UNIVERSITI
TEKNOLOGI
MARA

CSC584
ENTERPRISE PROGRAMMING

TITLE:
STUDENT MENTORSHIP PROGRAM SYSTEM

GROUP MEMBERS :

NAMA	NO. MATRIK
1. MUHAMMAD HASNUL FITRI BIN SAUPI	2025162983
2. HARIZ MUQRI BIN YAHAYA	2025139589
3. NUR AINA NAJWA BINTI ISKANDAR ZULKARNAIN	2025149355
4. NUR ASHIKIN BINTI MOHD RUSLI	2025165351

SUBMIT TO :

PROFESSOR MADYA DR MARSHIMA BINTI MOHD ROSLI

SIR MUHAMMAD RIDHWAN BIN MOHAMAD ROZALI

TABLE OF CONTENT

1.0 INTRODUCTION	**3**
1.1 System Overview	3
1.2 User Roles (Mentee, Mentor, Administrator)	3
1.3 Key Features	4
1.4 Role Of Members	5
1.5 Organizational Chart	7
2.0 PROBLEM STATEMENT	**8**
2.1 Current Challenges in Student Mentorship	8
2.2 Manual Process Limitations	8
2.3 Need for Digital Solution	8
3.0 OBJECTIVE	**9**
3.1 Primary Objective	9
3.2 Specific Objectives	9
4.0 USER INTERFACE OVERVIEW	**10**
4.1 Role-Based Dashboards	12
5.0 User Roles and Permissions	**15**
5.1 Mentee Role Overview	15
5.2 Mentor Role Overview	15
5.3 Administrator Role Overview	15
5.4 Access Control Summary	16
6.0 MENTEE USER GUIDE	**18**
6.2 Profile Management	20
6.3 Finding and Selecting a Mentor	23
6.5 Notes and Documentation	28
6.6 Inbox and Messages	**31**
6.6.1 Accessing Inbox	31

7.0 MENTOR USER GUIDE **34**
7.1 Mentor Dashboard 34
7.2 Mentor Profile Setup 36
7.3 Managing My Mentees 40
7.4 Handling Mentorship Requests 42
7.5 Meeting Scheduling 45
7.6 Learning Materials Management 48
7.7 Announcements **52**
8.0 ADMINISTRATOR USER GUIDE **55**
8.1 Admin Dashboard 55
8.2 Admin Profile 56
8.3 User Management 57
8.4 Mentee Management 57
8.5 Mentor Management 58
8.6 Profession Management 59
9.0 Technical Specifications **60**
9.1 System Architecture 60
9.2 Database Structure 63
9.3 Server Configuration 67

1.0 INTRODUCTION

1.1 System Overview

The Student Mentorship Program System is a web-based application designed to facilitate and manage mentorship relationships within educational institutions. The system connects students (mentees) seeking guidance with experienced mentors, providing a structured platform for scheduling meetings, tracking progress, and maintaining communication throughout the mentorship journey.

This application streamlines the entire mentorship lifecycle from initial mentor selection and request submission to ongoing session management and progress documentation. Built using Java-based technologies including JSP, Servlets, and a robust database backend, the system ensures secure, role-based access to features tailored for each user type.

1.2 User Roles (Mentee, Mentor, Administrator)

The system operates with three distinct user roles, each with specific capabilities and access levels:

Mentee

- Students seeking mentorship and guidance
- Can browse and request mentors based on expertise
- Manage personal profiles and meeting schedules
- Access learning resources and track progress
- Communicate with assigned mentors

Mentor

- Experienced individuals providing guidance to mentees
- Can create detailed professional profiles with expertise areas
- Review and approve/decline mentorship requests
- Schedule and manage multiple mentee relationships
- Document session notes and share announcements

Administrator

- System managers with full oversight capabilities
- Manage all user accounts (mentees and mentors)
- Configure profession categories and system settings
- Monitor mentorship activities and user engagement
- Generate reports and maintain system integrity

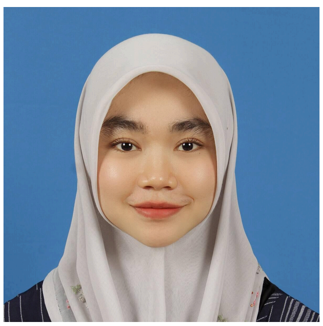
1.3 Key Features

The Student Mentorship Program System offers comprehensive features across all user roles:

- User Registration and Authentication - Secure account creation with role-based login access
- Profile Management - Customizable profiles for mentees, mentors, and administrators
- Mentor Discovery - Search and filter mentors by profession and expertise
- Request Management - Submit, review, and process mentorship requests
- Meeting Scheduling - Create, view, and manage mentorship sessions with calendar integration
- Communication Tools - Built-in inbox system for messaging between users
- Learning Materials Management - File upload and sharing features for distributing educational resources, lecture notes, study guides, and reference materials between mentors and mentee
- Announcement System - Mentors can broadcast updates to their mentees
- Administrative Controls - User management, profession configuration, and system oversight
- Dashboard Analytics - Role-specific dashboards displaying relevant information and quick actions

1.4 Role Of Members

NO.	PICTURE	ID AND NAME	TASK
1.		MUHAMMAD HASNUL FITRI BIN SAUPI 2025162983 (TEAM LEADER)	● Acted as the primary point of contact for project milestones and coordination. ● Designed the overall system architecture and workflow for the mentorship lifecycle. ● Managed the integration of modules between the mentor, mentee, and admin roles. ● Conducted final system validation and quality assurance testing.
2.		NUR AINA NAJWA BINTI ISKANDAR ZULKARNAIN 2025149355 (LEAD DEVELOPER)	● Developed the core backend infrastructure using Java Servlets and JSP. ● Implemented the secure authentication system and role-based access control. ● Engineered the "Request-Accept-Decline" logic for the mentorship pairing process. ● Managed the GlassFish server deployment and JDBC database connections.

3.		HARIZ MUQRI BIN YAHAYA 2025139589 (DEVELOPER)	● Developed the frontend user interface for the Mentor and Mentee dashboards. ● Created the centralized resource repository for file uploads and note sharing. ● Implemented the scheduling module and meeting documentation features. ● Performed unit testing on JSP components to ensure a seamless user experience.
4.		NUR ASHIKIN BINTI MOHD RUSLI 2025165351 (DOCUMENT MANAGER)	● Designed and documented the relational database schema (ERD) for the system. ● Managed all project documentation, including the Problem Statement and Objectives. ● Compiled the final technical report, WAR file, and SQL database scripts. ● Assisted in frontend CSS styling to ensure a consistent professional UI.

1.5 Organizational Chart

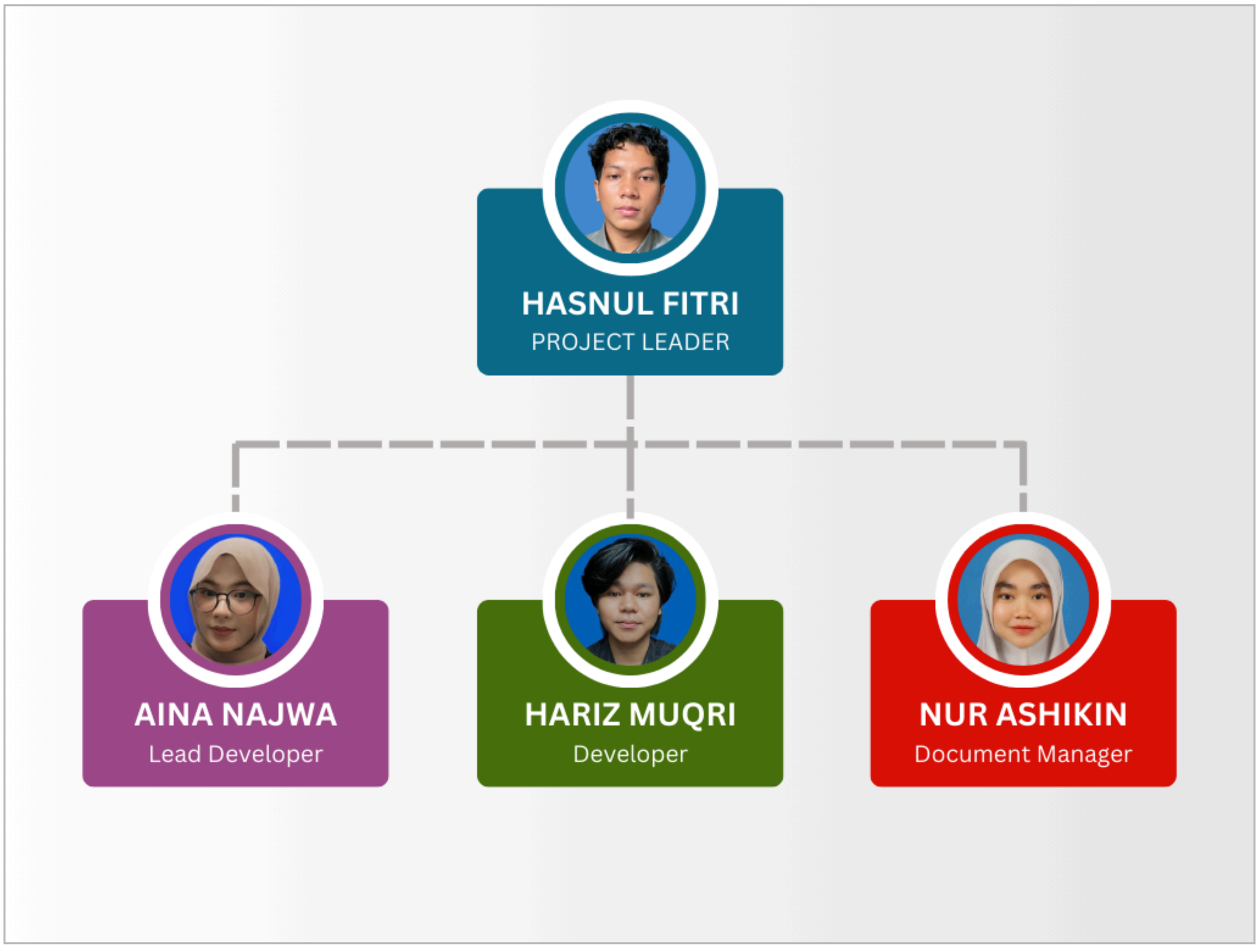


Figure 1.5 Organizational Chart

2.0 PROBLEM STATEMENT

2.1 Current Challenges in Student Mentorship

Traditional mentorship programs in educational institutions often face significant organizational and operational challenges. Students struggle to identify suitable mentors whose expertise aligns with their academic and career goals, while potential mentors lack visibility into available mentees seeking guidance. The absence of a centralized platform results in fragmented communication, missed opportunities for meaningful connections, and difficulty tracking mentorship progress over time.

2.2 Manual Process Limitations

Educational institutions typically manage mentorship programs through manual processes involving spreadsheets, email communications, and paper-based forms. This approach creates several problems including administrative overhead for coordinating mentor-mentee pairings, lack of real-time visibility into active mentorships, difficulty scheduling and tracking meeting attendance, and inability to measure program effectiveness through data analytics.

Mentees often experience delays in receiving responses to mentorship requests, uncertainty about mentor availability, and limited information about mentor qualifications and areas of expertise. Mentors face challenges managing multiple mentee relationships simultaneously, maintaining consistent communication, and documenting session outcomes effectively.

2.3 Need for Digital Solution

The Student Mentorship Program System addresses these challenges by providing a unified digital platform that automates mentorship workflows, enables efficient mentor-mentee matching, facilitates seamless communication and scheduling, maintains comprehensive records of mentorship activities, and empowers administrators with oversight and reporting capabilities.

3.0 OBJECTIVE

3.1 Primary Objective

The primary objective of the Student Mentorship Program System is to provide a comprehensive web-based platform that streamlines and enhances the mentorship experience for students, mentors and administrators within educational institutions. The system aims to eliminate manual coordination barriers and create an efficient digital ecosystem for managing all aspects of student-mentor relationships from initiation through completion.

3.2 Specific Objectives

For Mentees:

- Enable easy discovery and selection of mentors based on expertise and profession.
- Facilitate streamlined submission and tracking of mentorship requests.
- Provide centralized access to meeting schedules, session notes and communications.
- Support personal learning goal documentation and progress tracking.

For Mentors:

- Simplify the management of multiple mentee relationships through a unified dashboard.
- Streamline the review and approval process for incoming mentorship requests.
- Enable efficient scheduling and documentation of mentorship sessions.
- Provide tools for sharing announcements and resources with mentees.

For Administrators:

- Centralize user management and oversight of all mentorship activities.
- Enable configuration of profession categories to support accurate mentor-mentee matching.
- Provide visibility into program participation rates and mentorship outcomes.
- Facilitate data-driven decision-making through comprehensive system monitoring.

4.0 USER INTERFACE OVERVIEW

Registration Page

The registration page enables users to sign up by choosing their designated role within the mentorship program. Each role (Mentee, Mentor, or Administrator) has distinct registration fields tailored to capture relevant information, such as student details for mentees or professional expertise for mentors. Upon submission, the system validates credentials and grants appropriate access based on the selected role.

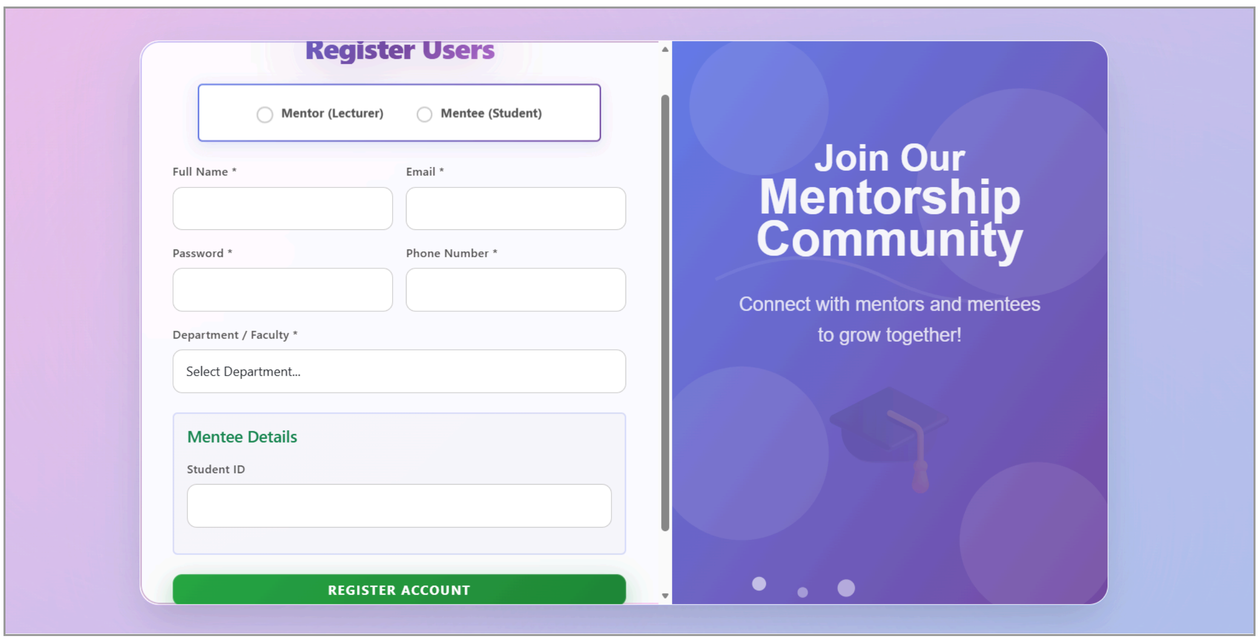


Figure 4.1 *Role-Based Registration*

Login Page

The login page serves as the main entry point for all registered users to access the Student Mentorship Program System. Users must provide valid credentials, including their username and password to authenticate their identity. The system verifies the credentials against the database and upon successful validation, redirects users to their appropriate dashboard based on their assigned role (Mentee, Mentor or Administrator). A password recovery option is available for users who have forgotten their login credentials.

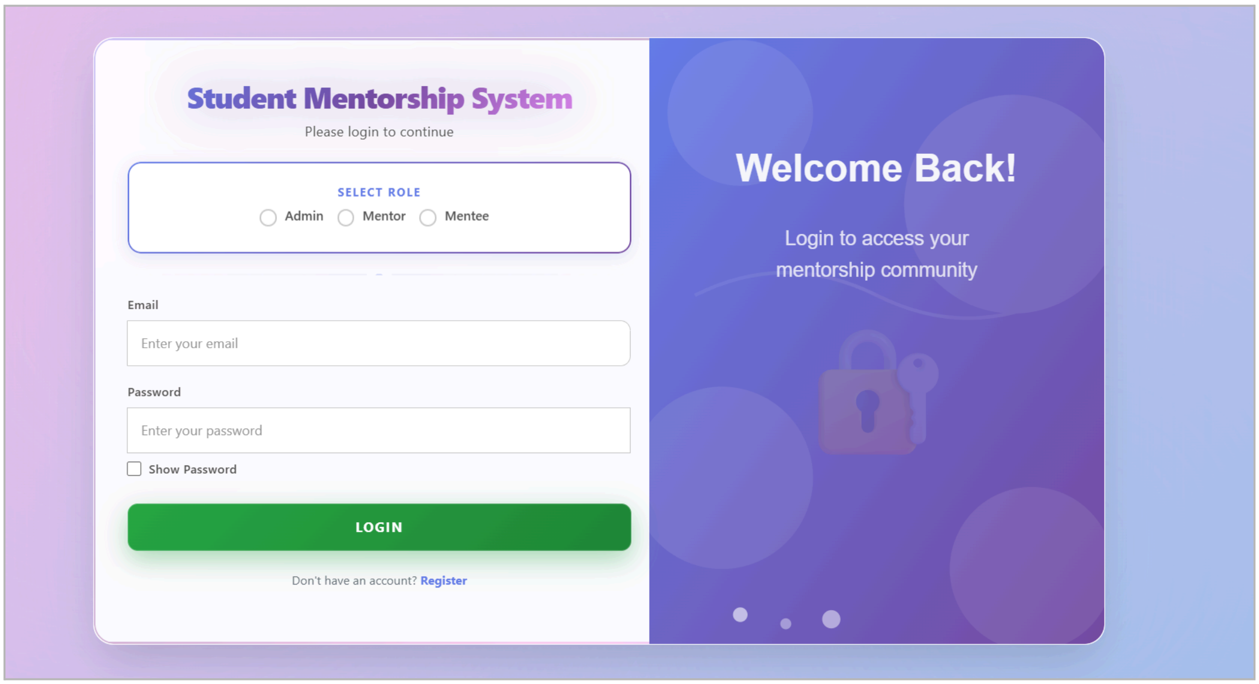


Figure 4.2 *Login Interface*

4.1 Role-Based Dashboards

Mentee Dashboard

The Mentee Dashboard provides an overview of the student's mentorship status and activities. The interface displays pending mentorship requests, upcoming meetings with quick join access, and current mentor connections. When no mentor is assigned, the dashboard shows personalized mentor recommendations based on the mentee's program or department profile settings. The left sidebar navigation menu provides access to notes, meeting participation, mentor search functionality, and the inbox for communications.

