

# STUDENT PORTAL WEB APPLICATION DOCUMENTATION

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# 1. Project Overview

## Purpose

The Student Portal is a web-based application designed to provide students with a centralized platform to:

- Register and log in securely
- View and manage their academic and personal information
- View available courses
- Browse available courses with search functionality
- Contact administrators with inquiries or feedback.

The portal ensures a seamless experience for students by integrating user authentication, database management, and responsive design for accessibility across devices.

## Key Features

| Feature            | Description  |
|--------------------|--|
| User Registration  | Secure sign-up with email validation and password hashing              |
| Login System       | Session-based authentication with optional “Remember-me” functionality |
| Profile Management | Edit personal and academic details (name, email, program, etc.)        |
| Course catalog     | Browse available courses with a searchable grid layout                 |
| Contact form       | Submit inquiries with a star-rating system for feedback                |
| Responsive UI      | Works on desktops, tablets, and mobile devices                         |
| Light /Dark mode   | Toggle between themes for better readability                           |

## *Technologies Used*

| Technology | Usage  |
|------------|--|
| HTML       | Structured and content layout  |
| CSS        | Styling, animations, and responsive design                             |
| JavaScript | Form validation, dynamic UI interactions and search functionality      |
| PHP        | Backend logic or authentication, database operations and form handling |
| MYSQL      | Database storage for user data, courses, and contact submissions       |
| Boxicons   | Icon library for UI elements   |

## 2. Folder Structure

Location Path: C:\xampp\htdocs\student portal

Folder name: student\_portal

This student\_portal folder needs to locate inside htdocs folder.

### CSS

- contact.css - styles for contact page
- course.css - styles for course page
- home.css - styles for course page
- login.css - styles for login page
- profile.css - styles for profile page
- nav.css - styles for navigation bar

### PHP

- db.php - Database connection setup
- login.php - handling user login
- register.php - Handles user registration
- logout.php - ends user session
- profile.php - manage profile updates
- contact.php - handle contact form submissions

JS

- script.js - handling JavaScript functions like form validation, Dark theme

Images— Contains logo and background images

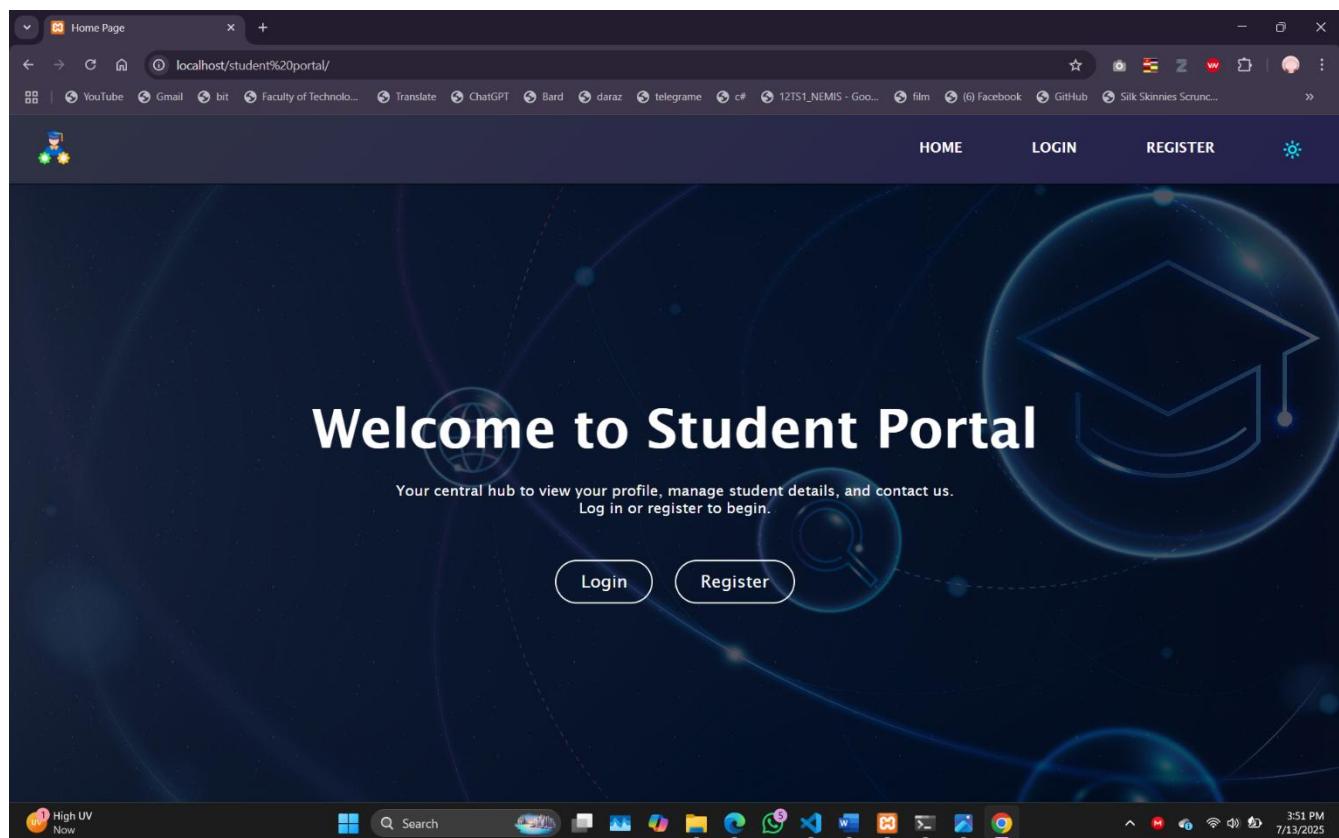
HTML

- home.html - landing page
- login.html - login and registration page
- profile.php - student profile(protected)
- course.php - course listing(protected)
- contact.php - contact form(protected)

