going to validate the name and password. The name can't be empty and password can't be less than 6 characters long.

Here, we are validating the form on form submit. The user will not be forwarded to the next page until given values are correct.

```

<html>
<body>
<script>
function validateform(){
var name=document.myform.name.value;
var password=document.myform.password.value;

if (name==null || name==""){
    alert("Name can't be blank");
    return false;
}else if(password.length<6){
    alert("Password must be at least 6 characters long.");
    return false;
}
}
</script>
<body>

```

```

<form name="myform" method="post" action="http://www.javatpoint.com/javascriptpages/valid.jsp" onsubmit="return validateform()" >
Name: <input type="text" name="name"><br/>
Password: <input type="password" name="password"><br/>
<input type="submit" value="register">
</form>
</body>
</html>

```

EXAMPLE 3

JavaScript Retype Password Validation

```

<html>
<head>
<script type="text/javascript">
function matchpass(){
var firstpassword=document.f1.password.value;
var secondpassword=document.f1.password2.value;

if(firstpassword==secondpassword){
return true;
}
else{
alert("password must be same!");
return false;
}
}
</script>
</head>
<body>

<form name="f1" action="http://www.javatpoint.com/javascriptpages/valid.jsp" onsubmit="return matchpass()">
Password:<input type="password" name="password" /><br/>
Re-enter Password:<input type="password" name="password2"/><br/>

```

```
<input type="submit">
</form>

</body>
</html>
```

EXAMPLE 4

TO CHECK FOR NUMERIC VALUES

```
<html>
<head>
<script>
function validate(){
var num=document.myform.num.value;
if (isNaN(num)){
    document.getElementById("numloc").innerHTML="Enter Numeric value only";
    return false;
}else{

alert ("THANKS")
    return true;
    }
}
</script>
</head>

<body>
<form name="myform" onsubmit="return validate()" >
Number: <input type="text" name="num"><span id="numloc"></span><br/>
<input type="submit" value="submit">
</form>

</body>
```

```
</html>
```

EXAMPLE 5 : EMAIL VALIDATION

```
<html>
<body>
<script>
function validateemail()
{
var x=document.myform.email.value;
var atposition=x.indexOf("@");
var dotposition=x.lastIndexOf(".");
if (atposition<1 || dotposition<atposition+2 || dotposition+2>=x.length){
    alert("Please enter a valid e-
mail address \n atpostion:"+atposition+"\n dotposition:"+dotposition);
    return false;
}
else
    alert ("Valid e mail id")
}
</script>
<body>
<form name="myform" method="post" onsubmit="return validateemail();">
Email: <input type="text" name="email"><br/>

<input type="submit" value="register">
</form>
</body>
</html>
```

EXAMPLE 5 : FORM VALIDATION

```
<html>
  <head>
    <title>Form Validation</title>
    <script type = "text/javascript">
      <!--
        // Form validation code will come here.
      //-->
      function validate() {

        if( document.myForm.Name.value == "" ) {
          alert( "Please provide your name!" );
          document.myForm.Name.focus() ;
          return false;
        }
        if( document.myForm.Email.value == "" ) {
          alert( "Please provide your Email!" );
          document.myForm.Email.focus() ;
          return false;
        }
        else
        {
          var emailID = document.myForm.Email.value;
          atpos = emailID.indexOf("@");
          dotpos = emailID.lastIndexOf(".");

          if (atpos < 1 || ( dotpos - atpos < 2 )) {
            alert("Please enter correct email ID")
            document.myForm.Email.focus() ;
            return false;
          }
          return( true );
        }
      }

      if( document.myForm.Zip.value == "" || isNaN( document.myForm.Zip.value ) ||
      |
      document.myForm.Zip.value.length != 5 ) {

        alert( "Please provide a zip in the format #####" );
        document.myForm.Zip.focus() ;
        return false;
      }
    }
  }
</script>
</head>
</html>
```

```

        if( document.myForm.Country.value == "-1" ) {
            alert( "Please provide your country!" );
            return false;
        }
        return( true );
    }
}

</script>
</head>

<body>
    <form action = "/cgi-bin/test.cgi" name = "myForm" onsubmit = "return(validate());">
        <table cellpadding = "2" cellspacing = "2" border = "1">

            <tr>
                <td align = "right">Name</td>
                <td><input type = "text" name = "Name" /></td>
            </tr>

            <tr>
                <td align = "right">EMail</td>
                <td><input type = "text" name = "EMail" /></td>
            </tr>

            <tr>
                <td align = "right">Zip Code</td>
                <td><input type = "text" name = "Zip" /></td>
            </tr>

            <tr>
                <td align = "right">Country</td>
                <td>
                    <select name = "Country">
                        <option value = "-1" selected>[choose yours]</option>
                        <option value = "1">USA</option>
                        <option value = "2">UK</option>
                        <option value = "3">INDIA</option>
                    </select>
                </td>
            </tr>

            <tr>