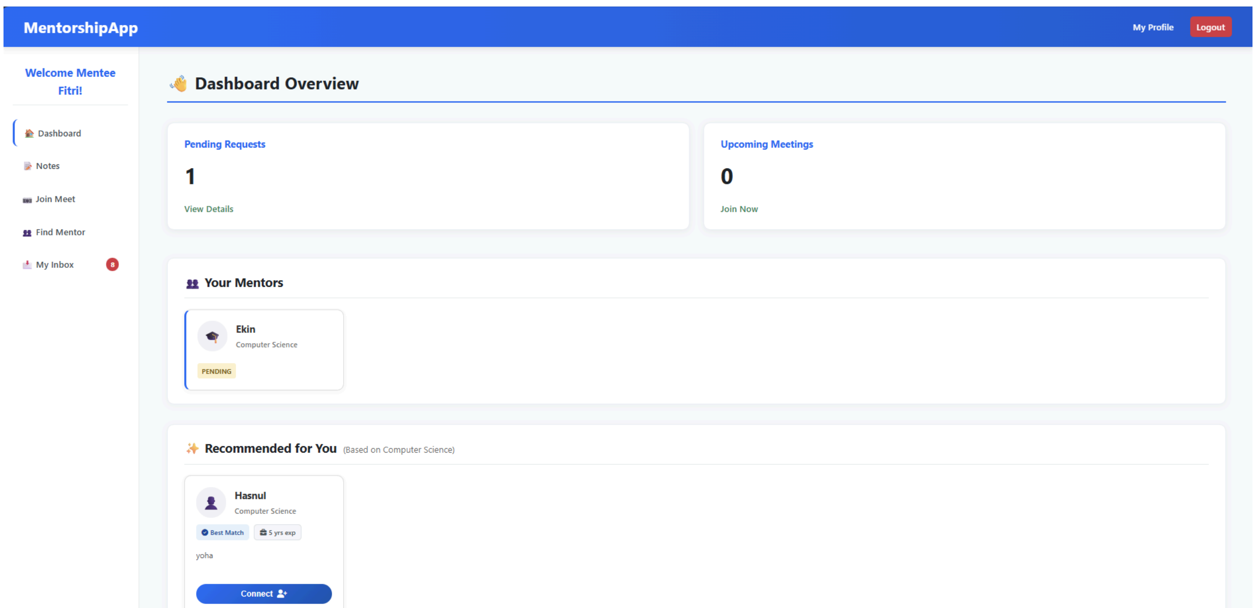


Figure 4.1.1 *Mentee Dashboard*

Mentor Dashboard

The Mentor Dashboard provides a centralized overview of all mentorship activities and quick access to key functions. The interface displays current mentees, pending mentorship requests awaiting review, and active mentorship pairs in a tabular format. Mentors can quickly navigate to manage their mentees, review new requests, or access other features through the left sidebar menu including scheduling meetings, posting announcements, and managing session notes.

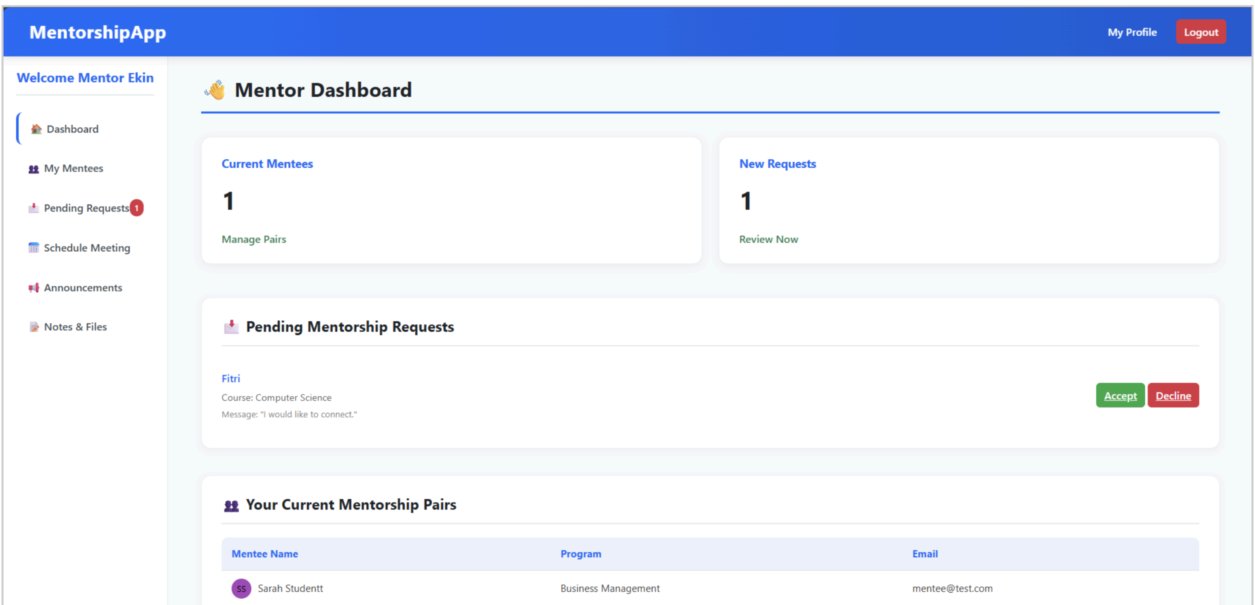


Figure 4.1.2 *Mentor Dashboard*

Admin Dashboard

The Administrator Dashboard provides comprehensive oversight of the entire mentorship system with statistical summaries and user management capabilities. The interface displays key metrics including total users, total mentors, and total mentees in card widgets at the top. Below, the "Manage Users" section presents a sortable table showing all registered users with columns for ID, Name, Role, Email, and Actions, allowing administrators to view, edit, or delete user accounts. The left sidebar provides access to profession management and profile settings for administrative tasks.

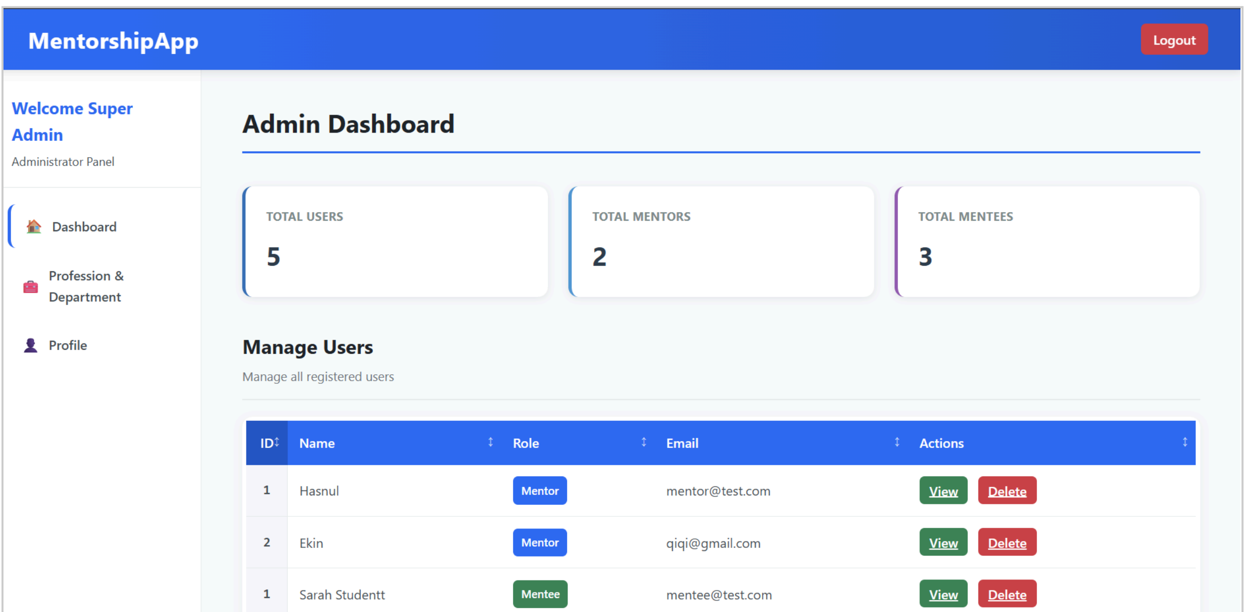


Figure 4.1.3 *Admin Dashboard*

5.0 User Roles and Permissions

5.1 Mentee Role Overview

Mentees are students seeking guidance and mentorship who have access to essential features for finding and managing their mentorship relationships. They can create and manage their personal profiles, browse and search for available mentors based on expertise and profession, and send mentorship requests to potential mentors. Once matched with a mentor, mentees can view and join scheduled meetings, access personal notes and session documentation, and communicate through the inbox messaging system. Additionally, mentees can view announcements posted by their mentors, track their mentorship progress throughout the program and maintain a record of their learning journey and goals within the system.

5.2 Mentor Role Overview

Mentors are experienced individuals who provide guidance and support to students, with comprehensive capabilities for managing mentorship relationships. They can create and manage detailed professional profiles showcasing their expertise, qualifications and areas of specialization to attract suitable mentees. Mentors have the ability to view incoming mentorship requests, review mentee profiles and respond by accepting or declining requests based on their capacity and expertise alignment. Once mentorship relationships are established, mentors can manage multiple mentees simultaneously, schedule and organize meetings with their mentees, and create detailed session notes to document progress and observations. Additionally, mentors can post announcements to keep their mentees informed, communicate through the inbox messaging system, track individual mentee progress over time and maintain comprehensive documentation of all mentorship sessions and activities.

5.3 Administrator Role Overview

Administrators are system managers with full oversight and control of the entire Student Mentorship Program System, responsible for ensuring smooth operation and effective program management. They have comprehensive access to view system-wide statistics and analytics including total users, mentors, and mentees, as well as the ability to manage all user accounts by creating, editing, deleting or viewing any user profile regardless of role. Administrators can configure profession and expertise categories to facilitate accurate mentor-mentee matching, monitor all active mentorship relationships across the system and access complete user profiles and data for oversight purposes. Additionally, administrators oversee system configuration and settings, moderate content posted within the system and resolve technical or interpersonal issues that may arise between users. This elevated access level enables administrators to maintain data integrity, ensure program quality and provide strategic insights for continuous improvement of the mentorship program.

5.4 Access Control Summary

The Student Mentorship Program System implements role-based access control (RBAC) to ensure users can only access features and data appropriate to their assigned role (Mentee, Mentor or Administrator). Permissions are enforced through servlet-level authentication checks that verify user roles before granting access to specific pages and functions, preventing unauthorized users from accessing restricted areas even if they know the direct URL. Security measures include session management that tracks logged-in users, automatic redirection to the login page for unauthenticated access attempts and server-side validation that verifies user permissions before processing any data modifications or retrievals.

Feature/Function	**Mentee**	**Mentor**	**Administrator**
View own dashboard	✓	✓	✓
Manage own profile	✓	✓	✓
Browse mentors	✓	✗	✓
Send mentorship requests	✓	✗	✗
View mentorship requests	✗	✓	✓

Accept/decline requests	✗	✓	✗
View my mentees	✗	✓	✗
Schedule meetings	Limited*	✓	✓
Create announcements	✗	✓	✓
Create session notes	✓**	✓	✗
Access inbox/messages	✓	✓	✓
View all users	✗	✗	✓
Manage user accounts	✗	✗	✓
Manage professions	✗	✗	✓
View system statistics	✗	Limited***	✓
Delete users	✗	✗	✓

Table 5.1 Role Permissions Matrix

6.0 MENTEE USER GUIDE

6.1 Mentee Dashboard

The Mentee Dashboard acts as the primary command center for students, providing a centralized overview of their mentorship status and pending activities. Upon authentication, mentees are greeted with a personalized interface that allows them to manage their learning journey effectively.

6.1.1 Accessing The Dashboard

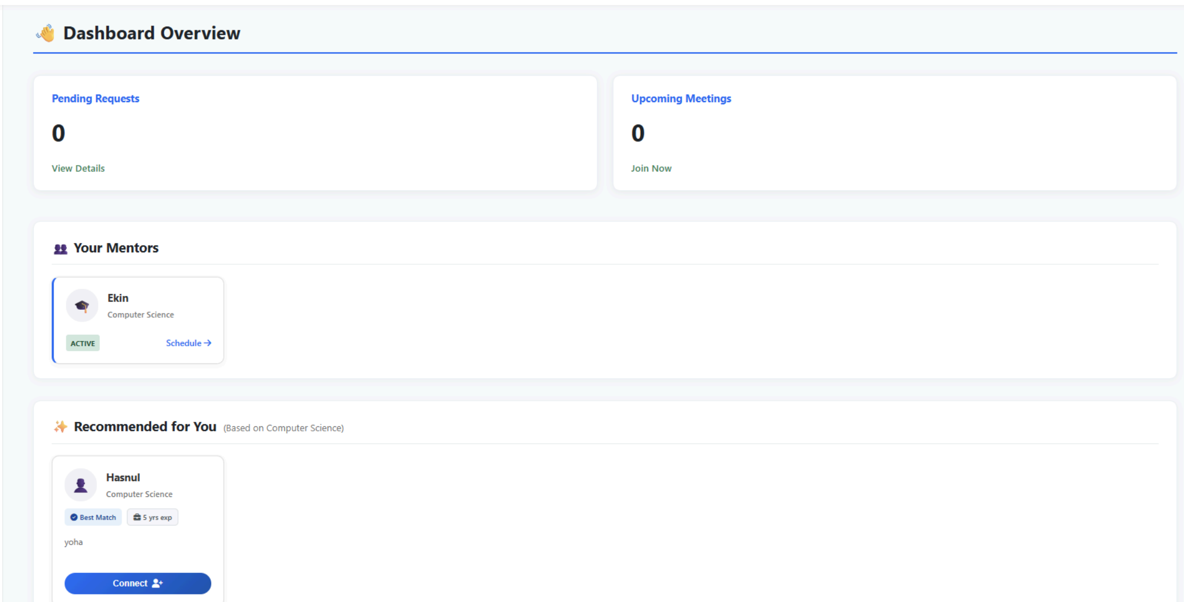


Figure 6.1 *Dashboard Overview*

The dashboard interface features high-level summary cards that display critical metrics, such as the number of "Pending Requests" and "Upcoming Meetings". This layout ensures students can immediately identify if a requested mentor has responded or if they have a session starting soon. If a student is not yet paired, the system displays a "Recommended for You" section based on their profile to encourage new connections.

6.1.2 Display Enrolled Mentor

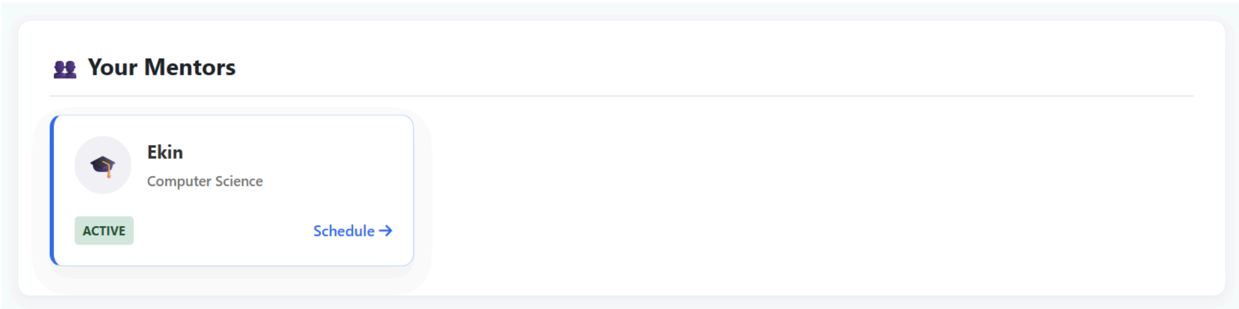


Figure 6.2 *Active Mentor Card*

Once a mentorship is established, the "Your Mentors" section provides a dedicated space for mentees to view their current active pairings. Each card displays the mentor's name and academic department (e.g., Computer Science), accompanied by an "ACTIVE" status badge to confirm a verified relationship.

6.1.3 Quick Navigation Overview

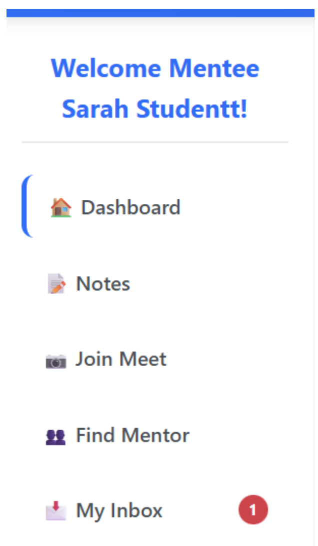


Figure 6.3 *Sidebar Navigation Menu*

A persistent vertical sidebar offers direct links to all essential modules, including "Notes" for resources, "Join Meet" for sessions, and "Find Mentor" for discovery. It also includes an "Inbox" link with a real-time notification badge to alert mentees of unread messages from their mentors.

