Tutorial No.__6_____

Title: Form Validation with JavaScript

Batch: B2 **Roll No.:1914078** **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):

Program:

```
<!DOCTYPE html>
<html lang="en">
<head>
<meta charset="UTF-8">
<title>JavaScript Form validation</title>
<link rel="stylesheet" href="/examples/css/form-style.css">
<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 middlename=document.contactForm.middlename.value;
   var lastname = document.contactForm.lastname.value;
   var email = document.contactForm.email.value;
   var mobile = document.contactForm.mobile.value;
   var state = document.contactForm.state.value;
   var password = document.contactForm.password.value;
   var confirmPassword =document.contactForm.confirmPassword.value;



  // Defining error variables with a default value
   var nameErr =lastnameErr= emailErr = mobileErr = stateErr = passErr= true;

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

   // Validate email address
   if(email == "") {
      printError("emailErr", "*Please enter your email address");
   } else {
      // Regular expression for basic email validation
      var regex = /^\S+@\S+\.\S+$/;
      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 State
    if(state == "Select") {
        printError("stateErr", "*Please select a state");
    } else {
        printError("stateErr", "");
        stateErr = false;
    }

// Validate Password
    if (password != confirmPassword) {
        printError("passErr","*Passwords do not match.");
    }else{
        printError("passErr","")
        passErr= false;
    }


    // Prevent the form from being submitted if there are any errors
    if((nameErr || emailErr || mobileErr || stateErr|| passErr) == 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" +
                          "Middle Name: " + middlename + "\n" +
                          "Last Name: " + lastname+ "\n"+
                          "Email Address: " + email + "\n" +
                          "Mobile Number: " + mobile + "\n" +
                          "State: " + state + "\n";
        // Display input data in a dialog box before submitting the form
        alert(dataPreview);
    }
};
</script>
<style>
```

