Batch: B4 Roll No.: 16010122828

Experiment No. 04

Grade: AA / AB / BB / BC / CC / CD /DD

Signature of the Staff In-charge with date

TITLE: Develop and demonstrate JavaScript with POP-UP boxes and functions.

AIM: To demonstrate the functionalities of JavaScript using HTML and CSS.

Expected Outcome of Experiment:

- Describe and utilize Javascript programming concepts such as variables, arrays, conditionals, and loops.
- Write and deploy Javascript code to solve practical web design problems.

Books/ Journals/ Websites referred:

1. https://www.w3schools.com
2. Web Design The complete Reference - Thomas Powell, Tata McGrawHill, 5 th edition 2010
3. HTML and XHTML The complete Reference - Thomas Powell, Tata McGrawHill, 5 th edition 2010 4. https://evernote.com/
4. https://getbootstrap.com/

Problem Statement:

a) Input: Click on Display Date button using onclick( ) function

Output: Display date in the textbox

b) Input: A number n obtained using prompt

Output: Factorial of n number using alert

c) Input: A number n obtained using prompt

Output: A multiplication table of numbers from 1 to 10 of n using

d) Write JavaScript to validate the following fields for the registration page.

Name (Name should contain alphabets and the length should not be less than 6 characters).

Password (Password should not be less than 6 characters length).

E-mail id (should not contain any invalid and must follow the standard pattern

name@domain.com)

Phone number (Phone number should contain 10 digits only).

Javascript Basic Concepts Learned With Syntax:

1.1 Introduction

JavaScript is the programming language of HTML and the Web. JavaScript is one of the 3 languages all web developers must learn:

1. HTML to define the content of web pages
2. CSS to specify the layout of web pages
3. JavaScript to program the behavior of web pages

To use an external script, put the name of the script file in the src (source) attribute of a <script> tag:
<script src="myScript.js"></script>

1.2.Example:

a.) JavaScript Can Change HTML Attribute Values.
One of many JavaScript HTML methods is getElementById(). This example uses the method to "find" an HTML element (with id="demo") and changes the element content (innerHTML) to "Welcome to JavaScript": document.getElementById('demo').innerHTML = 'Welcome to JavaScript'; b.) JavaScript Can Change HTML Styles (CSS).
Changing the style of an HTML element, is a variant of changing an HTML attribute:
document.getElementById("demo").style.color = "black";
document.getElementById("demo").style.display = "block";

1.3 The For Loop

The for loop has the following syntax: for (initialisation;condition;increment/decrement) {
// code block to be executed } Example:
for (i = 0; i < 5; i++) { text += "The number is " + i + " ";
}
From the example above, you can read:
initialisation part: sets a variable before the loop starts (var i = 0). condition part: defines the condition for the loop to run (i must be less than 5). increment/decrement: increases a value (i++) each time the code block in the loop has been executed.

1.4 IF Statement

Conditional statements are useful in scenarios which require us to perform different actions for different decisions.

In JavaScript we have the following conditional statements:

- Use *if* to specify a block of code to be executed, if a specified condition is true
- Use *else* to specify a block of code to be executed, if the same condition is false
- Use *else if* to specify a new condition to test, if the first condition is false
- Use the *if* statement to specify a block of JavaScript code to be executed if a condition is true.

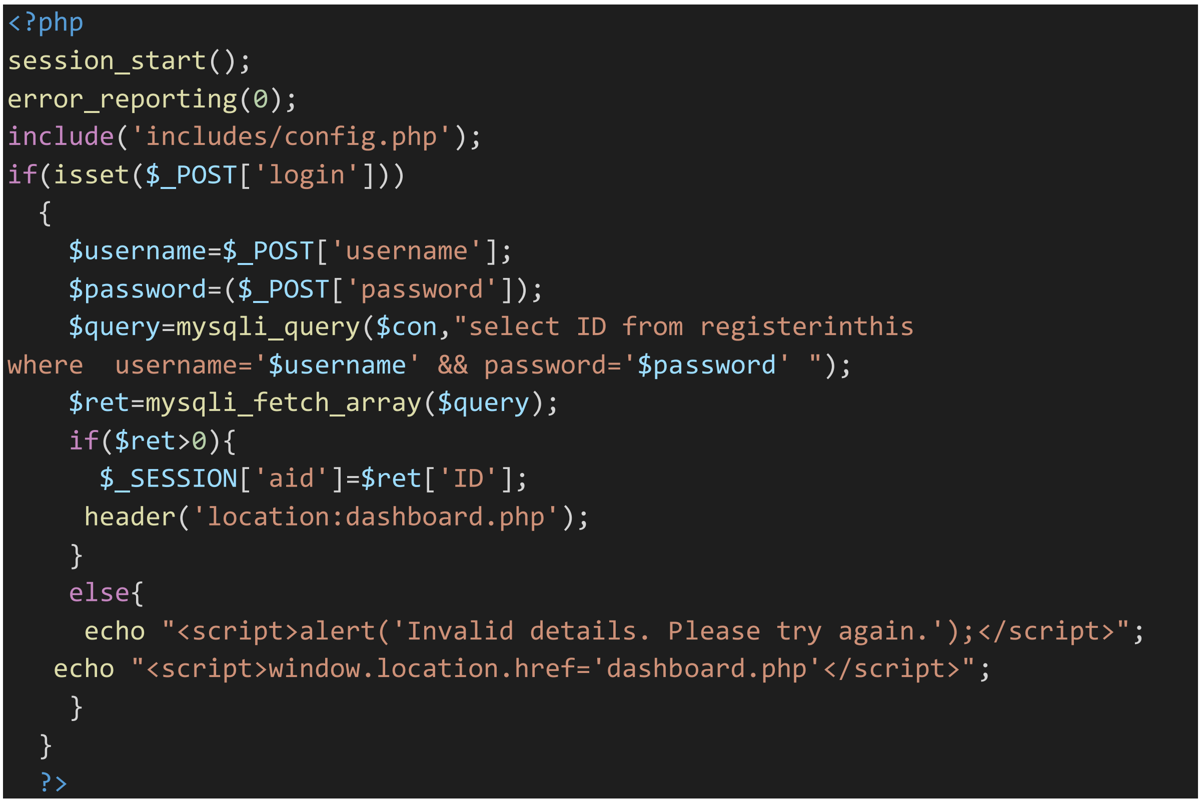
```
if (condition) {
    // block of code to be executed if the condition is true }
```