6.2 Profile Management

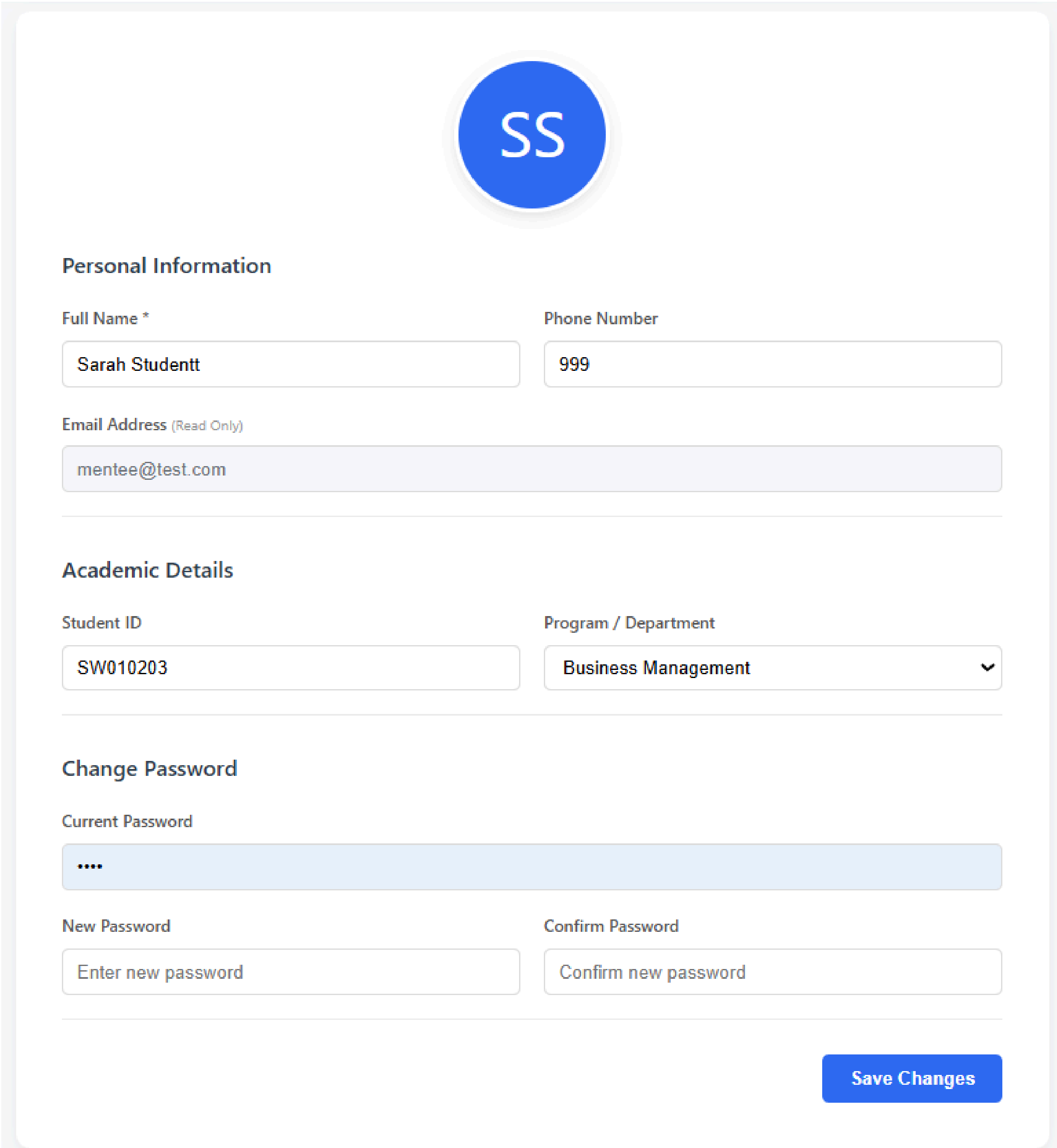


Figure 6.4 *Mentee Profile*

6.2.1 Creating Mentee Profile

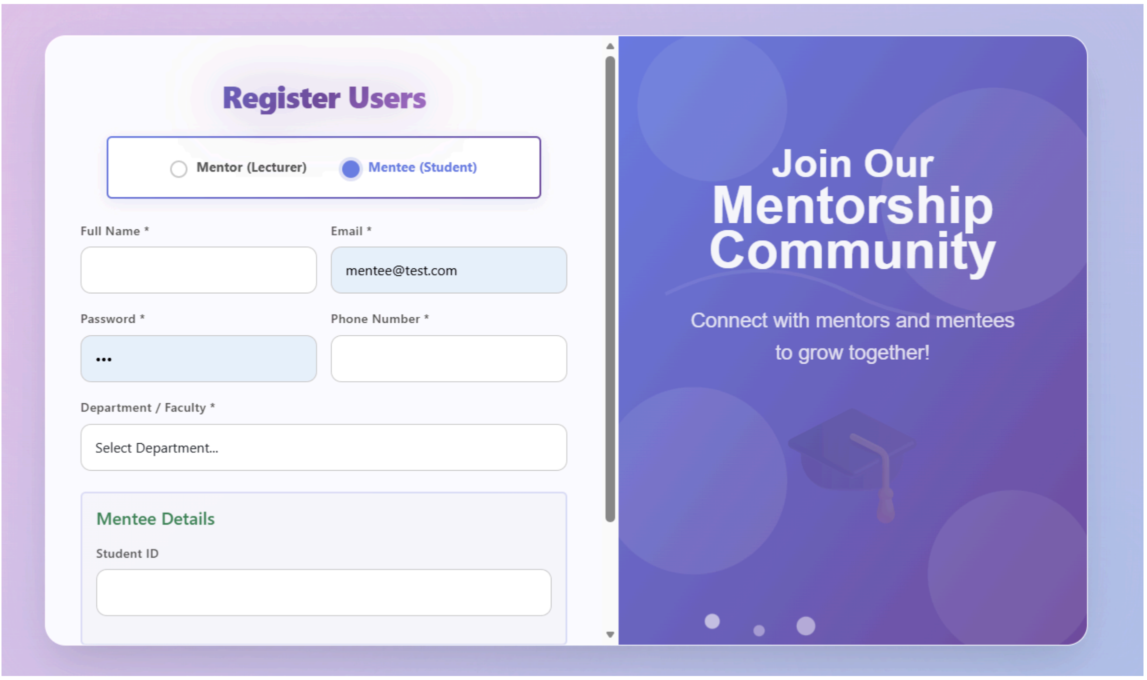


***Figure 6.5** Mentee Registration Form*

The initial phase of the mentorship program registration requires prospective mentees to select the "Mentee (Student)" role. Following this selection, a comprehensive registration form must be completed. Essential identifying information required includes the mentee's Full Name, a secure Password for account access, and a current Phone Number for communication purposes regarding program updates and matching notifications. This data is critical for identity verification and administrative needs. Furthermore, accurate academic details are mandatory for effective mentor matching. Students must accurately indicate their "Department/Faculty" from a dropdown list, which is vital for pairing them with a mentor possessing relevant expertise. Finally, a valid "Student ID" must be entered to authenticate their status and ensure accurate record-keeping. The combination of the selected Department/Faculty and the Student ID facilitates targeted categorization, a fundamental step for the algorithmic pairing process to ensure the mentee is matched with a suitably qualified mentor.

6.2.2 Editing Personal Information

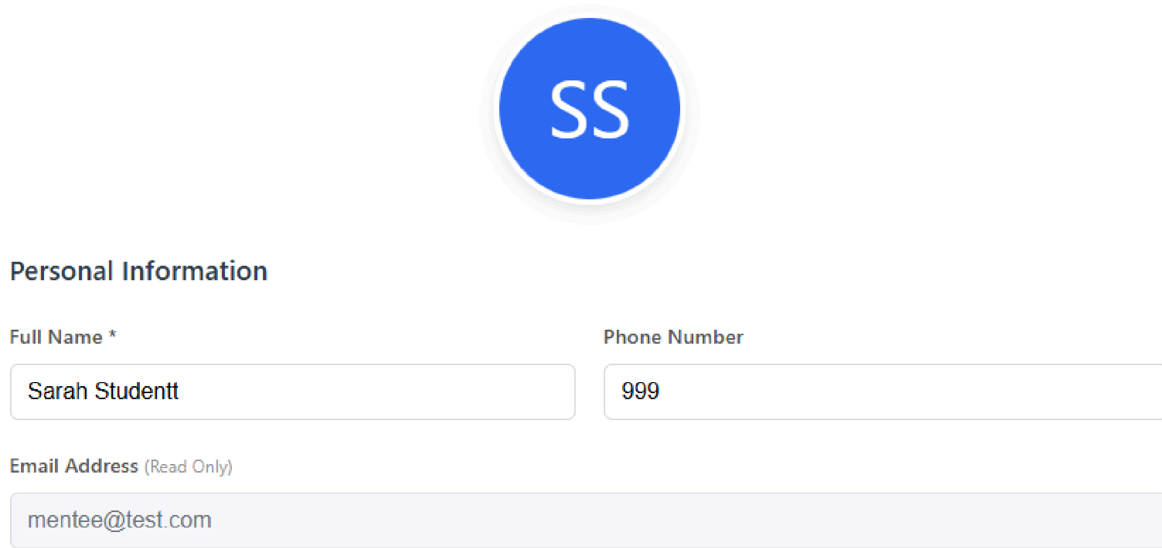


Figure 6.6 *Profile Edit Interface*

The mentoring system provides mentees with a dedicated profile page for managing their personal and academic data, a critical feature for maintaining the accuracy and integrity of the system's information used for matching, communication, and reporting. While the system empowers users with self-service updates, a distinction is made between static core identifiers like the "Email Address", which is read-only for security and administrative consistency, and dynamic fields like Phone Number and Department/Program of Study, which mentees are permitted to modify instantly to ensure their contact information and current academic standing are accurately reflected for effective platform engagement.

6.3 Finding and Selecting a Mentor

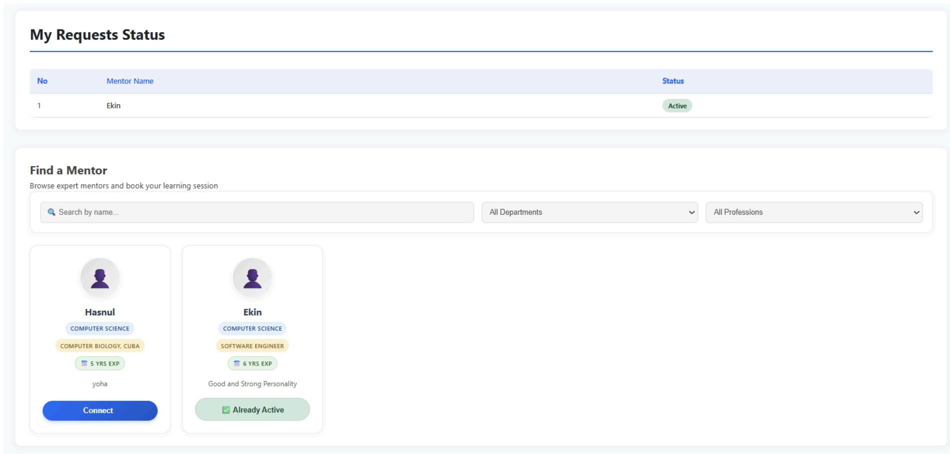


Figure 6.7 *Find Mentor Dashboard*

6.3.1 Viewing Mentor Profiles And Expertise

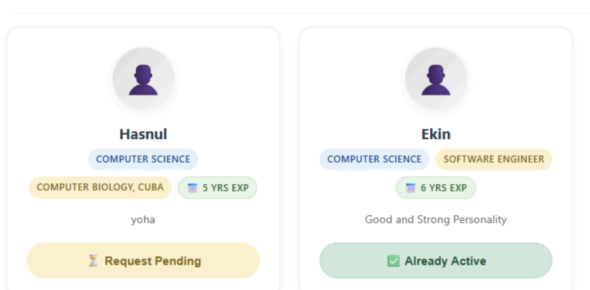


Figure 6.8 *Detailed Mentor Profiles*

Mentees are provided with comprehensive access to detailed mentor profiles, often called "mentor cards," which are crucial for making informed decisions during the mentor selection process. These profiles are robust, highlighting critical professional data, including the mentor's Specialized Expertise (e.g., Software Engineer, Data Scientist) and their Years of Experience to establish credibility and relevant background. Crucially, each card also features a brief personal bio, a narrative element that humanizes the mentor and offers essential insight into their coaching philosophy, preferred communication style, and areas of interest, allowing mentees to gauge the mentor's "coaching style" and overall personality fit before initiating contact, thereby ensuring a higher likelihood of a compatible and productive mentoring relationship.

6.3.2 Filtering Mentors by Profession/Criteria

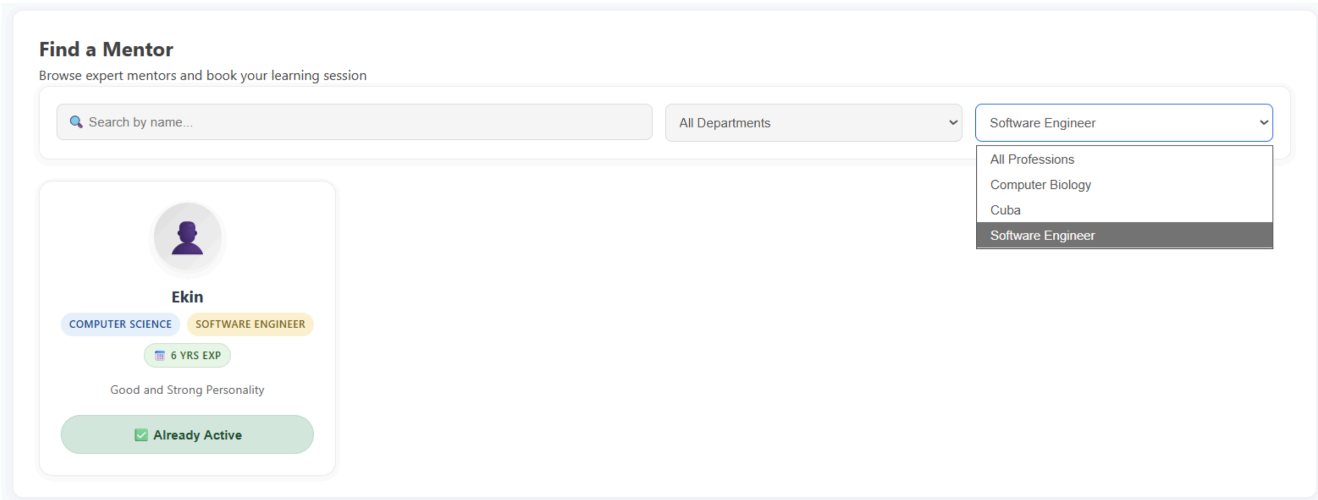


Figure 6.9 *Search and Filter Tools*

The platform's sophisticated discovery interface is a central feature designed to empower mentees in their search for the ideal mentor by offering a comprehensive suite of filtering options. This functionality goes beyond simple browsing, allowing students to meticulously narrow down the vast pool of potential mentors using key filters such as the mentor's full name, academic department (e.g., Computer Science, Electrical Engineering), or their professional background and profession (e.g., Software Developer, Financial Analyst). This robust system ensures that the match perfectly aligns with their specialized needs, academic trajectory, and career aspirations, significantly enhancing the probability of forming a high-quality, relevant mentorship pairing that can offer targeted, practical guidance.

6.3.3 Sending Mentorship Request

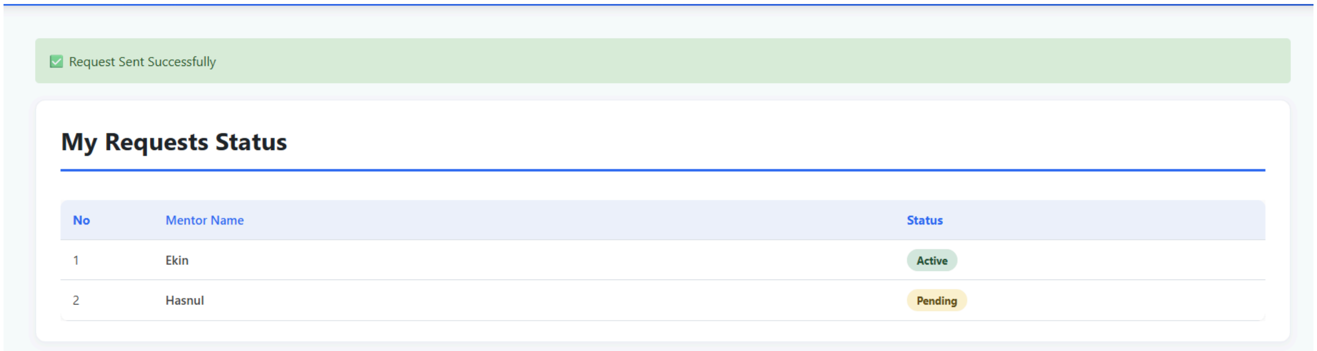


Figure 6.10 *Mentorship Request Status*

Once a suitable mentor is chosen, the mentee clicks the "Connect" button to send a formal request. The system then tracks this in a "My Requests Status" table, showing the request as "Pending" until it is reviewed by the mentor.The formal initiation of a mentorship connection begins with a prospective mentee selecting a suitable mentor from the platform's directory and sending a connection request via a button (e.g., "Connect" or "Request Mentorship") on the mentor's profile. Upon initiation, the system simultaneously dispatches a formal notification to the mentor (in-app, email, or both) and logs the request within the mentee's dedicated tracking module, automatically assigning the request the "Pending" status. This clear status serves as an unequivocal indicator that the request is awaiting the mentor's review and decision (acceptance or declination), establishing a robust and transparent tracking mechanism that allows the mentee to monitor their application's progress and sets clear expectations for the next phase of the journey.

6.4 Meeting Management

6.4.1 Viewing Scheduled Meetings

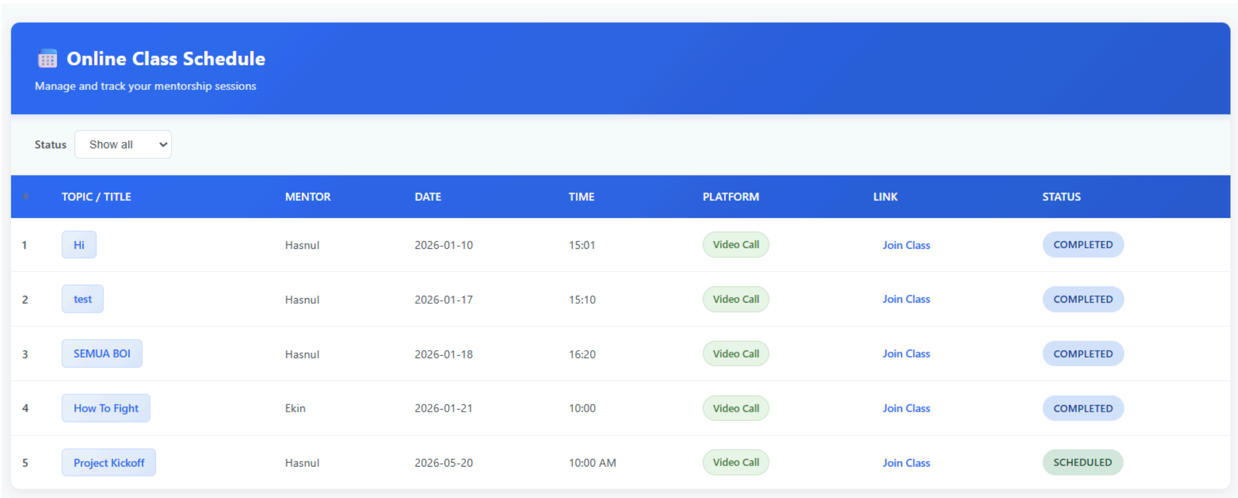


Figure 6.11 *Schedule Meetings Table*

The "Online Class Schedule" is the central logistical and communication tool for the educational program, functioning as a comprehensive, single-source reference point for all scheduled learning sessions. Each meticulously structured entry provides five critical pieces of information: the Topic/Title for subject identification, the Assigned Mentor for accountability and contact, the Date for calendar clarity, the precise Time to manage duration and accommodate time zones, and the Platform Used (e.g., Zoom, Google Meet) to ensure participants have the necessary technological access. More than just an event list, this schedule organizes the entire curriculum, manages the time commitments of all stakeholders, and clearly communicates the technological requirements essential for smooth and punctual class participation.

6.4.2 Meeting history

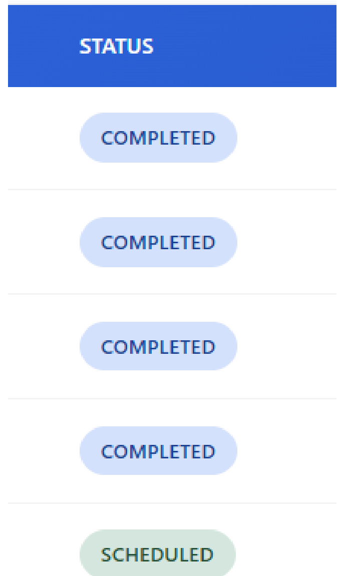


Figure 6.12 *Session Status Indicators*

To facilitate clear progress tracking, each mentoring session is assigned a distinct status badge. Future sessions are clearly marked with a "SCHEDULED" badge, allowing both mentors and mentees to see upcoming commitments and plan accordingly easily. Conversely, sessions that have already taken place are denoted by a "COMPLETED" badge, providing a permanent and accessible record of past interactions and topics covered. When the appointed time for a virtual session arrives, mentees can simply click the prominent "Join Class" button associated with the session. This action will seamlessly and instantly direct them to the appropriate virtual meeting link, ensuring a smooth and punctual start to their learning experience.

