Lab Report-04

Course Code:	Course Title:
CSE 416	Web Engineering Lab

Lab Report Details	
Lab Perform Date	: 03/07/2025
Report Submission Date	: 10/06/2025

Submitted To	Submitted By
Ms. Nishat Sadaf Lira Lecturer Department of CSE Daffodil International University.	Name : Munna Biswas SID : 221-15-5261 Section : 61-J2 Daffodil International University

Experiment No: 04

Experiment Name: Database-Driven Web Application Development with PHP and MySQL.

Objective:

To develop a simple database-driven web application using PHP and MySQL that performs CRUD (Create, Read, Update, Delete) operations on a student records database.

JavaScript Operations Performed:

No.	Feature / Concept	Description	Example Functions / Syntax
1	Basic PHP Syntax	Embedding PHP inside HTML, variables, and echo statements.	<?php ... ?>, $var
2	Database Connection	Connecting PHP to MySQL database using mysqli or PDO.	mysqli_connect()
3	Create Operation	Inserting new data into database tables.	INSERT INTO query
4	Read Operation	Fetching and displaying data from database.	SELECT query
5	Update Operation	Editing and updating existing records.	UPDATE query
6	Delete Operation	Removing records from database.	DELETE query

Code Snippets and Outcomes:

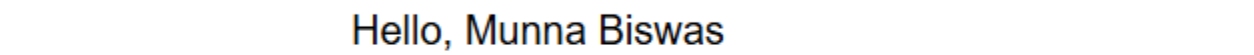
1. Basic PHP Syntax

Description:
PHP code is written inside <?php ... ?> tags and can be embedded into HTML.

Code Snippet:

```
66  <?php
67  $name = "Munna Biswas";
68  echo "Hello, " . $name;
69  ?>
```

Screenshot:



2. Database Connection

Description:
Connected PHP to MySQL using mysqli_connect().

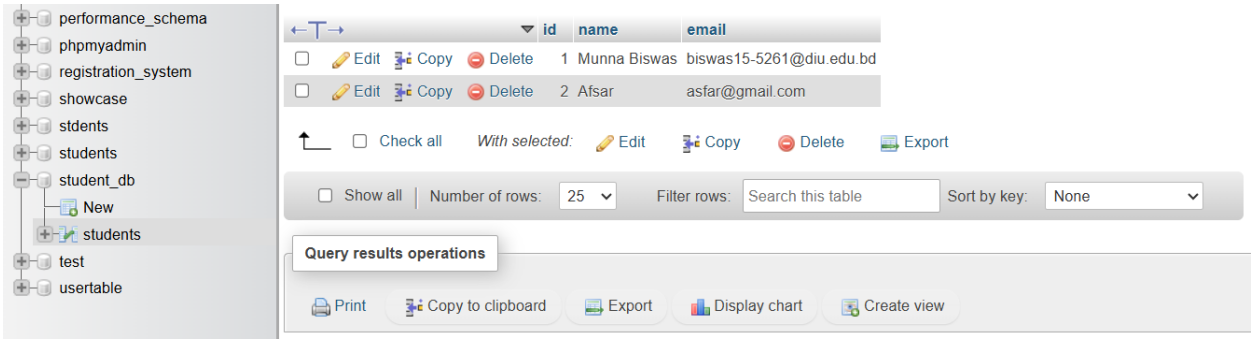
Code Snippet:

```php
<?php
$servername = "localhost";
$username = "root";  // default in XAMPP
$password = "";      // default in XAMPP
$dbname = "student_db";

// Create connection
$conn = mysqli_connect(hostname: $servername, username: $username, password: $password, database: $dbname);

// Check connection
if (!$conn) {
    die("Connection failed: " . mysqli_connect_error());
}
?>
```

Screenshot:



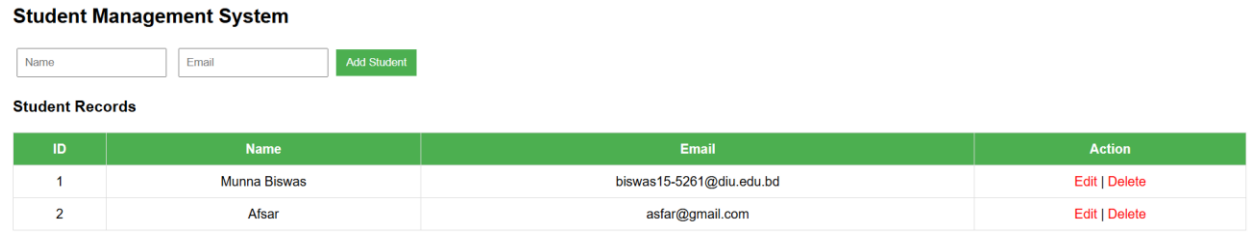
3. Create Operation (Insert Data)

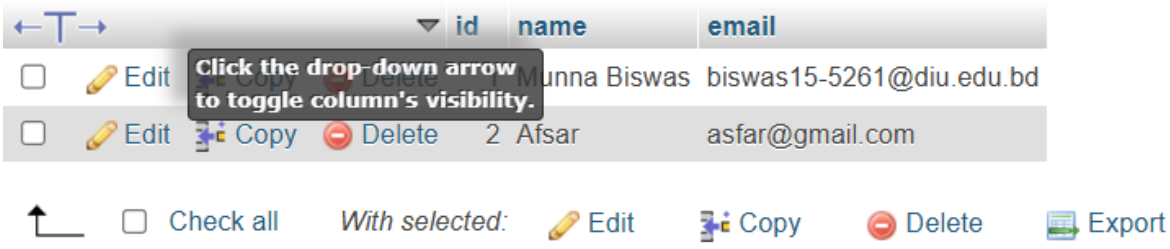
Description:
Inserted new student record into the database.

Code Snippet:

```php
// CREATE
if (isset($_POST['add'])) {
    $name = $_POST['name'];
    $email = $_POST['email'];
    mysqli_query(mysql: $conn, query: "INSERT INTO students (name, email) VALUES ('$name','$email')");
}
```

Screenshot:





4. Read Operation (Fetch Data)

Description:
Fetched and displayed student data in an HTML table.

Code Snippet:

```php
// READ
$result = mysqli_query(mysql: $conn, query: "SELECT * FROM students");
?>
```

```php
<table>
    <tr><th>ID</th><th>Name</th><th>Email</th><th>Action</th></tr>
    <?php while($row = mysqli_fetch_assoc(result: $result)) { ?>
    <tr>
        <td><?= $row['id']; ?></td>
        <td><?= $row['name']; ?></td>
        <td><?= $row['email']; ?></td>
        <td>
            <a href="update.php?id=<?= $row['id']; ?>">Edit</a> |
            <a href="index.php?delete=<?= $row['id']; ?>" onclick="return confirm('Are you sure?')">Delet
        </td>
    </tr>
    <?php } ?>
</table>
```

Screenshot:

Student Records

ID	Name	Email	Action
1	Munna Biswas	biswas15-5261@diu.edu.bd	Edit | Delete
2	Afsar	asfar@gmail.com	Edit | Delete

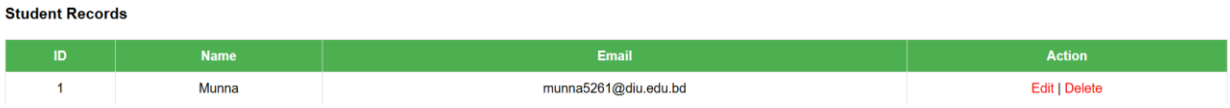
5. Update Operation (Edit Data)

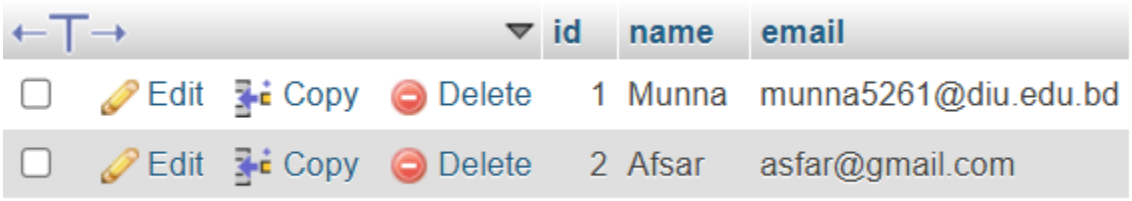
Description:
Updated an existing student's email in the database.