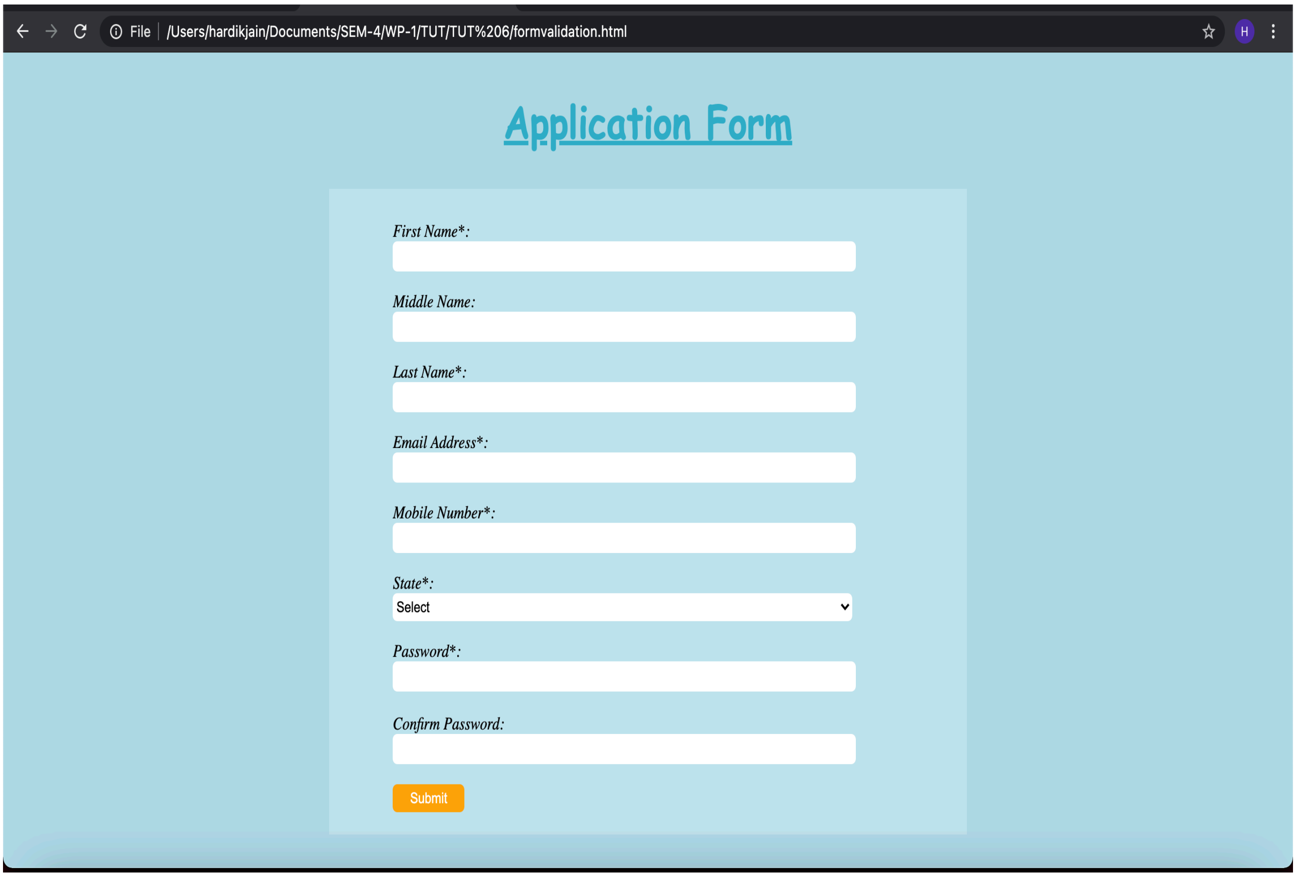
```
  body{
    background-color: lightblue;
  }
  .form{
        padding-left:5%;
        padding-right:5%;
        position: relative;
        background-color:#ffffff40;
        padding-bottom:20px;
        width:40%;
        margin: auto;
        padding-top:2%;
  }

  h2{
    font-family: "Comic Sans MS", "Comic Sans", cursive;
    font-size: 40px;
    color: #32b0c9;
    text-align: center;
  }

  .row input{
        background-color: white;
        color: black;
        width:90%;
        height:25px;
        border-radius:5px;
        border:none;
      }

  .row select{
        background-color: white;
        color: black;
        width:90%;
        height:25px;
        border-radius:5px;
        border:none;
      }

  .row label{
    color:black;
  }
  .button{
        margin-right:30px;
        height:25px;
        width:80px;
        color:white;
        border:none;
        background-color:#ffa30f;
        cursor:pointer;
        border-radius:5px;
      }
</style>
```

```
</head>
<body>
<h2><u>Application Form</u></h2>
<form name="contactForm" onsubmit="return validateForm()"
action="file:///Users/hardikjain/Documents/SEM-4/WP-
1/TUT/TUT%206/formvalidation.html" method="post" class="form">
   <div class="row">
      <label><i>First Name*:</i></label><br>
      <input type="text" name="name">
      <div class="error" id="nameErr"></div>
   </div><br>
   <div class="row">
      <label><i>Middle Name:</i></label><br>
      <input type="text" name="middlename">
   </div><br>
   <div class="row">
      <label><i>Last Name*:</i></label><br>
      <input type="text" name="lastname">
      <div class="error" id="lastnameErr"></div>
   </div><br>
   <div class="row">
      <label><i>Email Address*:</i></label><br>
      <input type="text" name="email">
      <div class="error" id="emailErr"></div>
   </div><br>
   <div class="row">
      <label><i>Mobile Number*:</i></label><br>
      <input type="text" name="mobile" maxlength="10">
      <div class="error" id="mobileErr"></div>
   </div><br>
   <div class="row">
      <label><i>State*:</i></label><br>
      <select name="state">
         <option>Select</option>
         <option>Goa</option>
         <option>Andaman Nicobar</option>
         <option>Maharashta</option>
         <option>Gujarat</option>
      </select>
      <div class="error" id="stateErr"></div>
   </div><br>
   <div class="row">
      <div style="padding-bottom: 10px;">
      <label><i>Password*:</i></label><br>
      <input type="password" name="password"/><br>
       </div>
       <div style="padding-bottom: 10px;"></div>
      <label><i>Confirm Password:</i></label><br>
      <input type="password" name="confirmPassword"/>
      </div>
      <div class="error" id="passErr"></div>
   </div><br>
```