6.5 Notes and Documentation

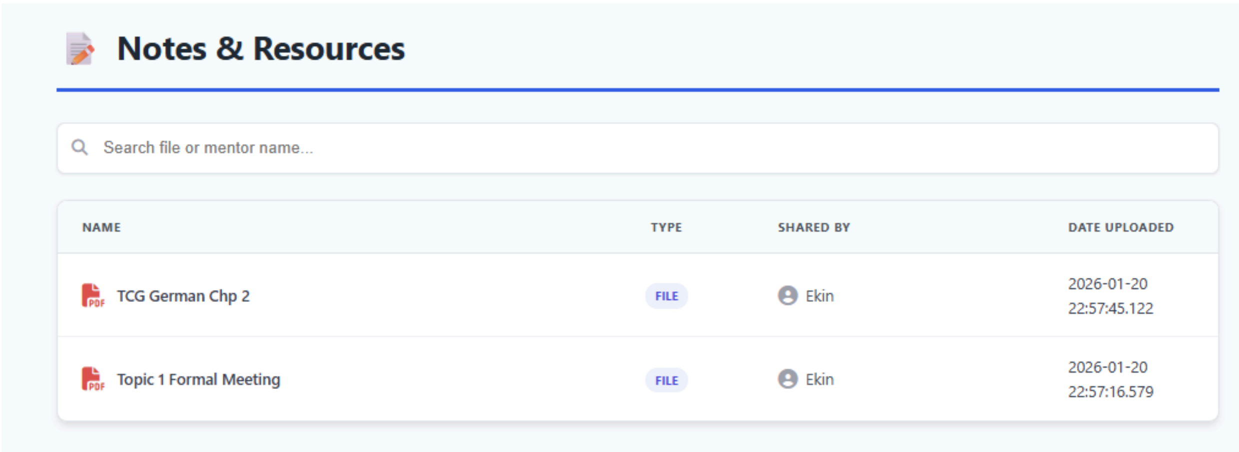


Figure 6.13 *Notes Dashboard Overview*

The Centralized Resource Repository Module acts as a secure, highly organized central hub that provides mentees with seamless access to all academic materials and session documentation shared by their mentors, significantly enhancing the learning experience by ensuring that all necessary resources are consistently structured, readily available, and easily retrievable from a single, reliable platform. This repository consolidates all learning content, such as lecture slides, readings, and recorded videos, eliminating the time-wastage associated with searching through fragmented communication methods like various messaging apps and email chains, while also featuring robust organizational tools that allow mentors to categorize and tag materials, thereby ensuring content version control and fostering a focused and efficient mentoring environment.

6.5.1 Download session notes

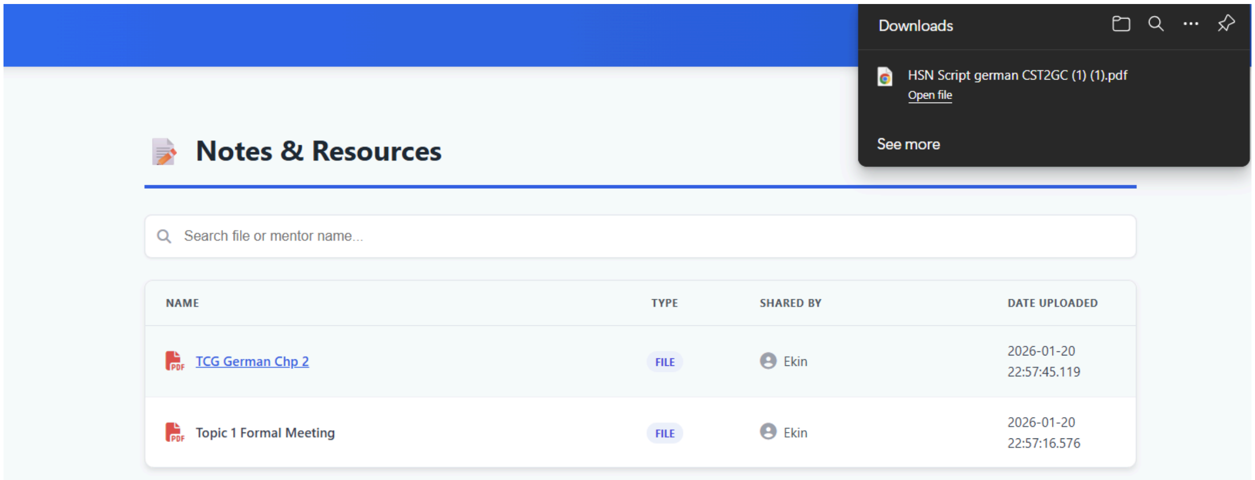


Figure 6.14 *Document Download Feature*

The platform is designed to offer mentees comprehensive, flexible learning through enhanced resource management, allowing for seamless access to and offline study of essential materials. Mentees can download instructional and supplementary resources in standard formats like PDF, DOCX, and PPT to any device for review without an internet connection. To ensure effective management and traceability, each resource is cataloged with critical metadata: a descriptive File Name for easy identification, the Type (File Format) for compatibility checks, Shared By (Mentor Identification) for accountability and follow-up communication, and a precise Date Uploaded (Version Control Timestamp) to guarantee mentees are always using the latest iteration of the document. This robust system maximizes accessibility and flexibility, significantly improving the mentee's overall learning experience by putting them in control of their study schedule and environment.

6.5.2 Searching notes

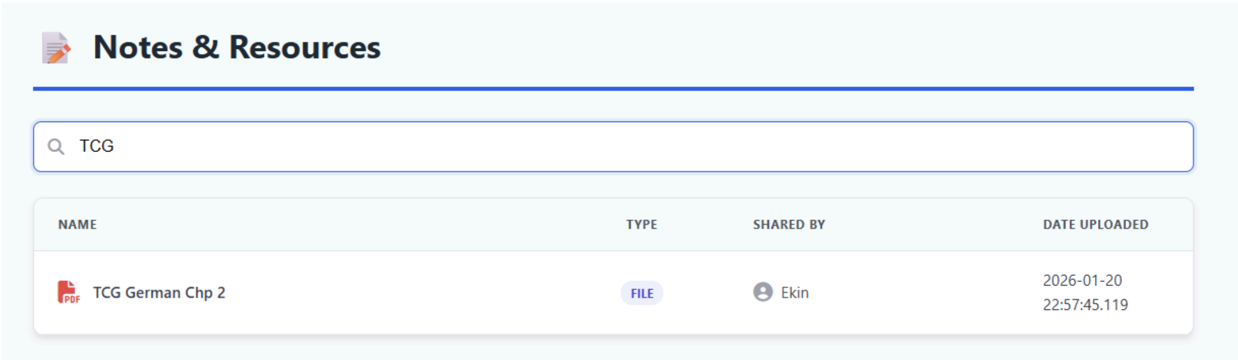


Figure 6.15 *Resource Search Function*

The "Notes & Resources" interface is designed as a centralized, structured hub for all academic and supplementary materials shared directly with the student. Recognizing the potential for this repository to grow into a substantial library of information over the course of a semester or program, a highly efficient search bar has been seamlessly integrated at the very top of the page. This feature is crucial for maintaining usability and ensuring rapid access to specific content. To utilize this feature, students simply enter relevant keywords into the search bar. For instance, entering a keyword such as "TCG" (standing for a specific topic, concept, or project name) triggers an instant filtering mechanism. The system immediately scans the entire document list, which might include lecture notes, assigned readings, meeting summaries, external links, or multimedia files, and dynamically filters it to display only the results directly relevant to the entered term. This capability eliminates the need for tedious manual scrolling and searching through potentially hundreds of files, thereby allowing for the rapid and precise retrieval of specific lecture notes, detailed meeting summaries, or other critical resources exactly when they are needed for study or reference. This focus on rapid retrieval significantly enhances the student's productivity and organization.

6.6 Inbox and Messages

6.6.1 Accessing Inbox

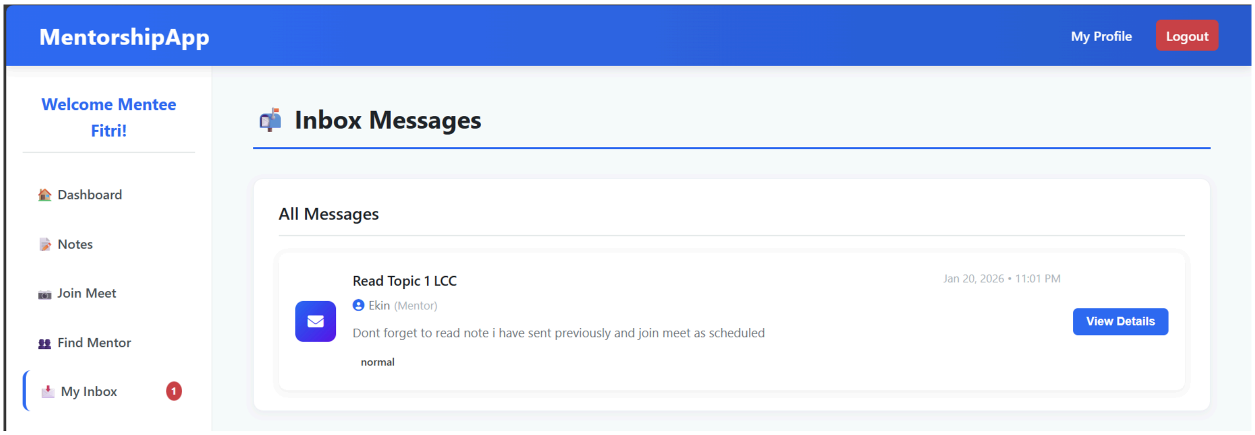


Figure 6.16 *Mentee Inbox Interface*

The "Inbox Messages" list serves as a comprehensive communication hub for mentees, providing a complete and easily accessible archive of all past and current interactions within the mentoring system. This centralized repository ensures that students can effortlessly track the evolution of discussions, revisit critical advice, and confirm details from previous exchanges, thereby minimizing the risk of miscommunication or information loss. To further optimize the communication experience and ensure the timely receipt of vital information, the system incorporates a robust real-time notification mechanism. A distinctive notification badge is strategically placed on the "My Inbox" link within the sidebar navigation. This badge is designed to be a persistent and highly visible visual cue, instantly drawing the mentee's attention. The primary function of this badge is to display a dynamic, numerical count of all unread messages residing in the mentee's inbox. This precise numerical indicator eliminates guesswork and provides an immediate, quantifiable measure of pending communications. By maintaining a continuous presence, the notification badge acts as an unwavering visual reminder, effectively prompting mentees to check their inbox regularly for new information, urgent announcements, and mentor feedback. This feature is crucial for fostering responsive communication and ensuring that students remain fully engaged and up-to-date with critical program updates and personalized mentoring communications.

6.6.2 Reading messages

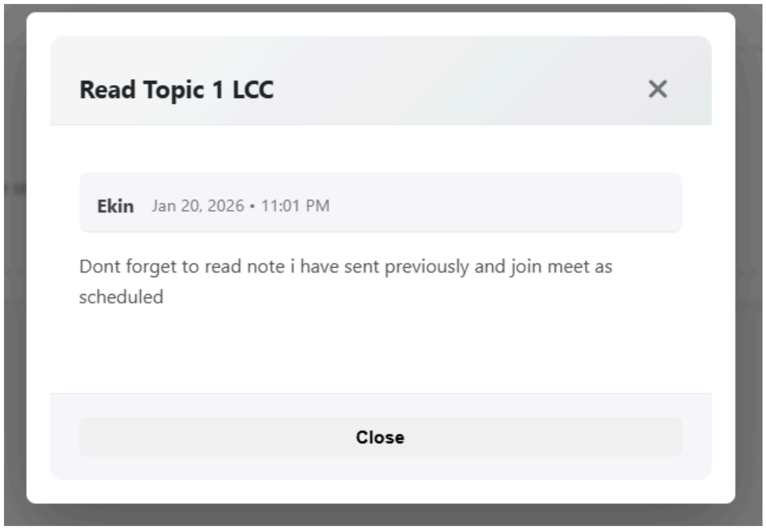


Figure 6.17 *Full Message Modal*

The message interaction design prioritizes an intuitive and non-disruptive user experience, centered around efficient communication triage. The main interface is the message list, optimized for quick scanning through a Message Preview that includes a subject line (e.g., "Read Topic 1 LCC") and a brief content snippet. This structure is designed to allow users to rapidly assess the nature and urgency of messages without opening them, fundamentally supporting focus and responsiveness by enabling the quick identification of important communications. For in-depth review, the system facilitates a seamless transition to the Detailed View. This full context is accessed via a "View Details" button, which triggers a non-blocking modal window that overlays the current screen, displaying the complete message content. Crucially, every message includes essential Contextual Information to ensure traceability and clarity. This data comprises a Precise Timestamp (e.g., "Jan 20, 2026 • 11:01 PM") for tracking timelines and the Sender's Name (typically a mentor), establishing accountability and a verifiable conversation history for effective collaboration.

6.6.3 Inbox notifications

Figure 6.18 *Sidebar Notification Badge*

The Inbox Notification system serves as a critical real-time alert mechanism within the student dashboard to ensure mentees never miss essential updates from their mentors. A prominent red numerical badge is displayed directly on the "My Inbox" menu item in the navigation sidebar, providing persistent visibility of unread messages regardless of which page the student is currently viewing. This automated feature triggers whenever a mentor broadcasts a new announcement or sends a direct communication, allowing students to prioritize their academic responsibilities and respond promptly to guidance.

7.0 MENTOR USER GUIDE

7.1 Mentor Dashboard

The Mentor Dashboard serves as the central hub for mentors to manage all their mentorship activities and access key functions efficiently. Upon login, mentors are greeted with a personalized welcome message and a comprehensive overview of their current mentorship status displayed through organized sections.

7.1.1 Dashboard overview

The dashboard presents critical information in an organized layout with distinct sections for easy navigation. The main content area displays "Current Mentees" showing active mentorship pairs with a "Manage Pairs" link for quick access, and "New Requests" highlighting pending mentorship requests requiring review with a "Review Now" action link. Below these quick-access cards, the "Pending Mentorship Requests" section displays a detailed list of students awaiting mentor approval, while the "Your Current Mentorship Pairs" section shows a table with columns for Mentee Name, Program, Email and Action buttons for managing each relationship.

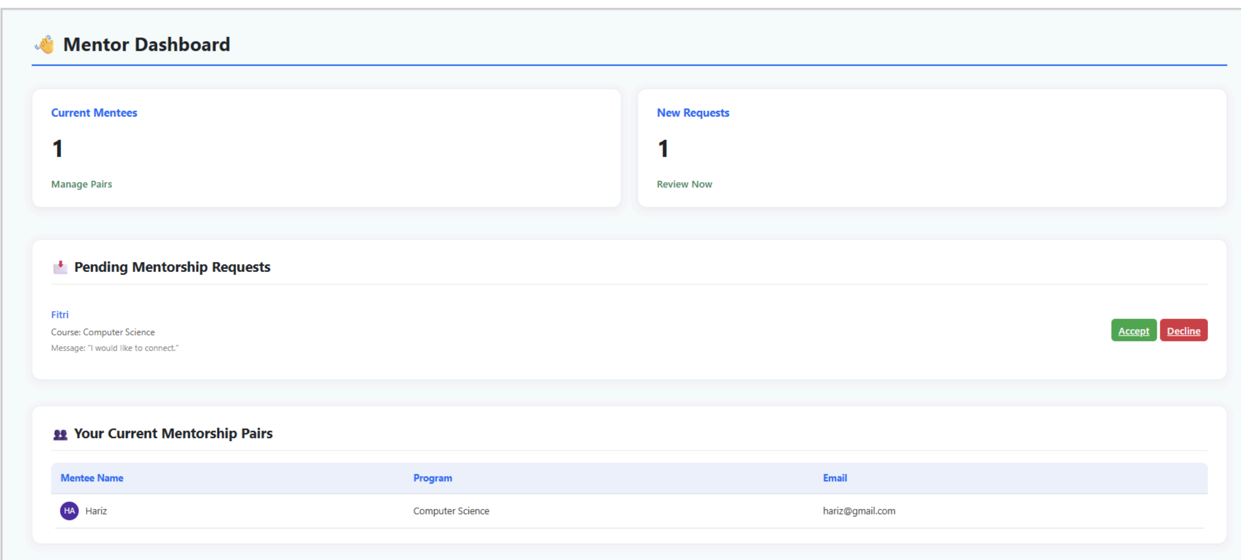


Figure 7.1.1 *Dashboard Mentor*

7.1.2 Active Mentorship Summary

The active mentorship summary provides mentors with a real-time view of all current mentee relationships in tabular format. Each row displays essential mentee information including name, academic program, contact email and available actions such as viewing details, scheduling meetings or managing the relationship. When no active mentees are present, the system displays a message indicating "No active mentees found," prompting mentors to check pending requests or wait for new mentorship applications.

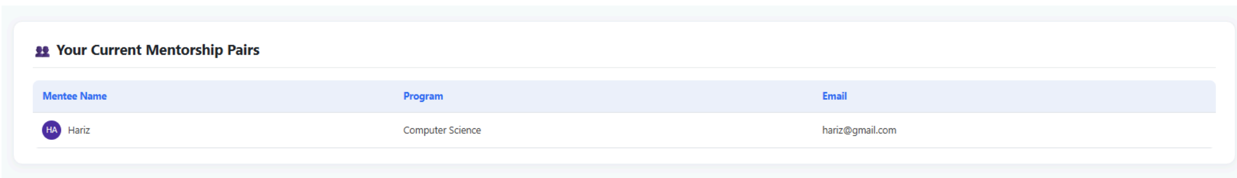


Figure 7.1.2 *Mentorship Current Pair*

7.1.3 Quick actions menu

The left sidebar navigation menu provides quick access to all mentor-specific functions. Menu items include Dashboard (home view), My Mentees (manage current mentees), Pending Requests (review new requests), Schedule Meeting (create new sessions), Announcements (post updates), and Notes & Files (document sessions). Each menu item is accompanied by an icon for visual recognition, and the currently active page is highlighted to indicate the mentor's current location within the system.

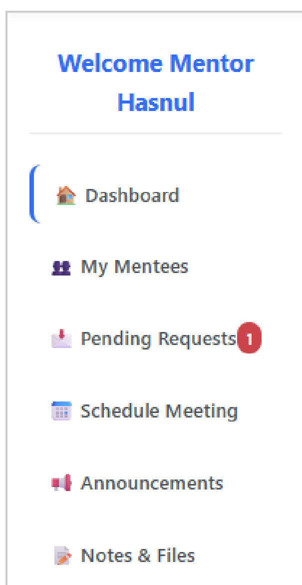


Figure 7.1.3 *Left Sidebar Navigation*

7.2 Mentor Profile Setup

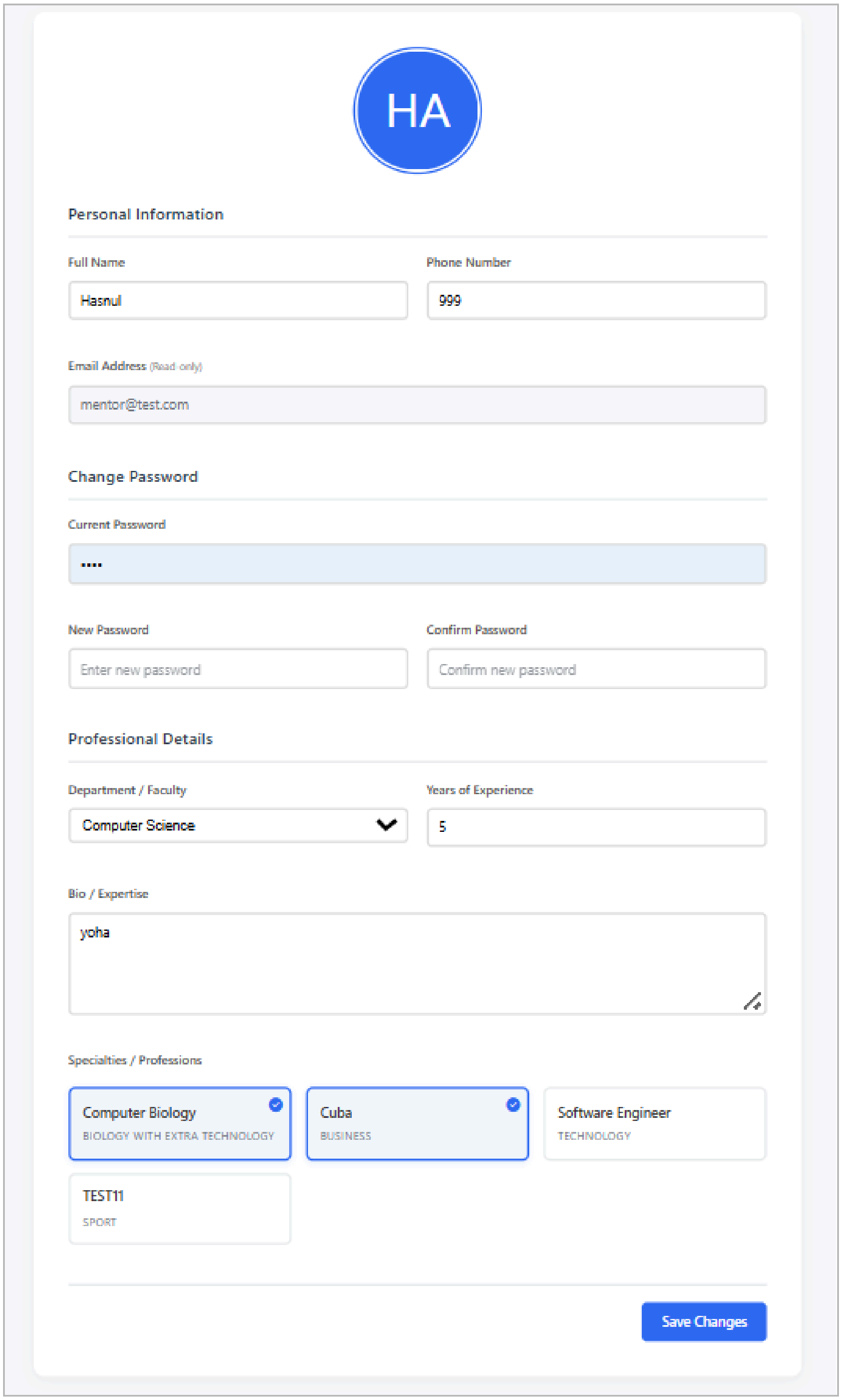


Figure 7.2 *MyProfile*

7.2.1 Creating mentor profile

The Mentor Profile page allows mentors to create and maintain a comprehensive professional profile that helps mentees identify suitable mentors based on expertise and qualifications. The interface is organized into two main sections ; Personal Information and Professional Details, accessible through the sidebar navigation menu. Mentors can upload a profile picture by clicking on the circular placeholder at the top of the form, which helps personalize their profile and builds trust with potential mentees.

