**JAVASCRIPT FORM VALIDATIONS**

**What is a Webform?**

A Webform (HTML form) allows a user to enter data that is sent to a server for processing. These forms contains checkboxes, radio buttons, or text fields. Webforms are defined in formal programming languages such as HTML, Perl, Php, Java or .NET.

**JavaScript Form Validation:**

HTML form validation can be done by a JavaScript. If a form field (fname) is empty, this function alerts a message, and returns false, to prevent the form from being submitted. JavaScript, provides a way to validate form's data on the client's computer before sending it to the web server. Form validation generally performs two functions.

**Basic Validation** - The form must be checked to make sure data was entered into each form field that required it. This would need just loop through each field in the form and check for data.

**Data Format Validation** - The data that is entered must be checked for correct form and value. This would need to put more logic to test correctness of data.

**Data Validation**

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

Typical validation tasks are:

Form data that typically are checked by a JavaScript:

1. If a text input is empty or not

2. If a text input is all numbers

3. If a text input is all letters (only Alphabets)

4. has the user left required fields empty?

5. has the user entered a valid e-mail address?

6. If a text input is all alphanumeric characters (numbers & letters)

7. If a text input has the correct number of characters in it

8. If a selection has been made from an HTML select

9. has the user entered a valid date?

10. has the user entered text in a numeric field?

Most often, the purpose of data validation is to ensure correct input to a computer application.

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.

**HTML Constraint Validation**

HTML5 introduced a new HTML validation concept called constraint validation.

HTML constraint validation is based on:

Constraint validation HTML Input Attributes

Constraint validation CSS Pseudo Selectors

Constraint validation DOM Properties and Methods

**Example:**

<head>

<script type='text/javascript'>

function notEmpty()

{

var myTextField = document.getElementById('myText');

if(myTextField.value != "")

{

alert("You entered: " + myTextField.value)

}

else

{

alert("Would you please enter some text?")

}

}

</script>

</head>

<body>

<form action='nit.html'>

<input type='text' id='myText' /><br/>

<input type='button' onclick='notEmpty()' value='Form Validate' />

</form>

</body>

**Example:**

<head>

<script>

function validateForm()

{

var x = document.forms["myForm"]["fname"].value;

if (x == null || x == "") {

alert("Name must be filled out");

return false;

}

}

</script>

</head>

<body>

<form name="myForm" action="nit.html"

onsubmit="return validateForm()" method="post">

Enter Name: <br/>

<input type="text" name="fname">

<input type="submit" value="Submit">

</form>

</body>

**Example:**

<head>

<script type="text/javascript">

function nameValidate( )

{

valid = true;

if (document.getElementById('name').value == "" )

{

alert( "Should not Empty...!!" );

valid = false;

}

return valid;

}

</script>

</head>

<body>

<form name="form1" method="post" action="nit.html" onsubmit="return nameValidate( );">

Enter Name: <br/>

<input type="text" id="name" /><br/>

<input type="submit" value="Click" />

</form>

</body>

**Example:**

<body>

<form action="nit.html" method="post">

<input type="text" name="fname" required>

<input type="submit" value="Submit">

</form>

<p>If you click submit, without filling out the text field, your browser will display an error message.</p>

</body>

**The disabled Attribute**

The disabled attribute specifies that the input field is disabled. A disabled element is un-usable and un-clickable. Disabled elements will not be submitted.

**Example:**

<body>

<form action="nit.html">

First name:<br>

<input type="text" name="firstname" value ="John" disabled><br>

Last name:<br>

<input type="text" name="lastname"><br/>

<input type='submit' value="Disabled">

</form>

</body>

**Example:**

<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="nit.html" onsubmit="return validateform()" >

Name: <br>

<input type="text" name="name"><br/>

Password: <br>

<input type="password" name="password"><br/>

<input type="submit" value="register">

</form>

</body>

**Example:**

<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="nit.html" onsubmit="return matchpass()">

Password:<br>

<input type="password" name="password" /><br/>

Re-enter Password:<br>

<input type="password" name="password2"/><br/>

<input type="submit" value="Login">

</form>

</body>

**Example:**

<head>

<script>

function validate()

{

var num=document.myform.num.value;

if (isNaN(num))

{

document.getElementById("numloc").innerHTML="Enter Numeric value only";

return false;

}

else

{

return true;

}

}

</script>

</head>

<body>

<form name="myform" action="nit.html" onsubmit="return validate()" >

Enter Number Only: <br/>

<input type="text" name="num"><span id="numloc"></span><br/>

<input type="submit" value="submit">

</form>

</body>

**Example:**

<html>

<body>

<script type="text/javascript">

function validate()

