MIT-WPU
॥ विश्वशान्तिर्ध्रुवं ध्रुवा ॥

Dr. Vishwanath Karad
MIT WORLD PEACE UNIVERSITY | PUNE
TECHNOLOGY, RESEARCH, SOCIAL INNOVATION & PARTNERSHIPS

School of Computer Engineering & Technology
Class: Third Year B.Tech CSE (Semester V)
Course: Full Stack Development

FSD Laboratory 04

NAME - SIDDHESH DUMRE
PANEL - E, BATCH E1
ROLL NO - 18
PRN - 1032222342

Aim: Write server-side script in PHP to perform form validation and create database application using PHP and MySQL to perform insert, update, delete and search operations.

Objectives:

1. To understand Server-side Scripting.
2. To learn database connectivity using PHP-MySQL.
3. To perform insert, update, delete and search operations on database.

Theory:

1. PHP Architecture.

   PHP is a server-side scripting language, and its architecture follows a model where:

   Client-Side (Browser): Users send HTTP requests via a browser (or any client).

   Web Server (Apache, Nginx, etc.): The server processes the request and uses the PHP interpreter to execute the PHP scripts.

   PHP Interpreter: The PHP engine executes the PHP code and interacts with the database or files as needed.

   Database (MySQL, PostgreSQL, etc.): If the PHP script needs to access data, it connects to a database through an extension or library (like PDO or MySQLi).

   Response: The PHP script processes the data, generates HTML, and returns it to the web server, which then sends the HTML back to the client.

2. Steps for Database connectivity in PHP.

   Create a database in a relational database like MySQL.

   Install and configure XAMPP to run the Apache server and MySQL database.

   Connect PHP to MySQL using:

   - **MySQLi** (Improved MySQL): A PHP extension designed to work with MySQL databases.
   - **PDO** (PHP Data Objects): A more flexible way of interacting with different databases.

FAQ:

1. What are the advantages of Server-side Scripting?

   Dynamic Content: Server-side scripting allows the generation of dynamic web pages, where content can change based on user input or other conditions.

   Database Interaction: Server-side scripting can interact with databases to store, retrieve, and manipulate data.

   Security: Sensitive logic and data are processed on the server, not exposed to the client.

   Cross-Browser Compatibility: As the server generates the final HTML, it ensures the content is displayed correctly across different browsers.

   Reduced Client Load: The heavy lifting is done on the server, reducing the load on the client-side device.

2. What is XAMPP and phpMyAdmin?

   XAMPP is a free, open-source cross-platform web server solution that includes:

   a. Apache (for serving web pages),
   b. MySQL (database management),
   c. PHP (scripting language),
   d. Perl, and other modules. XAMPP is useful for local development as it sets up the necessary environment to run PHP applications locally.

   phpMyAdmin is a web-based tool included in XAMPP that provides a user-friendly interface for managing MySQL databases. You can create, modify, and delete databases, tables, and records through phpMyAdmin without writing SQL queries.

