



ULAB

UNIVERSITY OF LIBERAL ARTS
BANGLADESH

Design Project 1 Report

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ABSTRACT

The Chalkboard Circle is a comprehensive, web-based academic portal that centralizes communication, assessment, and feedback for university students and teachers, for in this case the University of Liberal Arts Bangladesh (ULAB). The system integrates role-based authentication, a real-time discussion board for course groups, a structured complaint portal supporting both identified and anonymous submissions, a course-aware quiz module, and a global search feature that locates users and course resources across the platform.

Built using HTML, CSS, JavaScript, PHP, and MySQL on the XAMPP stack, the portal aims to reduce fragmentation between learning, support, and reporting tools by offering a single, user-friendly interface. The report covers requirement analysis, system design, database modeling, implementation details, testing, and future enhancements, demonstrating how a lightweight PHP–MySQL solution can improve communication, transparency, and engagement in a university environment.

This project aims to bring the entire community of ULAB, under one “roof”, or a website to build a clearcut information system, and an exchange of relationships between a teacher and a student. It also allows us to seek for the betterment of the future including the future of the university.

The Chalkboard Circle has successfully integrated all the attributes of being a fully functional website, and created solely on the knowledge of the greater Computer Science Engineering.

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Chapter 1 - Introduction

1.1 Overview of The Chalkboard Circle

The Chalkboard Circle is a web-based academic portal designed to centralize communication, assessment, and feedback between students and teachers within a university environment. It combines multiple features—such as course-based discussion rooms, a structured complaint portal, a quiz and course module, and a global search function—into a single, unified system. The platform is implemented using HTML, CSS, JavaScript, PHP, and MySQL on a XAMPP server, making it lightweight, accessible, and easy to deploy on standard institutional infrastructure.

1.2 Background and Motivation

Traditional university communication relies heavily on scattered tools like email threads, social media groups, and separate learning management systems. This fragmentation often leads to missed announcements, untracked complaints, and difficulty managing course resources or quizzes. Students need a simple way to discuss coursework, raise issues, and attempt assessments, while teachers require tools to manage interactions and monitor participation. The Chalkboard Circle is motivated by the need for a single, intuitive portal that addresses these gaps and supports both academic and administrative communication. This also has the motivation to create friendly relationships with our professors, learn a bit more about them, eliminating surface level interaction. Often, students who are introverted interact with their respective professors, this creates a greater opportunity to overcome this fear.

1.3 Problem Statement

Students and teachers often struggle with disconnected systems for discussion, complaints, and evaluations, resulting in poor information flow and limited transparency. For example, Google Classroom deals with very limited features. There is no integrated platform where a student can simultaneously participate in course discussions, submit feedback or complaints (including anonymous reports), search for relevant courses or teachers, and attempt quizzes. This project addresses the problem by designing and implementing a centralized portal that streamlines these tasks and ensures that interactions are recorded, organized, and accessible.

1.4 Objectives of the Project

The main objective of The Chalkboard Circle is to develop an integrated academic portal that improves communication and engagement between students and teachers. The specific objectives are:

- To provide secure, role-based login for students, teachers, and administrators.
- To create a discussion portal where users can participate in real-time course conversations.
- To implement a complaint system that supports both identified and anonymous submissions.
- To build a quiz and course module for online assessments and course-specific activities.
- To design a search feature that helps users quickly locate students, teachers, and course resources.
- To ensure a user-friendly interface that follows a consistent visual theme across all modules.

1.5 Scope and Limitations

The scope of this project covers core academic interactions rather than full university management. It includes user registration and authentication, student and teacher dashboards, course-based discussion groups, a complaint portal, search functionality, and quiz features. The system focuses on web browsers and is developed as a prototype suitable for departmental or small-scale deployment. Limitations include the absence of advanced analytics, large-scale performance optimization, and deep integration with existing university ERP or LMS systems. Mobile applications, push notifications, and complex grading automation are considered beyond the current scope but are identified for future work.

1.6 Organization of the Report

This report is structured into twelve chapters to present the project in a systematic manner. Chapter 1 introduces the project, background, problem statement, objectives, scope, and report structure. Chapter 2 reviews related systems and literature relevant to academic portals, complaint platforms, and quiz systems. Chapter 3 describes the methodology and development approach used in the project. Chapter 4 focuses on requirements analysis and user roles. Chapter 5 presents the detailed system design, including diagrams and database modeling. Chapter 6 explains each module of the system. Chapter 7 discusses implementation details and technologies. Chapter 8 covers testing and evaluation. Chapter 9 analyses cost and feasibility aspects. Chapter 10 explains deployment and maintenance plans. Chapter 11 outlines future enhancements, and Chapter 12 concludes the report with

reflections on achievements and limitations.

Chapter 2 - Literature Review and Methodology

2.1 Overview of Existing Academic Portals

Universities commonly adopt learning management systems such as Moodle, Canvas, and Google Classroom to share course materials, publish announcements, and collect assignments. These platforms focus primarily on content delivery and grading, while features like complaint handling, informal discussion, and cross-portal search are often limited or handled by separate tools. As a result, students may rely on a mixture of LMS pages, institutional portals, and external communication channels to manage their academic activities.

2.2 Communication, Complaint, and Quiz Systems

Online communication in academic settings is frequently supported by email, messaging applications, or built-in LMS forums. Although these tools enable group discussion and announcements, they rarely connect directly with formal complaint mechanisms or assessment modules. Complaint and feedback systems, where they exist, are usually standalone forms or ticketing systems that allow students to submit issues but offer little integration with course contexts or user dashboards. Similarly, web-based quiz tools provide automated assessment and grading but are often accessed from separate pages and are not

tightly linked to discussion spaces or global search. Together, this fragmentation leads to a disjointed user experience and makes it difficult to track the full lifecycle of a student's interaction with a course.

2.3 Summary of Literature Findings

The survey of existing portals indicates that most solutions address individual needs—content delivery, communication, complaints, or quizzes—but seldom provide a unified workflow across all of them. Students and teachers must repeatedly switch between systems to discuss course topics, attempt quizzes, and report problems, increasing complexity and reducing transparency. These gaps motivate the design of The Chalkboard Circle as an integrated portal where discussion, complaint handling, assessment, and search operate within a single, coherent environment tailored to departmental or institutional use.

2.4 Project Development Methodology

The Chalkboard Circle is developed using an iterative, phase-based methodology inspired by the waterfall-plus-feedback approach. The project begins with requirement elicitation, where student and teacher needs are identified through informal discussions and analysis of existing university tools. This is followed by system analysis and design, including the creation of use-case diagrams, data flow diagrams, and an entity-relationship model.

Implementation proceeds in incremental modules—authentication, discussion portal, complaint portal, search, and quiz—each

developed, integrated, and refined in cycles.

2.5 Tools, Technologies, and Workflow

The system is implemented using HTML, CSS, and JavaScript for the front end, with PHP and MySQL providing server-side logic and database management on a XAMPP environment. Versioned iterations are tested locally, allowing rapid debugging and adjustment. For each module, the workflow follows a consistent pattern: define functional requirements, design the database tables and interfaces, implement the PHP logic, integrate the module into student and teacher dashboards, and then conduct functional testing with sample data. This combined literature-and-methodology approach ensures that the proposed portal not only addresses shortcomings observed in existing systems but is also developed through a structured, repeatable process.

Chapter 3 - Requirements Analysis

3.1 Functional Requirements

The functional requirements define the specific behaviors and functions the system must support to meet user needs. The primary requirement is a secure authentication system that allows users to register and log in as either a student or a teacher, ensuring distinct access levels. The system must also include a complaint portal where students can submit issues regarding academic or facility matters, with a mandatory feature to allow anonymous submissions. Furthermore, a real-time discussion board is required to facilitate communication within course groups, allowing users to post queries and replies. Finally, the system must support a global search function to locate students and teachers across the university database and a quiz module that allows students to attempt assessments and receive immediate scores. However, keeping room to make even more improvements.

3.2 Non-Functional Requirements

Non-functional requirements address the quality attributes of the system rather than specific behaviors. Security is a critical constraint, requiring that all user passwords be encrypted before storage in the database to prevent unauthorized access. The system is also required to be user-friendly, offering an intuitive interface that allows users with basic digital literacy to navigate the dashboard without training. Performance is another key factor; the application is designed to be lightweight, ensuring fast load times on the local XAMPP server, and it must remain available to users whenever the host server is active. The integration determines the

role and the email password given for the particular person and only allows them to access the website.

3.3 User Roles and Permissions

The system is designed with distinct user roles to ensure appropriate access to features. The Teacher role allows faculty members to view student profiles, respond to complaints, and moderate course discussions. The Student role provides access to the core features, including participating in discussions, submitting complaints, searching for peers, and taking quizzes. These features are carefully designed per profile, ensuring communication of connection between both of these roles. The roles are there to ensure that sensitive administrative functions are protected from general users.

3.4 Use Cases of the System

The system creates several key use cases that describe user interactions. In one scenario, a student logs in to the portal to submit a complaint about a classroom facility; they select the category, type the description, eg. Discussion Forum, and Consultation Requests cards in both the profiles. Checking the box for anonymity before submitting in the Complaint Page. In another use case, a teacher accesses the search module to find a specific student by ID to review their details. A third use case involves a user joining a discussion group to post a question about an upcoming assignment, to which other peers or the instructor can reply.

Chapter 4 – Designing the System

4.1 Features of the Proposed System

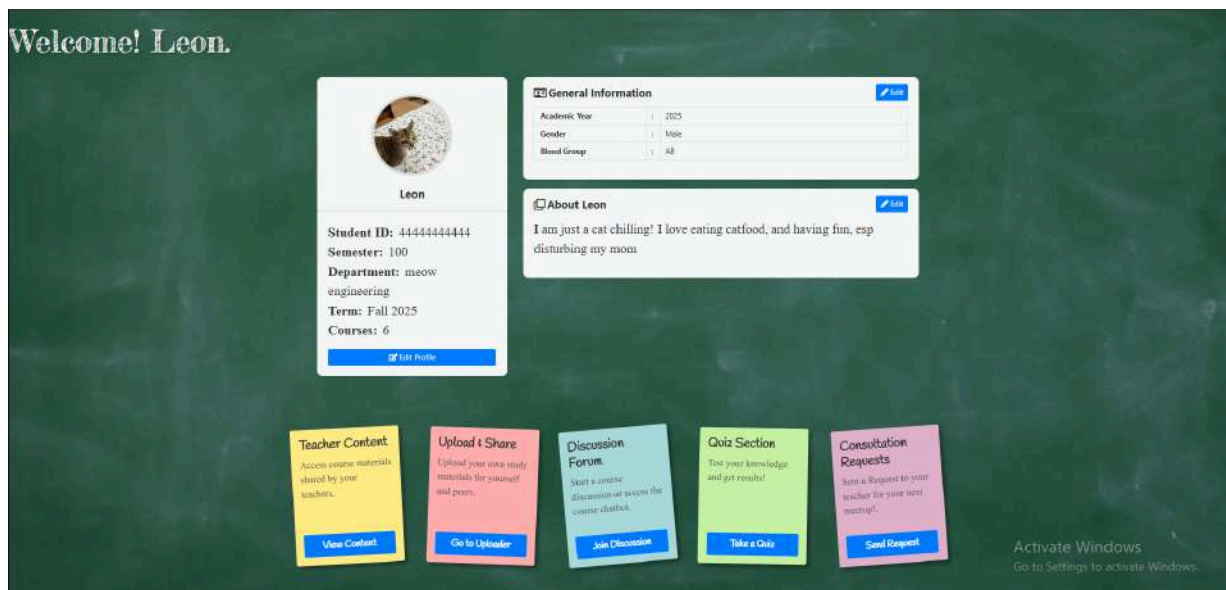
The Chalkboard Circle portal is designed as a web-based platform that unifies course discussions, complaint handling, quiz activities, and global search into one integrated environment. The system supports three primary user roles: student, teacher, and administrator, each with a dedicated dashboard while sharing the same underlying interface and database. The design focuses on intuitive navigation, clear separation of modules, and a visual style inspired by a classroom chalkboard and corkboard, so users can quickly reach common actions such as joining a discussion group, submitting a complaint, or attempting a quiz.

4.2 Features in Detail

4.2.1 Student Features

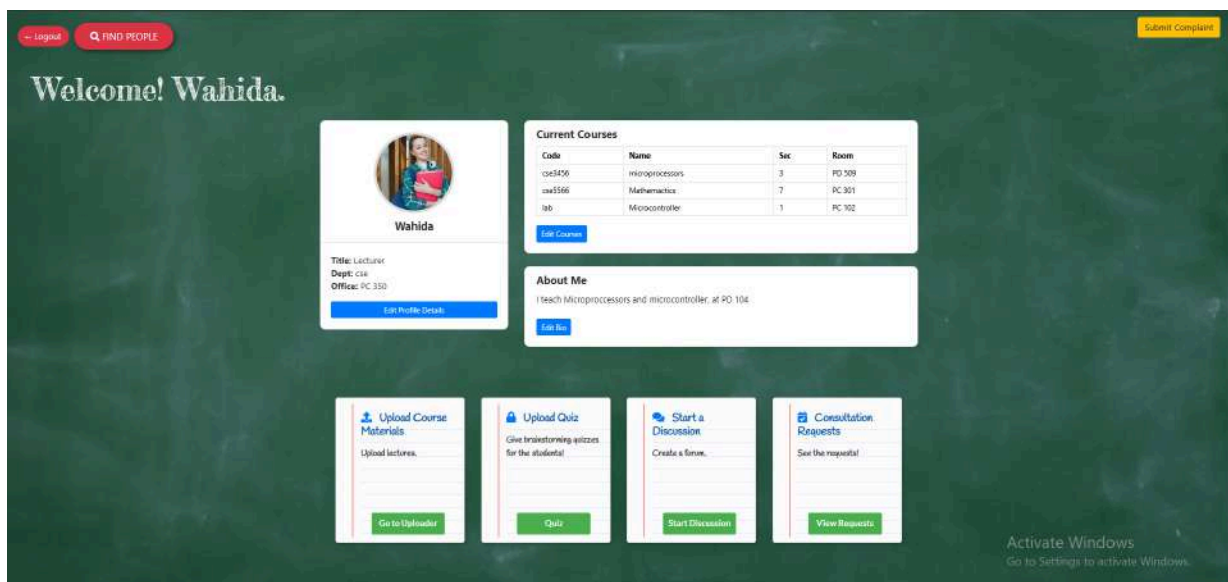
Students sign in to a personalized dashboard that summarizes active courses, upcoming quizzes, and links to discussion groups. From this dashboard, they can open the discussion portal for any course, send and view messages in real time, and see which teacher or student posted each message. Students can also access the complaint portal from their profile header, choose between identified or anonymous reporting, and submit structured complaints that are stored in the system for later review. In addition, students can use the search page to look up teachers, peers, or course codes and follow links to the relevant dashboard or quiz start page.