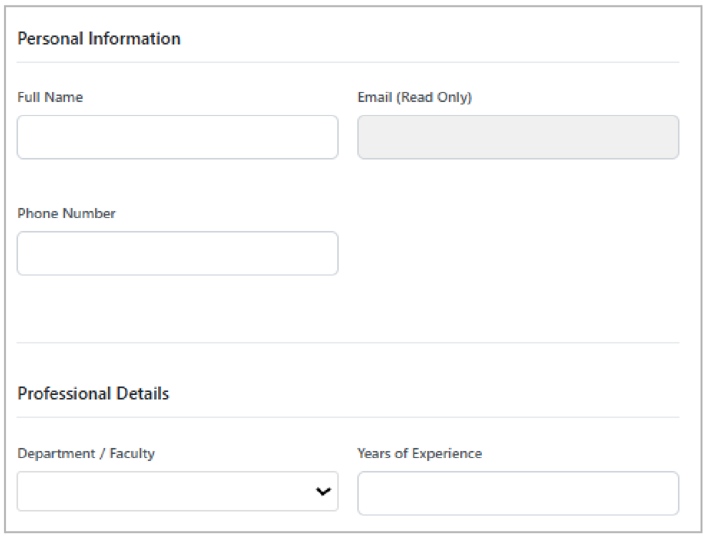


Figure 7.2.1 *Personal Information and Professional Details*

7.2.2 Adding expertise and qualifications

The Professional Details section enables mentors to showcase their qualifications and areas of expertise. Mentors input their Years of Experience to indicate their level of professional maturity, and can select multiple Specialties/Professions from a dropdown menu to highlight the various domains where they can provide guidance. The Bio/Expertise text area provides space for mentors to describe their areas of expertise in detail, share their professional background, outline their mentoring philosophy, and specify what type of guidance they can offer to mentees. This detailed information helps the system recommend appropriate mentor-mentee matches and allows students to make informed decisions when selecting mentors.

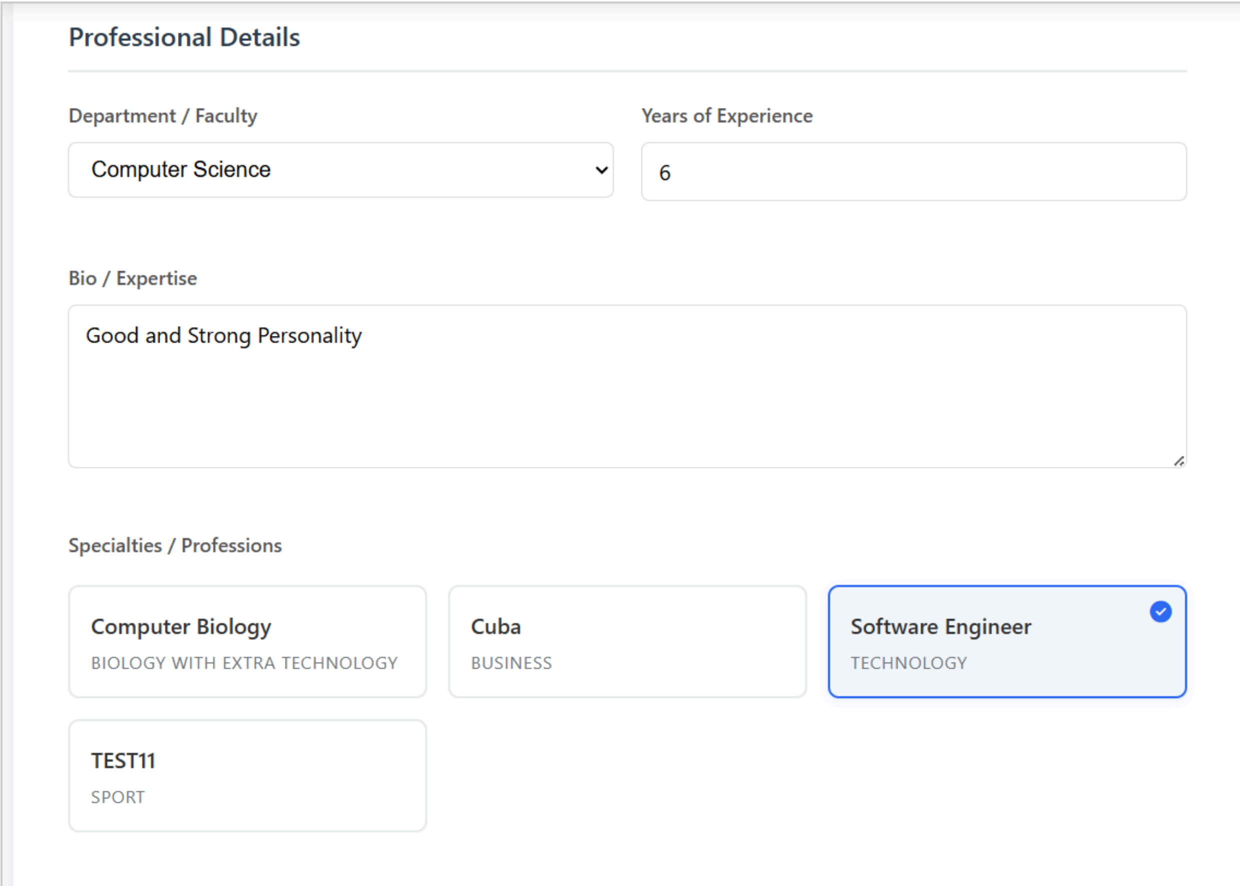


Figure 7.2.2 *Specialties and Expertise Area*

7.2.3 Setting profession details

Mentors must configure their professional information through structured fields in the form. The Department/Faculty dropdown menu allows selection of their primary academic or professional department, which is crucial for matching mentors with mentees from relevant programs. The Specialties/Professions field supports multiple selections, enabling mentors to indicate all areas where they possess expertise and can provide effective mentorship across different domains. These profession details feed into the system's mentor discovery and recommendation algorithms, ensuring mentees can find mentors aligned with their academic or career interests.

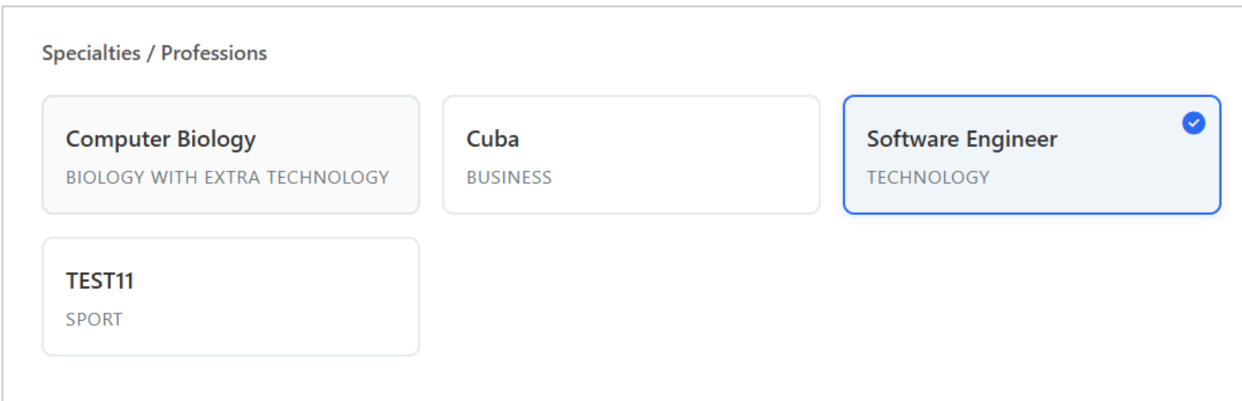


Figure 7.2.3 *Profession Details*

7.2.4 Profile visibility settings

Once all profile information is entered, mentors click the Save Changes button at the bottom of the form to update their profile. Personal Information fields include Full Name, Email (displayed as read-only since it's linked to the account), and Phone Number for contact purposes. After saving, the updated profile becomes visible to mentees browsing the "Find Mentor" feature, allowing students to view the mentor's expertise, experience, and professional background before sending mentorship requests. Mentors can return to this page at any time to update their information, add new specialties, or revise their bio to reflect current expertise and availability.

Figure 7.2.4 *Save Changes Button*

7.3 Managing My Mentees

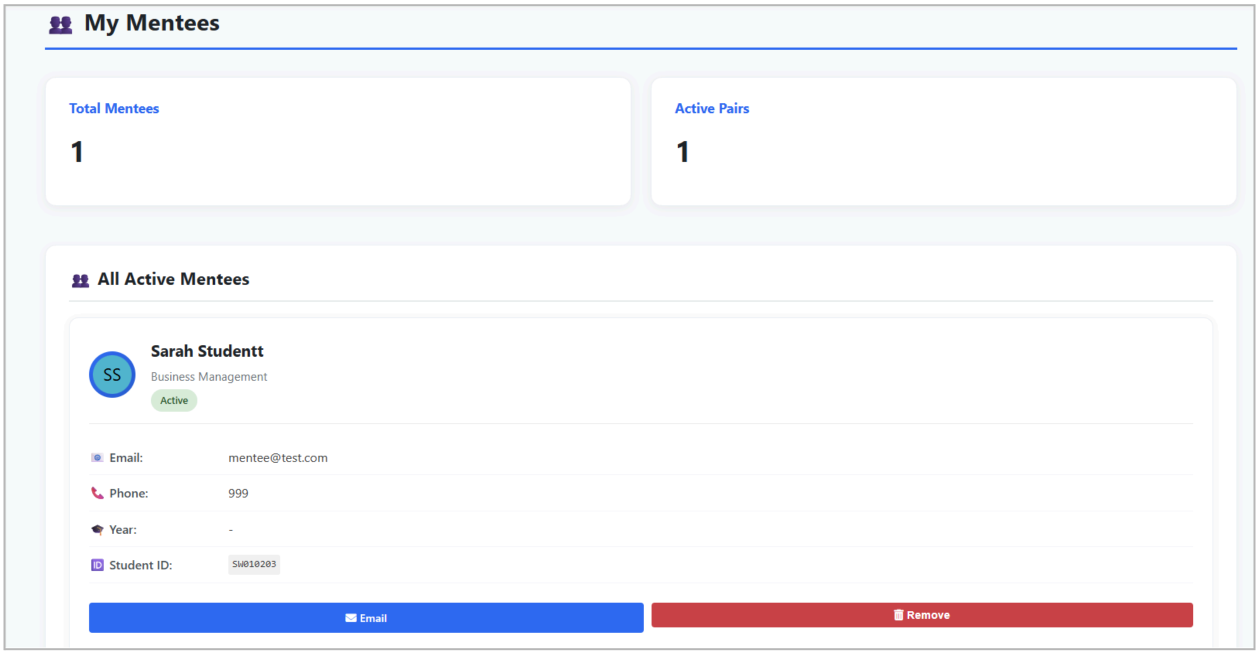


Figure 7.3 *My Mentees*

7.3.1 Viewing current mentees list

The My Mentees page provides mentors with a centralized view of all students currently under their guidance. The page is accessed through the sidebar navigation menu and displays summary statistics at the top, including "Total Mentees" showing the overall number of students assigned to the mentor, and "Active Pairs" indicating currently active mentorship relationships. Below the summary cards, the "All Active Mentees" section presents a comprehensive list or table of all mentees with their relevant information such as names, programs, contact details, and relationship status. When no mentees are currently assigned, the system displays a helpful message stating "You do not have any active mentees yet" and provides a direct link to "Pending Requests" where mentors can review and accept new student requests.

7.3.2 Accessing mentee profiles

From the My Mentees page, mentors can click on individual mentee names or profile links to access detailed student information. Each mentee entry in the list provides quick access to view their complete profile, including academic program or department, learning goals, interests, and any personal information the student has shared. This profile access allows mentors to better understand their mentees' backgrounds, aspirations, and specific areas where they need guidance, enabling more personalized and effective mentorship.

Mentors can review this information at any time to prepare for meetings, tailor their advice, or identify opportunities to connect mentees with relevant resources or opportunities.

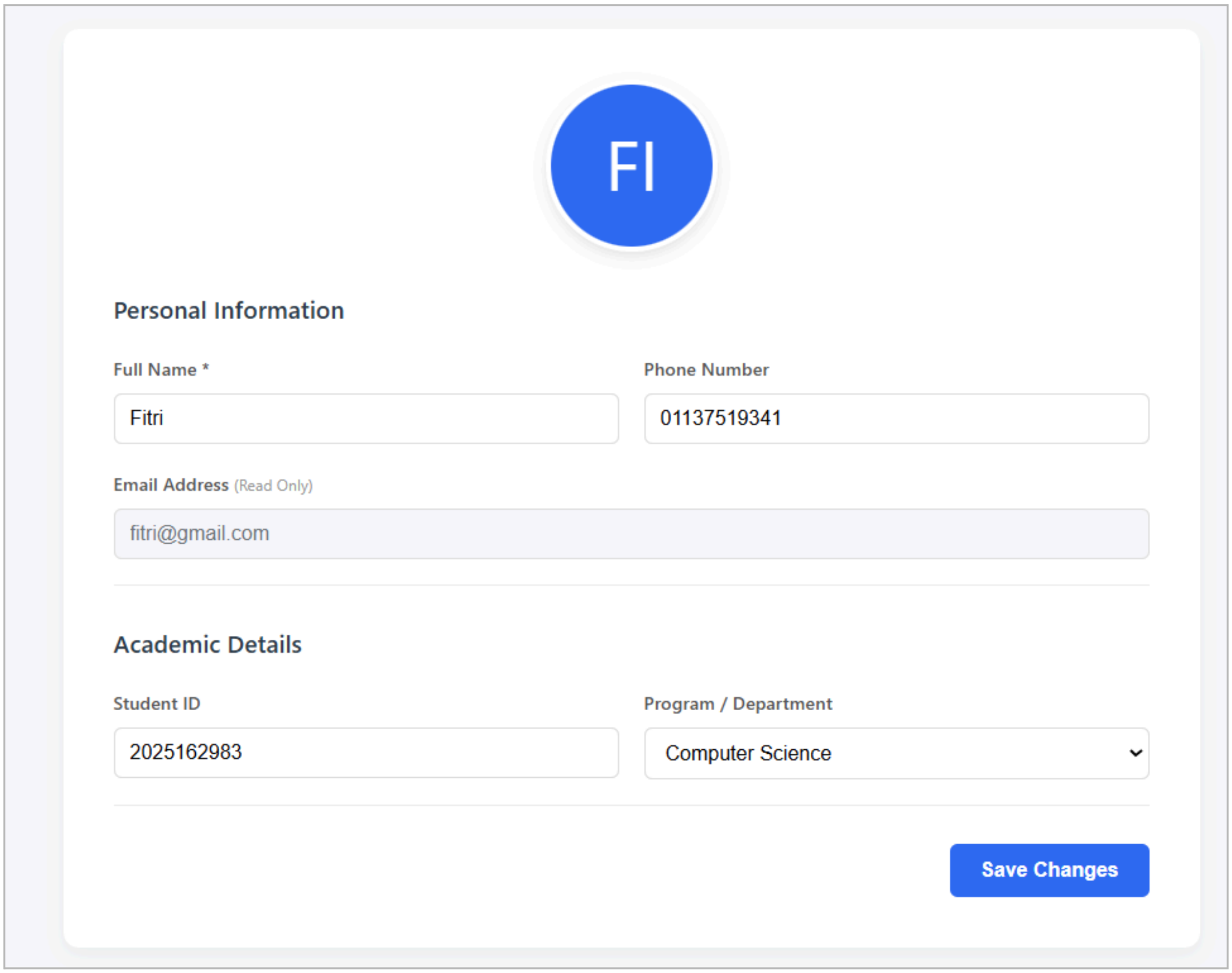


Figure 7.3.2 *Mentee Profiles*

7.3.3 Mentee progress overview

The My Mentees interface enables mentors to monitor the progress of each student they are mentoring. While viewing the mentees list, mentors can see key indicators of the mentorship relationship status and activity levels. This overview helps mentors identify which mentees may need more attention, track meeting frequency, and ensure all students are receiving adequate support. The progress tracking features allow mentors to maintain balanced attention across all their mentees and identify any relationships that may require intervention or additional engagement.

7.3.4 Managing multiple mentees

For mentors working with several students simultaneously, the My Mentees page serves as the central management hub. The interface is designed to handle multiple mentee relationships efficiently, with each mentee displayed in an organized list format that can typically be sorted or filtered. Action buttons or links associated with each mentee entry allow mentors to perform quick tasks such as scheduling meetings, viewing session notes, sending messages, or documenting progress without navigating away from the main page. This streamlined approach to managing multiple relationships helps mentors stay organized, ensure consistent engagement with all mentees, and maintain high-quality mentorship across their entire student portfolio.