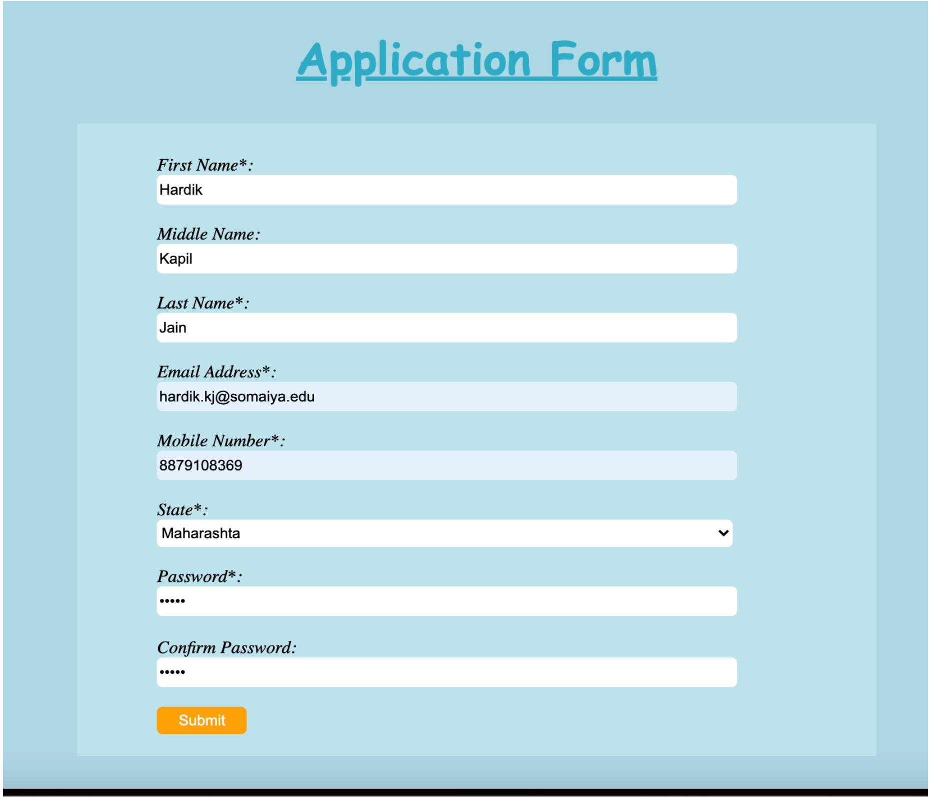
```
        <div class="row">
            <button type="submit" value="Submit" class="button">Submit</button>
        </div>
    </form>
    </body>
    </html>
```

Output:

- **This is the layout of the application form in which JavaScript form validation is implemented.**



- **Here, all the correct information is filled in each input type including the password.**