3. What are the two ways to connect to a database in PHP?

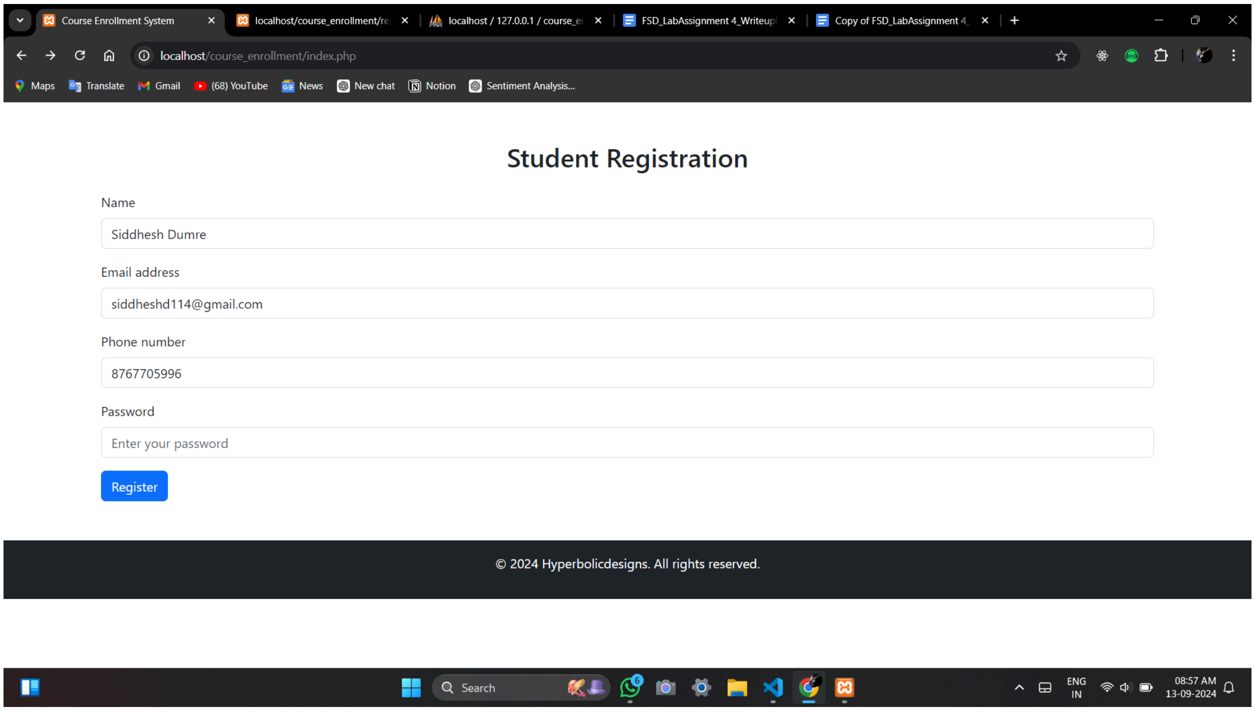
   MySQLi (MySQL Improved):

   a. Supports both procedural and object-oriented programming.
   b. Used to interact specifically with MySQL databases.
   c. Example: `mysqli_connect()`.

   PDO (PHP Data Objects):

   d. A more flexible way to interact with different databases (e.g., MySQL, PostgreSQL, SQLite).
   e. Object-oriented approach.
   f. Offers features like prepared statements which are essential for preventing SQL injection.
   g. Example: `new PDO()`.