Student profile and features:



4.2.2 Teacher Features

Teachers log in to a dashboard that highlights the courses they teach, recent messages in each discussion group, and quick access to quiz and complaint information. They can participate in course discussions, where their messages are visually marked as teacher posts, and can observe how students interact in different groups. Teachers can create or manage quizzes associated with specific courses, review basic results, and guide students toward relevant practice activities. The design also allows teachers to see complaints related to their courses when appropriate, helping them respond to academic concerns while formal administrative handling remains under the admin role.



4.3 Use Case Diagram

The use case design groups interactions around the three main roles. Students initiate use cases such as “Log In”, “Join Discussion”, “Send Message”, “Submit Complaint”, “Search Portal”, and “Attempt Quiz”. Teachers participate in use cases including “Log In”, “View Course Discussions”, “Post Teacher Message”, “Create or Manage Quiz”, and “Review Course-Related Complaints”. Administrators are involved in “Manage Users”, “View and Assign Complaints”, and “Monitor System Activity”. The diagram shows all roles connected to the central Chalkboard Circle system, illustrating how each actor interacts with the shared modules through different access rights.

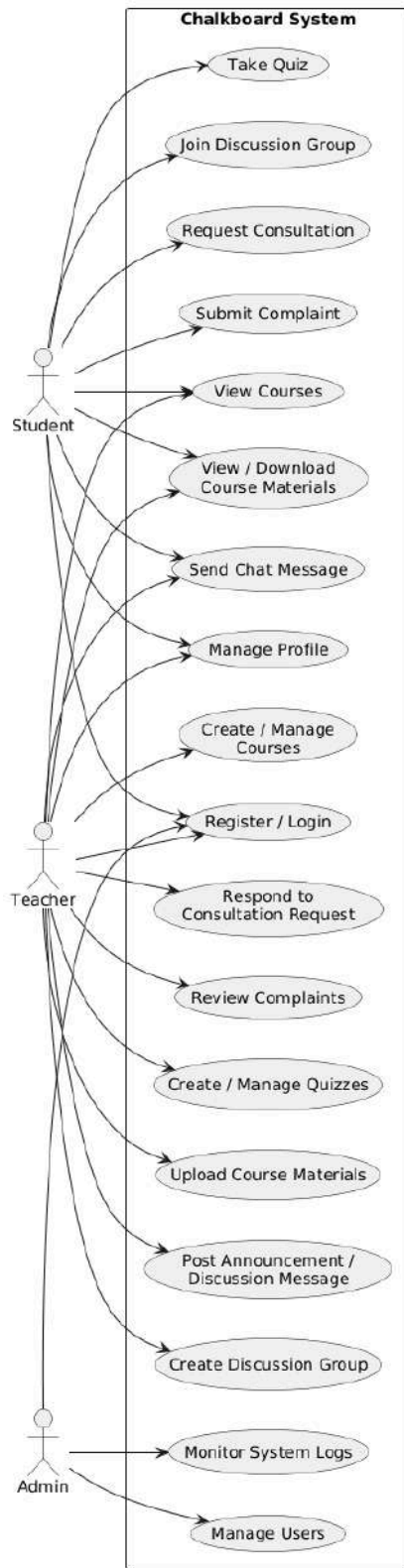


Fig Use Case Diagram

4.4 Data Flow Diagram

The context-level data flow diagram represents the Chalkboard Circle as a single process receiving inputs from Students, Teachers, and Administrators and interacting with the central database. At Level-1, the system is decomposed into key processes such as “Authentication and Role Management”, “Discussion Management”, “Complaint Management”, “Search Processing”, and “Quiz Management”. Each process exchanges data with corresponding data stores, for example user credentials, messages, complaints, quiz questions, and results, demonstrating how information moves between interfaces and the database during normal operation.

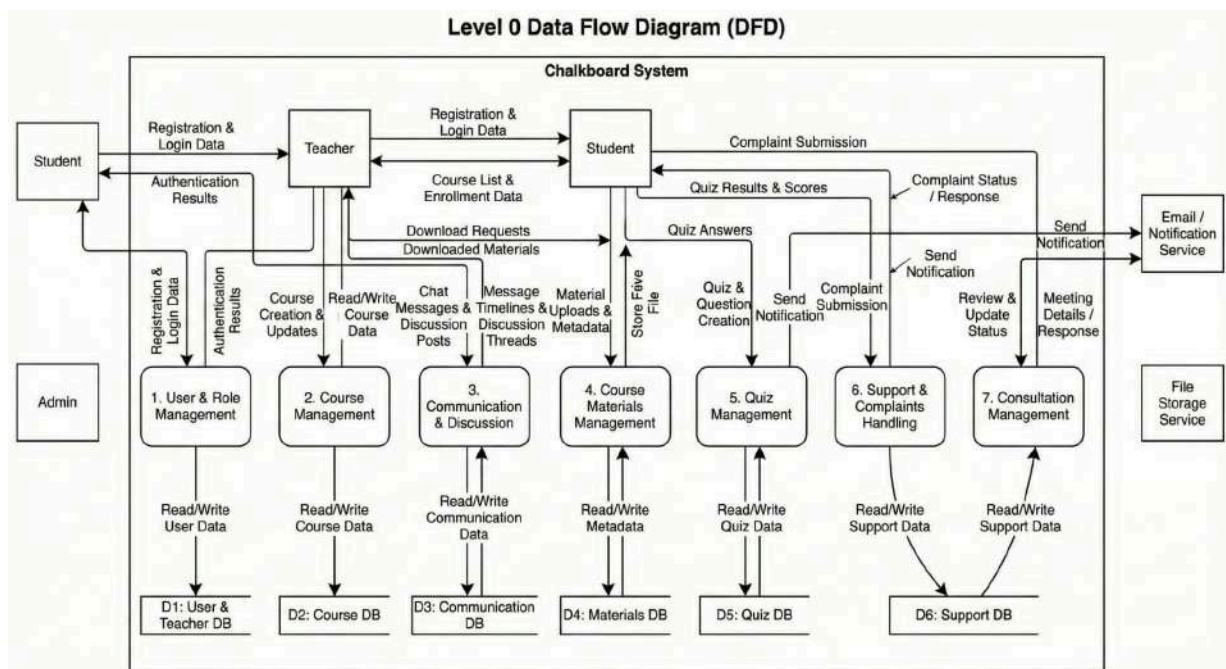


Fig Data Flow diagram

4.5 Entity–Relationship Diagram

The entity–relationship design identifies core entities such as Student, Teacher, Admin, Course, DiscussionGroup, Message, Complaint, Quiz, Question, and Result. Relationships capture how one teacher can be linked to many courses, each course can have one or more discussion groups and quizzes, and each quiz consists of multiple questions. Complaints are associated with a user and optionally with a course or category, while messages connect a user to a discussion group. Primary and foreign keys are defined for each table to ensure referential integrity and support efficient queries for the search and reporting modules.

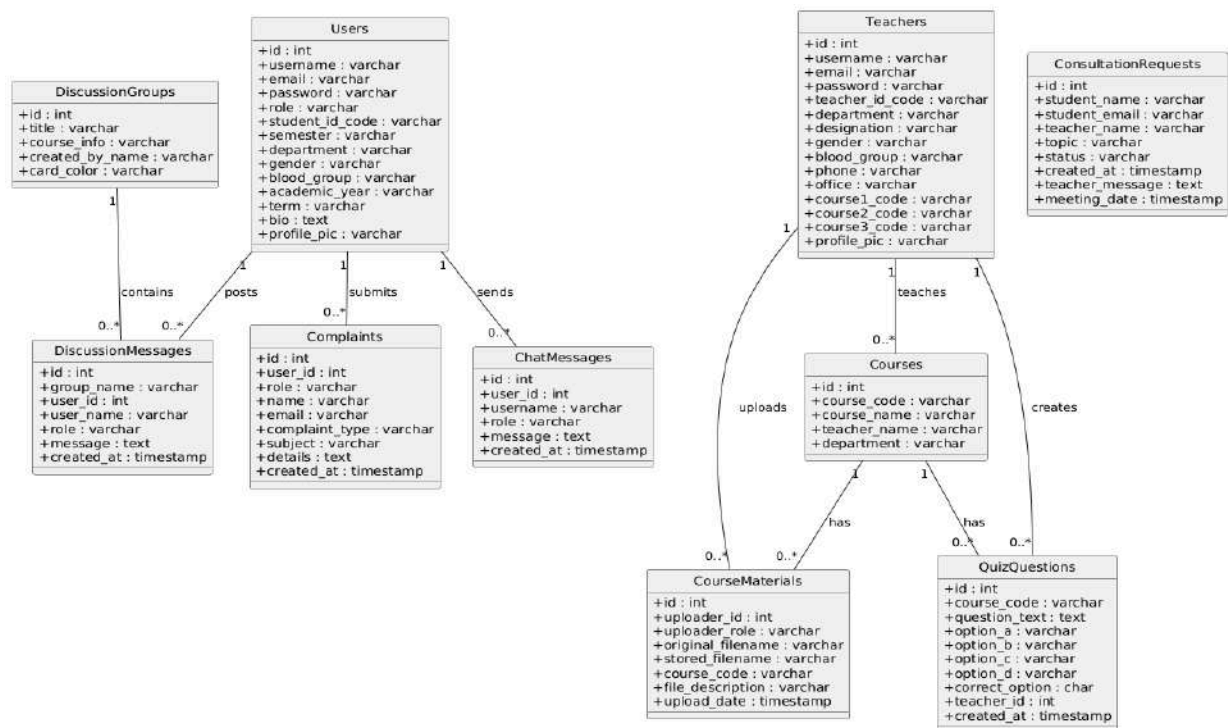


Fig Class Diagram of the Database Architecture

4.6 Activity Diagrams

Activity diagrams describe the flow of actions for the most important user tasks. For example, the “Send Discussion Message” activity begins when a logged in student or teacher opens a group, types a message, triggers the send action, and the system validates input, stores the message in the database, and refreshes the chat window. The “Submit Complaint” activity shows two branches: identified submission and anonymous submission, both leading through validation, database insertion, and confirmation display. Another activity diagram for “Search and Open Resource” traces how a user enters a keyword, the system performs parallel searches across students, teachers, and courses, displays unified results, and then redirects the user to the appropriate dashboard or quiz page when a result is selected.