Code Snippet:

```php
// Update record
if (isset($_POST['update'])) {
    $name = $_POST['name'];
    $email = $_POST['email'];
    mysqli_query(mysql: $conn, query: "UPDATE students SET name='$name', email='$email' WHERE id=$id");
    header(header: "Location: index.php");
}
```

Screenshots:





6. Delete Operation (Remove Data)

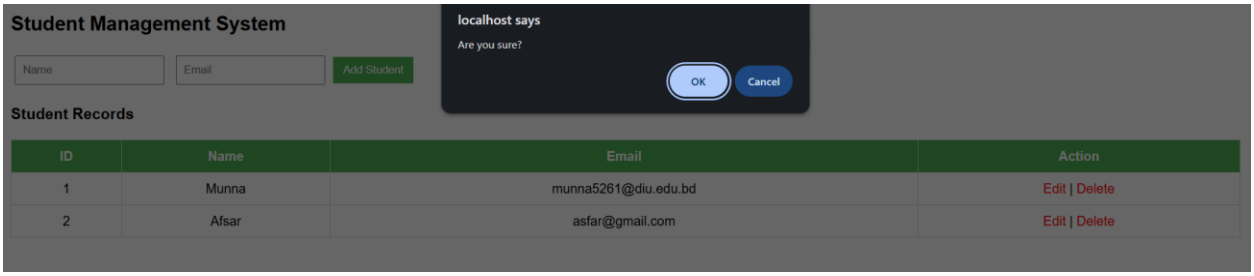
Description:
Deleted a student record from the database.

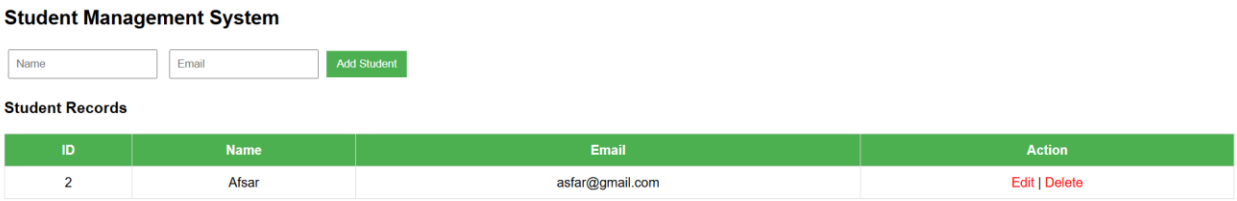
Code Snippet:

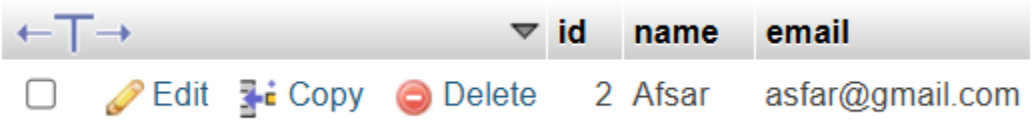
```php
// DELETE
if (isset($_GET['delete'])) {
    $id = $_GET['
    mysqli_query(mysql: $conn, query: "DELETE FROM students WHERE id=$id");
}
```

Double-click to insert

Screenshot:







Outcome:

The student management application successfully performed CRUD operations. Users could add, view, update, and delete student records stored in a MySQL database.

Conclusion:

PHP and MySQL provide a powerful way to create dynamic, database-driven web applications. CRUD functionality is essential for almost all real-world applications such as student management, e-commerce, and content management systems.

References:

https://www.php.net/manual/en/

https://www.w3schools.com/php/

https://www.mysqltutorial.org/