Output: Screenshots of the output to be attached



Student Registration

Name: Siddhesh Dumre

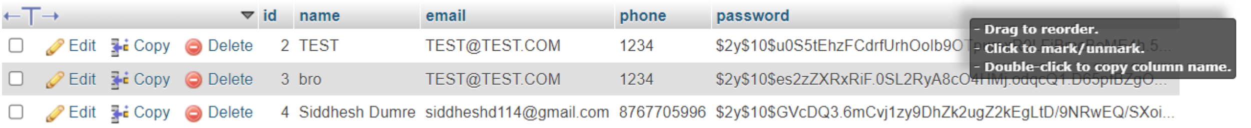
Email address: siddheshd114@gmail.com

Phone number: 8767705996

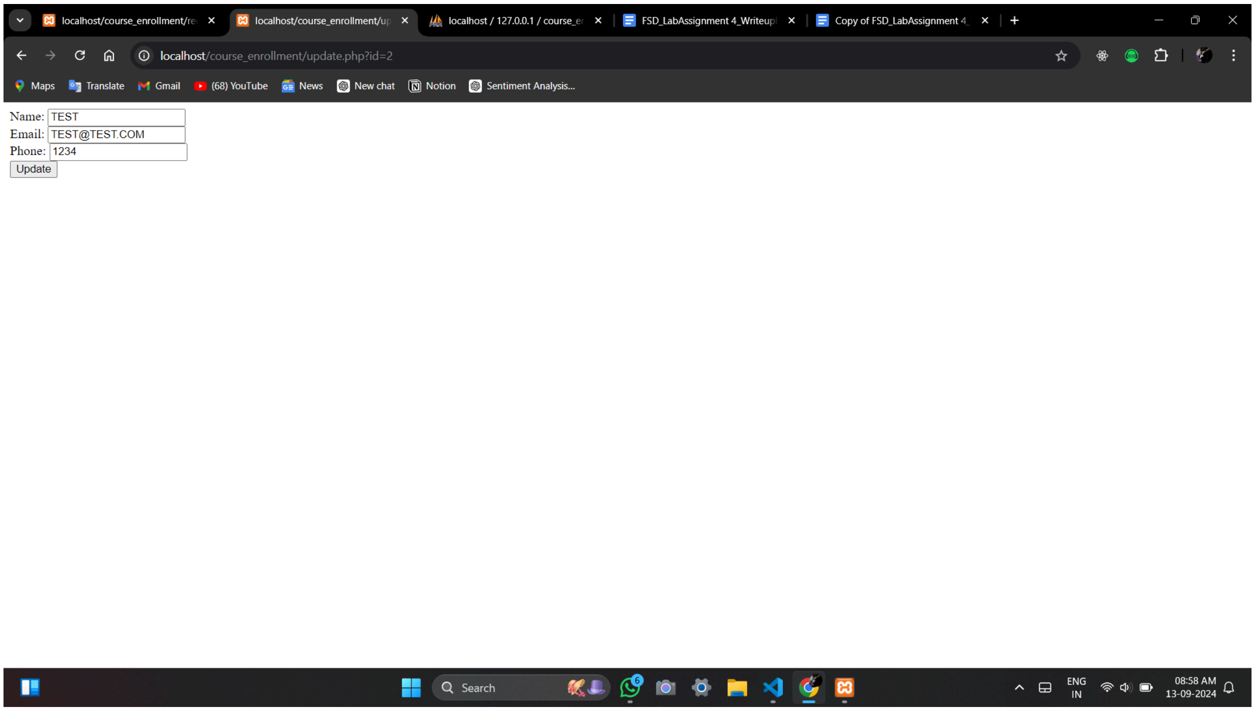
Password: Enter your password

Register

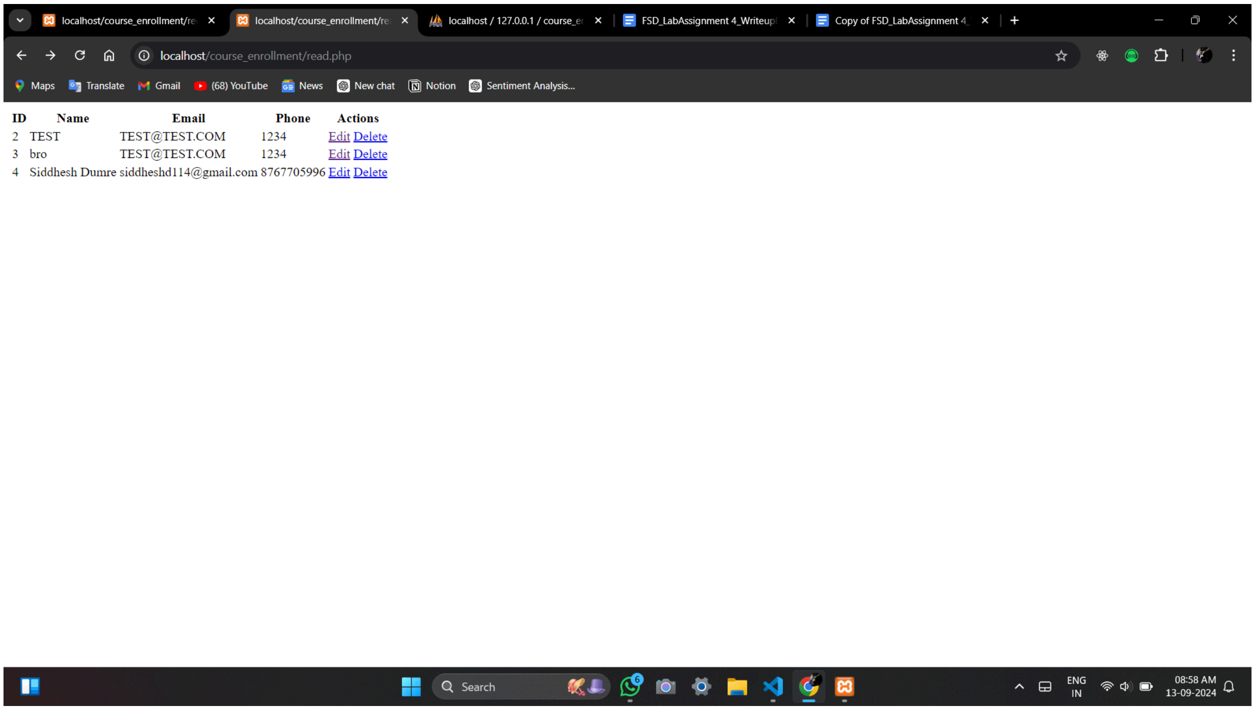
© 2024 Hyperbolicdesigns. All rights reserved.