## 3. Page Descriptions

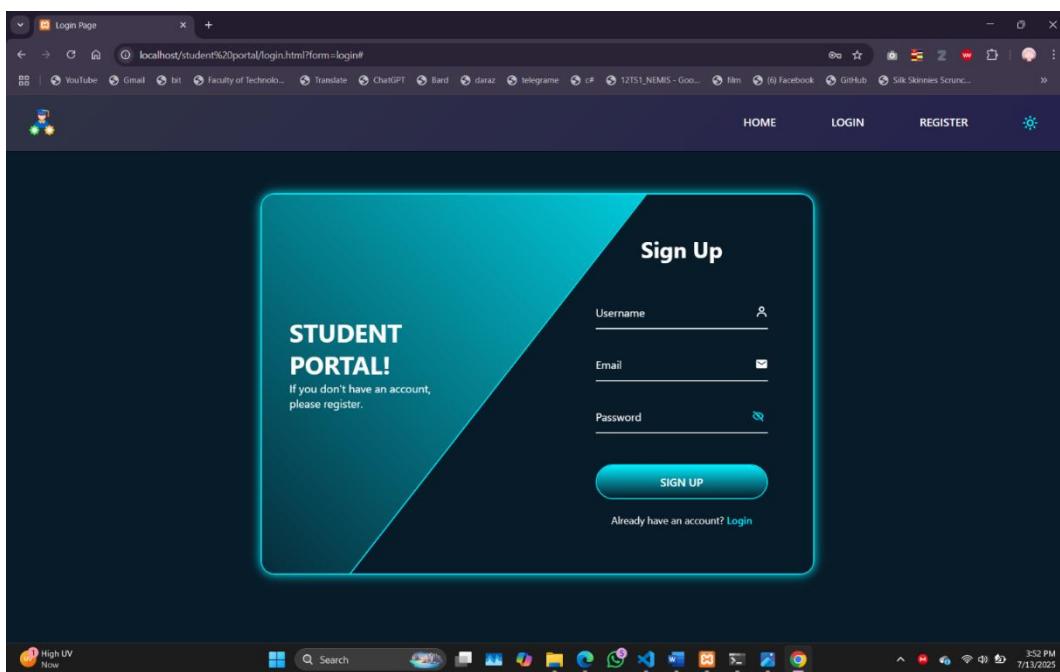
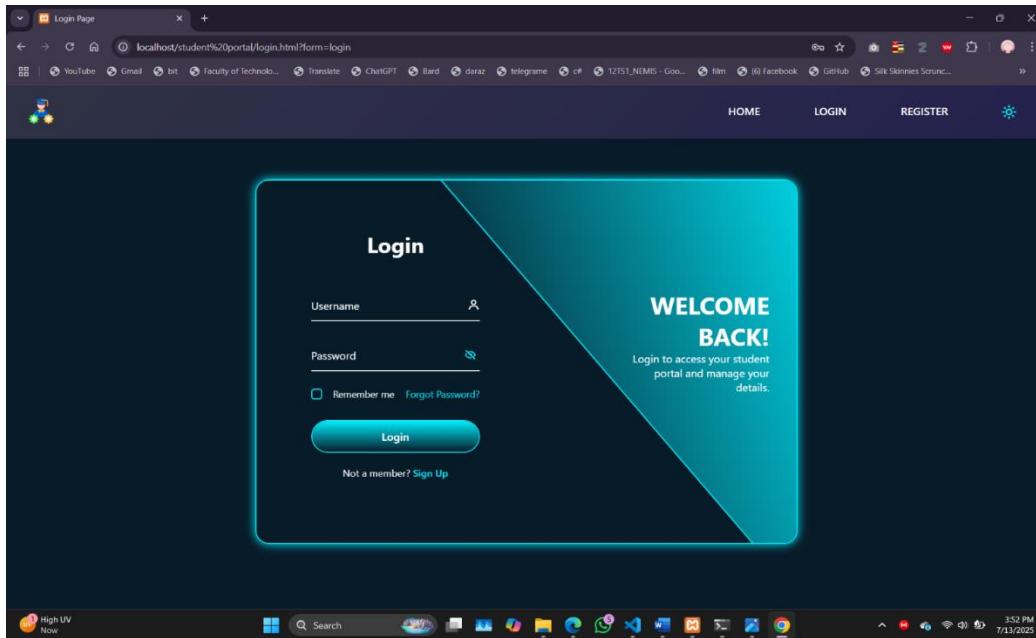
### *Home page*

- Purpose: Landing page with a welcome message and navigation options
- Features:
  - Hero section with call-to-action buttons for LOGIN and REGISTRATER
  - Responsive design using CSS Flexbox/Grid
  - Dark/Light mode toggle



## Login & Registration Page(login.html)

- Purpose: Allows students to log or create an account
- Features:
  - Animated toggle between login and registration forms
  - Form validation (required fields, email format, password strength)
  - Password visibility toggle (eye/hide icon)
  - Error handling (Invalid credentials, existing email/username)



# Profile Page(profile.php)

- Purpose: Display and allows editing of student information
- Features:
  - Personal info Section- Name, email, phone, address, DOB
  - Academic info section - Student ID, program, year level, enrollment date
  - Edit Mode - Toggle between view and edit modes with form validation
  - Success/Error Messages - Feedback after updates

The screenshot shows a student profile page with a purple header and a white content area. At the top right are links for PROFILE, COURSES, CONTACT, and LOGOUT. The user's name, Kusal Akalanka Perera, is displayed in a large font, along with their Student ID (STU001) and email (kusalakalankaun@gmail.com). A circular icon with 'KA' initials is shown. Below this, there are two main sections: 'Personal Information' and 'Academic Information'. Each section has an 'Edit' button at the top right. The 'Personal Information' section contains fields for Full Name (Kusal Akalanka Perera), Email (kusalakalankaun@gmail.com), Phone (01122336655), Date of Birth (July 11, 2025), and Address (217/6, 'Bhagya', Kuruppumulla, Panadura). The 'Academic Information' section contains fields for Student ID (STU001), Program (Software Engineering), Year Level (1st Year), Enrollment Date (August 2025), and Expected Graduation (October 2025).