Application Form

First Name:*
Hardik

Middle Name:
Kapil

Last Name:*
Jain

Email Address:*
hardik.kj@somaiya.edu

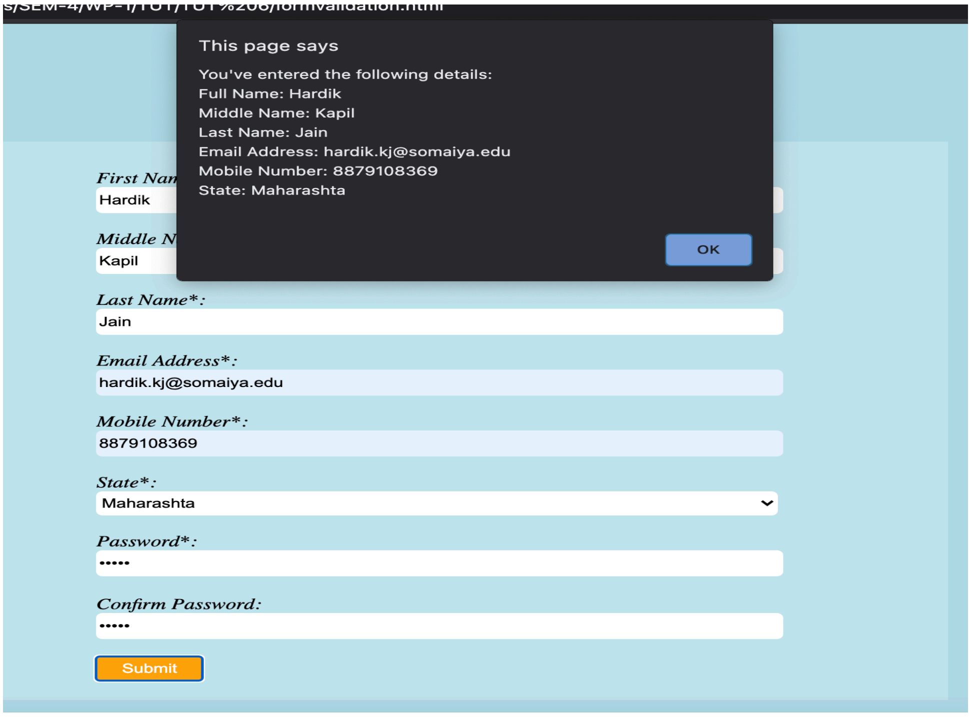
Mobile Number:*
8879108369

State:*
Maharashta

Password:*
•••••

Confirm Password:
•••••

- **After clicking on the submit button we get this output which confirms the details we have entered in the form of alert-**



s/SEM-4/WP-1/TUT/TUT%206/formvalidation.html

This page says

You've entered the following details:
Full Name: Hardik
Middle Name: Kapil
Last Name: Jain
Email Address: hardik.kj@somaiya.edu
Mobile Number: 8879108369
State: Maharashta