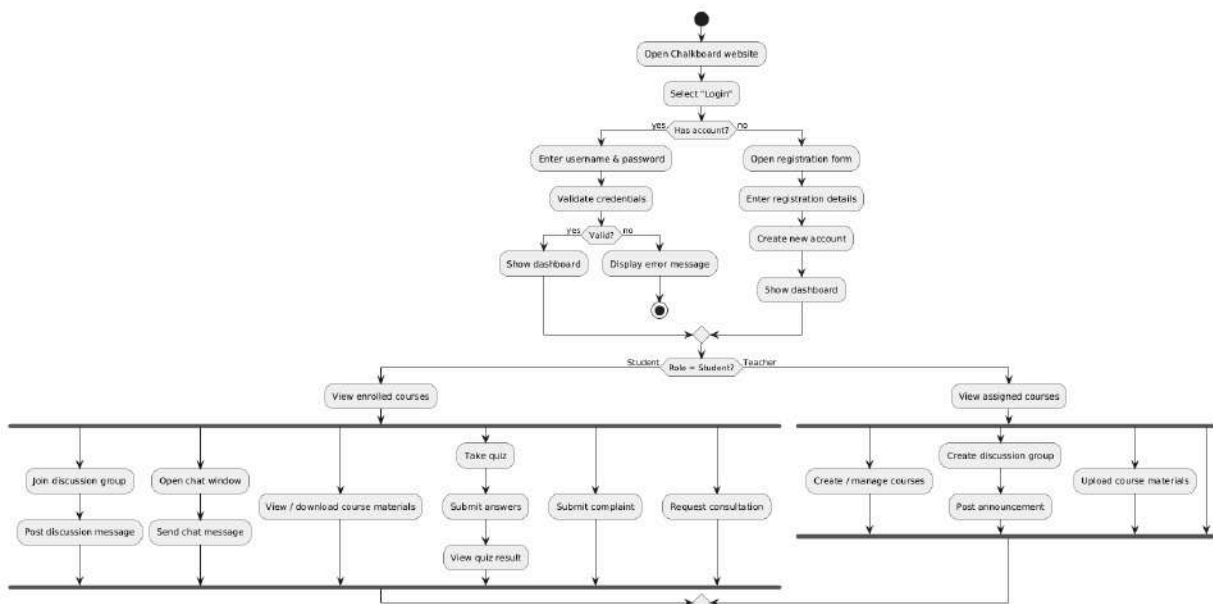


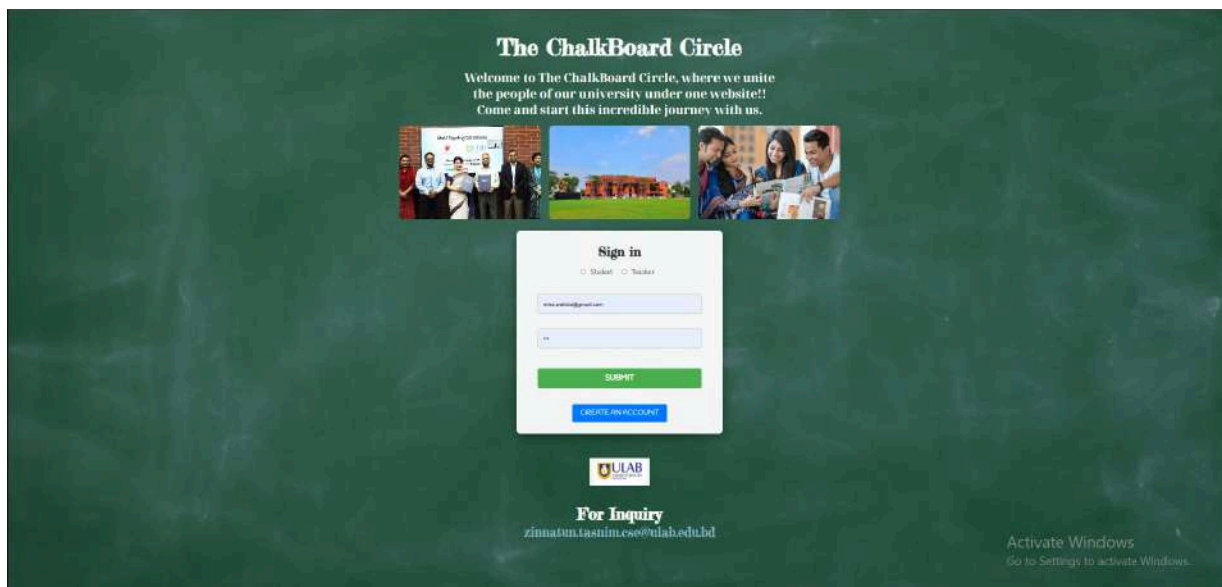
Fig Activity Diagram

Chapter 5 – Module Description

5.1 Authentication and Role Management

The authentication module is responsible for verifying user credentials and assigning the correct role to each session. Users log in using a registered email or username and password, which are validated against records stored in the database using secure queries. After a successful login, the system stores a role-specific session variables (student, teacher, or admin) that control which pages, buttons, and actions become available. Role management ensures that students cannot access teacher-only or admin-only functions, while teachers and administrators receive additional options suited to their responsibilities.

Sign In Page:



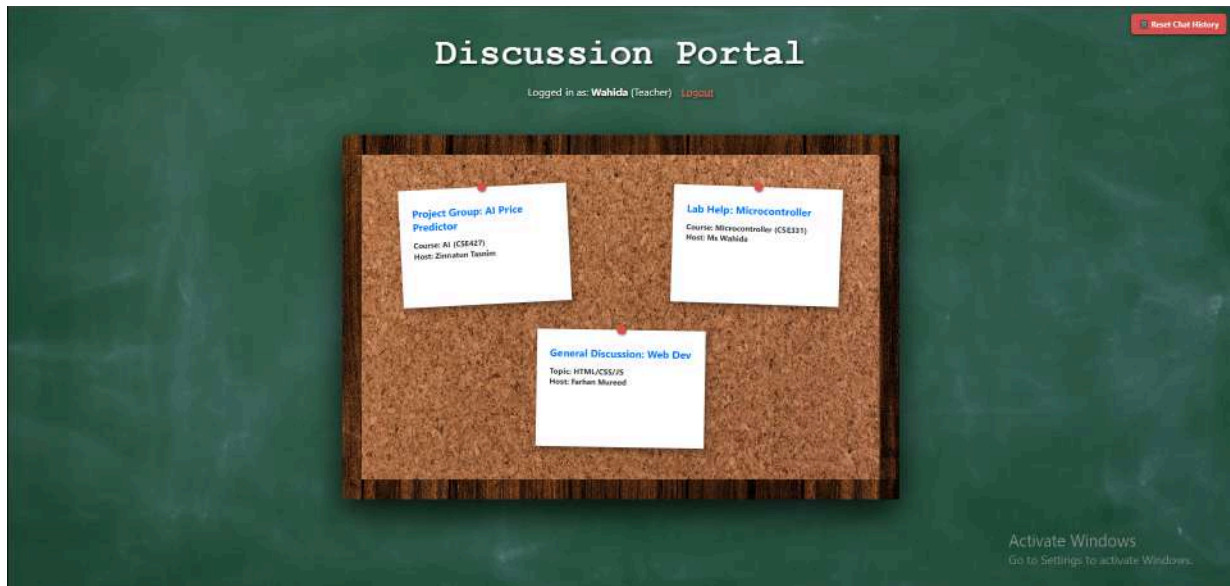
Create An Account Page:



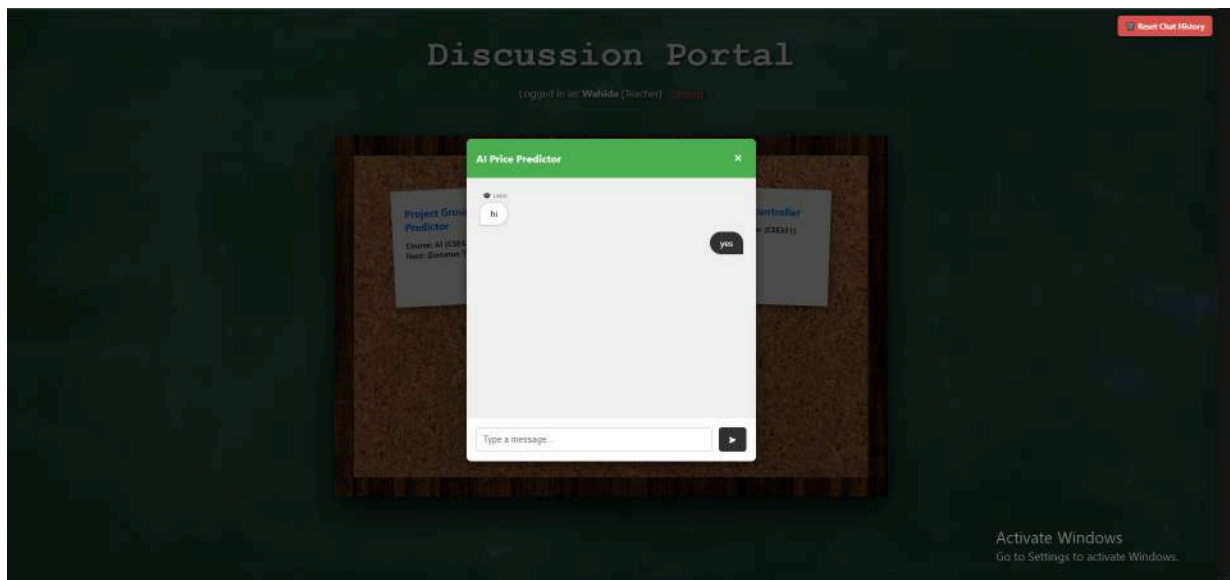
5.2 Discussion Portal Module

The discussion portal module provides course-based live chat rooms where students and teachers can exchange messages. Each discussion group is linked to a particular course or topic and displays messages in a styled interface that distinguishes between outgoing messages, student posts, and teacher posts. The module uses asynchronous requests to send and retrieve messages from the discussion table in the database, updating the chat window without reloading the entire page. This design allows participants to follow conversations in real time and keeps a persistent record of discussions for future reference.

Discussion Portal Page:



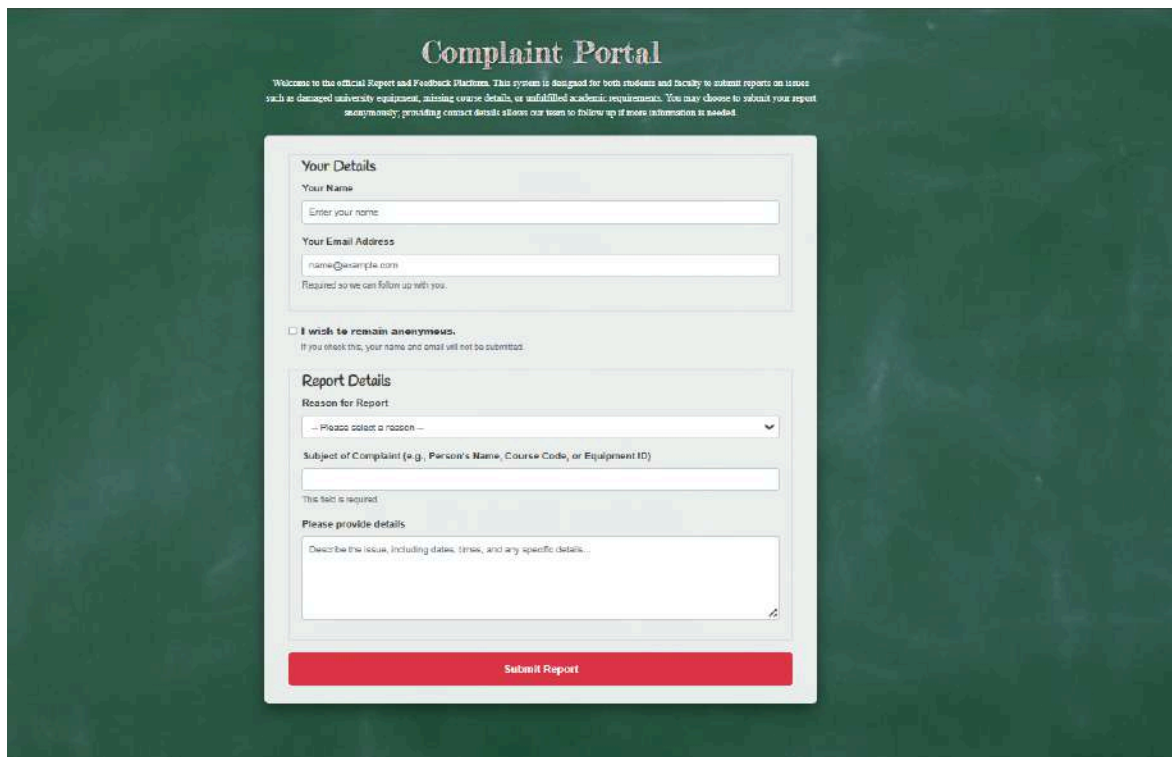
Live chat Integration:



5.3 Complaint Portal Module

The complaint portal module allows users to submit structured reports about academic or administrative issues, with the option to remain identified or anonymous. The complaint form collects information such as category, subject, and detailed description, and either stores the user's name and email or masks them if anonymity is selected. Submitted complaints are saved in a dedicated table where authorized staff or administrators can view, filter, and process them. This module aims to make reporting issues simple and safe, improving transparency and responsiveness within the institution.

Complaint Portal:



The screenshot displays a web form titled "Complaint Portal" set against a dark green background. At the top, a welcome message states: "Welcome to the official Report and Feedback Platform. This system is designed for both students and faculty to submit reports on issues such as damaged university equipment, missing course details, or unfulfilled academic requirements. You may choose to submit your report anonymously; providing contact details allows our team to follow up if more information is needed." The form is divided into two main sections: "Your Details" and "Report Details".

Your Details

- Your Name:** A text input field with the placeholder "Enter your name".
- Your Email Address:** A text input field with the placeholder "name@example.com". Below this field is a note: "Required so we can follow up with you."
- Privacy Option:** A checkbox labeled "I wish to remain anonymous." with the instruction "If you check this, your name and email will not be submitted."

Report Details

- Reason for Report:** A dropdown menu with the placeholder text "-- Please select a reason --".
- Subject of Complaint (e.g., Person's Name, Course Code, or Equipment ID):** A text input field with a note below it stating "This text is required."
- Please provide details:** A large text area with the placeholder "Describe the issue, including dates, times, and any specific details..." and a small icon in the bottom right corner.

At the bottom of the form is a prominent red button labeled "Submit Report".

5.4 Search and Profile Lookup Module

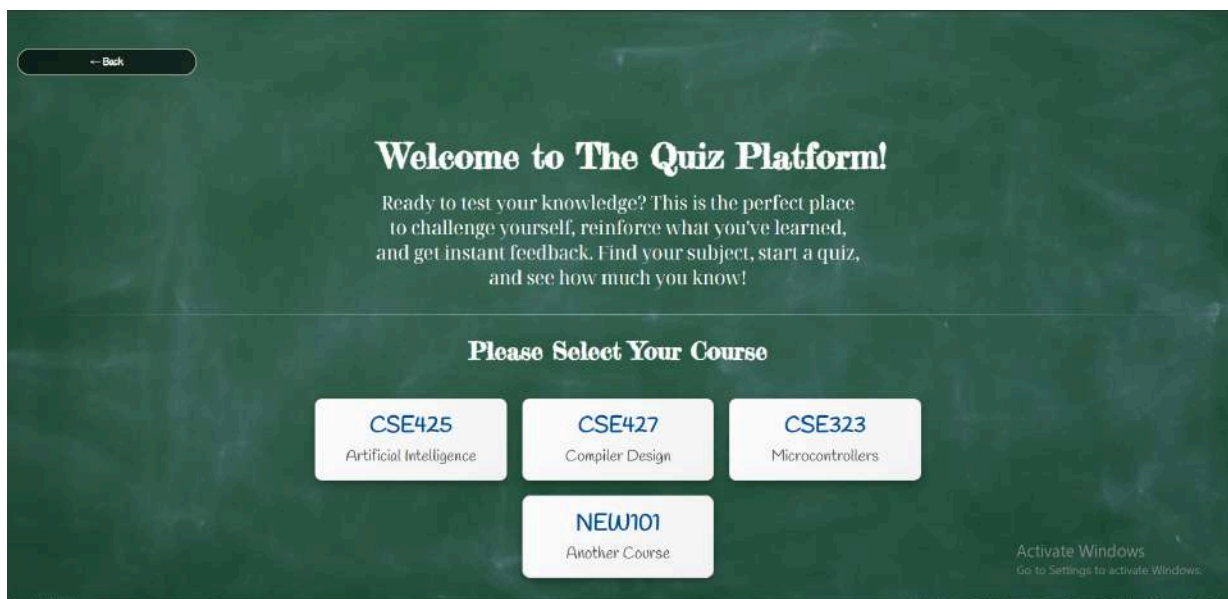
The search module offers a unified search bar that can locate students, teachers, and courses using names, departments, or course codes. When a query is submitted, the system performs parallel searches on the relevant tables and displays results as clickable cards with concise information such as name, role, department, and email or course details. Selecting a result redirects the user to the appropriate page, such as the main student dashboard, teacher dashboard, or quiz start screen for a specific course. This module reduces the time users spend navigating menus and helps them quickly find the people or resources they need.