	id	name	email	phone	password
□ Edit Copy Delete	2	TEST	TEST@TEST.COM	1234	$2y$10$u0S5tEhzFCdrfUrhOolb9O...
□ Edit Copy Delete	3	bro	TEST@TEST.COM	1234	$2y$10$es2zZXRxRiF.0SL2RyA8cO...
□ Edit Copy Delete	4	Siddhesh Dumre	siddheshd114@gmail.com	8767705996	$2y$10$GVcDQ3.6mCvj1zy9DhZk2ugZ2kEgLtD/9NRwEQ/SXoi...



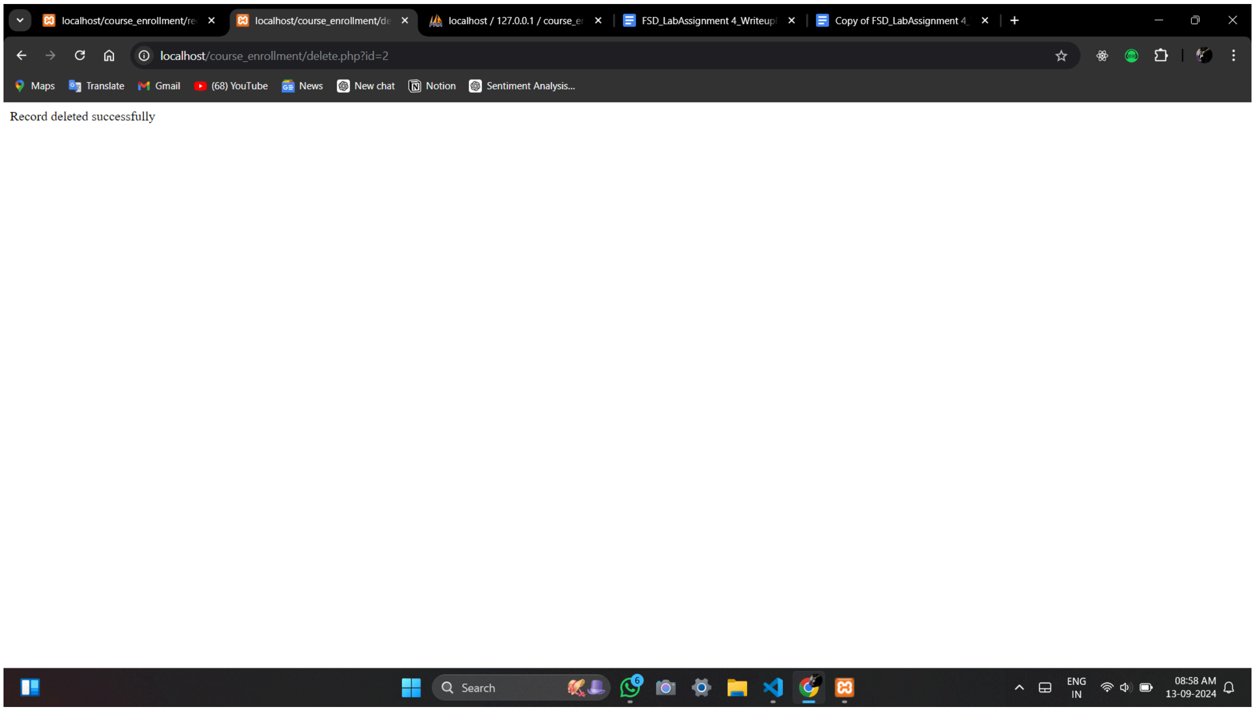
Name: TEST
Email: TEST@TEST.COM
Phone: 1234
Update