| Personal Information |   | Edit |  |
|----------------------|---|------|--|
| Full Name            | Kusal Akalanka Perera                   |      |  |
| Email                | kusalakalankaun@gmail.com               |      |  |
| Phone                | 01122336655                             |      |  |
| Date of Birth        | July 11, 2025                           |      |  |
| Address              | 217/6, 'Bhagya', Kuruppumulla, Panadura |      |  |

| Academic Information |                      | Edit |  |
|----------------------|----------------------|------|--|
| Student ID           | STU001               |      |  |
| Program              | Software Engineering |      |  |
| Year Level           | 1st Year             |      |  |
| Enrollment Date      | August 2025          |      |  |
| Expected Graduation  | October 2025         |      |  |

## Courses Page(course.php)

- Purpose: Display available courses in a searchable grid
- Features:
  - Search bar - Filter courses in real-time
  - Course cards - each card shows course name, description, and icon
  - No-Results message - shown if no matches are found

The screenshot displays the 'Available Courses' section of a learning platform. At the top, there's a navigation bar with icons for user profile, courses (highlighted in blue), contact, and logout. Below the header, a title 'Available Courses' is centered above a subtitle: 'Explore our comprehensive range of courses designed to enhance your learning journey.' A search bar is present for filtering courses by name. The main content area features a 3x3 grid of course cards:

| Course Icon | Course Name               | Description                 |
|-------------|---------------------------|-----------------------------|
|             | <b>Computer Science</b>   | Fundamentals of Programming |
|             | <b>Data Structures</b>    | Advanced Data Management    |
|             | <b>Algorithms</b>         | Problem Solving Techniques  |
|             | <b>Web Development</b>    | Modern Web Technologies     |
|             | <b>Mobile Development</b> | iOS & Android Applications  |
|             | <b>Machine Learning</b>   | AI & Neural Networks        |
|             |                           |                             |
|             |                           |                             |
|             |                           |                             |

# Contact Page(contact.php)

- Purpose - Allows students to submit inquiries or feedback
- Features:
  - Form fields - Name(auto-filled), email, phone, subject, message
  - Star Rating system – Rates service experience (1-5 stars)
  - Character count - limits message length to 1000 characters
  - Success/Error messages - confirms submission or displays errors

The screenshot shows a contact form on a website. At the top, there's a navigation bar with icons for profile, courses, contact, and logout. Below the navigation is a header with the title "✉ Contact Us" and a sub-instruction: "We'd love to hear from you! Send us a message and we'll respond as soon as possible." The main form area has two sections: "Send us a Message" and "Contact Information".

**Send us a Message**

|                       |                                   |
|-----------------------|-----------------------------------|
| Full Name *           | Email Address *                   |
| Kusal Akalanka Perera | kusalakalankaun@gmail.com         |
| Phone Number          | Category                          |
| 01122336655           | Select Category                   |
| Priority Level        | Subject *                         |
| Medium                | Brief description of your inquiry |

How would you rate our service so far?  
★ ★ ★ ★ ★

Message \*

Please provide detailed information about your inquiry or issue...

**Contact Information**

|                |   |
|----------------|---|
| ✉ Email        | support@studentportal.edu   |
| 📞 Phone        | +94 112 556 556   |
| 📍 Address      | 123 University Avenue<br>Colombo 04   |
| 🕒 Office Hours | Monday - Friday: 8:00 AM - 6:00 PM<br>Saturday: 9:00 AM - 4:00 PM<br>Sunday: Closed |

## 4. JavaScript Functions

| Function          | Description   |
|-------------------|---|
| Form validation   | Check requires filed, email format, and password strength |
| Password Toggle   | Switch between visible / hidden password input            |
| Light/ Dark Mode  | Toggle theme and save preference                          |
| Course Search     | Filter course dynamically as the user types               |
| Start Rating      | Interactive rating selection with hover effects           |
| Character Counter | Tracks message length in the contact form                 |

## 5. PHP Backend Logic

### Database Schema

Use XAMP SERVER for connecting database

- Tables

```
MariaDB [(none)]> use student_db;
Database changed
MariaDB [student_db]> show tables;
+-----+
| Tables_in_student_db |
+-----+
| contact_submissions |
| user_info             |
| users                 |
+-----+
3 rows in set (0.001 sec)
```

- users Table: Stores id, username, email, password(hashed)

```
MariaDB [student_db]> desc users;
+-----+-----+-----+-----+-----+-----+
| Field | Type   | Null | Key | Default | Extra |
+-----+-----+-----+-----+-----+-----+
| id    | int(11) | NO   | PRI | NULL    | auto_increment |
| username | varchar(50) | NO   |     | NULL    |                |
| email  | varchar(100) | NO  |     | NULL    |                |
| password | varchar(255) | NO  |     | NULL    |                |
+-----+-----+-----+-----+-----+-----+
4 rows in set (0.031 sec)
```

- User\_info table: stores additional student details

```
MariaDB [student_db]> desc user_info;
+-----+-----+-----+-----+-----+-----+
| Field | Type   | Null | Key | Default | Extra |
+-----+-----+-----+-----+-----+-----+
| id    | int(11) | NO   | PRI | NULL    | auto_increment |
| user_id | int(11) | NO   | MUL | NULL    |                |
| full_name | varchar(100) | YES  |     | NULL    |                |
| email  | varchar(100) | YES  |     | NULL    |                |
| phone  | varchar(20) | YES  |     | NULL    |                |
| dob    | date    | YES  |     | NULL    |                |
| address | text    | YES  |     | NULL    |                |
| student_id | varchar(20) | YES  |     | NULL    |                |
| program | varchar(100) | YES  |     | NULL    |                |
| year_level | varchar(20) | YES  |     | NULL    |                |
| enrollment_date | date    | YES  |     | NULL    |                |
| graduation_date | date    | YES  |     | NULL    |                |
+-----+-----+-----+-----+-----+-----+
12 rows in set (0.030 sec)
```