Search Page:



5.5 Quiz and Course Module

The quiz and course module manages online assessments associated with specific courses. Teachers can create quizzes by defining course tags, questions, and correct answers, which are stored in the database. Students access quizzes through their dashboard or via search, attempt questions within a time-bounded interface, and receive immediate feedback or stored scores depending on the configuration. The module maintains the link between courses, quizzes, and results so that performance can be tracked per subject and used to support learning and revision.



Quiz for CSE425

1. What is the formula for straight line?

- ☐ $y = mx + c$
- ☐ $y \text{ equal } mx + c$
- ☐ $y/mx + c$

2. bla bla

- ☐ ab
- ☐ gg
- ☐ 66

3. What is the answer???

- ☐ ab
- ☐ njhb ==
- ☐ 66

Activate Windows
Go to Settings to activate Windows.

Quiz for CSE425

Your Results:

You scored 1 out of 3!

Good try! A little more review might help.

[Back to Courses](#)

Activate Windows
Go to Settings to activate Windows.

Chapter 6 – Implementation

6.1 Development Environment Setup

The Chalkboard Circle portal was developed and tested on a local web server environment using XAMPP, which bundles Apache, PHP, and MySQL. The project files were organized within the server's document root, allowing direct access through a browser via local URLs such as <http://localhost/chalkboard/>. A code editor was used to manage HTML, CSS, JavaScript, and PHP files, while phpMyAdmin provided a graphical interface for creating databases, tables, and running SQL queries. This setup made it possible to iteratively develop, debug, and refine the system in a controlled environment before any deployment to external servers.

6.2 Backend Implementation with PHP and MySQL

The backend of the system is built using PHP scripts that handle authentication, role management, form submissions, and database communication. Separate PHP files were created for key features such as login, registration, dashboards, the discussion portal, complaint handling, search, and quiz logic. Each script connects to a central MySQL database using a shared configuration file, executes parameterized queries to prevent basic injection issues, and returns appropriate responses to the browser. Tables were designed to store users, teachers, courses, messages, complaints, quizzes, questions, and results, allowing the backend to enforce relationships and retrieve data efficiently for different modules.

6.3 Frontend Implementation with HTML, CSS, and JavaScript

The frontend uses HTML to structure pages such as the student dashboard, teacher dashboard, discussion board, complaint form, search page, and quiz interfaces. CSS is applied to create a chalkboard-style background, corkboard cards, and consistent typography across all screens, giving the portal a cohesive look and feel. JavaScript enhances interactivity by validating form inputs, managing modal windows, and sending asynchronous requests for features like live discussions and dynamic search. This combination of technologies ensures that pages remain responsive and visually clear while interacting smoothly with the PHP backend.

6.4 Integration of Modules

After individual modules were implemented, they were connected through shared navigation elements and consistent session handling. The authentication module routes users to the correct dashboard, from which they can access the discussion portal, complaint page, search interface, and quizzes using clearly labeled buttons or menu items. Each module reads role information from the active session to determine what options should be visible and which actions are allowed. URLs and parameters were standardized so that the search results can open the corresponding dashboards or quiz pages, and so that teachers and admins can move between management views without logging out.

6.5 Sample Screens and Workflows

To illustrate how the system operates, representative screens were prepared for inclusion in the report. These include the login page, student and teacher dashboards, the discussion portal with outgoing and incoming messages, the complaint submission form with anonymous mode, the search page showing categorized results, and the quiz attempt screen. For each screen, a short workflow description explains the typical sequence of actions—for example, how a student logs in, opens a course discussion, posts a message, submits a complaint if needed, and then navigates to a quiz. These examples demonstrate how the individual components of The Chalkboard Circle work together to support everyday academic activities.

Chapter 7 – Future Enhancements

7.1 Planned Feature Extensions

Several functional extensions are envisioned to increase the usefulness of The Chalkboard Circle beyond its current prototype. A dedicated notification system could be added so that students and teachers receive real-time alerts for new discussion messages, quiz availability, or complaint status updates via email or in-portal pop-ups. Mobile-friendly views or a companion mobile application would make it easier for users to participate in discussions and attempt quizzes from phones and tablets. Additional planned features include richer quiz types (such as descriptive answers and file-upload questions), detailed grade reports for students, and analytics dashboards for teachers showing participation and performance trends.

7.2 Scalability and Performance Improvements

To prepare the system for larger deployments, future work will focus on optimizing database queries, indexing frequently accessed tables, and separating static resources from dynamic content. Caching popular pages or search results can reduce server load, while implementing pagination for discussions, complaints, and search results will keep page responses fast even when data grows significantly. The architecture could also be migrated from a single local server to a more scalable environment, such as a cloud-hosted LAMP stack, where load balancing and backup strategies can be introduced to ensure higher availability and reliability.

7.3 Integration With Other University Systems

In the long term, The Chalkboard Circle can be integrated with existing university information systems to provide a more seamless experience. Linking the portal with the central student information system would allow automatic synchronization of course enrollments, user profiles, and class lists, reducing manual data entry. Single sign-on support could be added so that users log in once using institutional credentials and gain access to all connected services, including the discussion portal and quizzes. Integration with official LMS or result-publishing platforms would enable grades from quizzes and activities in The Chalkboard Circle to be transferred directly into institutional records, making the portal a complementary component of the broader academic infrastructure.

Chapter 8 – Full Web Design and its Functionality And Database Connection

1. Sign in and Login Page:



Functionality:

1. Introduction and Title
2. This is basically the first log-in page, which allows the users to get into their desired profile. The user must give their details as seen in the picture and select a role identifying who is using this account right now.
3. Role: Student or Teacher
4. List of the users that have created an id and remains stored into the database in the Users table as seen below

Read only by PHP to check login; the actual plain text password is never stored.

- role

Role for authorization, here always “Student”.

Used by PHP to decide which pages and features the user can see (student dashboard vs teacher/admin).

Academic info

- student_id_code

Official student ID from the university (e.g. roll number).

Lets you distinguish students even if they share the same name.

- semester

Current semester number (1st, 6th, etc.).

Helpful when grouping or filtering students by academic level.

- department

Department or program name (e.g. “CSE”, “General”, “Meow Engineering”).

Used in search and for showing where the student belongs academically.

- courses_taken

Placeholder for courses the student is taking (currently **NULL** in your data).

Could be used later to store course codes or be replaced by a separate enrollment table.

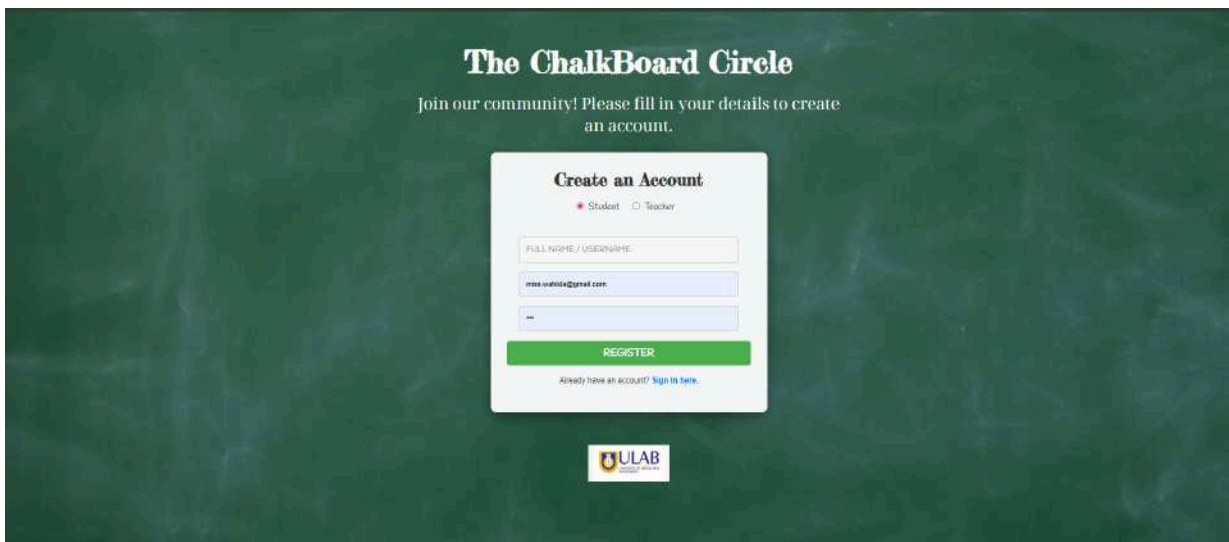
Personal details

- gender
Student's gender (Male, Female, Other).
Optional profile field for demographic or form completeness.
- blood_group
Student's blood group (e.g. AB, B+).
Could be used for emergency contact information.
- academic_year
Calendar year of study (e.g. 2025).
Distinguishes different admission batches or graduating years.
- term
Term/semester label (e.g. "Fall 2025").
Combines season and year to indicate the current academic term.
- bio
Short self-description the student writes about themselves.
Shown on profile pages; currently some rows have simple text like "bla bla".
- profile_pic
Filename or path to the student's profile picture stored on the server.
Used by the UI to load the correct image when showing the user's avatar.

Extra Features:

- Authenticate a student (email + password, checked against **id** and **role**).
- Show meaningful profile information (name, department, semester, bio, picture).
- Use academic details (student id, department, and term) in other modules like search, discussions, and future reporting.

2. Create an Account Page:



1. This is a standard account creation page
2. Each new user is registered in the users table of my database
3. Suppose I wish to create a new user “Mark Cuban”, as a student.....

The ChalkBoard Circle

Join our community! Please fill in your details to create an account.

Create an Account

☒ Student ☐ Teacher

mark.ckbae

mark.ckbae@gmail.com

REGISTER

Already have an account? [Sign In here.](#)

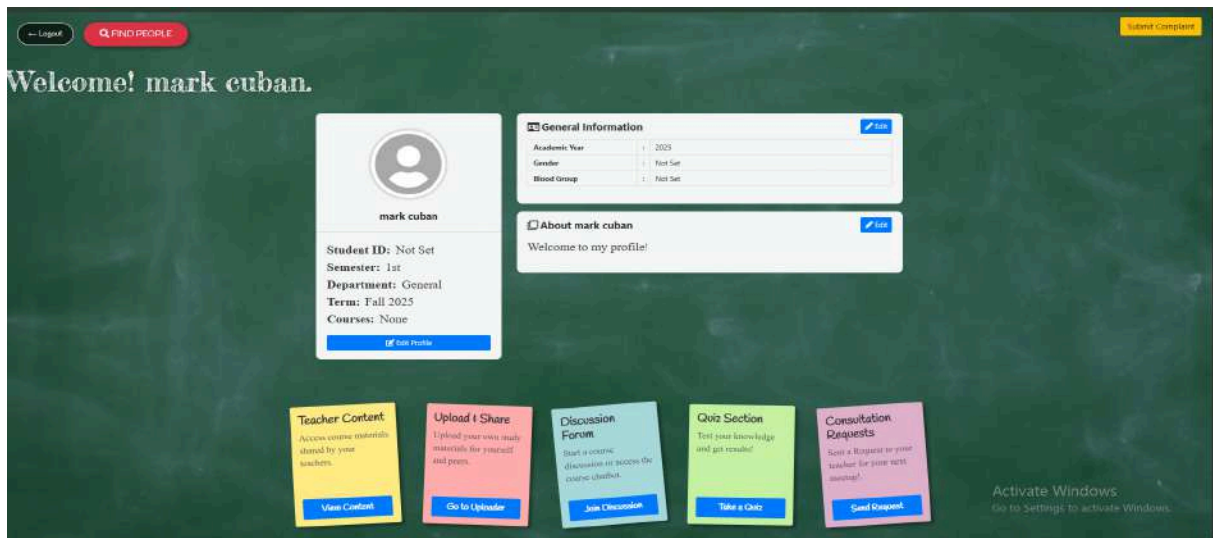


- miss.wahida@gmail.com
- ...
- dustin@gmail.com
- ...
- farhanmused19112003@gmail.com
- ...
- leonthegreat@gmail.com
- ...
- rezwana@gmail.com
- ...
- suki.waterhouse@gmail.com
- ...
- tasnim.laura@gmail.com
- ...
- Manage passwords...

Activate Windows
Go to Settings to activate Windows.