7.4 Handling Mentorship Requests

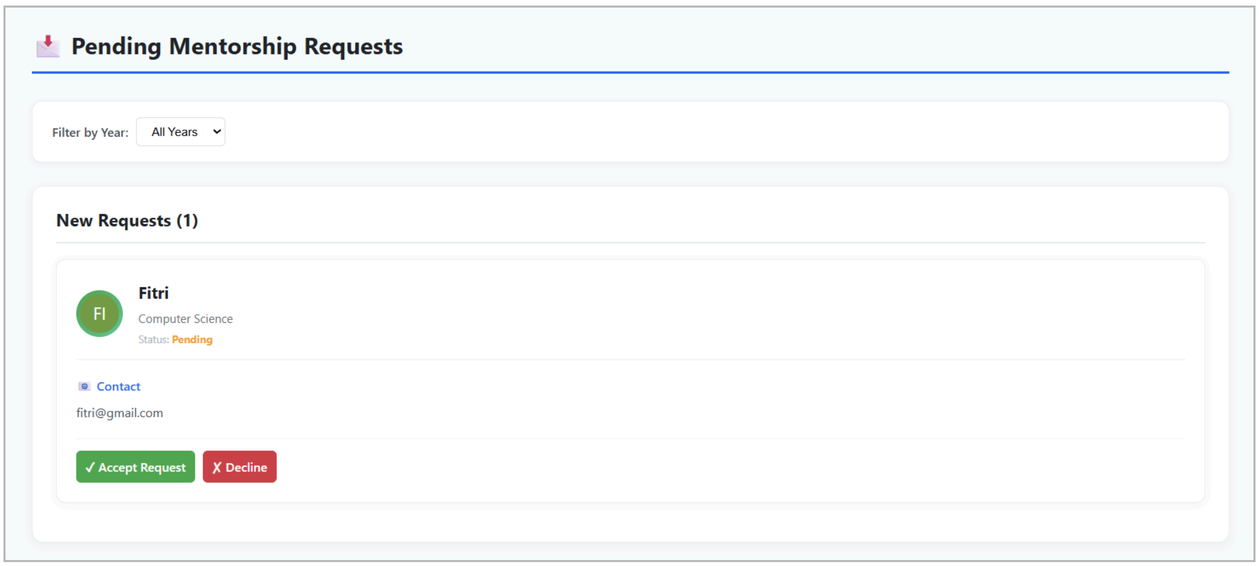


Figure 7.4 *Pending Request*

7.4.1 Viewing pending requests

The Pending Requests page displays all mentorship requests submitted by students awaiting mentor review and response. Mentors access this page through the sidebar navigation menu item labeled "Pending Requests" to see a complete list of students who have expressed interest in their mentorship. The interface typically presents requests in a table or card format, showing key information such as the student's name, academic program or department, email contact, and the date the request was submitted. Each pending request remains visible on this page until the mentor takes action by either accepting or declining the mentorship application. The page also displays the total number of pending requests, helping mentors understand their current workload and prioritize responses accordingly.

7.4.2 Accepting requests

When a mentor decides to accept a mentorship request, they click the "Accept" button associated with that specific student's request. Upon acceptance, the system establishes a formal mentorship relationship by adding the student to the mentor's active mentees list and notifying the student of the approval. The accepted request is automatically removed from the Pending Requests page and the mentee appears in the "My Mentees" section, where the mentor can begin scheduling meetings, communicating, and documenting sessions. Accepting a request initiates the mentorship lifecycle, enabling both parties to access collaboration features such as meeting scheduling, messaging, note sharing, and progress tracking. Mentors should consider their current mentee load and available time before accepting new requests to ensure they can provide quality mentorship to all students.

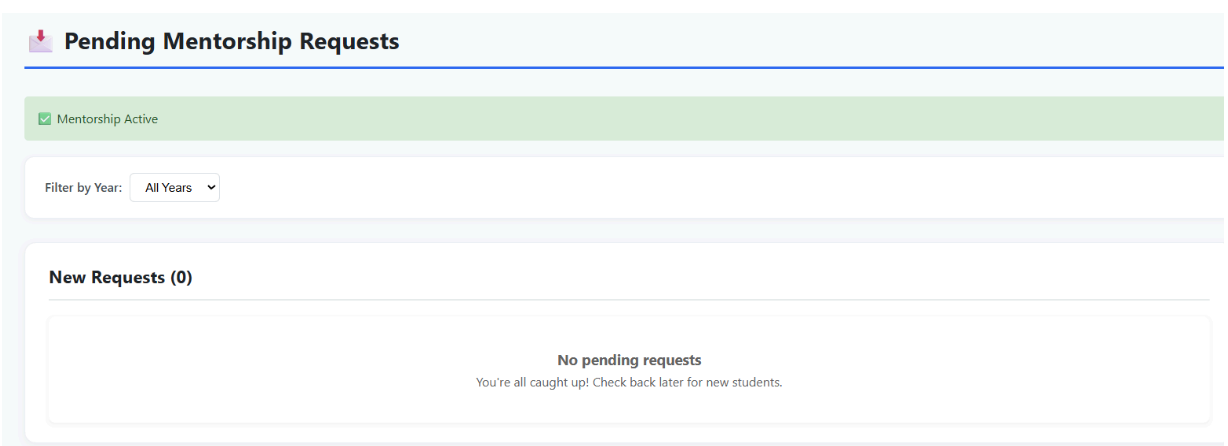


Figure 7.4.3 *Accepting mentees*

7.4.3 Declining requests

If a mentor determines they cannot accept a mentorship request due to capacity constraints, expertise mismatch, or other reasons, they can decline the request by clicking the "Decline" or "Reject" button associated with that student's request. Declining a request removes it from the pending list and notifies the student of the decision, allowing them to seek other mentorship opportunities. This action helps mentors manage their workload effectively by only accepting mentees they have the capacity and appropriate expertise to support. Mentors should decline requests promptly to enable students to find alternative mentors in a timely manner and continue

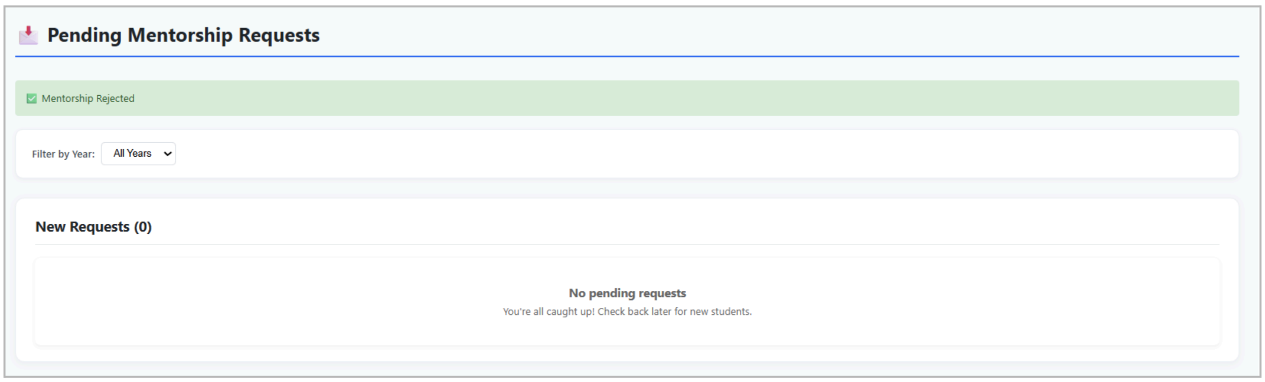


Figure 7.4.3 *Decline Request*

7.5 Meeting Scheduling

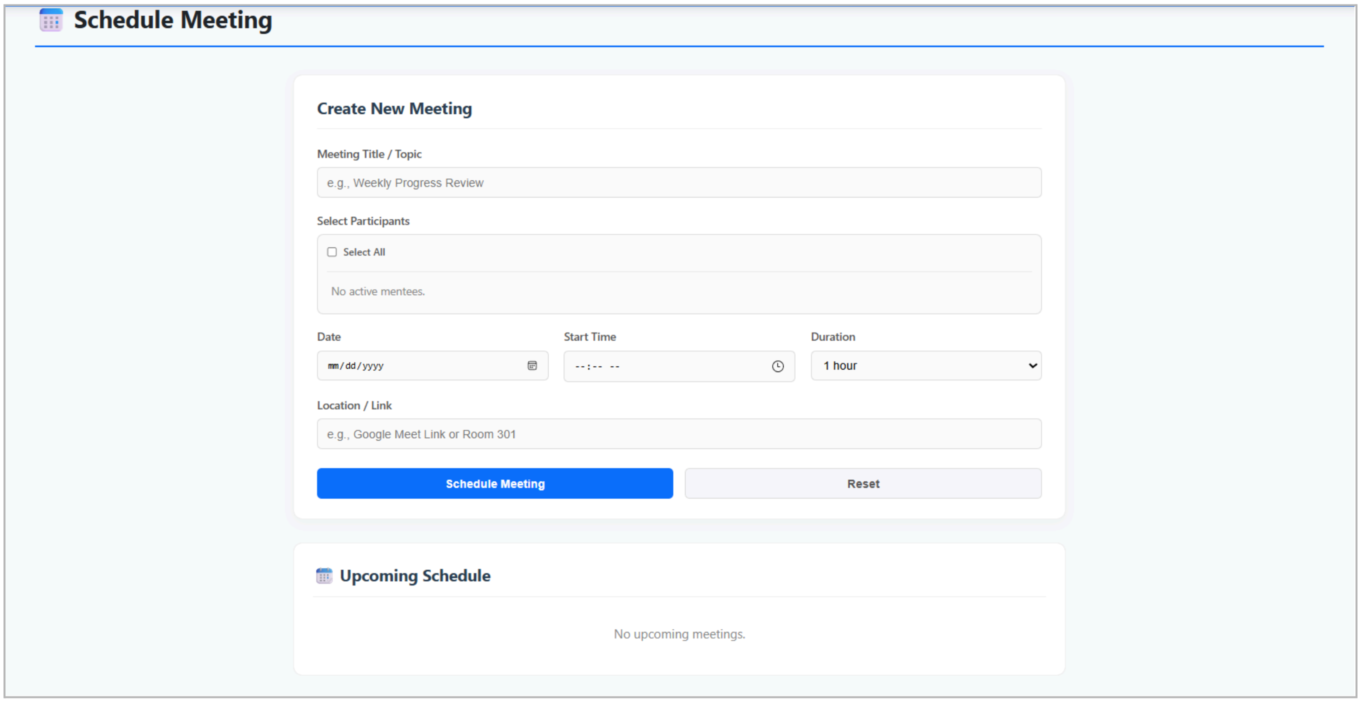


Figure 7.5 *Schedule Meeting*

7.5.1 Creating new meetings

The Schedule Meeting page enables mentors to create new mentorship sessions with their mentees through a dedicated form interface. Mentors access this feature by clicking "Schedule Meeting" from the sidebar navigation menu, which opens the meeting creation form. The page typically displays a list of the mentor's current mentees, allowing selection of one or more students to include in the meeting. Mentors initiate the scheduling process by selecting the mentee(s) they wish to meet with, then proceeding to fill in the required meeting details such as date, time, duration, and purpose.

This centralized scheduling system eliminates the need for back-and-forth email coordination and ensures all meeting information is stored in one accessible location for both parties.

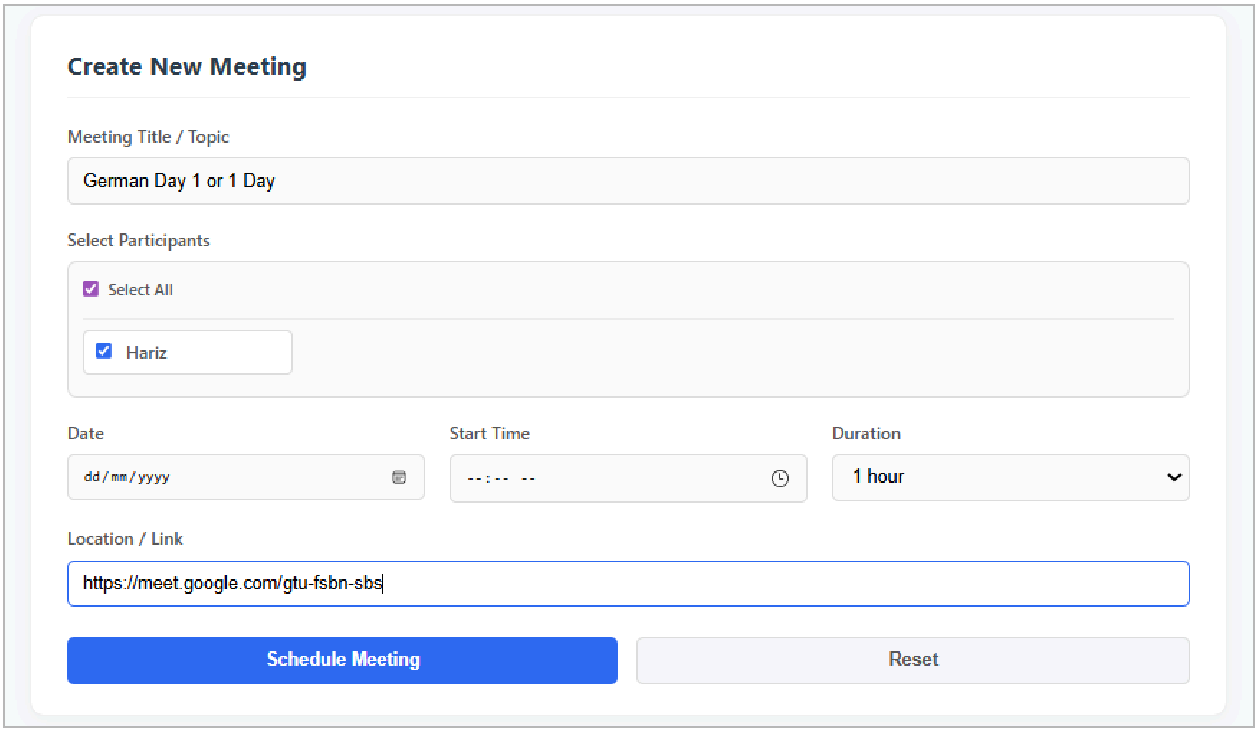


Figure 7.5.1 *Create new meeting*

7.5.2 Setting meeting date and time

After selecting the mentee, mentors specify when the meeting will take place using date and time input fields. The interface typically provides a calendar picker for selecting the meeting date and time dropdowns or input fields for specifying the exact meeting time. Mentors should choose dates and times that accommodate both their schedule and the mentee's likely availability, considering academic schedules, time zones (if applicable), and typical working hours. The system may also display the mentor's existing meetings to help avoid scheduling conflicts and ensure adequate spacing between sessions. Once the date and time are set, mentors can specify the meeting duration to help mentees plan their schedules accordingly and allocate sufficient time for meaningful discussion.

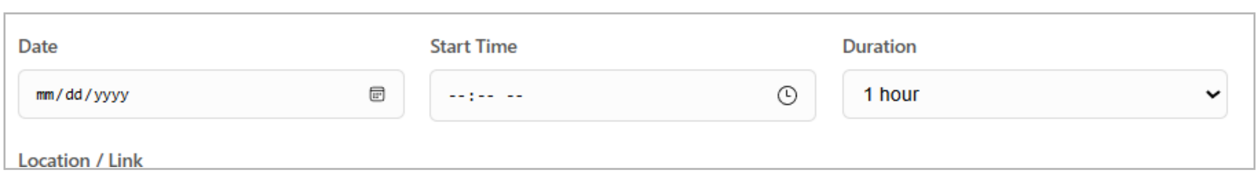


Figure 7.5.2 *Date and Time Setting*

7.5.3 Adding Meeting Venue

The meeting form includes a Location/Link field where mentors specify where the meeting will take place. This field accepts either a physical location (such as "Room 301" or "Library Study Room 2B") or a virtual meeting link (such as a Google Meet, Zoom, or Microsoft Teams URL). Mentors enter the meeting location or paste the online meeting link in the provided text field, ensuring mentees know exactly where to attend the session. Additionally, the form includes other essential fields such as mentee selection, date, and time to complete the meeting setup.

Figure 7.5.3 *Venue Details*

7.5.4 Selecting Meeting Participants

The Schedule Meeting form includes a "Select Participants" section where mentors choose which mentee(s) will attend the scheduled session. This section displays a list of the mentor's active mentees with checkboxes next to each name, allowing mentors to select individual students or use the "Select All" checkbox to include all mentees in a group meeting. When a mentor has no active mentees, the system displays the message "No active mentees," indicating that the mentor must first accept mentorship requests from the Pending Requests page before they can schedule meetings. Once mentees are available, mentors simply check the boxes next to the students they wish to include in the meeting, then proceed to set the date, time, and location before clicking the Schedule Meeting button to finalize the appointment.

Figure 7.5.4 *Participation Inclusion*

7.5.5 Rescheduling meetings

Once all meeting details are entered including the mentee, date, time, and location/link, mentors click the Schedule Meeting button to create the appointment. The Reset button is available to clear all form fields if the mentor needs to start over or cancel the scheduling process. After clicking Schedule Meeting, the system processes the meeting creation and the scheduled session becomes available in both the mentor's and mentee's meeting lists for easy access and attendance. The mentee is notified of the new meeting through the system's notification mechanism and can view the meeting details including the location or virtual meeting link.

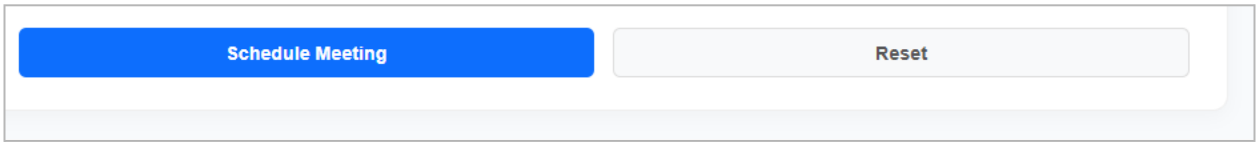


Figure 7.5.5 *Schedule Setting*

7.6 Learning Materials Management

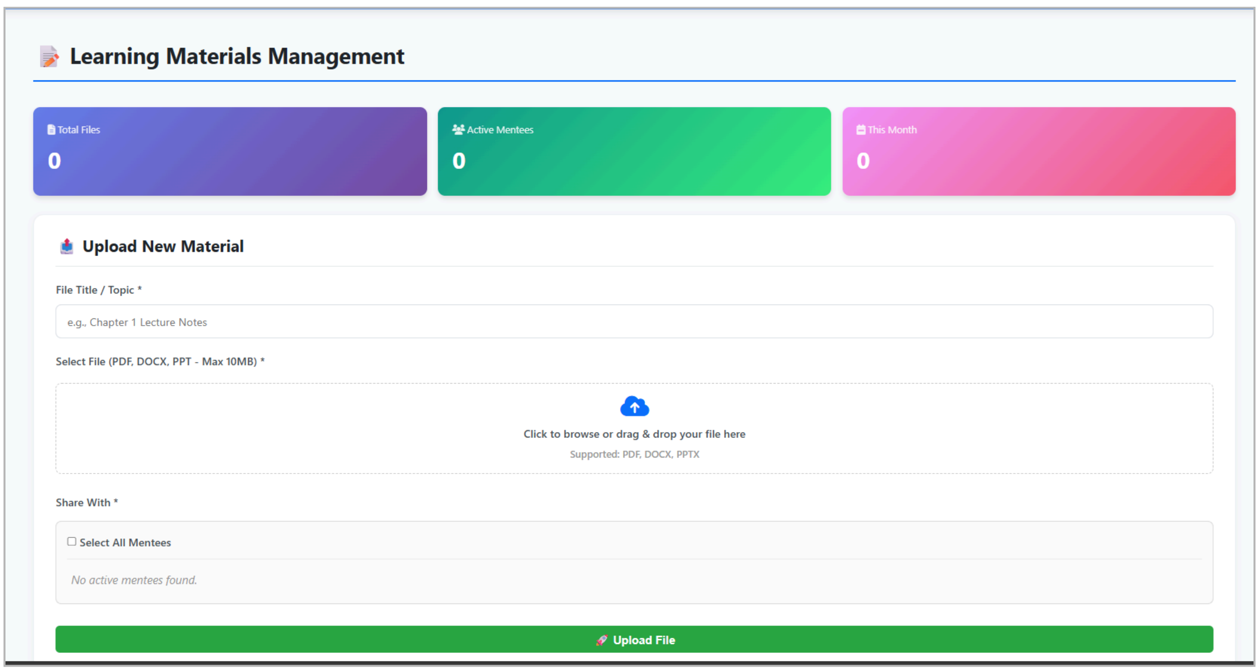


Figure 7.6 *Learning Material Management*

7.6.1 Uploading Learning Materials

The Learning Materials Management page provides mentors with a centralized system for uploading and sharing educational resources with their mentees. Mentors access this feature through the "Notes & Files" menu item in the sidebar navigation, which opens the file management interface. The page displays summary statistics at the top showing Total Files uploaded, Active Mentees count, and files uploaded This Month, providing mentors with a quick overview of their resource library. Mentors use the "Upload New Material" section to add documents, presentations, lecture notes, study guides, or any educational content they wish to share with their mentees.