First Nam
Hardik

Middle N
Kapil

Last Name:*
Jain

Email Address:*
hardik.kj@somaiya.edu

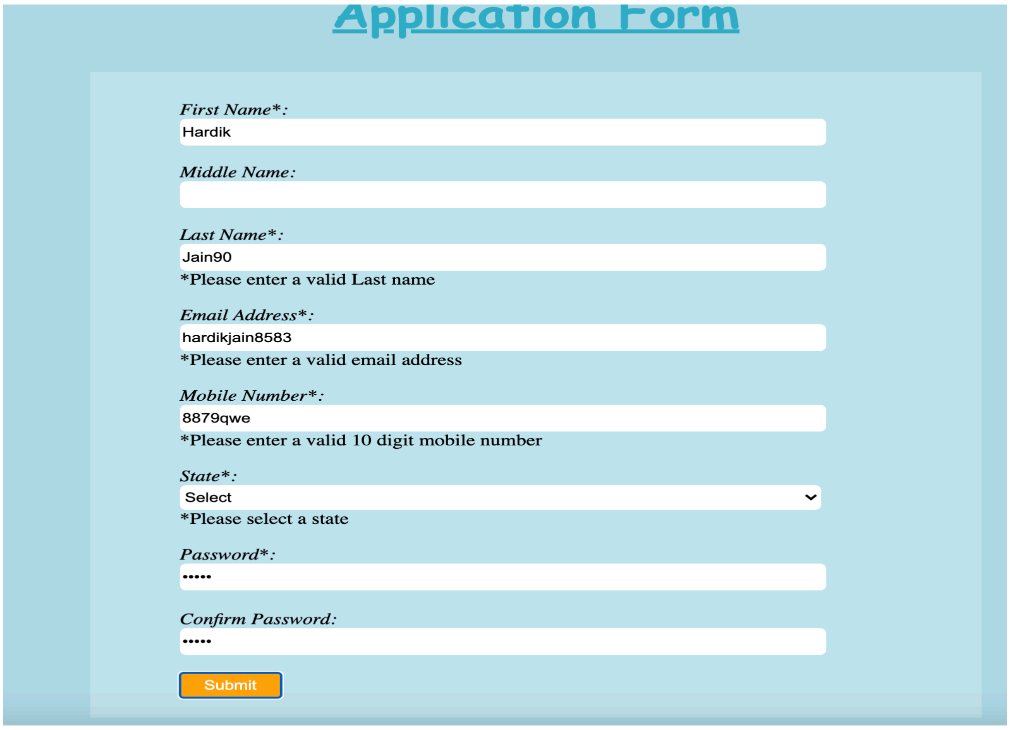
Mobile Number:*
8879108369

State:*
Maharashta

Password:*
•••••

Confirm Password:
•••••

- **Now, we deliberately add information in the wrong form as input and click on the submit button to see all the errors.**



Application Form

First Name:*
Hardik

Middle Name:

Last Name:*
Jain90
*Please enter a valid Last name

Email Address:*
hardikjain8583
*Please enter a valid email address

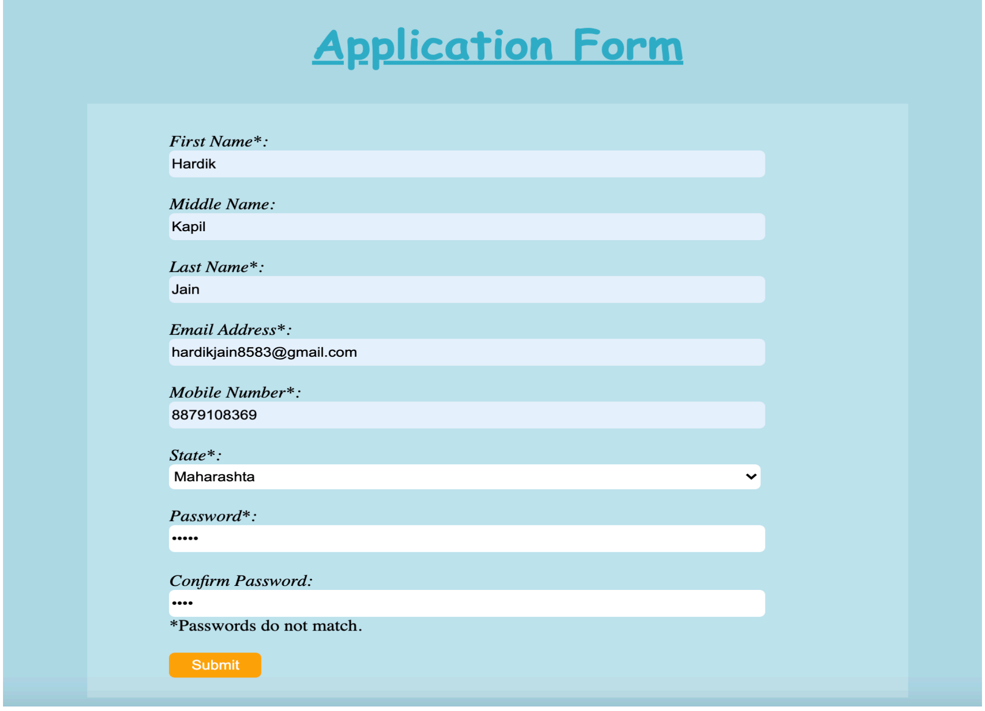
Mobile Number:*
8879qwe
*Please enter a valid 10 digit mobile number

State:*
Select
*Please select a state

Password:*
•••••

Confirm Password:
•••••

- **Here we see, even if the passwords do not match, we get an error on clicking submit button and the form does not get submitted.**



Application Form

First Name:*
Hardik

Middle Name:
Kapil

Last Name:*
Jain

Email Address:*
hardikjain8583@gmail.com

Mobile Number:*
8879108369

State:*
Maharashta

Password:*
•••••

Confirm Password:
••••
*Passwords do not match.

Outcomes:

CO3: Apply Javascript for Web Application development.

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

Through this experiment we learnt how to design a web page containing a form and perform appropriate client-side validation on that form. We learnt the implementation of JavaScript by applying validation in form using Regex/Built in validation/Event handling.

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