4. A new user appears:

- New Profile Created shown

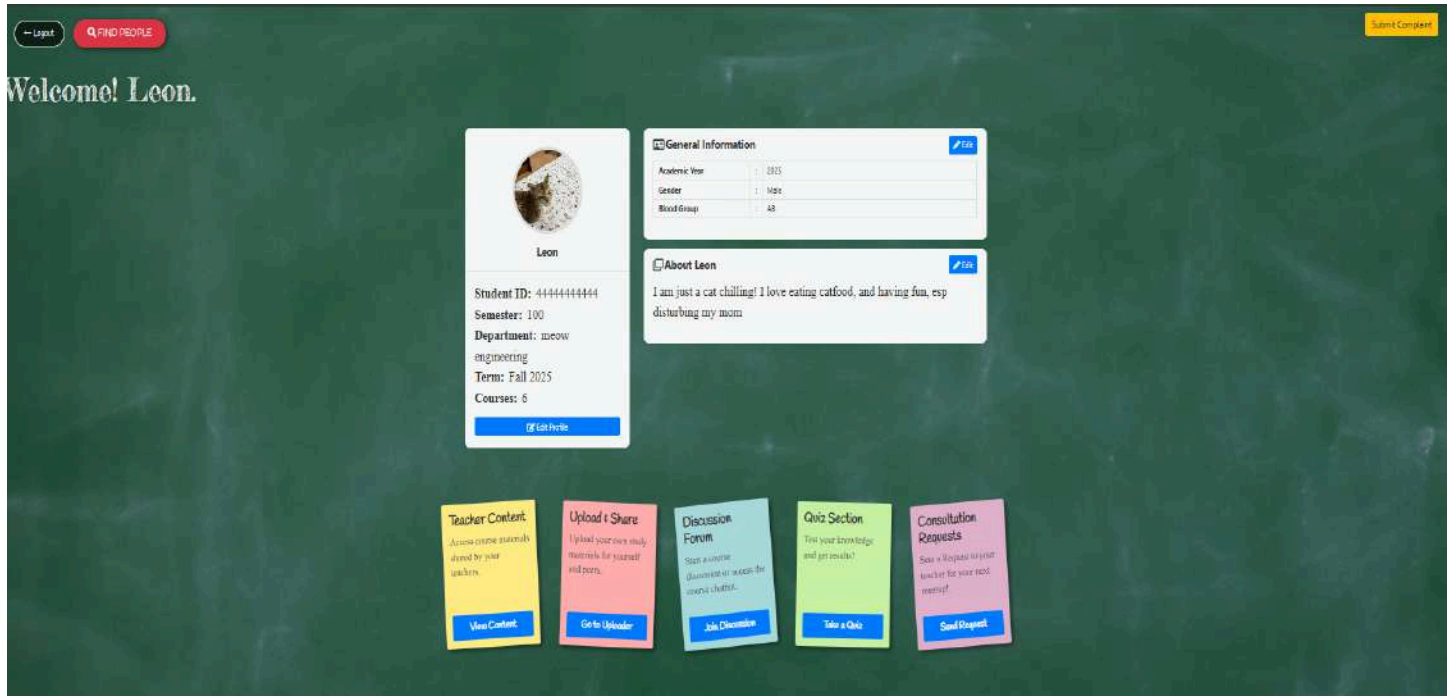


The screenshot shows a database table with columns: id, username, email, password, role, student_id, semester, department, courses_taken, gender, blood_group, academic_year, term, bio, and profile_pic. The table contains 11 rows of data. A red arrow points to the 11th row, which is highlighted in red. The 11th row has the following values: id: 11, username: mark cuban, email: mark.cuban@gmail.com, password: \$2y\$10\$zT4P9Vh11JULv58TnV1A30000HJZuP9K1D..., role: Not Set, student_id: Not Set, semester: Not Set, department: General, courses_taken: NULL, gender: Not Set, blood_group: Not Set, academic_year: 2025, term: Fall 2025, bio: NULL, and profile_pic: NULL.

id	username	email	password	role	student_id	semester	department	courses_taken	gender	blood_group	academic_year	term	bio	profile_pic
1	test	test@gmail.com	\$2y\$10\$zT4P9Vh11JULv58TnV1A30000HJZuP9K1D...	Student	Not Set	Not Set	General	NULL	Not Set	Not Set	2025	Fall 2025	NULL	NULL
2	test	test@gmail.com	\$2y\$10\$zT4P9Vh11JULv58TnV1A30000HJZuP9K1D...	Student	Not Set	Not Set	General	NULL	Not Set	Not Set	2025	Fall 2025	NULL	NULL
3	test	test@gmail.com	\$2y\$10\$zT4P9Vh11JULv58TnV1A30000HJZuP9K1D...	Student	Not Set	Not Set	General	NULL	Not Set	Not Set	2025	Fall 2025	NULL	NULL
4	test	test@gmail.com	\$2y\$10\$zT4P9Vh11JULv58TnV1A30000HJZuP9K1D...	Student	Not Set	Not Set	General	NULL	Not Set	Not Set	2025	Fall 2025	NULL	NULL
5	test	test@gmail.com	\$2y\$10\$zT4P9Vh11JULv58TnV1A30000HJZuP9K1D...	Student	Not Set	Not Set	General	NULL	Not Set	Not Set	2025	Fall 2025	NULL	NULL
6	test	test@gmail.com	\$2y\$10\$zT4P9Vh11JULv58TnV1A30000HJZuP9K1D...	Student	Not Set	Not Set	General	NULL	Not Set	Not Set	2025	Fall 2025	NULL	NULL
7	test	test@gmail.com	\$2y\$10\$zT4P9Vh11JULv58TnV1A30000HJZuP9K1D...	Student	Not Set	Not Set	General	NULL	Not Set	Not Set	2025	Fall 2025	NULL	NULL
8	test	test@gmail.com	\$2y\$10\$zT4P9Vh11JULv58TnV1A30000HJZuP9K1D...	Student	Not Set	Not Set	General	NULL	Not Set	Not Set	2025	Fall 2025	NULL	NULL
9	test	test@gmail.com	\$2y\$10\$zT4P9Vh11JULv58TnV1A30000HJZuP9K1D...	Student	Not Set	Not Set	General	NULL	Not Set	Not Set	2025	Fall 2025	NULL	NULL
10	test	test@gmail.com	\$2y\$10\$zT4P9Vh11JULv58TnV1A30000HJZuP9K1D...	Student	Not Set	Not Set	General	NULL	Not Set	Not Set	2025	Fall 2025	NULL	NULL
11	mark cuban	mark.cuban@gmail.com	\$2y\$10\$zT4P9Vh11JULv58TnV1A30000HJZuP9K1D...	Not Set	Not Set	Not Set	General	NULL	Not Set	Not Set	2025	Fall 2025	NULL	NULL

Same for teachers' profiles!

2. Student Profile:



1. This basically a standard student profile fit to fit in a user-friendly environment
2. Each cards has a functional button; the “Edit Profile” button contains a page to store the user’s information.
3. The below cards, presenting a sticky note, holds buttons towards each of the pages that exist within the website
4. On the left corner, button for logging out that redirects to the Sign in page

3. Edit Profile Page:

Update Your Profile

Profile Photo
Upload New Picture
 No file chosen

Profile Photo
Upload New Picture
 No file chosen

Academic Info

Student ID: Semester:
Department: Term:

General Info

Academic Year: Gender: Blood Group:
Courses Taken:
About Me (Bio):

Update Your Profile

Profile Photo
Upload New Picture
 No file chosen

Profile Photo
Upload New Picture
 No file chosen

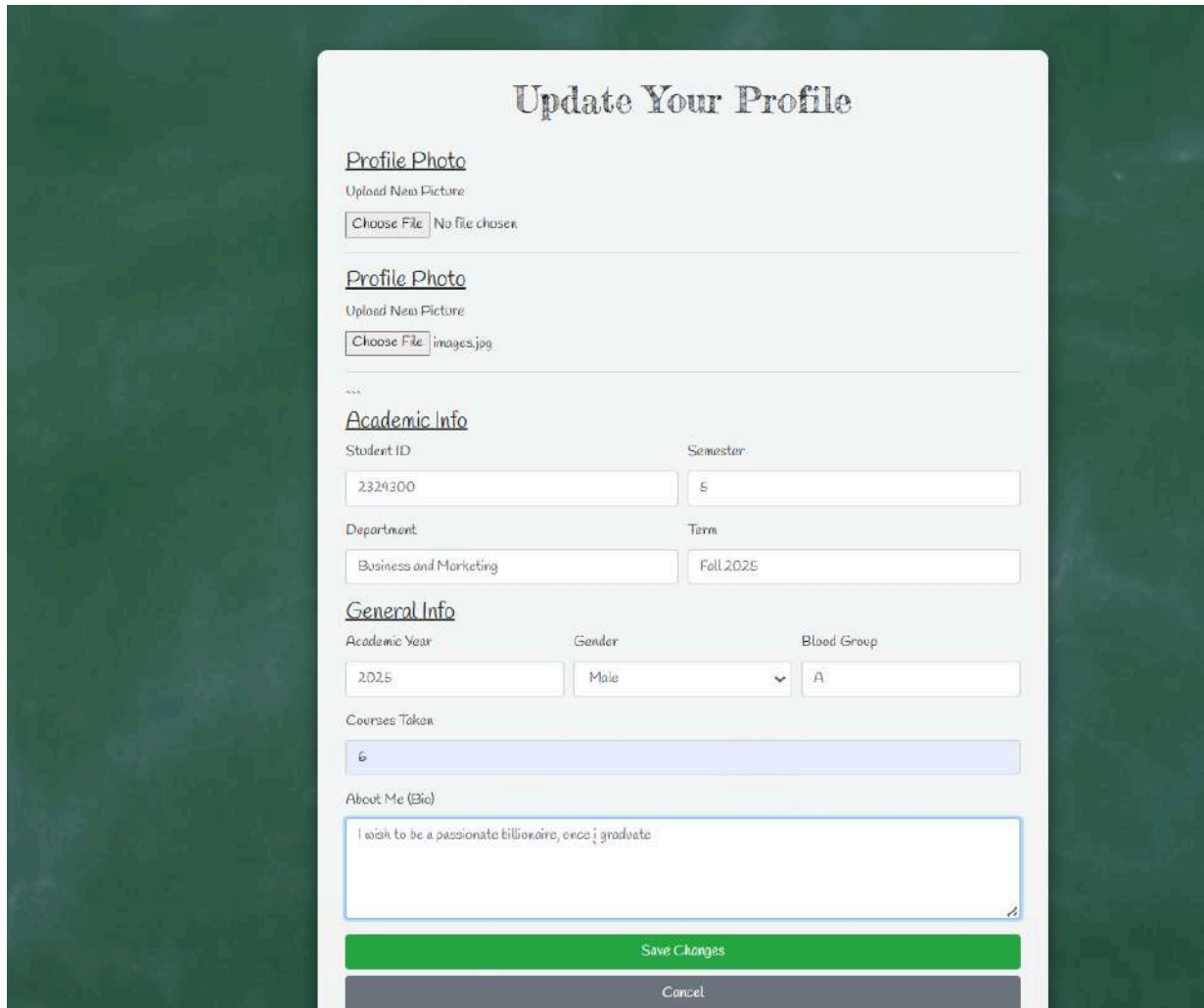
Academic Info

Student ID: Semester:
Department: Term:

General Info

Academic Year: Gender: Blood Group:
Courses Taken:
About Me (Bio):

1. On this page you can put in information, which is user input.
For example I am going to edit the newly created account
“Mark Cuban.”



The screenshot shows a web form titled "Update Your Profile" with a light blue background. The form is divided into several sections: "Profile Photo" (with two identical upload areas, each showing a "Choose File" button and a file name like "images.jpg"), "Academic Info" (with fields for Student ID, Semester, Department, and Term), "General Info" (with fields for Academic Year, Gender, and Blood Group), "Courses Taken" (a text input field containing the number "6"), and "About Me (Bio)" (a larger text area containing the text "I wish to be a passionate billionaire, once i graduate"). At the bottom of the form are two buttons: a green "Save Changes" button and a grey "Cancel" button.

Update Your Profile

Profile Photo
Upload New Picture
Choose File No file chosen

Profile Photo
Upload New Picture
Choose File images.jpg

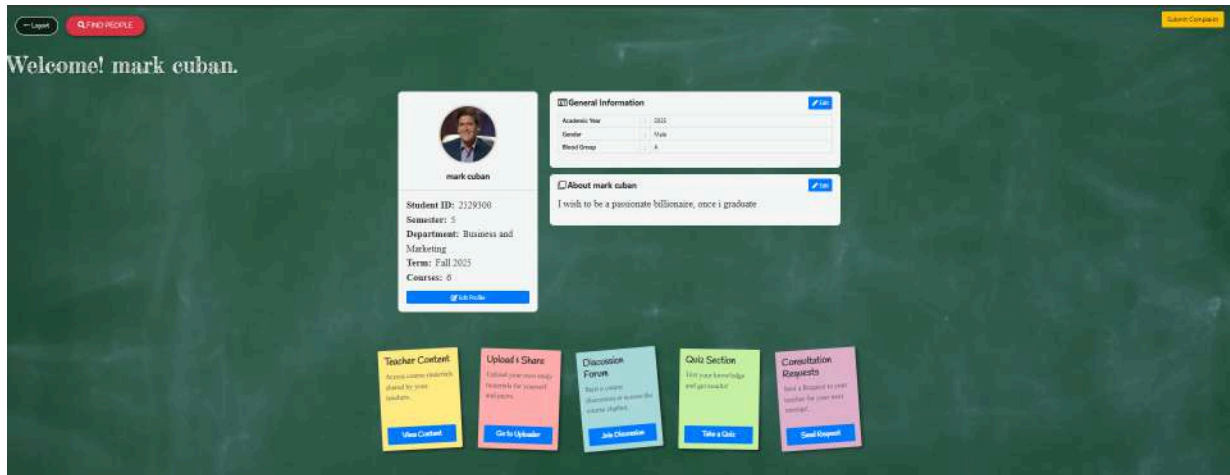
...

Academic Info
Student ID Semester
2324300 S
Department Term
Business and Marketing Fall 2025

General Info
Academic Year Gender Blood Group
2025 Male A
Courses Taken
6
About Me (Bio)
I wish to be a passionate billionaire, once i graduate

Save Changes
Cancel

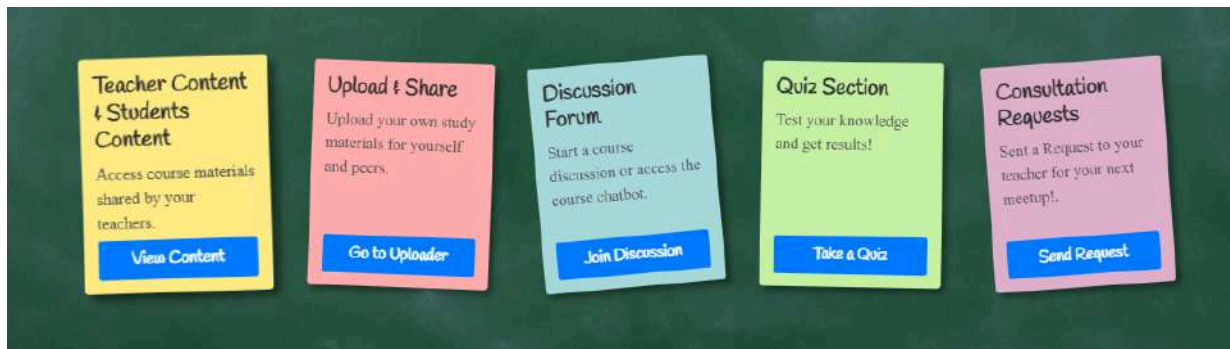
2. Click save changes.