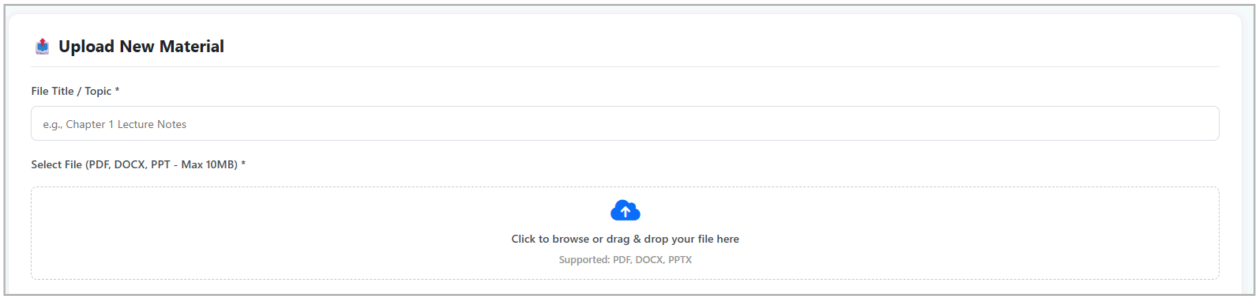


Figure 7.6.1 *Uploading Materials*

7.6.2 Organizing Learning Resources

To upload materials, mentors first enter a descriptive title in the "File Title / Topic" field that clearly identifies the content, such as "Chapter 1 Lecture Notes," "Interview Preparation Guide," or "Research Methodology Resources". This descriptive naming helps mentees easily identify and locate relevant materials when accessing the shared files. The title should be specific enough to indicate the subject matter and purpose of the file, enabling both mentors and mentees to maintain an organized library of educational resources throughout the mentorship period.

Figure 7.6.2*.1 File/Topic Field*

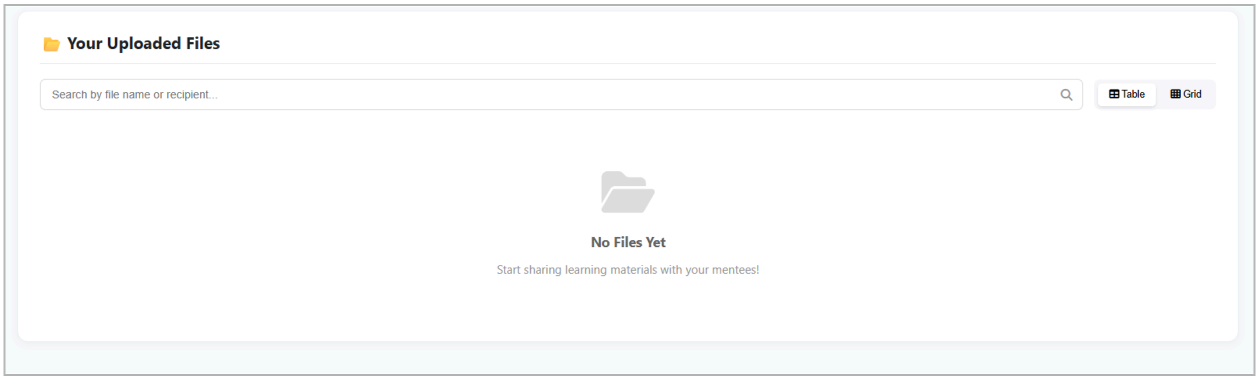


Figure 7.6.2 *Uploaded Files*

7.6.3 Uploading Files

The file upload section accepts PDF, DOCX, and PPT formats with a maximum file size of 10MB, as indicated in the "Select File" field label. Mentors can upload files using two methods: clicking the browse option to select files from their computer, or using the drag-and-drop feature by dragging files directly into the upload area marked with "Click to browse or drag & drop your file here". The system displays supported file formats (PDF, DOCX, PPTX) below the upload area to guide mentors in preparing compatible materials. This flexible upload system accommodates various types of learning materials including lecture slides, reading materials, and reference documents.

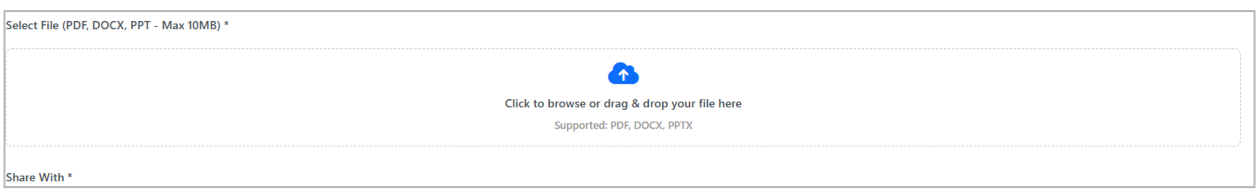


Figure 7.6.3 *File Upload Section*

7.6.4 Sharing Materials with Mentees

After selecting the file to upload, mentors specify which mentees should receive access using the "Share With" section. The interface provides a "Select All Mentees" checkbox for sharing materials with all active mentees simultaneously, or mentors can individually select specific mentees who need access to particular resources. When no active mentees exist, the system displays "No active mentees found," prompting mentors to accept pending requests before sharing materials. Once recipients are selected, mentors click the green "Upload File" button to complete the upload, making the learning material immediately available to the selected mentees through their own file access interface.

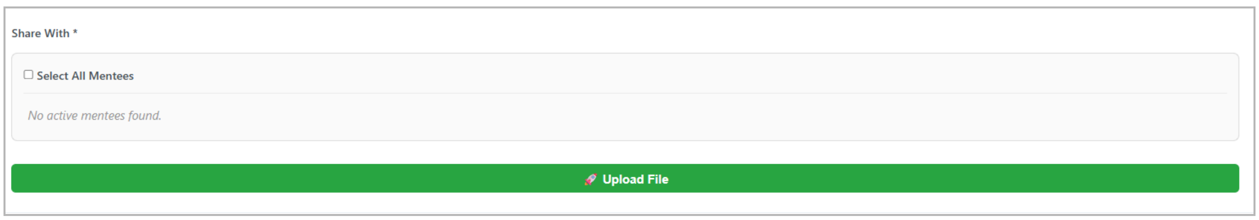


Figure 7.6.4 *Sharing Material Section*

7.7 Announcements

7.7.1 Creating announcements

The Announcements page enables mentors to broadcast important updates, reminders, or information to their mentees through a two-step creation process. Mentors access this feature by clicking "Announcements" from the sidebar navigation menu, which opens the announcement creation interface labeled "Create New Announcement". In Step 1: Recipients, mentors enter an announcement title in the required "Announcement Title" field, such as "German Day 2," "Upcoming Workshop," or "Important Deadline Reminder". The "Send To" section displays a list of active mentees with checkboxes, allowing mentors to select individual recipients like "Sarah Student" and "Fitri," or use the "Select All Mentees" checkbox to send the announcement to all mentees simultaneously. After selecting at least one recipient, mentors click the blue "Next" button to advance to Step 2: Content, where they compose the announcement message.

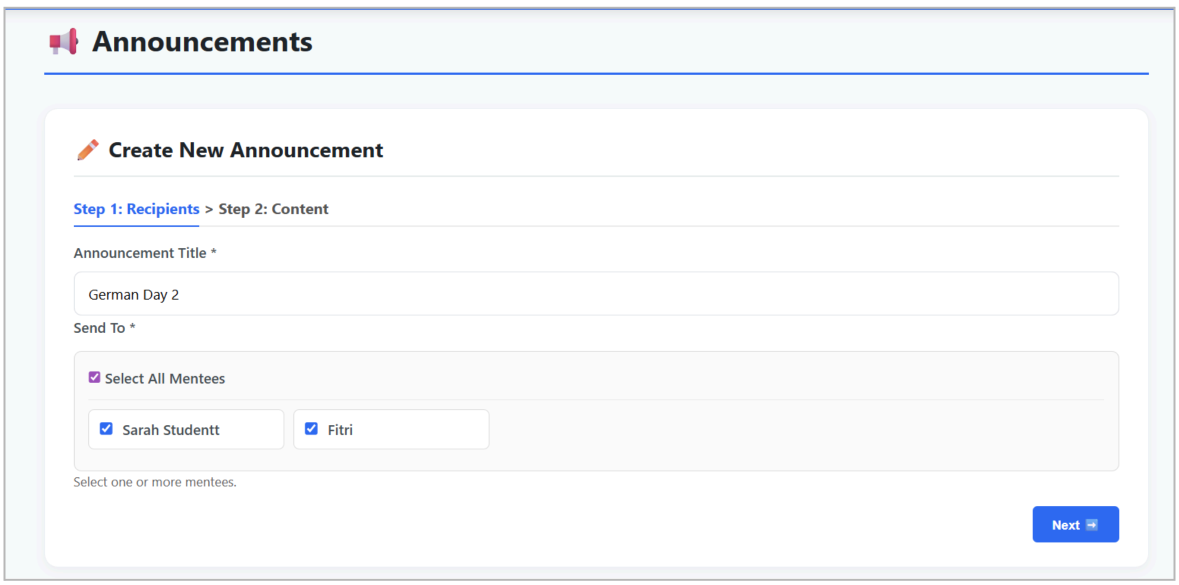


Figure 7.7.1 *Creating Announcement*

7.7.2 Posting updates for mentees

In Step 2: Content, mentors compose the actual announcement message that will be delivered to the selected mentees. This step typically includes a text area or rich text editor where mentors can type detailed information about upcoming events, deadlines, meeting changes, resource availability, or any other relevant updates. Mentors should write clear and concise messages that convey important information effectively, including specific dates, times, locations, or action items that mentees need to know. Once the announcement content is complete, mentors click a "Post" or "Submit" button to publish the announcement, which immediately becomes visible to all selected mentees through their dashboard or announcements section. The posted announcement appears in the mentees' notification feed and may also trigger email notifications depending on system settings.

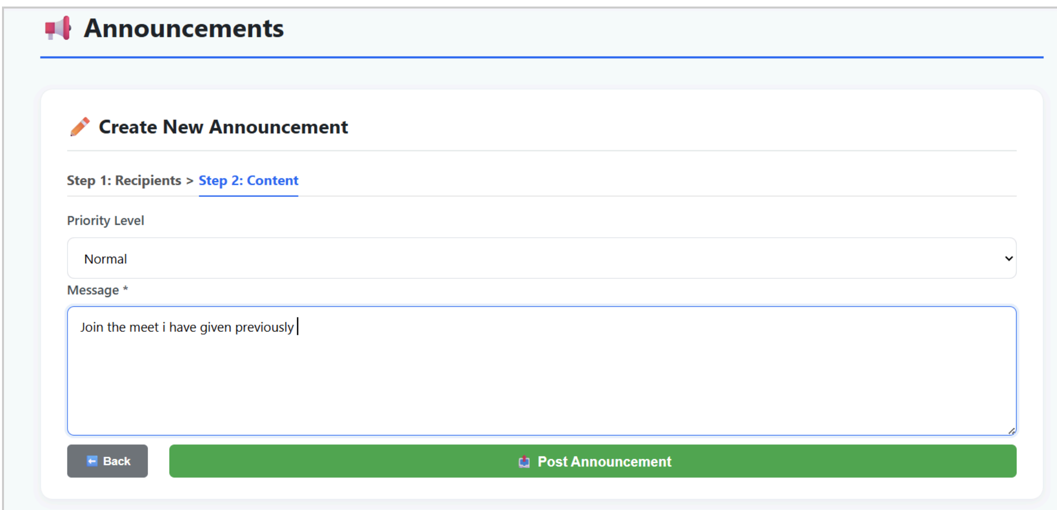


Figure 7.7.2 *Posting Announcement*

7.7.3 Managing announcement visibility

After posting announcements, mentors can manage which mentees have access to view specific updates. The announcement system typically displays a list of all previously posted announcements with details such as title, posting date, and recipients. Mentors can review past announcements to ensure appropriate distribution and verify that critical information reached the intended audience. If needed, mentors may have the option to edit announcement recipients or update the content to correct errors, clarify information, or add additional details. This management capability ensures that announcements remain relevant and reach the right mentees throughout the mentorship program.

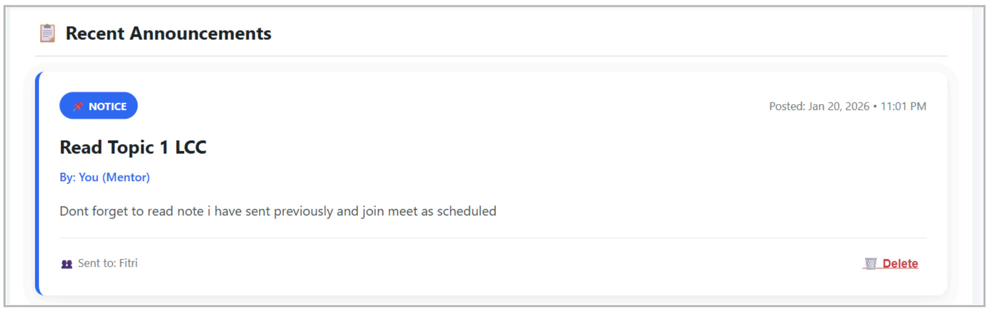


Figure 7.7.4 *View Announcement*

7.7.4 Deleting announcements

Mentors can remove outdated or irrelevant announcements from the system to maintain a clean and current information feed for their mentees. When viewing the list of posted announcements, each entry typically includes a "Delete" or remove button that allows mentors to permanently remove specific announcements. Before deleting, the system may display a confirmation dialog asking mentors to verify their intention to delete the announcement, preventing accidental removal of important information. Once confirmed, the deleted announcement is removed from both the mentor's announcement list and the mentees' view, ensuring that outdated information does not cause confusion. Mentors should regularly review and delete expired announcements such as past event notices or outdated deadlines to keep the announcement feed relevant and focused on current information.

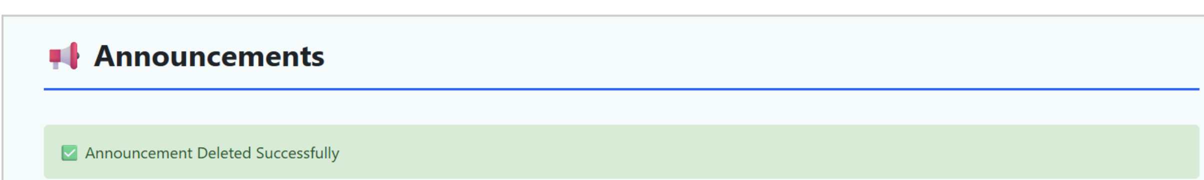


Figure 7.7.4 *Deleting Announcement*

8.0 ADMINISTRATOR USER GUIDE

8.1 Admin Dashboard

The Admin Dashboard serves as the central command hub for overseeing the entire mentorship platform, managing users (Mentor and Mentee), managing the profession and department. Upon login, admin are greeted with a personalized welcome message and a comprehensive overview of platform activity displayed through organized sections

8.1.1 Dashboard Overview

The dashboard presents system analytics in an organized layout with distinct sections for quick navigation and management. The main content area displays Dashboard analytics with real-time system statistics, list of all users (Mentor and Mentee) and Quick management tools providing immediate access to essential administrative functions. Below these overview cards, detailed sections provide the control and visibility into user management, mentorship status and platform operations.

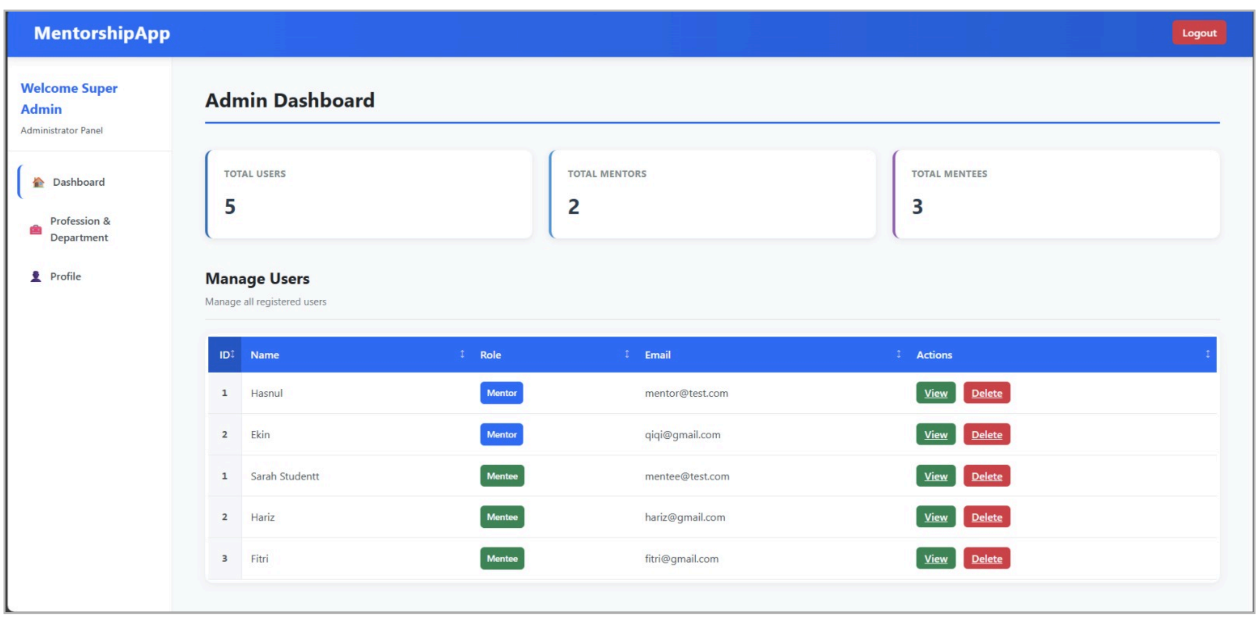


Figure 8.1.1 *Dashboard Admin*

8.2 Admin Profile

The profile details section allows the administrator to view and edit their basic identity information. At the top of the page, a Profile Avatar provides a clear visual indicator of the user, showing the admin's initials for quick identification. The Full Name field is a required input used to identify the administrator throughout the system, while the Phone Number field is available for keeping contact records up to date. For security reasons, the Email Address is a read-only field, which means it cannot be changed directly on this page to prevent accidental changes to the primary login account. Admin also can change the password if the admin forget the password.