{

var name=document.f1.name.value;

var passwordlength=document.f1.password.value.length;

var status=false;

if(name==null||name=="")

{

document.getElementById("namelocation").innerHTML=

"<img src='unchecked.gif'>Please enter your name";

status=false;

}

else

{

document.getElementById("namelocation").innerHTML="<img src='checked.gif'/>";

status=true;

}

if(passwordlength<6)

{

document.getElementById("passwordlocation").innerHTML=

"<img src='unchecked.gif'/> Password must be greater than 6";

status=false;

}

else

{

document.getElementById("passwordlocation").innerHTML="<img src='checked.gif'/>";

status=true;

}

return status;

}

</script>

<form name="f1" action="nit.html" onsubmit="return validate()">

<table>

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

<span id="namelocation" style="color:red"></span></td></tr>

<tr><td>Password:</td><td><input type="password" name="password"/>

<span id="passwordlocation" style="color:red"></span></td></tr>

<tr><td colspan="2"><input type="submit" value="register"/> </td></tr>

</table>

</form>

</body>

**JavaScript Validation API**

Constraint Validation DOM Methods

Property Description

checkValidity() Returns true if an input element contains valid data.

setCustomValidity() Sets the validationMessage property of an input element.

Example:

<body>

<p>Enter a number and click OK:</p>

<input id="id1" type="number" min="100" max="300">

<button onclick="myFunction()">OK</button>

<p>If the number is less than 100 or greater than 300, an error message will be displayed.</p>

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

<script>

function myFunction()

{

var inpObj = document.getElementById("id1");

if (inpObj.checkValidity() == false) {

document.getElementById("demo").innerHTML = inpObj.validationMessage;

}

else

{

document.getElementById("demo").innerHTML = "Input OK";

}

}

</script>

</body>

**Example:**

<body>

<p>Enter a number and click OK:</p>

<input id="id1" type="number" max="100">

<button onclick="myFunction()">OK</button>

<p>If the number is greater than 100 (the input's max attribute), an error message will be displayed.</p>

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

<script>

function myFunction()

{

var txt = "";

if (document.getElementById("id1").validity.rangeOverflow)

{

txt = "Value too large";

}

else

{

txt = "Input OK";

}

document.getElementById("demo").innerHTML = txt;

}

</script>

</body>

**VALIDATING CHECKBOXES**

<head>

<script type="text/javascript">

function formValidate()

{

var choice1=document.getElementById("orange").checked;

var choice2=document.getElementById("apple").checked;

if ((choice1=="")&&(choice2==""))

{

alert("Choose a fruit");

return false;

}

return true;

}

</script>

</head>

<body>

<form name="form1" onsubmit="return formValidate()" action='nit.html'>

<input type="checkbox" id="orange">Orange

<input type="checkbox" id="apple">Apple

<input type="submit" value="Submit" />

<input type="reset" value="Reset" />

</form>

</body>

**VALIDATING RADIO BUTTONS**

<html>

<head>

<script type="text/javascript">

function validate(){

var r1 = document.getElementById('male').checked;

var r2 = document.getElementById('female').checked;

if((r1=="") && (r2=="")){

alert("Select either Male or Female");

return false;

}

return true;

}

</script>

</head>

<body>

You are?

<form name="form1" method="post" action='nit.html'>

<input type="radio" id="male" value="male">Male

<input type="radio" id="female" value="female">Female

<input type="submit" onclick="return validate();" value='Submit'>

</form>

</body>

</html>

**Validating Text Fields**

Example

<head>

<title>

Field Validations

</title>

<script type='text/javascript'>

function funchklen(len,cid)

{

if(len<6)

{

document.getElementById(cid).style.borderColor="red"

}

else

{

document.getElementById(cid).style.borderColor="silver"

}

}

</script>

<style>

input{

border:1px solid silver;

}

</style>

</head>

<body>

Username:<input type="text" id="txt1" onblur="funchklen(this.value.length,'txt1')" onclick="funremove('txt1')">

<br>

Password:<input type="text" id="txt2" onblur="funchklen(this.value.length,'txt2')" onclick="funremove('txt2')">

<br>

</body>

**Return the Value of button:**

<body>

<input type="button" id="button1" value="Click Me!">

<p>The text on the button is:

<script>

document.write(document.getElementById("button1").value);

