



**Gokhale Education Society's
R. H. Sapat College of Engineering, Management
Studies & Research, Nashik-422005
Department of Computer Engineering**

Class: TE B Computer

Name of Subject: Web Technology (310254)

Semester: VI

Subject Teacher: Mrs. R.D.Narwade

Group No: 02

Write a JavaScript and JQuery application using DOM Objects their and properties for desired system with validation.

Group Members:

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THEORY:

JavaScript:

JavaScript is a programming language of HTML as well web. It is preferred for creating network-centric applications. It is integrated and complimentary with Java. As JavaScript is integrated with HTML it is very easy to implement. It is open as well as cross-platform.

Advantages:

The advantages of using JavaScript are –

- ☐ It requires less server interaction
- ☐ Immediate feedback to the visitors
- ☐ Increased interactivity
- ☐ Richer interfaces

JavaScript can be implemented using JavaScript statements that are placed within the `<script>`. You can place the `<script>` tags, containing your JavaScript, anywhere within your web page, but it is normally recommended that you should keep it within the `<head>` tags.

The script tag takes two important attributes: ☐ Language – This attribute specifies what scripting language you are using. Typically, its value will be JavaScript. Although recent versions of HTML (and XHTML, its successor) have phased out the use of this attribute. ☐ Type – This attribute is what is now recommended to indicate the scripting language in use

JQuery :-

JQuery is a lightweight, "write less, do more", JavaScript library. The purpose of JQuery is to make it much easier to use JavaScript on your website. JQuery takes a lot of common tasks that require many lines of JavaScript code to accomplish, and wraps them into methods that you can call with a single line of code. JQuery also simplifies a lot of the complicated things from JavaScript, like AJAX calls and DOM manipulation.

The JQuery library contains the following features:

- HTML/DOM manipulation
- CSS manipulation
- HTML event methods
- Effects and animations
- AJAX
- Utilities

The Document Object Model (DOM) :

The Document Object Model (**DOM**) is a programming interface for HTML and XML documents. ... The Document Object Model (**DOM**) represents that same document so it can be manipulated. The **DOM** is an object-oriented representation of the **web** page, which can be modified with a scripting language such as JavaScript.

DOM Properties:

These are some typical DOM properties:

- `x.innerHTML` - the inner text value of `x` (a HTML element)
- `x.nodeName` - the name of `x`
- `x.nodeValue` - the value of `x`
- `x.parentNode` - the parent node of `x`
- `x.childNodes` - the child nodes of `x`
- `x.attributes` - the attributes nodes of `x`

DOM Methods :

- `x.getElementById(id)` - get the element with a specified `id`
- `x.getElementsByTagName(name)` - get all elements with a specified tag name
- `x.appendChild(node)` - insert a child node to `x`
- `x.removeChild(node)` - remove a child node from `x`

Note: In the list above, `x` is a node object (HTML element).

Validation:

When client enters the all necessary data and press the submit button form validation is done at server side. If data entered by a client is incorrect or missing, the server needs to send all data back to the client and request for resubmission of form with correct information. This is really a lengthy process which puts a lot of load (burden) on the server. So, JavaScript provides a way to validate form's data on the client's side itself before sending it to the web server.

Form validation performs two functions-

- ❑ **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 the data.
- ❑ **Data Format Validation** – Secondly, the data that is entered must be checked for correct format and its value. The code must include appropriate logic to test correctness of data.