localhost/course_enrollment/re
localhost/course_enrollment/re
localhost / 127.0.0.1 / course_er
FSD_LabAssignment 4_Writeup
Copy of FSD_LabAssignment 4
Maps
Translate
Gmail
(68) YouTube
News
New chat
Notion
Sentiment Analysis...
Search
ENG IN
08:58 AM
13-09-2024

localhost/course_enrollment/read.php

ID	Name	Email	Phone	Actions
2	TEST	TEST@TEST.COM	1234	Edit Delete
3	bro	TEST@TEST.COM	1234	Edit Delete
4	Siddhesh Dumre	siddheshd114@gmail.com	8767705996	Edit Delete

New record created successfully


localhost/course_enrollment/re
localhost/course_enrollment/de
localhost / 127.0.0.1 / course_er
FSD_LabAssignment 4_Writeup
Copy of FSD_LabAssignment 4
Maps
Translate
Gmail
(68) YouTube
News
New chat
Notion
Sentiment Analysis...
Search
ENG IN
08:58 AM
13-09-2024

localhost/course_enrollment/delete.php?id=2

Record deleted successfully

-

Sample Problem Statements:

PHP CRUD Operations

1.Student can create a PHP form or use existing/ implemented HTML form for Student's Registration System with the fields mentioned: First name,Last name, Roll No/ID, Password, Confirm Password,Contact number and perform following operations

1.Insert student details -First name,Last name, Roll No/ID, Password, Confirm Password,Contact number
2.Delete the Student records based on Roll no/ID
3.Update the Student details based on Roll no/ID- Example students can update their contact details based on searching the record with Roll no.
4.Display the Updated student details or View the Students record in tabular format.

Apply Form Validation on the necessary fields using PHP/Javascript

2. Student can create a PHP form or use existing/ implemented HTML form for Library Management System with the fields mentioned: Book name, ISBN No, Book title, Author name , Publisher name and perform following operations

1.Insert Book details -Book name, ISBN No, Book title, Author name, Publisher name
2.Delete the Book records based on ISBN No
3.Update the Book details based on ISBN No- Example students can update wrong entered book details based on searching the record with ISBN No.
4.Display the Updated Book details or View the Book Details records in tabular format.

Apply Form Validation on the necessary fields using PHP/Javascript

3. Student can create a PHP form or use existing/ implemented HTML form for Employee Management System with the fields mentioned: Employee name, Employee ID, Department_name, Phone number , Joining Date and perform following operations

1.Insert Employee details -Employee name, Employee ID, Department_name, Phone number , Joining Date
2.Delete the Employee records based on Employee ID
3.Update the Employee details based on Employee ID- Example students can update Employee details based on searching the record with Employee ID.
4.Display the Updated Employee details or View the Employee Details records in tabular format.

Apply Form Validation on the necessary fields using PHP/Javascript

4. Student can create a PHP form or use existing/ implemented HTML form for Flight Booking Management System with the fields mentioned: Passenger name, From, to, date,Departure date,Arrival date, Phone number , Email ID and perform following operations

1.Insert Passenger details -Passenger name, From, to, date,Departure date,Arrival date, Phone number , Email ID
2.Delete the Passenger records based on Phone Number
3.Update the Passenger details based on Phone Number - Example students can update Flight Booking details based on searching the record with Phone Number.

4.Display the Updated Flight Booking details or View the Flight Booking Details records in tabular format.

Apply Form Validation on the necessary fields using PHP/Javascript.

Technologies Student Should Use:
XAMPP
PHP for Server-side Scripting
MySQL as a backend Database