3. New profile has been edited.
4. Information has been updated in the database



Button Functionality:



1. Teacher and student content takes you to the student content page.
2. Upload and Share
3. Discussion Forum
4. Quiz Section
5. Consultation Requests

2. Teacher's Profile:

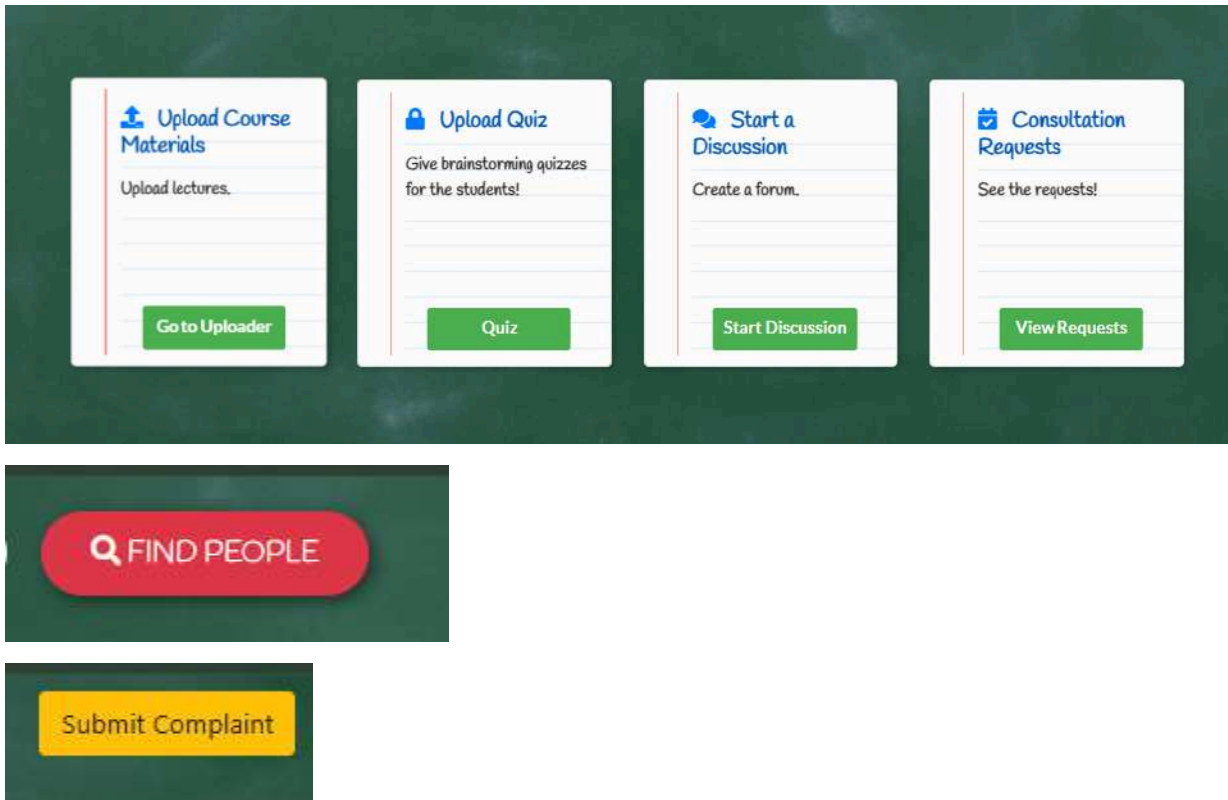
The screenshot shows a user interface for a teacher's profile. At the top, there is a navigation bar with a 'Logout' button and a 'FIND PEOPLE' search bar. A 'Submit Complaint' button is in the top right corner. The main heading says 'Welcome! Wahida.' Below this, the profile information is displayed in a white box on a dark green background. The profile includes a circular profile picture of a woman, the name 'Wahida', and her title 'Lecturer', department 'Dept: cse', and office 'Office: PC 150'. There is an 'Edit Profile Details' button. To the right, the 'Current Courses' section shows a table with columns for Code, Name, Sec, and Room. The table lists three courses: 'cse406' (microprocessors, Sec 3, Room PD 309), 'cse566' (Mathematics, Sec 7, Room PC 301), and 'lab' (Microcontroller, Sec 1, Room PC 102). An 'Edit Courses' button is below the table. The 'About Me' section contains the text 'I teach Microprocessors and microcontroller at PD 104' and an 'Edit Bio' button. At the bottom, there are four action boxes: 'Upload Course Materials' (with a 'Go to Uploader' button), 'Upload Quiz' (with a 'Quiz' button), 'Start a Discussion' (with a 'Start Discussion' button), and 'Consultation Requests' (with a 'View Requests' button). An 'Activate Windows' watermark is visible in the bottom right corner.

Code	Name	Sec	Room
cse406	microprocessors	3	PD 309
cse566	Mathematics	7	PC 301
lab	Microcontroller	1	PC 102

This is an already created teacher's (role: teacher) profile. The information is already given and saved in the database. This is also a standard design where it fits the user-friendly theme.

1. Contains box of information that is relevant to the teacher
2. The edit profile button exists here, and connects it to the "Update profile page" that allows to put information later saved in the database

Button Functionality:



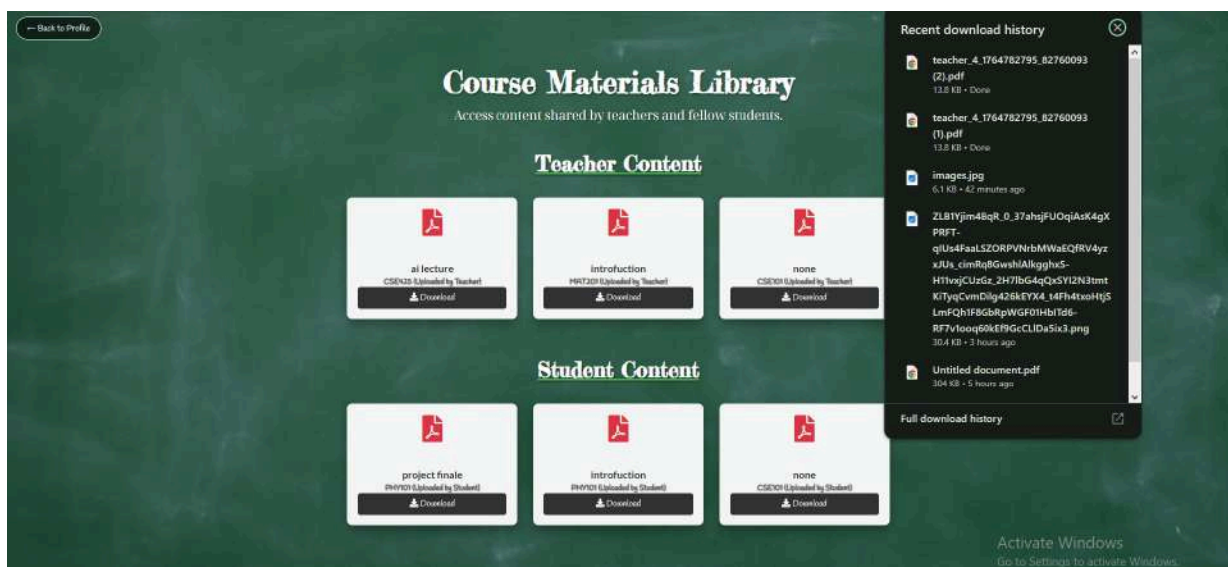
1. Each button takes it to a page that can only be viewed by the teacher. While the students cannot access this page.
 - Upload course materials that allow the teachers to upload lectures.
 - Upload the quiz. The teachers are allowed to set questions for students.
 - Discussion takes place in the discussion portal, the same as with the students.
 - Consultation requests allow the teacher to see who has requested a meetup.
2. The find people button takes to the search page

3. Submit a complaint to take to the complaint page.

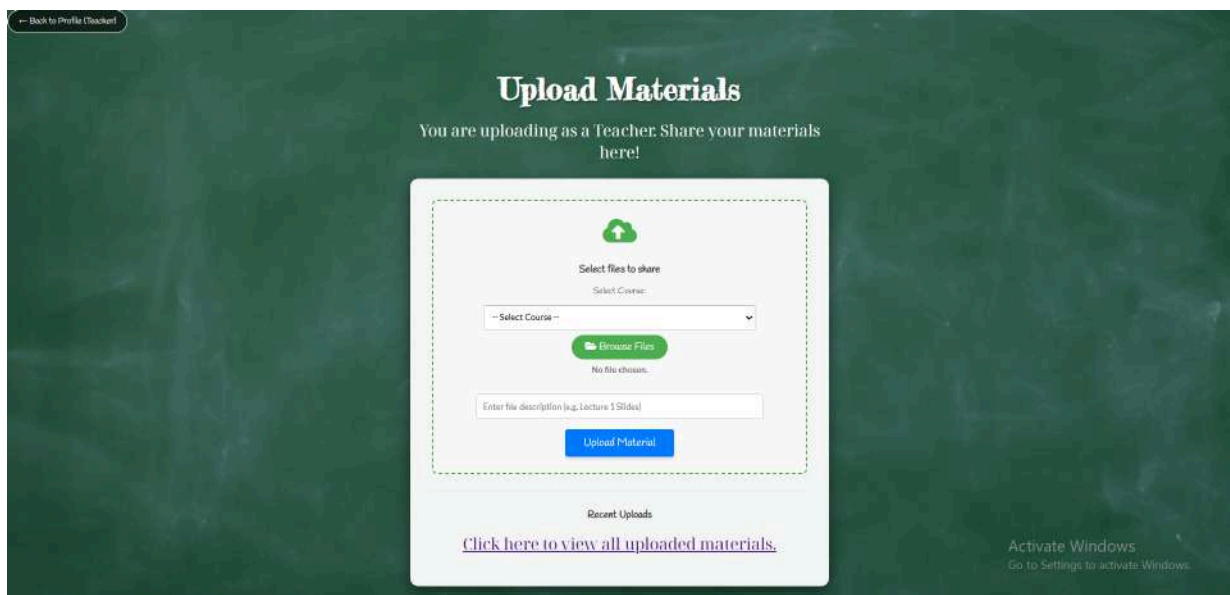
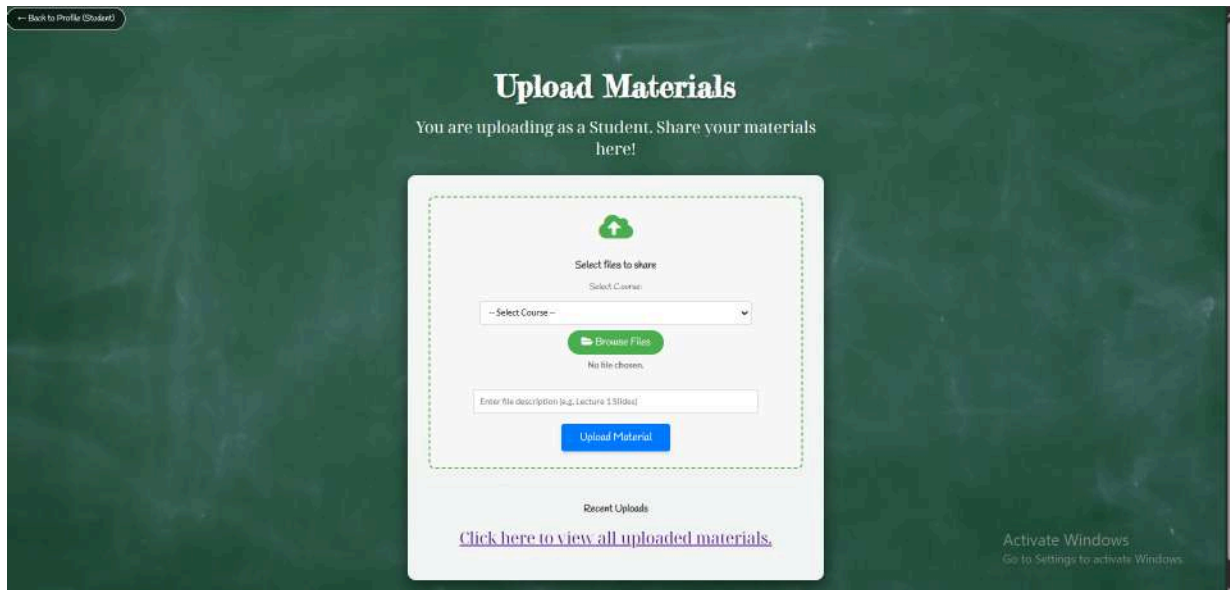
4. Content pages:



1. This page pops up when it is accessed through the student profile.
2. The students see the content that is already uploaded by a teacher or student.