- contact\_submissions table: stores contact form entries

```
MariaDB [student_db]> desc contact_submissions;
+-----+-----+-----+-----+-----+-----+
| Field | Type   | Null | Key | Default | Extra |
+-----+-----+-----+-----+-----+-----+
| id    | int(11) |       | NO  | PRI    | NULL    |
| user_id | int(11) |       | NO  | MUL    | NULL    |
| name  | varchar(255) |      | NO  |         | NULL    |
| email | varchar(255) |      | NO  |         | NULL    |
| phone | varchar(20) |      | YES |         | NULL    |
| subject | varchar(500) |      | NO  |         | NULL    |
| message | text    |      | NO  |         | NULL    |
| rating | int(11) |      | YES |         | 0       |
| category | varchar(50) |      | YES |         | NULL    |
| priority | enum('low','medium','high','urgent') | YES | MUL    | medium  |
| status  | enum('pending','in_progress','resolved','closed') | YES | MUL    | pending |
+-----+-----+-----+-----+-----+-----+
11 rows in set (0.022 sec)
```

## *Authentication Flow*

1. Registration (register.php)
  - Validates username/ email uniqueness.
  - Hashes password using password\_hash ()
  - Generates a student ID (ex: STU001)
  - Sends a confirmation email
2. Login (login.php)
  - Verifies credentials against the database
  - Starts a session with \$\_SESSION['user\_id']
  - Redirects to profile.php on success
3. Logout (logout.php)
  - Destroys the session and redirects to login

## *Protected Pages*

- Profile, courses, contact pages check isset(\$\_SESSION['user\_id'])
- Unauthorized users are redirected to login.html

# 6. Challengers and Improvements

## *Challengers*

- Form validation: ensuring both client-side (JS) and server-side (PHP) validation
- Session management: preventing unauthorized access to protected pages
- Responsive design: Adapting UI for mobile devices
- Use some AI tools to fix issues

## *Improvements*

- Added features
  - Email Notifications (registration confirmation)
  - Search functionality (course filtering)
  - Star rating system (feedback collection)
- Future enhancement
  - Password reset via email
  - Course enrollment system
  - Admin dashboard for managing students

# 7. How to Run the Project

## *Prerequisites*

- XAMPP/ WAMP (for local PHP/ MYSQL server)
- Web Browser (Use Chrome for better performance)

## *Setup steps*

- Start Apache & MYSQL in XAMPP / WAMP
- Create Database:

- 1. Open phpMyAdmin**
- 2. Import the provided SQL schema**

```
-- Create the database
CREATE DATABASE IF NOT EXISTS student_db;
USE student_db;
```

```
-- Create users table
CREATE TABLE IF NOT EXISTS users (
    id INT(11) NOT NULL AUTO_INCREMENT,
    username VARCHAR(50) NOT NULL,
    email VARCHAR(100) NOT NULL,
    password VARCHAR(255) NOT NULL,
    PRIMARY KEY (id)
);
```

```
-- Create user_info table
CREATE TABLE IF NOT EXISTS user_info (
    id INT(11) NOT NULL AUTO_INCREMENT,
    user_id INT(11) NOT NULL,
    full_name VARCHAR(100) DEFAULT NULL,
    email VARCHAR(100) DEFAULT NULL,
    phone VARCHAR(20) DEFAULT NULL,
    dob DATE DEFAULT NULL,
    address TEXT DEFAULT NULL,
    student_id VARCHAR(20) DEFAULT NULL,
    program VARCHAR(100) DEFAULT NULL,
    year_level VARCHAR(20) DEFAULT NULL,
    enrollment_date DATE DEFAULT NULL,
    graduation_date DATE DEFAULT NULL,
```

```

PRIMARY KEY (id),
KEY user_id (user_id),
FOREIGN KEY (user_id) REFERENCES users (id)
);

-- Create contact_submissions table
CREATE TABLE IF NOT EXISTS contact_submissions (
    id INT(11) NOT NULL AUTO_INCREMENT,
    user_id INT(11) NOT NULL,
    name VARCHAR(255) NOT NULL,
    email VARCHAR(255) NOT NULL,
    phone VARCHAR(20) DEFAULT NULL,
    subject VARCHAR(500) NOT NULL,
    message TEXT NOT NULL,
    rating INT(11) DEFAULT 0,
    category VARCHAR(50) DEFAULT NULL,
    priority ENUM('low','medium','high','urgent') DEFAULT 'medium',
    status ENUM('pending','in_progress','resolved','closed') DEFAULT 'pending',
    PRIMARY KEY (id),
    KEY user_id (user_id),
    KEY priority (priority),
    KEY status (status),
    FOREIGN KEY (user_id) REFERENCES users (id)
);

```

**3. Place files in htdocs:**

- Copy all project files to C:\xampp\htdocs\student\_portal

**4. check your XAMPP/ WAMP mysql username & password :**

username – root

password- ''

These are my credentials, if your mysql credentials are different with this, you need to change in db.php

## 5. Email changes:

1. First config PHP's mail setting in php.ini and config as shows below

```
[mail function]
; For Win32 only.
; http://php.net/smtp
SMTP=smtp.gmail.com
; http://php.net/smtp-port
smtp_port=587

; For Win32 only.
; http://php.net/sendmail-from
sendmail_from = kusalakalankaun@gmail.com

; For Unix only. You may supply arguments as well (default: "sendmail -t -i").
; http://php.net/sendmail-path
sendmail_path ="\"C:\xampp\sendmail\sendmail.exe\" -t"
```