1.5 Operators

Operator	**Description**
+	Addition
-	Subtraction
*	Multiplication
**	Exponentiation
/	Division
%	Modulus (Division Remainder)
++	Increment
--	Decrement

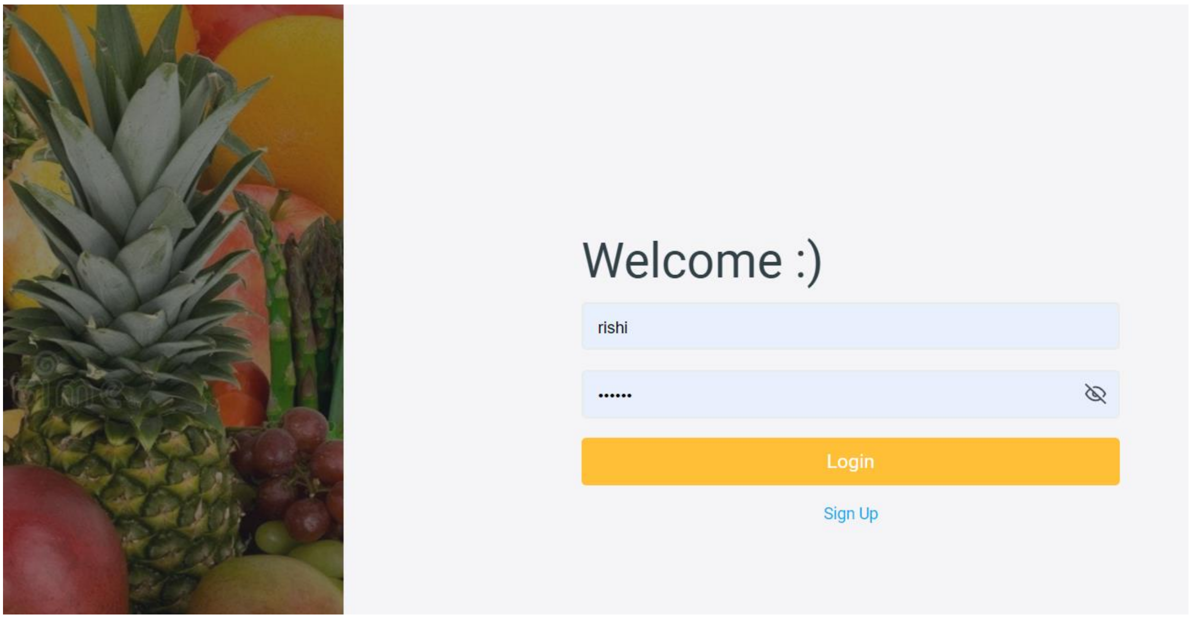
Description of the application implemented with output:

Code:-



```
<?php
session_start();
error_reporting(0);
include('includes/config.php');
if(isset($_POST['login']))
  {
    $username=$_POST['username'];
    $password=($_POST['password']);
    $query=mysqli_query($con,"select ID from registerinthis
where  username='$username' && password='$password' ");
    $ret=mysqli_fetch_array($query);
    if($ret>0){
      $_SESSION['aid']=$ret['ID'];
     header('location:dashboard.php');
    }
    else{
     echo "<script>alert('Invalid details. Please try again.');</script>";
   echo "<script>window.location.href='dashboard.php'</script>";
    }
  }
  ?>
```