4. When the student presses on the download button, the uploaded PDF or lecture is downloaded instantly on the computer.

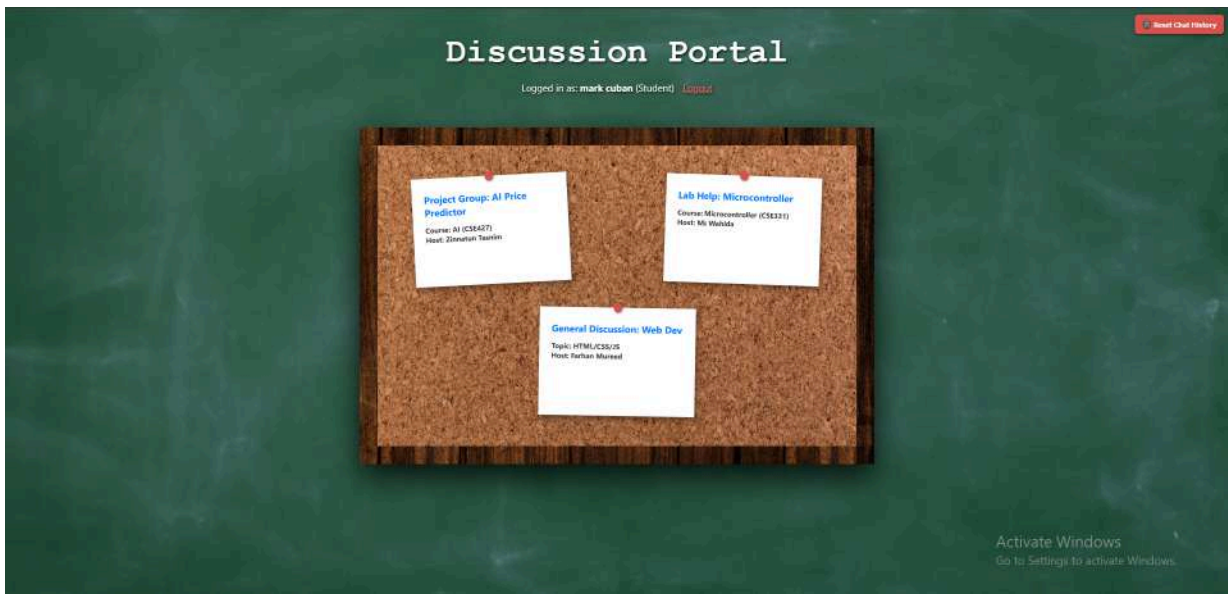


5. This upload page pops up in both the student's and teacher's profiles when the upload button is clicked. After Uploading is done it takes back to the page where you can see the uploaded materials.

6. Each material that has been uploaded has been saved in the database, in the course_material table

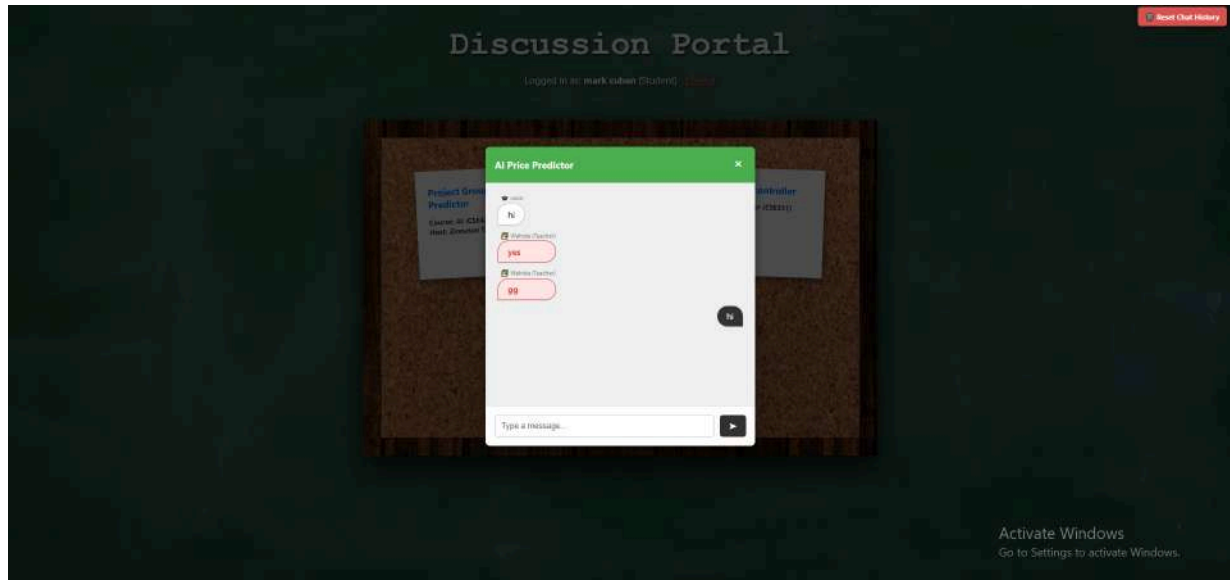
	id	uploader_id	uploader_role	original_filename	stored_filename	course_code	file_description	upload_date
<input type="checkbox"/>	1	4	teacher	Hi my name is zinnatun tasnim.pdf	teacher_4_1764773275_13001010.pdf	CSE101	none	2025-12-03 20:47:55
<input type="checkbox"/>	2	4	teacher	Hi my name is zinnatun tasnim.pdf	teacher_4_1764773569_2453109c.pdf	MAT201	introduction	2025-12-03 20:52:40
<input type="checkbox"/>	3	5	student	Hi my name is zinnatun tasnim.pdf	student_5_1704776079_53bd1910.pdf	CSE101	none	2025-12-03 22:21:18
<input type="checkbox"/>	4	5	student	Group Number 3_Lab Final Project (1).pdf	student_5_1704761904_6c4477c1.pdf	PHY101	introduction	2025-12-03 23:12:04
<input type="checkbox"/>	5	5	student	Group Number 3_Lab Final Project.pdf	student_5_1704762190_67ea8531.pdf	PHY101	project finale	2025-12-03 23:18:30
<input type="checkbox"/>	6	4	teacher	Hi my name is zinnatun tasnim (1).pdf	teacher_4_1764782705_82760093.pdf	CSE425	all lecture	2025-12-03 23:26:35

5. Discussion Forum:



1. The discussion page pops up for both the ids when discussion button is pressed.
2. In the page you can see the ongoing discussions, which are public; anyone can take part in by clicking the cards.

	id	title	course_info	created_by_name	card_color
<input type="checkbox"/>	1	Project Group: AI Price Predictor	Course: AI (CSE427)	Zinnatun Tasnim	#ffdf00
<input type="checkbox"/>	2	Lab Help: Microcontroller 8086	Course: Microcontroller (CSE331)	Ms Wahida	#f0f0f0
<input type="checkbox"/>	3	General Discussion: Web Dev	Topic: HTML/CSS/JS	Farhan Mueed	#e6f7ff



New

- chat_messages
- complaints
- consultation_requests
- courses
- course_materials
- discussion_groups
- discussion_messages
- quiz_questions
- teachers
- users
- information_schema
- mysql

Frontend [Edit inline] [Edit] [Explain SQL] [Create PHP code] [Keras]

☐ Show all | Number of rows: 25 | Filter rows: Search this table | Sort by key: None

Extra options

		id	group_name	user_id	user_name	user_role	message	created_at
<input type="checkbox"/>	Edit Copy Delete	1	AI Price Predictor	8	Leon	Student	hi	2025-12-05 01:25:09
<input type="checkbox"/>	Edit Copy Delete	2	AI Price Predictor	4	Wahida	Teacher	yes	2025-12-05 01:30:25
<input type="checkbox"/>	Edit Copy Delete	3	AI Price Predictor	4	Wahida	Teacher	gg	2025-12-05 20:36:46
<input type="checkbox"/>	Edit Copy Delete	4	AI Price Predictor	11	mark cuban	Student	hi	2025-12-05 20:37:10

Check all | With selected: Edit Copy Delete Export

3. A live chat pops up when a card is clicked and a teacher and student can engage in a conversation based on the roles.

6. Quiz Platform:



1. This is from the students page where they can give a quiz for any of the courses.
2. Teachers can upload questions here

A screenshot of a web form titled "Add Quiz Question". The form has several input fields: "Course Code" with a hint "e.g. CSE425", "Question Text", "Option A", "Option B", "Option C", and "Correct Option" with a dropdown menu showing "-- Select --". At the bottom of the form is a green button labeled "Save Question". Below the form is a section titled "Your Questions" which currently displays "No questions yet."

Activate Windows
Go to Settings to activate Windows.

Quiz for CSE425

1. What is the formula for straight line?

- ☐ $y = mx + c$
- ☐ $y \text{ equal } mx + c$
- ☐ $y/mx + c$

2. bla bla

- ☐ ab
- ☐ gg
- ☐ 66

3. What is the answer???

- ☐ ab
- ☐ nhb==
- ☐ 66

4. what is the st line formula

- ☐ $y = mx + c$
- ☐ y
- ☐ $y/mx + c$

5. 7 plus 5

- ☐ 40
- ☐ 12
- ☐ 56

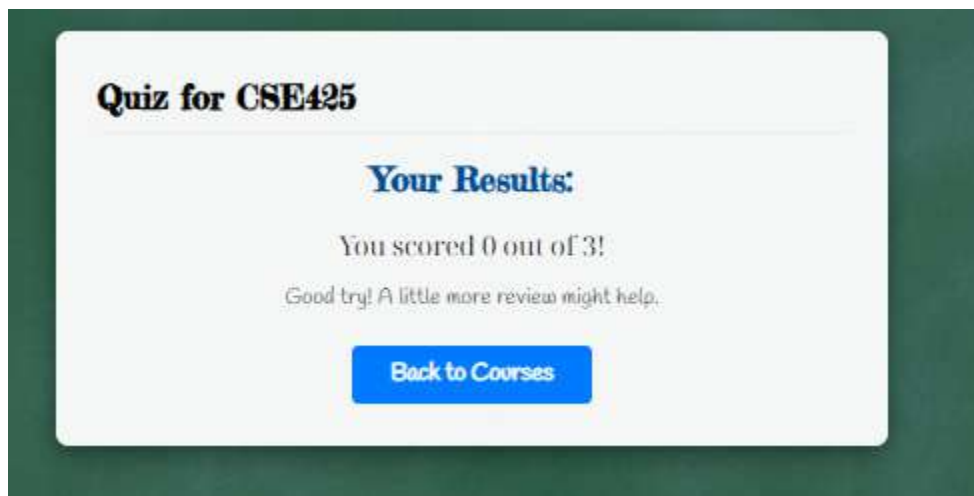
Submit Quiz

Teachers creating questions:



The screenshot shows a database management tool with a sidebar on the left containing a tree view of database schemas: consultation_requests, courses, course_materials, discussion_groups, discussion_messages, quiz_questions, teachers, users, information_schema, and mysql. The main area displays a table titled 'Extra options' with columns: id, course_code, question_text, option_a, option_b, option_c, correct_option, teacher_id, and created_at. The table contains five rows of quiz questions for course CSE425.

	id	course_code	question_text	option_a	option_b	option_c	correct_option	teacher_id	created_at
<input type="checkbox"/>	1	CSE425	What is the formula for straight line?	$y = mx + c$	$y \text{ equal } mx + c$	$y/mx + c$	b	4	2025-12-04 21:29:20
<input type="checkbox"/>	2	CSE425	ola bla	ab	90	66	b	4	2025-12-04 21:29:52
<input type="checkbox"/>	3	CSE425	What is the answer???	ab	nhb==	66	b	4	2025-12-04 21:30:23
<input type="checkbox"/>	4	CSE425	what is the st line formula	$y = mx + c$	y	$y/mx + c$	b	8	2025-12-04 21:50:41
<input type="checkbox"/>	5	CSE425	7 plus 5	40	12	56	b	8	2025-12-04 22:02:51



3. Each quiz taken has a result generation.

7. Consultation pages:

Request Consultation

Student: mark cuban

Choose Teacher
-- Select --

Topic / Reason

Send Request

Your Consultation Requests

You have not sent any consultation requests yet.

- 1. This is a consultation from a student's profile where the student can request a teacher for a meetup.

Request Consultation

Student: mark cuban

Your request has been sent to Wahida.

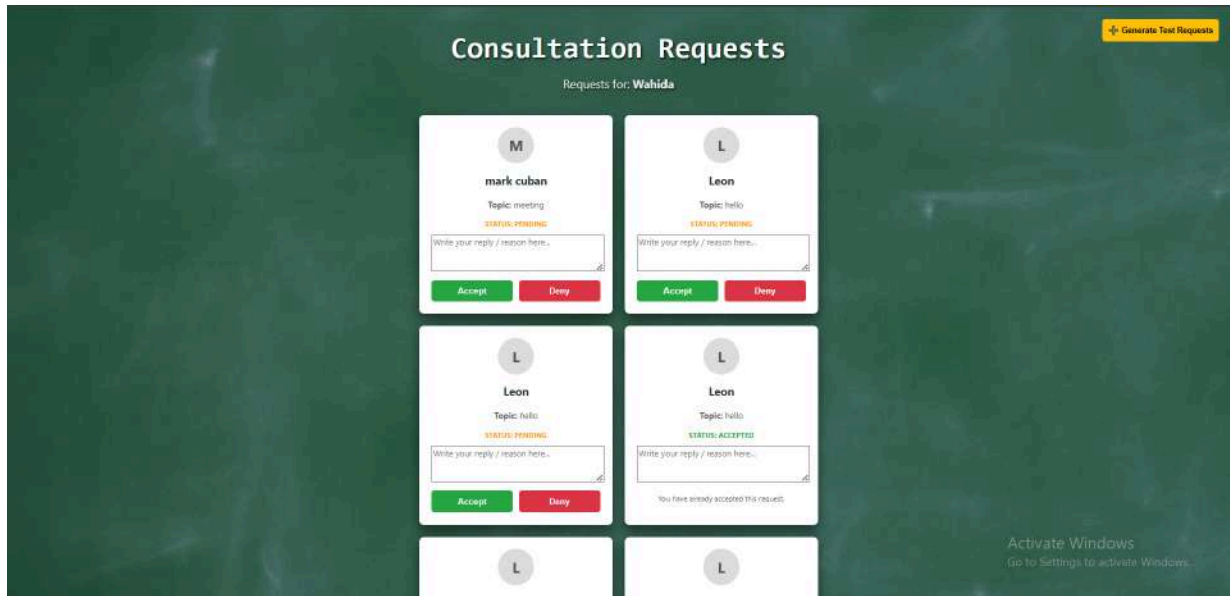
Choose Teacher
-- Select --

Topic / Reason

Send Request

Your Consultation Requests

Teacher	Topic	Status	Feedback from Teacher	Date
Wahida	meeting	Pending	no feedback yet.	2025-12-05 20:52:37