2. Next go to sendMail folder sendmail.ini and config as shown below

```
[sendmail]

; you must change mail.mydomain.com to your smtp server,
; or to IIS's "pickup" directory. (generally C:\Inetpub\mailroot\Pickup)
; emails delivered via IIS's pickup directory cause sendmail to
; run quicker, but you won't get error messages back to the calling
; application.

smtp_server=smtp.gmail.com

; smtp port (normally 25)

smtp_port=587

; SMTPS (SSL) support
;   auto = use SSL for port 465, otherwise try to use TLS
;   ssl  = always use SSL
;   tls  = always use TLS
;   none = never try to use SSL

smtp_ssl=auto

; the default domain for this server will be read from the registry
; this will be appended to email addresses when one isn't provided
; if you want to override the value in the registry, uncomment and modify
```

```
;default_domain=mydomain.com

; log smtp errors to error.log (defaults to same directory as sendmail.exe)
; uncomment to enable logging

error_logfile=error.log

; create debug log as debug.log (defaults to same directory as sendmail.exe)
; uncomment to enable debugging

debug_logfile=debug.log

; if your smtp server requires authentication, modify the following two lines

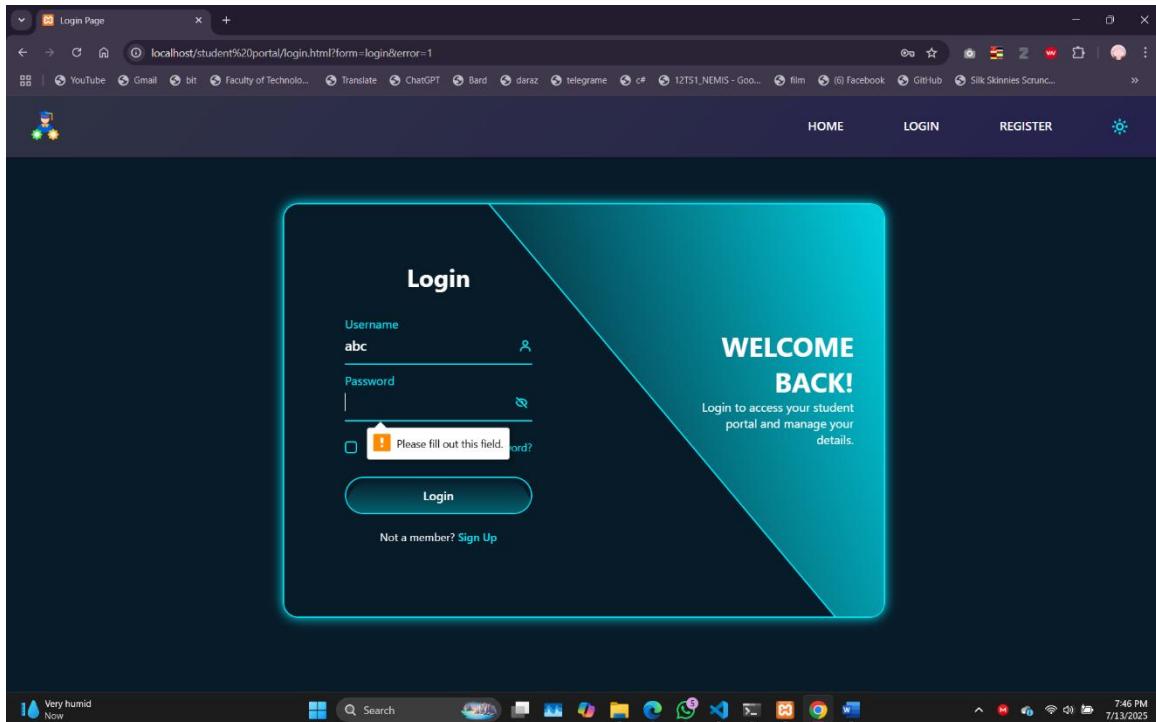
auth_username=kusalakalankaun@gmail.com
auth_password=mmqa gjkr ikli xtps
```

## 6. Access in Browser :

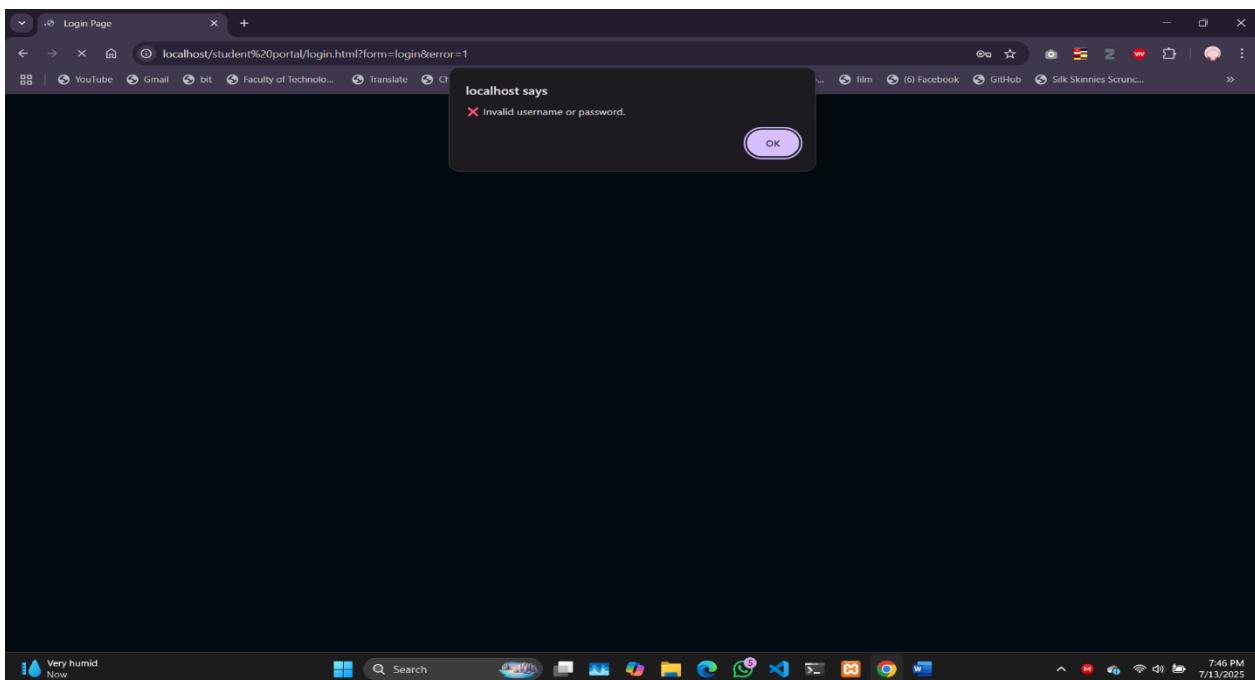
Open : [http://localhost/student\\_portal/home.html](http://localhost/student_portal/home.html)