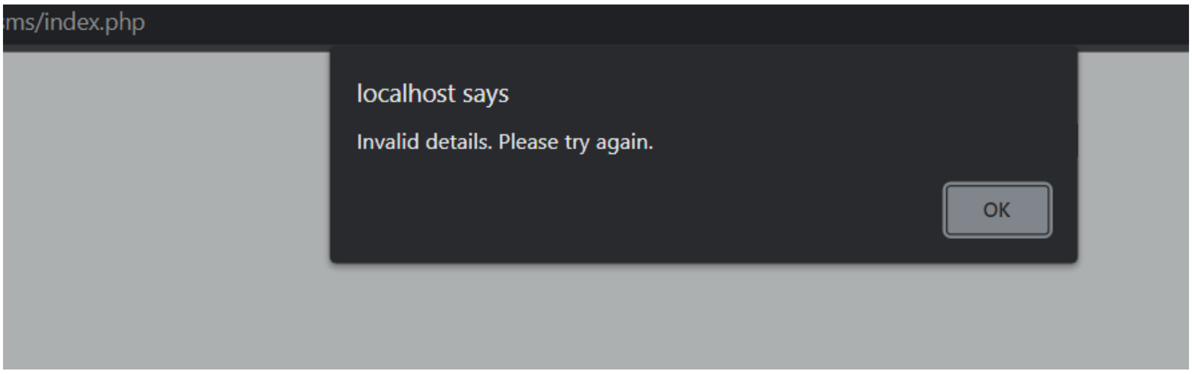
OutPut:-



Welcome :)

rishi

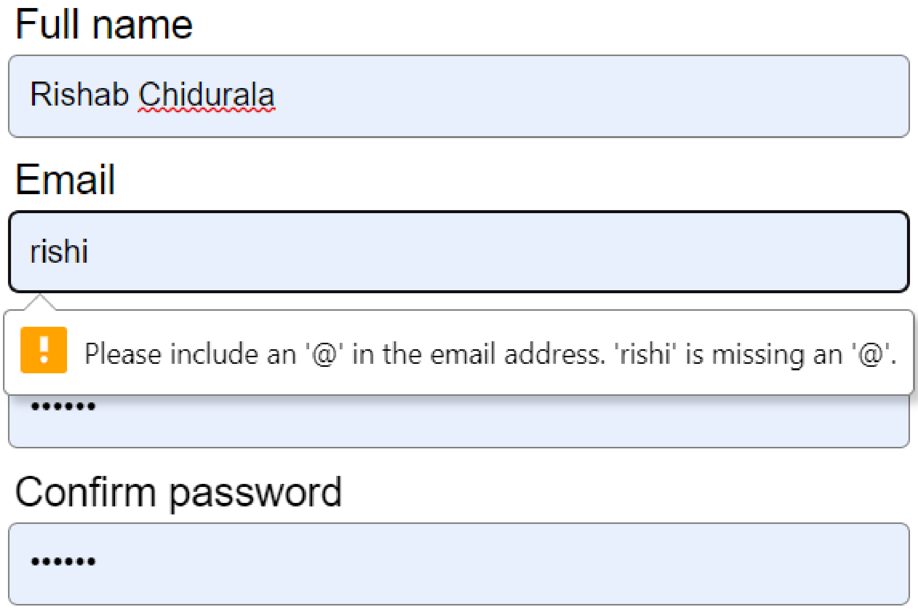
••••••



ms/index.php

localhost says

Invalid details. Please try again.



Full name

Rishab Chidurala

Email

rishi

Please include an '@' in the email address. 'rishi' is missing an '@'.

••••••

Confirm password

••••••

Post Lab Objective with Ans

What are the possible ways to create objects in JavaScript? There

are four ways to create an object in JavaScript

- using object literals
- using the function constructor
- using the Object.create method
- using the class keyword

What is the Difference between == and === operators

==	===
Double equals named as Equality Operator.	Triple equals named as Identity / Strict equality Operator.
Double equals used as Type converting the conversion	Triple equals used as Strict conversion without performing any conversion in operands.
Double equals has syntax for comparison as (a == b)	Triple equals has syntax for comparison as (a === b)
Double equals first convert the operands into the same type and then compare i.e comparison would perform once both the operands are of the same type. This is also known as type coercion comparison.	On the other hand, triple equals do not perform any type of conversion before comparison and return true only if type and value of both operands are exactly the same.

What is the difference between let and var

The main difference between let and var is that scope of a variable defined with let is limited to the block in which it is declared while variable declared with var has the global scope. So we can say that var is rather a keyword which defines a variable globally regardless of block scope.

The scope of let not only limited to the block in which it is defined but variable with let also do not get added with global window object even if it get declared outside of any block. But we can access variable with var from window object if it is defined globally.

Due to limited scope let variables are usually used when there is limited use of those variables such as in for loops, while loops or inside the scope of if conditions etc while var variable is used when value of variable need to be less change and used to accessed globally.

Also, one difference between var and let is variable with var can be redeclared to some other value while variable could not be redeclared if it is defined with let.

Date: **Signature of faculty in-charge**