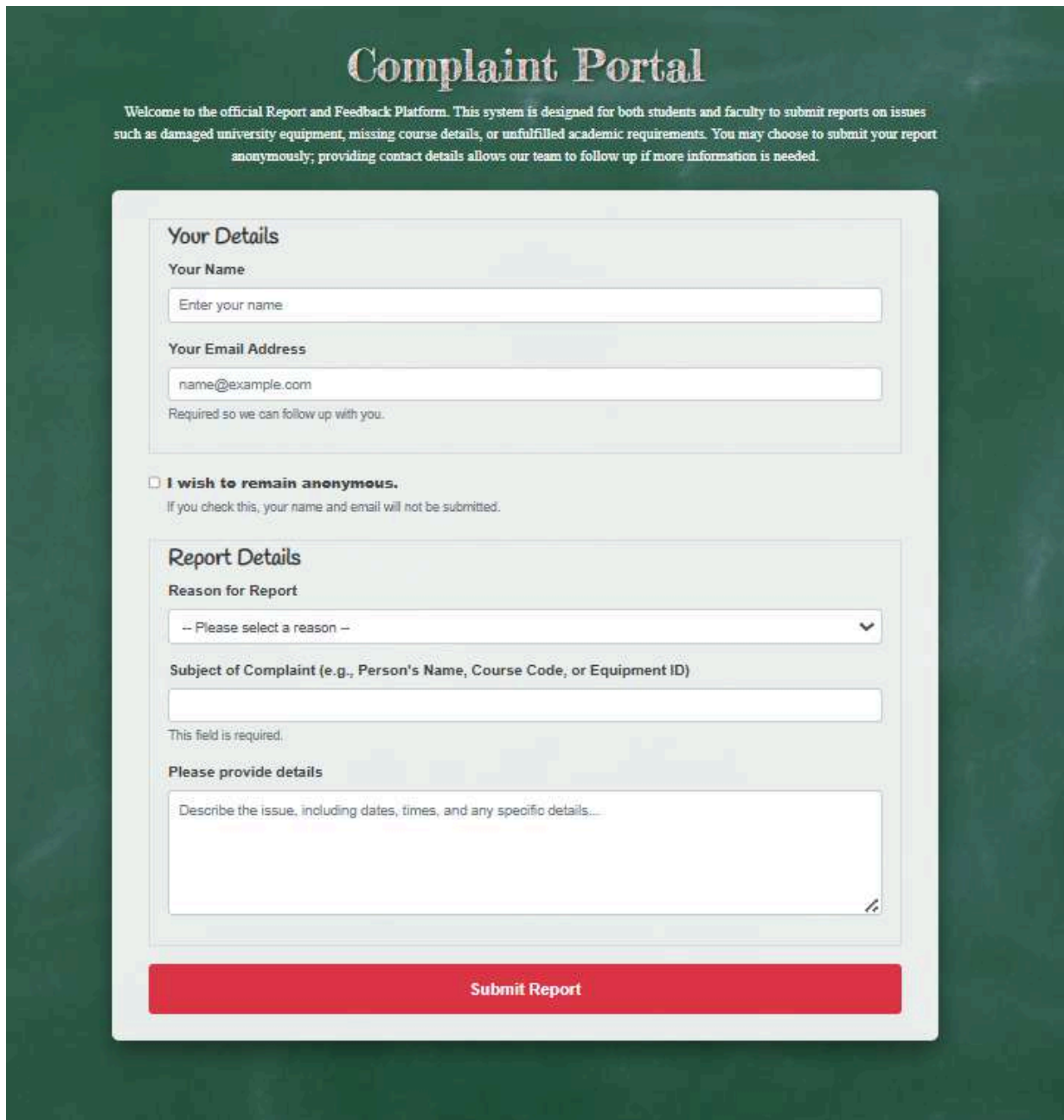


2. This is the consultation page from the teachers profile, that shows the amount of students requisition for consultation

ID	student_name	student_email	teacher_name	topic	status	teacher_message	request_date
1	Sadia Khan	sadia@example.com	Wahida	Lab Query	Accepted	we will meet shortly	2025-12-04 17:58:34
2	Nusrat Jahan	nusrat@example.com	Wahida	Course Registration Help	Pending	MULL	2025-12-04 18:38:22
3	Amr Hossain	amr@example.com	Wahida	Course Registration Help	Pending	MULL	2025-12-04 18:38:22
4	Fahim Mueed	fahim@example.com	Wahida	Assignment Extension	Pending	MULL	2025-12-04 18:38:22
5	Leon	leonhagrest@gmail.com	Wahida	I need help	Pending	MULL	2025-12-04 19:46:02
6	Leon	leonhagrest@gmail.com	Wahida	I need help	Accepted	okay	2025-12-04 20:01:23
7	Leon	leonhagrest@gmail.com	Wahida	hello	Accepted	i have accepted	2025-12-04 20:38:17
8	Leon	leonhagrest@gmail.com	Wahida	hello	Pending	MULL	2025-12-04 20:38:37
9	Leon	leonhagrest@gmail.com	Wahida	hello	Pending	MULL	2025-12-04 20:49:44
10	mark cuban	mark.cuban@gmail.com	Wahida	meeting	Pending	MULL	2025-12-06 20:52:57

Xampp database shows consultation

8. Complaint Page:



The image shows a web form titled "Complaint Portal" on a dark green background. The form is white with a light gray border. It contains two main sections: "Your Details" and "Report Details".

Complaint Portal

Welcome to the official Report and Feedback Platform. This system is designed for both students and faculty to submit reports on issues such as damaged university equipment, missing course details, or unfulfilled academic requirements. You may choose to submit your report anonymously; providing contact details allows our team to follow up if more information is needed.

Your Details

Your Name

Enter your name

Your Email Address

name@example.com

Required so we can follow up with you.

☐ **I wish to remain anonymous.**

If you check this, your name and email will not be submitted.

Report Details

Reason for Report

-- Please select a reason --

Subject of Complaint (e.g., Person's Name, Course Code, or Equipment ID)

This field is required.

Please provide details

Describe the issue, including dates, times, and any specific details...

Submit Report

1. This page can be accessed by both the profiles and any student or teacher can access it but clicking the button present in the top most right corner
2. The user can choose to remain anonymous

Your Details

Your Name

Your Email Address

Required so we can follow up with you.

☐ **I wish to remain anonymous.**
If you check this, your name and email will not be submitted.

Report Details

Reason for Report

Subject of Complaint (e.g., Person's Name, Course Code, or Equipment ID)

This field is required.

Please provide details

pd 806 room damaged comp

Submit Report

New

chalkboard_db

New

chat_messages

complaints

consultation_requests

courses

course_materials

discussion_groups

discussion_messages

quiz_questions

teachers

users

information_schema

mysql

SELECT * FROM `complaints`

Profiling

[Edit inline]

[Edit]

[Explain SQL]

[Create PHP code]

[Refresh]

Show all

Number of rows: 25

Filter rows: Search this table

Sort by key: None

Extra options

id

user_id

role

name

email

complaint_type

subject

details

created_at

Edit

+4

Copy

Delete

1

4

Teacher

zinnatun

zinnatun@gmail.com

damaged_equipment

computer

backdated equipment

2025-12-05 01:40:37

Edit

+4

Copy

Delete

2

4

Teacher

zinnatun

zinnatun@gmail.com

damaged_equipment

computer

backdated equipment

2025-12-05 01:51:58

Edit

+4

Copy

Delete

3

4

Teacher

zinnatun

zinnatun@gmail.com

damaged_equipment

computer

backdated equipment

2025-12-05 01:52:07

Edit

+4

Copy

Delete

4

4

Teacher

zinnatun

zinnatun@gmail.com

damaged_equipment

computer

pd 806 room damaged comp

2025-12-05 20:58:20

Check all

With selected:

Edit

Copy

Delete

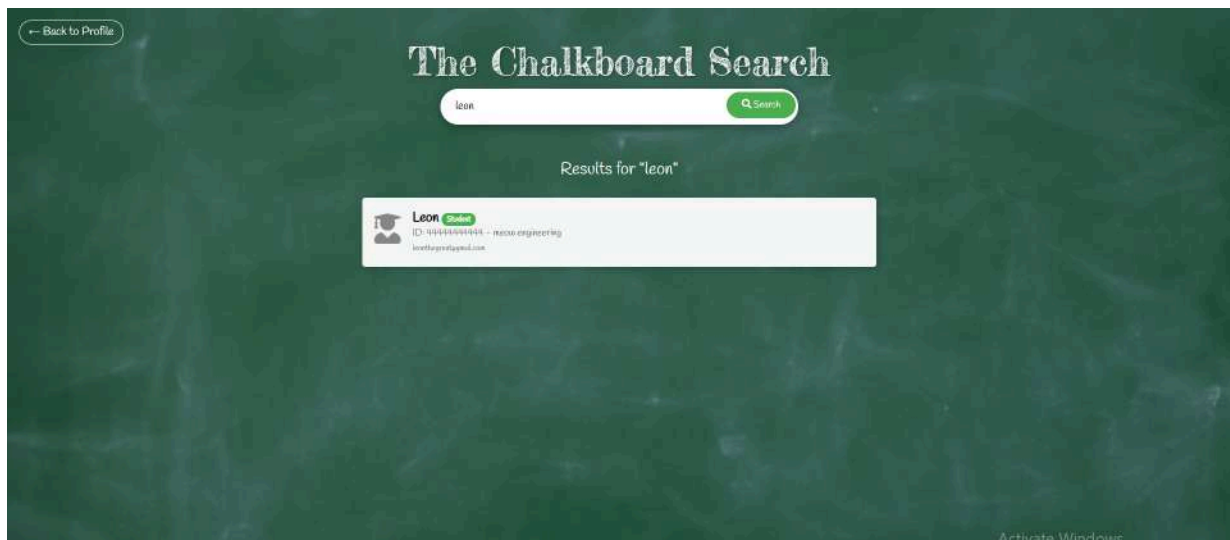
Export

3. The complaint has been saved to the database

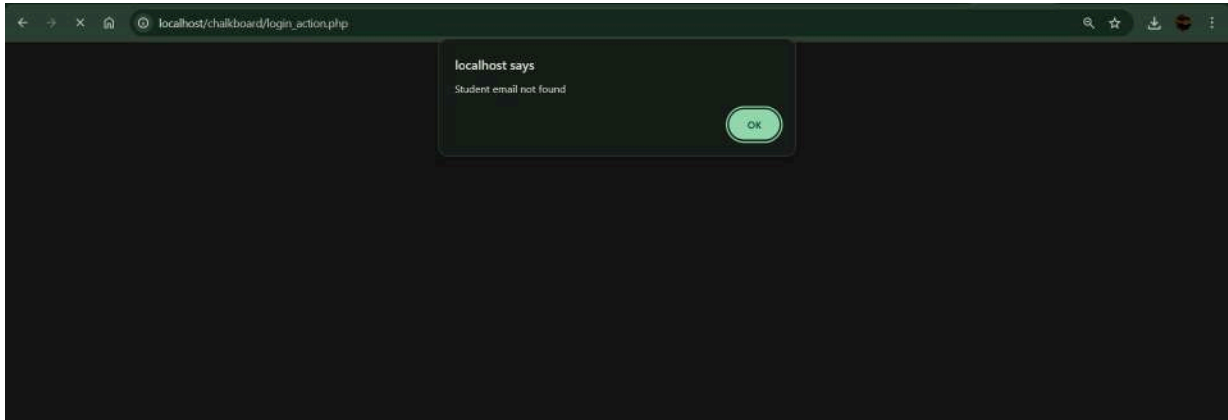
9. Search Page:



1. This page accessed by both the profile by the upper most left button besides log out
2. It serves as a global page that searches people course etc.



10. Role Based Login:



The log in information must be accurate to the role and the information based on the stored in the database or else they cannot be entered

Chapter 9 – Conclusion

9.1 Summary of the Project

The Chalkboard Circle project set out to build a unified academic portal that brings together course discussions, complaint handling, quiz management, and search in a single web application. Using a PHP–MySQL backend with HTML, CSS, and JavaScript on the front end, the system provides role-based dashboards for students, teachers, and administrators. By integrating these modules around a classroom-themed interface, the portal offers a smoother workflow for common academic tasks and demonstrates how a lightweight web solution can support communication and assessment within a department or institution.

9.2 Achievements and Contributions

The implemented prototype successfully enables secure login for different user roles, real-time discussion in course-specific groups, submission of identified and anonymous complaints, course and profile search, and access to quizzes linked with course codes. The work contributes a cohesive design that reduces the need to switch between multiple disconnected tools, emphasizing usability through clear navigation and consistent styling. It also provides a structured database and modular architecture that can be reused or extended in future projects, serving as a practical reference for building integrated academic portals.

9.3 Limitations and Lessons Learned

Although functional, the current version is intended as a prototype and has limitations in areas such as advanced security, detailed analytics, and large-scale performance optimization. Features like comprehensive grade management, push notifications, mobile applications, and deep integration with official university systems are not yet implemented. During development, important lessons were learned about incremental design, careful database planning, and continuous testing; these experiences highlight the need for early requirement clarification and modular coding practices when building multi-feature web systems like The Chalkboard Circle.

9.3 References

1. <https://www.youtube.com/watch?v=HcOc7P5BMi4&list=PLfqMhTWNBTte0PY9xunOzsP5kmYIz2Hu7i>
2. <https://www.youtube.com/watch?v=1IQbPxFkoiQ&list=PLgH5OX0i9K3qLcx9DvVDWmNJ7riPvxzCD>
3. <https://www.youtube.com/watch?v=zZ6vybT1HQs>
4. https://www.youtube.com/watch?v=UdamtabIRtk&list=PLoBGtBK7uqyWWp5Q_ypAZB3biKu1UAh8q