# 8. Functionalities

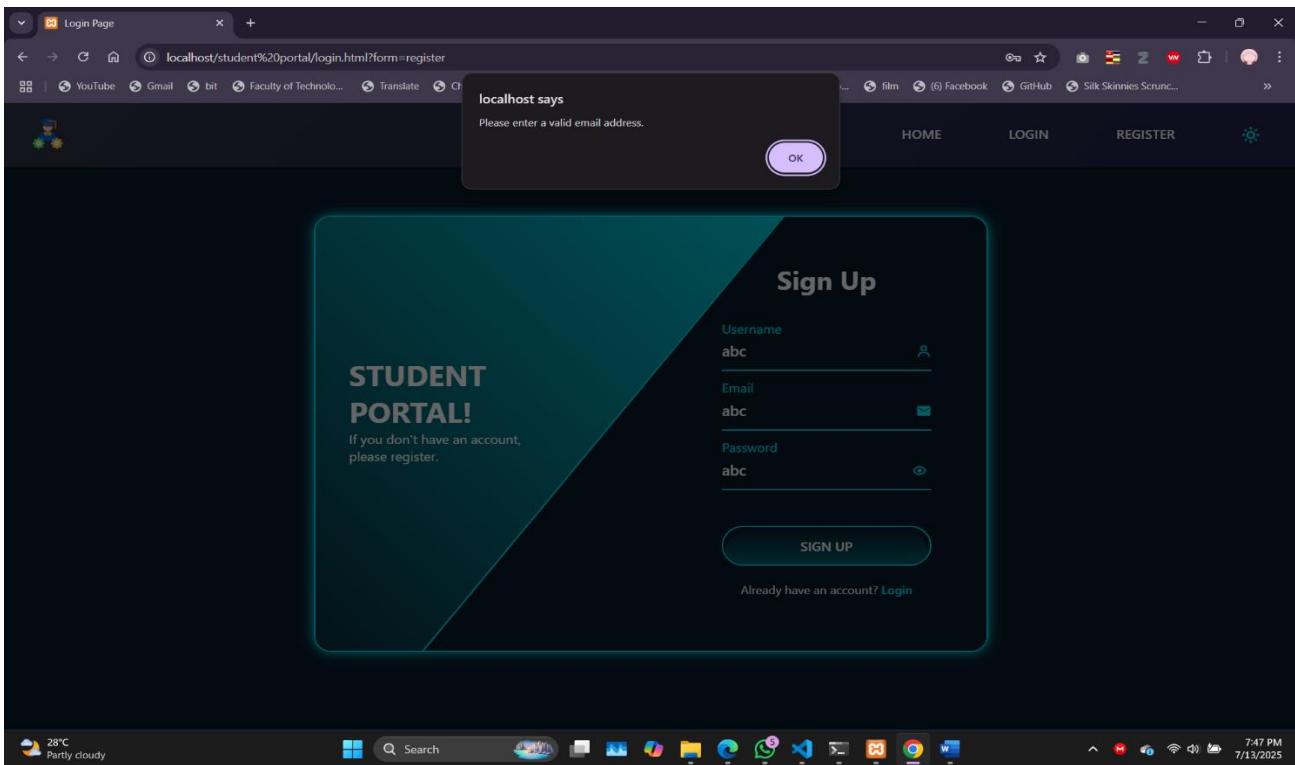
- No fields are empty error message



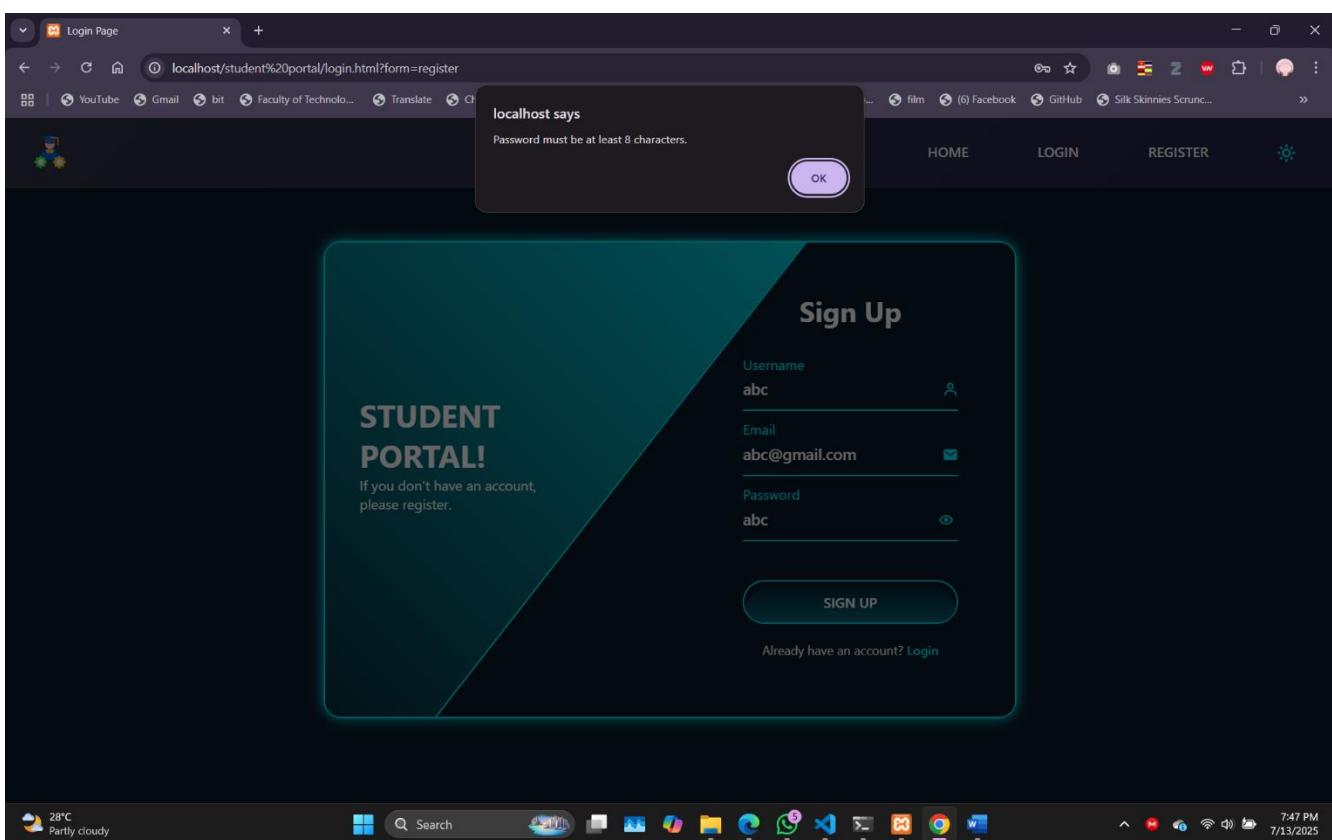
- Invalid Username or password message



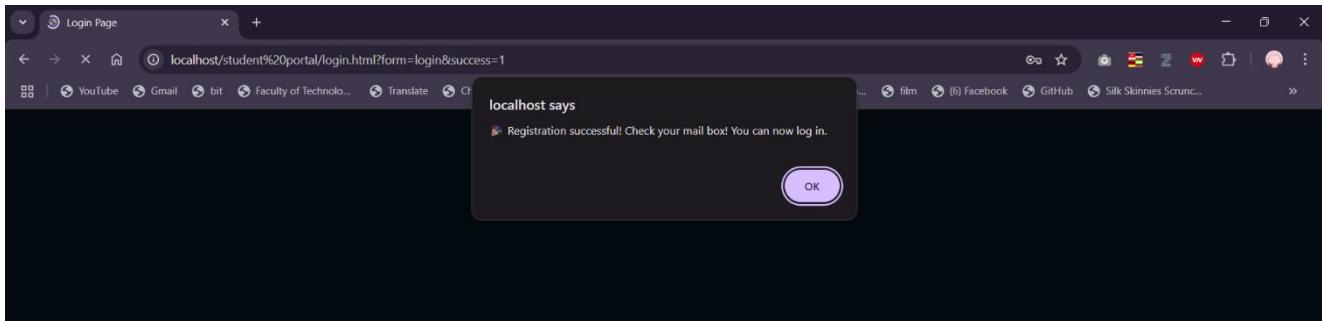
- Email address validation message



- Password validation message



- Registration successful message



- Information updated successfully message

A screenshot of a web browser window titled "Student Profile - Student Portal". The address bar shows "localhost/student%20portal/profile.php". The page has a purple header with navigation links for "PROFILE", "COURSES", "CONTACT", and "LOGOUT". On the left, there is a user icon with "KA" initials. The main content area features a green banner at the top stating "Personal information updated successfully!". Below this, a card displays the student's name "Kusal Akalanka Perera" and details: "Student ID: STU001" and "Email: kusalakalankaun@gmail.com". A green button labeled "Active Student" is also present. Two large cards below show "Personal Information" and "Academic Information". The "Personal Information" card contains fields for Full Name (Kusal Akalanka Perera), Email (kusalakalankaun@gmail.com), Phone (0772153579), and Date of Birth (October 27, 2002). The "Academic Information" card contains fields for Student ID (STU001), Program (Software Engineering), Year Level (1st Year), and Enrollment Date (August 2025). The bottom of the screen shows a Windows taskbar with various icons and system status indicators.