</script></p>

</body>

**Disable Button**

<html>

<script>

function disableElement()

{

document.getElementById("firstbtn").disabled=true;

}

</script>

<body>

<form>

Buttons:

<input type="button" id="firstbtn" value="OK">

<input type="button" id="secondbtn" value="OK">

</form>

<button onclick="disableElement()">Disable button</button>

</body>

</html>

Example: (Disable button)

<head>

<script type='text/javascript'>

function fun1()

{

if(document.getElementById('un').value.length>=6&& document.getElementById('pw').value.length>=6)

{

document.getElementById('but1').disabled=false

}

else

{

document.getElementById('but1').disabled=true

}

}

</script>

</head>

<body>

<input type='text' id='un' onblur='fun1()'>

<br>

<input type='password' id='pw' onblur='fun1()'>

<br/>

<input type="button" value="Click" id="but1" disabled>

</body>

**Example:**

Firstname:<br/>

<input id='un' onblur="lbl1.innerHTML=this.value">

<br/>

<label id='lbl1'>

**Email Validation:**

Every email is made up for 5 parts:

1. A combination of letters, numbers, periods, hyphens, plus signs, and/or underscores

2. The at symbol @

3. A combination of letters, numbers, hyphens, and/or periods

4. A period

5. The top level domain (com, net, org, us, gov, ...)

**Valid Examples:**

**info@nareshit.com**

The regular expression to check for all of this is a little overkill and beyond the scope of this tutorial to explain thoroughly.

**Example:**

<html>

<head>

<script type='text/javascript'>

function chkemail(val,sid)

{

exp=/^([a-zA-Z0-9\_.-])+@([a-zA-Z0-9\_.-])+\.([a-zA-Z])+([a-zA-Z])+/;

if(!exp.test(val))

{

document.getElementById(sid).innerHTML="Invalid Email id"

document.getElementById(sid).style.color="Red"

}

else

{

document.getElementById(sid).innerHTML=""

}

}

</script>

</head>

<body>

EmailID:<input type="text" id="txtemail" placeholder="example@domain.com" onblur="chkemail(this.value,'sp2')"><span id="sp2"></span>

</body>

</html>

**Example:**

<html>

<head>

<title>Form Validation Example</title>

<script>

function ValidateContactForm()

{

var name = document.ContactForm.Name;

var email = document.ContactForm.Email;

var phone = document.ContactForm.Telephone;

var nocall = document.ContactForm.DoNotCall;

var what = document.ContactForm.Subject;

var comment = document.ContactForm.Comment;

if (name.value == "")

{

window.alert("Please enter your name.");

name.focus();

return false;

}

if (email.value == "")

{

window.alert("Please enter a valid e-mail address.");

email.focus();

return false;

}

if (email.value.indexOf("@", 0) < 0)

{

window.alert("Please enter a valid e-mail address.");

email.focus();

return false;

}

if (email.value.indexOf(".", 0) < 0)

{

window.alert("Please enter a valid e-mail address.");

email.focus();

return false;

}

if ((nocall.checked == false) && (phone.value == ""))

{

window.alert("Please enter your telephone number.");

phone.focus();

return false;

}

if (what.selectedIndex < 1)

{

alert("Please tell us how we can help you.");

what.focus();

return false;

}

if (comment.value == "")

{

window.alert("Please provide a detailed description or comment.");

comment.focus();

return false;

}

return true;

}

function EnableDisable(chkbx)

{

if(chkbx.checked == true)

{

document.ContactForm.Telephone.disabled = true;

}

else

{

document.ContactForm.Telephone.disabled = false;

}

}

</script>

</head>

<body>

<form method="post" action="mailto:raju@cohowinery.com"

name="ContactForm" onsubmit="return ValidateContactForm();">

<p>Name: <input type="text" size="65" name="Name"></p>

<p>E-mail Address: <input type="text" size="65" name="Email"></p>

<p>Telephone: <input type="text" size="65" name="Telephone"><br>

<input type="checkbox" name="DoNotCall"

onclick="EnableDisable(this);"> Please do not call me.</p>

<p>What can we help you with?

<select type="text" value="" name="Subject">

<option> </option>

<option>Customer Service</option>

<option>Question</option>

<option>Comment</option>

<option>Consultation</option>

<option>Other</option>

</select></p>

<p>Comments: <textarea cols="55" name="Comment"> </textarea></p>

<p><input type="submit" value="Send" name="submit">

<input type="reset" value="Reset" name="reset"></p>

</form>

</body>

</html>