CODE:

```
<!DOCTYPE html>
<html lang="en">
<head>
  <meta charset="UTF-8">
  <meta name="viewport" content="width=device-width, initial-scale=1.0">
  <title>JavaScript Form Validation</title>

  <link rel="stylesheet" href="https://maxcdn.bootstrapcdn.com/bootstrap/4.5.2/css/bootstrap.min
.css">

  <!-- jQuery library -->
  <script src="https://ajax.googleapis.com/ajax/libs/jquery/3.5.1/jquery.min.js"></script>

  <!-- Popper JS -->
  <script src="https://cdnjs.cloudflare.com/ajax/libs/popper.js/1.16.0/umd/popper.min.js"></script>

  <!-- Latest compiled JavaScript -->
  <script src="https://maxcdn.bootstrapcdn.com/bootstrap/4.5.2/js/bootstrap.min.js"></script>

</head>
<body>
  <div class="container"> <br>
    <h1 class="text-success text-center"> Complete Form Validation In JavaScript</h1> <br>
    <div class="col-12 m-auto d-block">

      <form action="#" onsubmit="return validation()" class="bg-light">
        <div class="form-group">
          <label>Username: </label>
          <input type="text" name="user" class="form-control" id="user" autocomplete="off">
          <span id="Username" class="text-danger font-weight-bold"></span>

        </div>
        <div class="form-group">
          <label>Password: </label>
          <input type="text" name="pass" class="form-control" id="pass" autocomplete="off">
          <span id="passwords" class="text-danger font-weight-bold"></span>
        </div>

        <div class="form-group">
          <label>Confirm Password: </label>
          <input type="text" name="conpass" class="form-
control" id="conpass" autocomplete="off">
          <span id="confirmPass" class="text-danger font-weight-bold"></span>

        </div>
        <div class="form-group">
          <label>Mobile Number: </label>
          <input type="text" name="mobile" class="form-
control" id="mobileNumber" autocomplete="off">
          <span id="mobileNo" class="text-danger font-weight-bold"></span>
        </div>
      </div>
    </div>
  </div>
```

```

</div>
<div class= "form.group">
  <label>Email: </label>
  <input type="text" name="email" class="form-control" id="emails" autocomplete="off">
  <span id="emailids" class="text-danger font-weight-bold"></span>

</div>
<input type="submit" name="submit" value="submit" class="btn btn-success">
</form>
</div>
</div>
<script type ="text/javascript">

function validation() {

  var user = document.getElementById('user').value;
  var pass = document.getElementById('pass').value;
  var confirmPass = document.getElementById('conpass').value;
  var mobileNumber = document.getElementById('mobileNumber').value;
  var emails = document.getElementById('emails').value;

  if(user == ""){

    document.getElementById('Username').innerHTML="**Please fill the username field";
    return false;
  }

  if((user.length <= 2) || (user.length > 20)) {
    document.getElementById('Username').innerHTML="**UserName length must be in between 2 & 20";
    return false;
  }

  if(!isNaN(user)) {
    document.getElementById('Username').innerHTML="**only characters are allowed";
    return false;
  }
  if(pass == ""){
    document.getElementById('passwords').innerHTML="**Please fill the password field";
    return false;
  }

  if((pass.length <= 5) || (pass.length > 20)) {
    document.getElementById('passwords').innerHTML="**password length must be in between 5 & 20";
    return false;
  }
}

```

```

        if(confirmPass == ""){
            document.getElementById('confirmPass').innerHTML="Please fill the confirmpassword fi
eld";
            return false;
        }

        if(pass!= confirmPass) {
            document.getElementById('confirmPass').innerHTML="**Password Are Not Matching";
            return false;
        }

        if(mobileNumber == ""){
            document.getElementById('mobileNo').innerHTML="Please fill the mobileNo field";
            return false;
        }

        if (isNaN(mobileNumber)) {
            document.getElementById('mobileNo').innerHTML="**User must write digits only not a c
haracters";
            return false;
        }

        if (mobileNumber.length != 10) {
            document.getElementById('mobileNo').innerHTML="**Mobile Number must be a 10 digit
s";
            return false;
        }

        if(emails == ""){
            document.getElementById('emailids').innerHTML="Please fill the emailId field";
            return false;
        }

        if(emails.indexOf('@') <= 0 ){
            document.getElementById('emailids').innerHTML="** @ Invalid Position";
            return false;
        }

        if((emails.charAt(emails.length - 4) != '.' ) && (emails.charAt(emails.length - 3) != '.' )) {
            document.getElementById('emailids').innerHTML="** . Invalid Position";
            return false;
        }
    }

</script>

</body>
</html>

```

OUTPUT :

JavaScript Form Validation

File | D:/JS%20Project/ValidationForm.html

Complete Form Validation In JavaScript

Username:

Password:

Confirm Password:

Mobile Number:

Email:

submit

JavaScript Form Validation

File | D:/JS%20Project/ValidationForm.html

Complete Form Validation In JavaScript

Username:

****Please fill the username field**

Password:

Confirm Password:

Mobile Number:

Email:

submit

JavaScript Form Validation x +

File | D:/JS%20Project/ValidationForm.html

Complete Form Validation In JavaScript

Username:

****UserName length must be in between 2 & 20**

Password:

Confirm Password:

Mobile Number:

Email:

submit

JavaScript Form Validation x +

File | D:/JS%20Project/ValidationForm.html

Complete Form Validation In JavaScript

Username:

Password:

****Please fill the password field**

Confirm Password:

Mobile Number:

Email:

submit

EN 17:43

JavaScript Form Validation x +

File | D:/JS%20Project/ValidationForm.html

Complete Form Validation In JavaScript

Username:

Password:

Confirm Password:

****Password Are Not Matching**

Mobile Number:

Email:

EN 17:45

JavaScript Form Validation x +

File | D:/JS%20Project/ValidationForm.html

Complete Form Validation In JavaScript

Username:

Password:

Confirm Password:

Mobile Number:

****Mobile Number must be a 10 digits**

Email:

EN 17:47

JavaScript Form Validation x +

File | D:/JS%20Project/ValidationForm.html

Complete Form Validation In JavaScript

Username:
vrushali lawand

Password:
vrushali@

Confirm Password:
vrushali@

Mobile Number:
9970213020

Email:
@gmail.com

**** @ Invalid Position**

submit

EN 17:49

JavaScript Form Validation x +

File | D:/JS%20Project/ValidationForm.html

Complete Form Validation In JavaScript

Username:
vrushali lawand

Password:
vrushali@

Confirm Password:
vrushali@

Mobile Number:
9970213020

Email:
vrush@gmail.i

**** . Invalid Position**

submit

EN 17:49