SVKM’s NMIMS

MPSTME

Computer Engineering Department (MCA SEM I)

Web Programming

Lab Manual

**PART A**

(Part A: TO BE REFFERED BY STUDENTS)

**Experiment No. 10**

**PART-A**

**A.1 Aim:** Implement database CRUD operations in PHP

**A.2 Prerequisite:**

HTML, CSS, PHP, simple MYSQL queries

**A.3 Outcome:**

After successful completion of this experiment students will be able to

1. Understand server side working of application
2. Implements form applications in PHP.
3. Implement CRUD database operations in PHP.

**A.4 Theory:**

* PHP scripts are executed on the server, and the result is returned as plain HTML to the browser.
* A PHP script starts with <?php and ends with ?>.
* PHP statements end with a semicolon ;

Example:

Code for database crud form:

<?php

if(isset($\_POST['submit']))

{

if(empty($\_POST['name']) || empty($\_POST['age']) || empty($\_POST['pass']) || empty($\_POST['check\_list']))

header("location:formdatabase.html");

else

{

$a=$\_POST['name'];

$b=$\_POST['age'];

$c=$\_POST['pass'];

$d=[];

if(!empty($\_POST['check\_list']))

//Checking of checkboxes are not empty

{

// Loop to store and display values of individual checked checkbox.

$i=0;

foreach($\_POST['check\_list'] as $s)

{

$d[$i]=$s;

$i++;

}

}

$e=implode(',',$d);

}

$dbHost = '127.0.0.1';//or localhost

$dbName = 'php lecture'; // your db\_name

$dbUsername = 'root'; // root by default for localhost

$dbPassword = '' ''

$conn = mysqli\_connect($dbHost, $dbUsername, $dbPassword, $dbName);

if (!$conn) {

die("Connection failed: " . mysqli\_connect\_error());

}

echo "Connected Successfully";

$sql = "CREATE TABLE if not exists employee(

name VARCHAR(30) NOT NULL,

age int NOT NULL,

password varchar(30) NOT NULL, preferences varchar(50) NOT NULL)";

if(mysqli\_query($conn, $sql))

{

echo "<br>Table created successfully</br>";

}

else

{

echo "ERROR: Could not create table " . mysqli\_error($conn);

}

$sql = "INSERT INTO employee VALUES ('$a','$b','$c','$e')";

if(mysqli\_query($conn, $sql)){

echo "Records inserted successfully.";

}

else

{

echo "ERROR: Could not insert values " . mysqli\_error($conn);

}

$sql = "select \* from employee";

if($result = mysqli\_query($conn, $sql)){

if(mysqli\_num\_rows($result) > 0){

while($row = mysqli\_fetch\_array($result)){

echo "<br>";

echo " " . $row['name'];

echo " " . $row['age'];

echo " " . $row['preferences'];

}

// Free result set

mysqli\_free\_result($result);

}

else{

echo "No records could be retrieved.";

}

}

$sql = "UPDATE employee SET age=98 WHERE name='abc'";

if(mysqli\_query($conn, $sql)){

echo "Records were updated successfully.";

} else {

echo "ERROR: Could not able to execute $sql. " . mysqli\_error($conn);

}

$sql = "DELETE FROM employee WHERE name='xyz'";

if(mysqli\_query($conn, $sql)){

echo "Records were deleted successfully.";

} else{

echo "ERROR: Could not able to execute $sql. " . mysqli\_error($link);

}

$sql = "DELETE FROM employee";

if(mysqli\_query($conn, $sql)){

echo "Records were deleted successfully.";

} else{

echo "ERROR: Could not able to execute $sql. " . mysqli\_error($link);

}

mysqli\_close($conn);

}

else

{

header("location:formdatabase.html");

}

?>

A.5 **Tasks to be completed:**

1. Reuse the student form created in program 9.
2. Reus ethe php script written in program 9 to retrieve form data and do validations
3. **Write php script to connect to mysql database and implement following CRUD operations**
4. **Create table “student” in database with columns as given in form fields**
5. **Insert the form data retrieved into the database.**
6. **Retrieve the form data from database and display the data on the browser**
7. **Retrieve the details of student with ID:100 and display the student data on the browser**
8. **Update the student name with student ID:100**
9. **Display the age of student with ID:100**
10. **Display the list of courses opted by student with ID:100**
11. **Delete student record with student ID:100**

**B.1 Software Code written by student:**

<!DOCTYPE html>

<html lang="en">

<head>

    <meta charset="UTF-8">

    <title>Student Registration with CRUD Operations</title>

</head>

<body>

    <?php

    $dbHost = 'localhost';

    $dbName = 'mysql';

    $dbUsername = 'root';

    $dbPassword = '';

    $conn = mysqli\_connect($dbHost, $dbUsername, $dbPassword, $dbName);

    if (!$conn) {

        die("Connection failed: " . mysqli\_connect\_error());