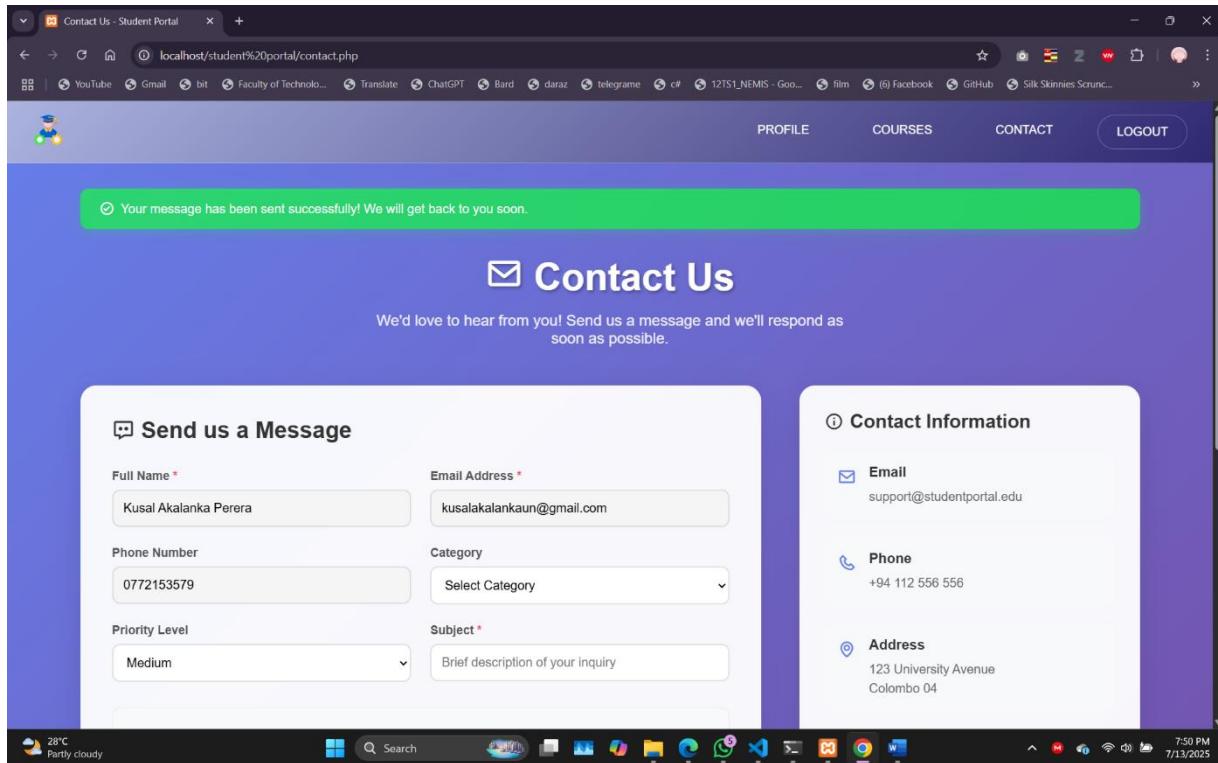
- Filter out matching search course

The screenshot shows a web browser window titled "Courses - Student Portal". The URL in the address bar is "localhost/student%20portal/course.php". The page has a purple header with navigation links for PROFILE, COURSES (which is highlighted), CONTACT, and LOGOUT. Below the header, there's a section titled "Available Courses" with a subtitle "Explore our comprehensive range of courses designed to enhance your learning journey." A search bar contains the text "com". Below the search bar, it says "Showing 1 course(s)". A card displays a blue icon with white code symbols (</>), the title "Computer Science", and the subtitle "Fundamentals of Programming". At the bottom of the screen, the Windows taskbar shows the date and time as "7/13/2025 7:49 PM".

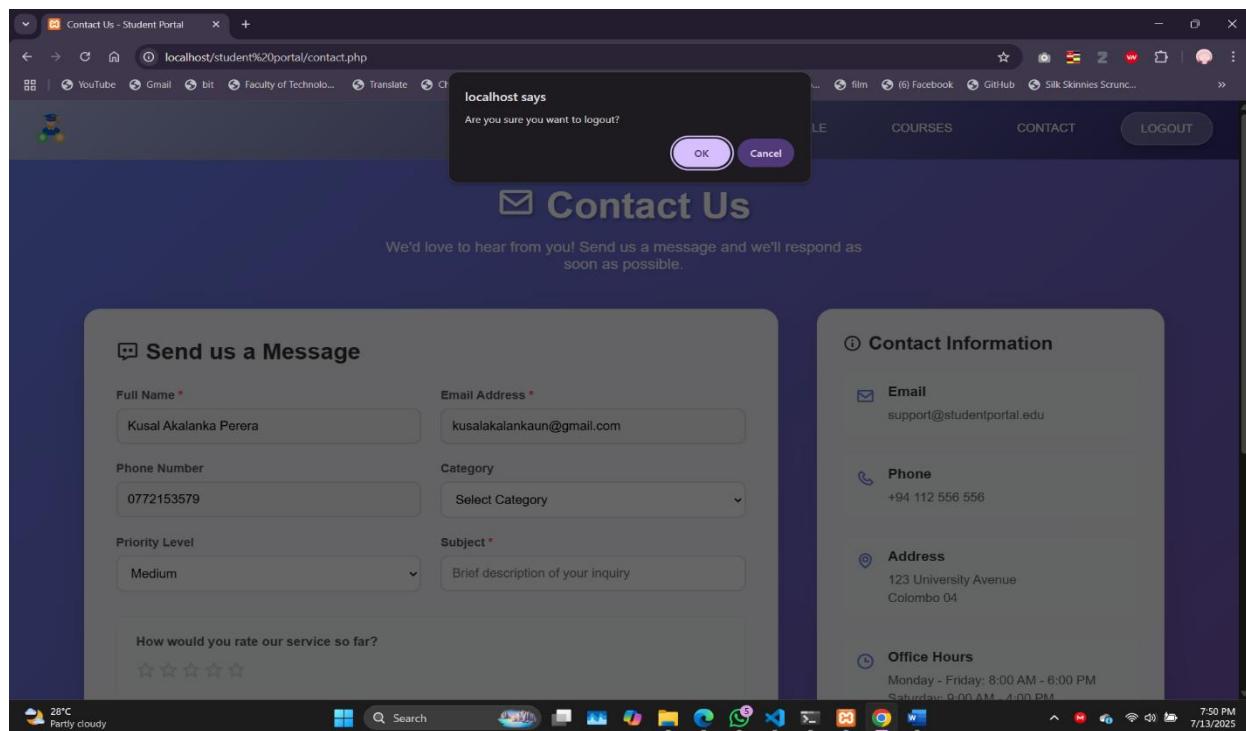
- Error message for mismatch search course

The screenshot shows a web browser window titled "Courses - Student Portal". The URL in the address bar is "localhost/student%20portal/course.php". The page has a purple header with navigation links for PROFILE, COURSES (which is highlighted), CONTACT, and LOGOUT. Below the header, there's a section titled "Available Courses" with a subtitle "Explore our comprehensive range of courses designed to enhance your learning journey." A search bar contains the text "abc". Below the search bar, it says "Showing 0 course(s)". A magnifying glass icon is centered on the page. Below the icon, a message reads "No courses found matching your search. Try searching with different keywords." At the bottom of the screen, the Windows taskbar shows the date and time as "7/13/2025 7:49 PM".

- Contact form submission saucerful message



- Logout confirmation message



## 9. Conclusion

This student portal application successfully delivers a comprehensive digital platform that empowers students to efficiently manage their academic journey.

Through its intuitive interface and robust backend architecture, the system provides:

- ✓ Secure authentication with password protection and session management
- ✓ Complete profile control for both personal and academic information
- ✓ Interactive course browsing with real-time search capabilities
- ✓ Direct communication channels with administrative supports
- ✓ Responsive design ensuring accessibility across all devices

Future development Roadmap:

- ✓ Password recovery system via email verification
- ✓ Course enrollment functionality with registration management
- ✓ Admin dashboard for comprehensive user management
- ✓ Analytics dashboard to track student engagement
- ✓ Mobile application version for on the go access