```

```

        <td align = "right"></td>
        <td><input type = "submit" value = "Submit" /></td>
    </tr>

</table>
</form>
</body>
</html>

```

EXAMPLE 6

```

<html>
<head>
<title>JavaScript Form validation</title>
<script>
// Defining a function to display error message
function printError(elemId, hintMsg) {
    document.getElementById(elemId).innerHTML = hintMsg;
}

// Defining a function to validate form
function validateForm() {
    // Retrieving the values of form elements
    var name = document.contactForm.name.value;
    var email = document.contactForm.email.value;
    var mobile = document.contactForm.mobile.value;
    var country = document.contactForm.country.value;
    var gender = document.contactForm.gender.value;
    var hobbies = [];
    var checkboxes = document.getElementsByName("hobbies[]");
    for(var i=0; i < checkboxes.length; i++) {
        if(checkboxes[i].checked) {
            // Populate hobbies array with selected values
            hobbies.push(checkboxes[i].value);
        }
    }

    // Defining error variables with a default value
    var nameErr = emailErr = mobileErr = countryErr = genderErr = true;

```



```

// Validate name
if(name == "") {
    printError("nameErr", "Please enter your name");
} else {
    var regex = /^[a-zA-Z\s]+$/;
    if(regex.test(name) === false) {
        printError("nameErr", "Please enter a valid name");
    } else {
        printError("nameErr", "");
        nameErr = false;
    }
}

// Validate email address
if(email == "") {
    printError("emailErr", "Please enter your email address");
} else {
    // Regular expression for basic email validation
    var regex = /^[a-zA-Z0-9_\.\s]+@[a-zA-Z0-9_\.\s]+\.[a-zA-Z]{2,4}$/;
    if(regex.test(email) === false) {
        printError("emailErr", "Please enter a valid email address");
    } else{
        printError("emailErr", "");
        emailErr = false;
    }
}

// Validate mobile number
if(mobile == "") {
    printError("mobileErr", "Please enter your mobile number");
} else {
    var regex = /^[1-9]\d{9}$/;
    if(regex.test(mobile) === false) {
        printError("mobileErr", "Please enter a valid 10 digit mobile number"
);
    } else{
        printError("mobileErr", "");
        mobileErr = false;
    }
}

// Validate country
if(country == "Select") {
    printError("countryErr", "Please select your country");
} else {

```

```

        printError("countryErr", "");
        countryErr = false;
    }

    // Validate gender
    if(gender == "") {
        printError("genderErr", "Please select your gender");
    } else {
        printError("genderErr", "");
        genderErr = false;
    }

    // Prevent the form from being submitted if there are any errors
    if((nameErr || emailErr || mobileErr || countryErr || genderErr) == true) {
        return false;
    } else {
        // Creating a string from input data for preview
        var dataPreview = "You've entered the following details: \n" +
            "Full Name: " + name + "\n" +
            "Email Address: " + email + "\n" +
            "Mobile Number: " + mobile + "\n" +
            "Country: " + country + "\n" +
            "Gender: " + gender + "\n";

        if(hobbies.length) {
            dataPreview += "Hobbies: " + hobbies.join(", ");
        }

        // Display input data in a dialog box before submitting the form
        alert(dataPreview);
    }
};
</script>
</head>
<body>
<form name="contactForm" onsubmit="return validateForm()" action="/examples/actions/confirmation.php" method="post">
    <h2>Application Form</h2>
    <div class="row">
        <label>Full Name</label>
        <input type="text" name="name">
        <div class="error" id="nameErr"></div>
    </div>
    <div class="row">
        <label>Email Address</label>
        <input type="text" name="email">
        <div class="error" id="emailErr"></div>

```

```

</div>
<div class="row">
  <label>Mobile Number</label>
  <input type="text" name="mobile" maxlength="10">
  <div class="error" id="mobileErr"></div>
</div>
<div class="row">
  <label>Country</label>
  <select name="country">
    <option>Select</option>
    <option>Australia</option>
    <option>India</option>
    <option>United States</option>
    <option>United Kingdom</option>
  </select>
  <div class="error" id="countryErr"></div>
</div>
<div class="row">
  <label>Gender</label>
  <div class="form-inline">
    <label><input type="radio" name="gender" value="male"> Male</label>
    <label><input type="radio" name="gender" value="female"> Female</label>
  </div>
  <div class="error" id="genderErr"></div>
</div>
<div class="row">
  <label>Hobbies <i>(Optional)</i></label>
  <div class="form-inline">
    <label><input type="checkbox" name="hobbies[]" value="sports"> Sports
  </label>
    <label><input type="checkbox" name="hobbies[]" value="movies"> Movies
  </label>
    <label><input type="checkbox" name="hobbies[]" value="music"> Music</label>
  </div>
</div>
<div class="row">
  <input type="submit" value="Submit">
</div>
</form>
</body>
</html>

```