    }

    $errors = [];

    if ($\_SERVER["REQUEST\_METHOD"] == "POST") {

        $studentID = trim($\_POST['studentID']);

        $name = trim($\_POST['name']);

        $password = $\_POST['password'];

        $confirmPassword = $\_POST['confirmPassword'];

        $email = filter\_var($\_POST['email'], FILTER\_SANITIZE\_EMAIL);

        $course = isset($\_POST['course']) ? $\_POST['course'] : [];

        $gender = isset($\_POST['gender']) ? $\_POST['gender'] : '';

        $dob = $\_POST['dob'];

        if (empty($studentID) || empty($name) || empty($password) || empty($confirmPassword) || empty($email) || empty($gender) || empty($dob)) {

            $errors[] = "All fields are mandatory.";

        }

        if (!preg\_match("/^[a-zA-Z]{6}$/", $name)) {

            $errors[] = "Name must contain only letters and be exactly 6 characters long.";

        }

        if ($password !== $confirmPassword) {

            $errors[] = "Passwords do not match.";

        }

        if (!preg\_match('/^(?=.\*[A-Z])(?=.\*[a-z])(?=.\*[0-9])(?=.\*[@$%^&]).{6,12}$/', $password)) {

            $errors[] = "Password must contain at least one uppercase letter, one lowercase letter, one digit, and one special character, with a length between 6 and 12 characters.";

        }

        $dobYear = (int)date("Y", strtotime($dob));

        if ($dobYear < 1980 || $dobYear > 2010) {

            $errors[] = "Year of birth should be between 1980 and 2010.";

        }

        if (empty($errors)) {

            $courses = implode(",", $course);

            $sql = "INSERT INTO student (studentID, name, password, email, gender, dob, courses) VALUES ('$studentID', '$name', '$password', '$email', '$gender', '$dob', '$courses')";

            if (mysqli\_query($conn, $sql)) {

                echo "<p>Record inserted successfully.</p>";

            } else {

                echo "<p>Error: " . mysqli\_error($conn) . "</p>";

            }

        }

    }

    if (empty($errors)) {

        echo "<h3>All Student Records:</h3>";

        $result = mysqli\_query($conn, "SELECT \* FROM student");

        while ($row = mysqli\_fetch\_assoc($result)) {

            echo "ID: " . $row['studentID'] . ", Name: " . $row['name'] . ", Courses: " . $row['courses'] . "<br>";

        }

        echo "<h3>Details of Student with ID 100:</h3>";

        $result = mysqli\_query($conn, "SELECT \* FROM student WHERE studentID = 100");

        $row = mysqli\_fetch\_assoc($result);

        if ($row) {

            echo "ID: " . $row['studentID'] . ", Name: " . $row['name'] . ", Age: " . (int)date("Y") - (int)date("Y", strtotime($row['dob'])) . ", Courses: " . $row['courses'] . "<br>";

        } else {

            echo "No record found for student with ID 100.<br>";

        }

        $updateQuery = "UPDATE student SET name='UpdatedName' WHERE studentID = 100";

        mysqli\_query($conn, $updateQuery);

        $result = mysqli\_query($conn, "SELECT name, dob FROM student WHERE studentID = 100");

        $row = mysqli\_fetch\_assoc($result);

        if ($row) {

            echo "<h3>Updated Name and Age for Student ID 100:</h3>";

            echo "Name: " . $row['name'] . ", Age: " . (int)date("Y") - (int)date("Y", strtotime($row['dob'])) . "<br>";

        }

        mysqli\_query($conn, "DELETE FROM student WHERE studentID = 100");

        echo "<p>Record with student ID 100 deleted (if exists).</p>";

    }

    mysqli\_close($conn);

    ?>

    <h2>Student Registration Form</h2>

    <?php

    if (!empty($errors)) {

        echo "<h3>Errors:</h3><ul>";

        foreach ($errors as $error) {

            echo "<li>$error</li>";

        }

        echo "</ul>";

    }

    ?>

    <form action="<?php echo htmlspecialchars($\_SERVER["PHP\_SELF"]); ?>" method="POST">

        <label for="studentID">Student ID:</label>

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

        <label for="name">Name:</label>

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

        <label for="password">Password:</label>

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

        <label for="confirmPassword">Confirm Password:</label>

        <input type="password" id="confirmPassword" name="confirmPassword" ><br><br>

        <label for="email">Email:</label>

        <input type="email" id="email" name="email" ><br><br>

        <label>Course:</label><br>

        <input type="checkbox" name="course[]" value="PHP">PHP<br>

        <input type="checkbox" name="course[]" value="JavaScript">JavaScript<br>

        <input type="checkbox" name="course[]" value="Python">Python<br><br>

        <label>Gender:</label><br>

        <input type="radio" name="gender" value="Male" >Male<br>

        <input type="radio" name="gender" value="Female" >Female<br><br>

        <label for="dob">Date of Birth:</label>

        <input type="date" id="dob" name="dob" ><br><br>

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

    </form>

</body>

</html>







