

Web Technologies Laboratory 02

Aim: Develop a web application using javascript to implement sessions, cookies, DOM. Perform validations such as checking for emptiness, only numbers for phone number, special character requirement for password, regular expressions for certain format of the fields etc. Use the mySQL database.

Objectives:

1. To understand what form validation is.
2. To learn basic functioning of DOM objects.
3. To learn how to apply various techniques to implement it.

Theory:

- 1) Explain the role of **regular expressions**. Why are they a suitable tool for validating data formats like a phone number or checking for the presence of specific characters in a password?
- 2) Explain the fundamental difference between a session and a cookie in the context of web application development. How do they work together to maintain a user's logged-in state?
- 3) What is the purpose of performing **both** client-side and server-side validation? Describe a scenario where relying solely on client-side validation could lead to a security vulnerability.
- 4) Provide a simple example of how a JavaScript script can interact with the DOM to dynamically change the content of a web page after a user action, such as a form submission.
- 5) Give the steps for connectivity from Front end using HTML CSS JS to mysql

FAQ:

1. Write 3 reasons why Form validations are important.
2. Give an example of how to modify an attribute value using DOM.
3. What are the different features of Java Script?

Problem Statement:

- 1) Write a program to design Student registration form by using HTML, CSS having following fields: Username, Email, Phone number, Password, Confirm Password and write external javascript code to achieve following validations
 - Fields should not be empty. If spaces are entered those should be considered empty
 - Phone number must accept only numeric values and it should be 10 digits
 - Password length must be at least 7 and it should contain at least one capital letter, one digit and one special character from the set (&,\$,#,@)
 - Value entered in password field and confirm password fields must match

Email address must contain @ sign and a ., there should be few letters before the @ sign, there should be three letters between @ sign and a . There must be 3 or 2 letters after the . (hint: Use regular expression)

2) Write a client-side script with JavaScript to access and manipulate Document Object Model (DOM) objects in an HTML web page. Develop a dynamic web page using javascript and DOM. Make use of the following for accessing elements

- getElementById, getElementsByTagName, getElementsByClassName
- Change the text using innerHTML property
- Change the CSS properties like color, position of a particular element on the page
- Change the image source after clicking on a button
- Add a text node and attach it to a parent node
- Delete a node

Include jQuery to perform following operations:

- Change button text using jQuery.
- Set background-image using jQuery CSS property.
- Access HTML form data using jQuery.
- Add attribute using jQuery