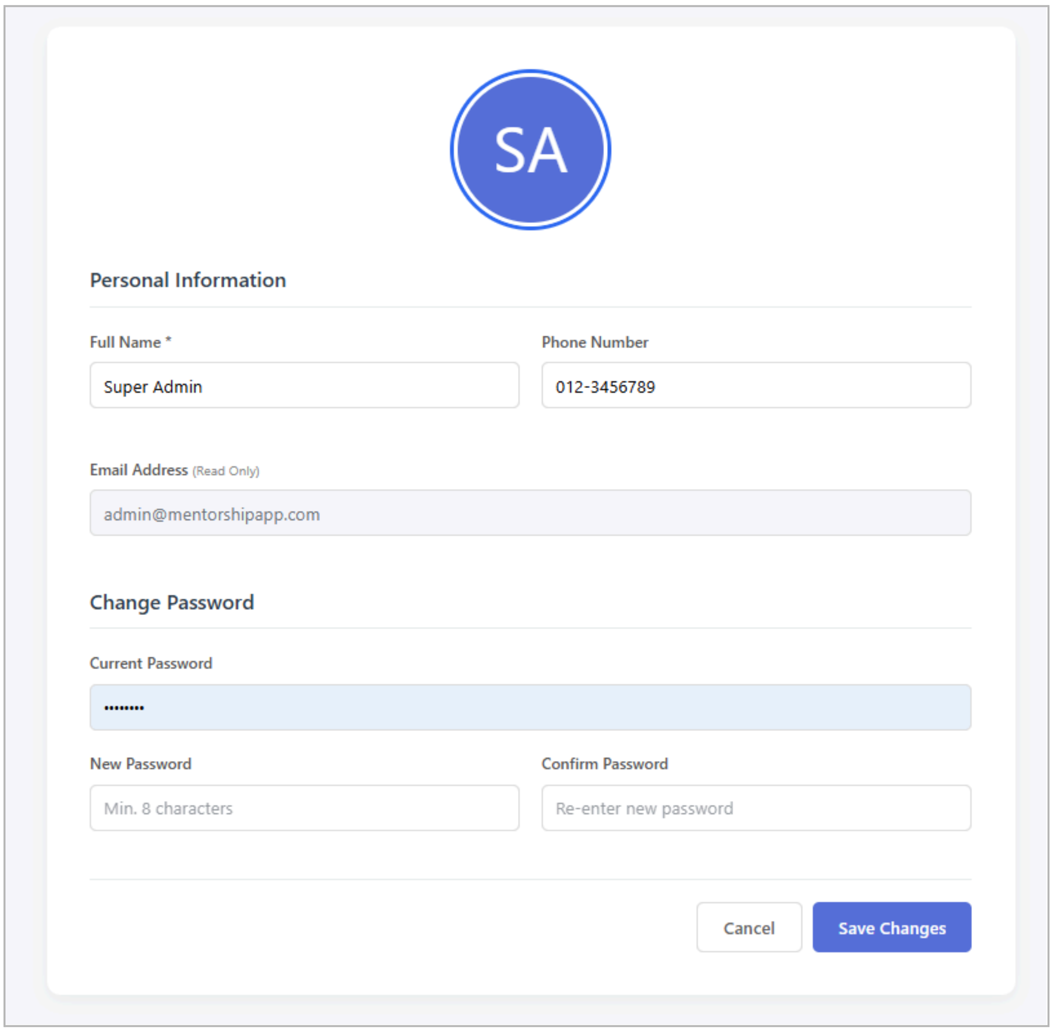


Figure 8.1.2 *Admin Profile*

8.3 User Management

The User Management module provides a table for the Admin to monitor and manage all registered Mentors and Mentees. This interface is designed for high visibility, allowing the administrator to view all users and identify their roles through color coded badges while utilizing tools for searching and filtering to find specific records quickly. The system further supports user status monitoring and maintains detailed user activity logs, giving the administrator a clear history of platform interactions and the ability to use "View" or "Delete" actions to ensure the user base remains accurate and secure.

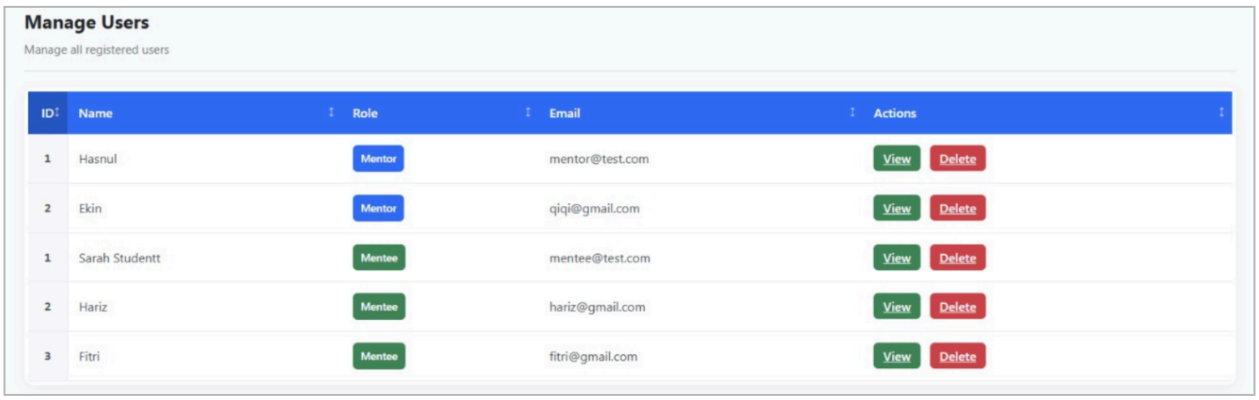


Figure 8.1.3 *Manage user*

8.4 Mentee Management

The Mentee Management for Admin to oversee all individuals registered as mentees within the platform. This specialized view allows the administrator to monitor and access specific mentee registration details, such as their full name, email address, and unique User ID, ensuring that all student profiles are accurate and properly managed. By centralizing mentee account management, the system enables the admin to maintain the integrity of the mentorship program.

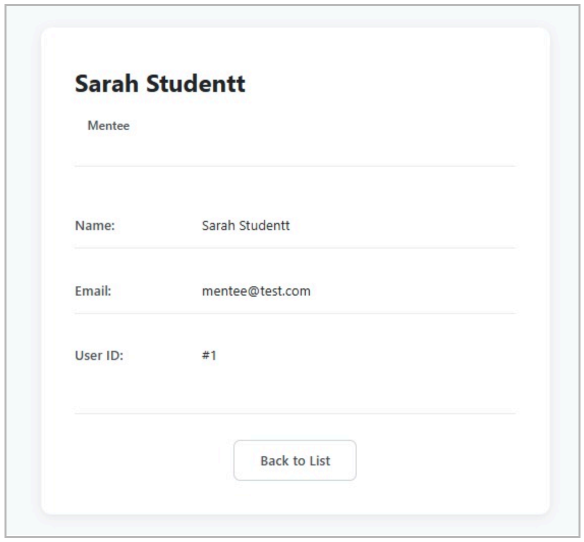


Figure 8.1.4 *Mentee Detail*

8.5 Mentor Management

The Mentor Management module provides an interface for the Admin to oversee all individuals registered as mentors within the platform. This specialized view allows the administrator to access specific mentor registration details, such as their full name, email address and unique User ID, ensuring that all professional profiles are accurate and properly managed.

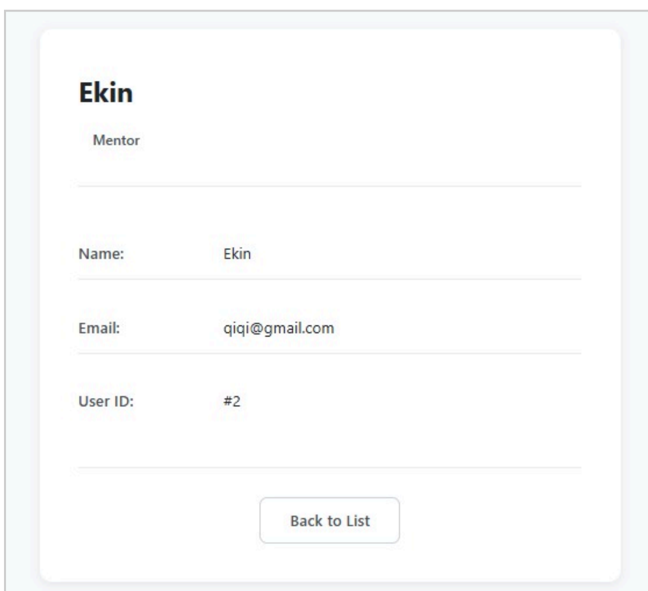


Figure 8.1.5 *Mentor Detail*

8.6 Profession Management

The Profession and Department Management module allows the Admin to add new professions or areas of expertise by providing fields for the profession name, specific category selection, and a detailed description, all of which can be finalized through the "Save Profession" action. To maintain an accurate system, the administrator can manage the profession list for mentor selection, edit profession categories, and delete outdated entries directly from the "Registered Professions" list. This part also includes a dedicated section for adding and managing university departments, allowing the admin to view existing divisions like Engineering or Computer Science and remove them if necessary to keep the platform's structural data current.

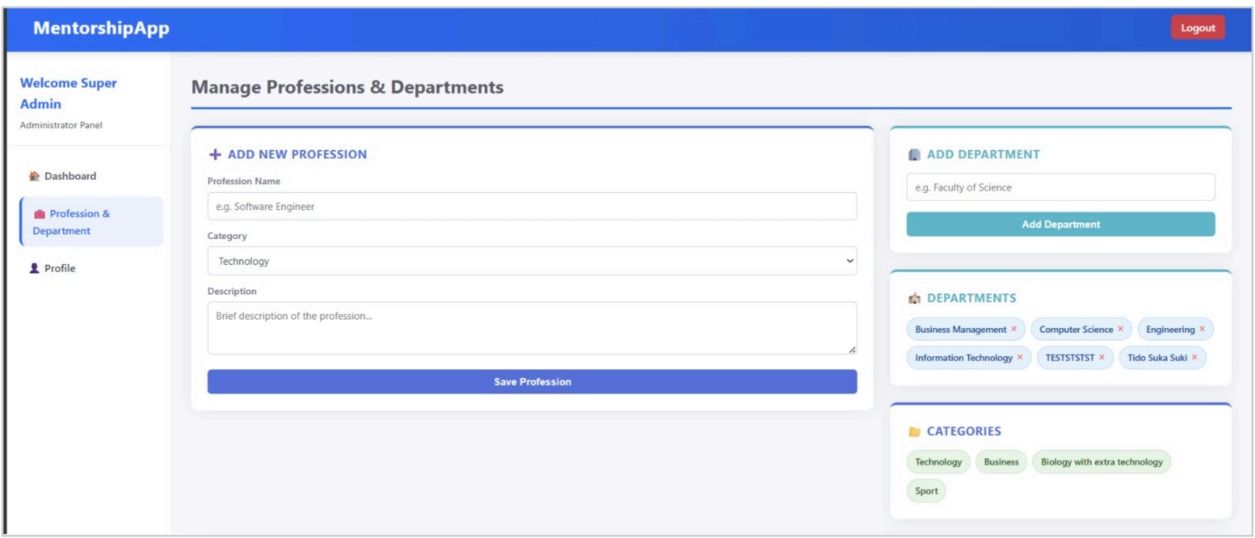


Figure 8.1.6 *Profession Management*

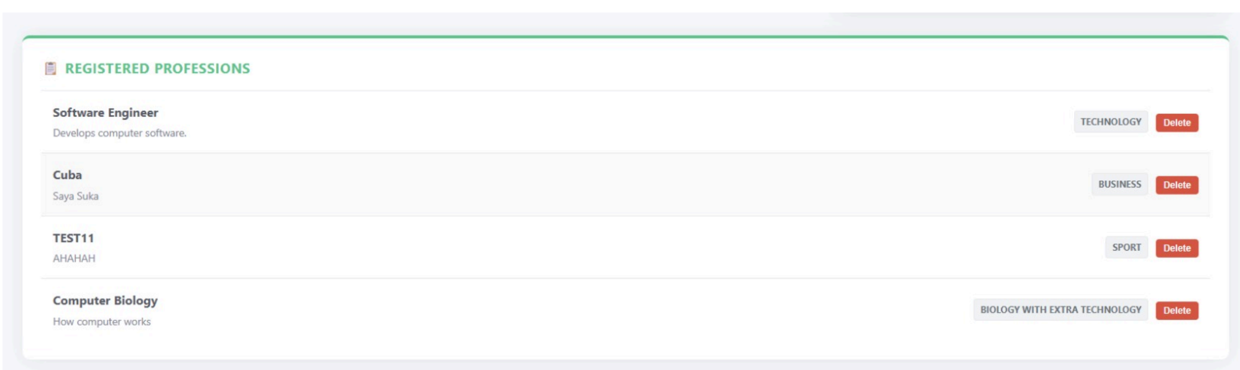


Figure 8.1.7 *Registered Profession*

9.0 Technical Specifications

9.1 System Architecture

The Student Mentorship Program System is built using the Model-View-Controller (MVC) architectural pattern, which separates the application into three interconnected components for better organization and maintainability.

MVC pattern implementation

The Student Mentorship Program System implements the Model-View-Controller (MVC) architectural pattern to organize code into three distinct layers, as evidenced by the project's package structure

Model Layer

The Model layer contains Java classes in the model package that represent the core business entities and data structures of the mentorship system. This layer includes User.java (representing mentees, mentors, and administrators), Mentorship.java (managing mentor-mentee relationships), Meeting.java (storing session information), Announcement.java (handling mentor updates), Note.java (managing learning materials and documentation), and Profession.java (defining expertise categories). These model classes encapsulate the application's data and business rules, defining how information is structured and validated before being stored in the database.

View Layer

The View layer comprises all JSP files organized in role-specific folders that render the user interface for different user types. The mentor folder contains JSP pages like dashboardMentor.jsp, MyMentees.jsp, PendingRequest.jsp, ScheduleMeeting.jsp, NotesMentor.jsp and Announcement.jsp for mentor interfaces. The mentee folder includes pages such as index.jsp, findMentor.jsp, profileMentee.jsp, meetingMentee.jsp, notesMentee.jsp, and inboxMentee.jsp for student interfaces. The admin folder houses dashboardAdmin.jsp, viewUser.jsp, viewUserMentee.jsp, and profession.jsp for administrative functions. Additionally, login.jsp and register.jsp handle authentication views for all users, while CSS files in the css folder provide styling for consistent visual presentation across all views.

Controller Layer

The Controller layer consists of Java Servlets in the controller package that process user requests and coordinate between the Model and View layers. AdminServlet.java handles administrative operations like user management and profession configuration, LoginServlet.java processes authentication requests and establishes user sessions, LogoutServlet.java terminates user sessions, RegisterServlet.java manages new user registration, MenteeServlet.java processes mentee-specific actions such as finding mentors and viewing meetings, and MentorServlet.java handles mentor operations including accepting requests and scheduling meetings. These servlets receive HTTP requests from JSP forms, invoke appropriate DAO methods to interact with the database, and forward responses to the correct JSP views for display.

Data Access Layer (DAO)

Supporting the MVC pattern, the dao package contains Data Access Object classes that bridge the Controller and Model layers with the database. AdminDAO.java, MenteeDAO.java, MentorDAO.java, and UserDAO.java encapsulate all SQL queries and database operations, providing clean methods for servlets to create, retrieve, update, and delete records without writing SQL code directly in controllers. This abstraction layer promotes code reusability and simplifies database maintenance.

Utility Layer

The utils package contains DBConnection.java, which manages database connectivity across the entire application, providing a centralized connection mechanism that all DAO classes utilize to interact with the database. This separation ensures that each component focuses on specific responsibilities while maintaining clear communication channels, making the Student Mentorship Program System easier to test, maintain, and extend.

Frontend: JSP, CSS, JavaScript

The presentation layer utilizes JavaServer Pages (JSP) for dynamic web content generation, displaying data to users through interactive interfaces organized in role-specific folders (mentor, mentee, admin).

CSS Styling

The css folder contains dedicated stylesheets that handle the visual styling and layout of all pages, ensuring a consistent and professional appearance across the application. Role-specific stylesheets include dashboardMentor.css, dashboardMentee.css, and dashboardAdmin.css for customizing each user's dashboard interface. Page-specific CSS files include Announcement.css, MyMentees.css, NotesMentor.css, PendingRequest.css, ScheduleMeeting.css, meetingMentee.css, notesMentee.css, and inboxMentee.css for styling individual features. Additional stylesheets such as profile.css, profileMentor.css, login-user.css, register-user.css, viewUser.css, addProfession.css, Report.css, and find.css handle profile management, authentication, administration, and mentor discovery pages. Utility stylesheets like downloader.css support file download functionality throughout the system.

JavaScript Interactivity

The js folder contains JavaScript files that add client-side interactivity and enhance user experience. The primary JavaScript file, inboxMentee.js, provides dynamic functionality for the mentee inbox feature such as real-time message updates, form validation, and interactive messaging components. JavaScript enhances form validation before submission, enables dynamic content updates without page reloads, and implements user interface enhancements like dropdown menus, modal dialogs, date pickers, and interactive notifications across all JSP pages.

Backend Java Servlets

The business logic layer is implemented using Java Servlets that act as controllers, processing HTTP requests from users and coordinating between the data layer and presentation layer. Key servlets include AdminServlet.java for administrative functions, LoginServlet.java for authentication, LogoutServlet.java for session management, RegisterServlet.java for user registration, MenteeServlet.java for mentee operations, and MentorServlet.java for mentor functionalities. These servlets handle user actions, validate input, invoke appropriate business logic, and select the correct JSP views to render responses.

Database Connection via DBConnection.java

Data persistence is managed through the DBConnection.java utility class, which establishes and manages connections to the database using JDBC (Java Database Connectivity). The Data Access Object (DAO) layer includes AdminDAO.java, MenteeDAO.java, MentorDAO.java, and UserDAO.java classes that encapsulate all database operations such as creating, reading, updating, and deleting records. This abstraction layer separates database interaction logic from business logic, promoting code reusability and making the application easier to maintain.

9.2 Database Structure

- User table

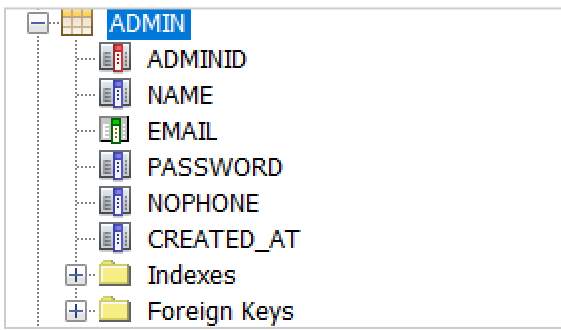


Figure 9.2.1 *Admin Table*

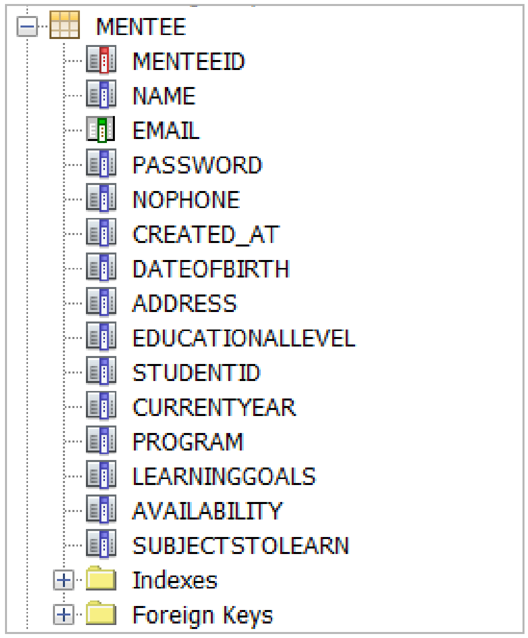


***Figure 9.2.2** Mentee Table*

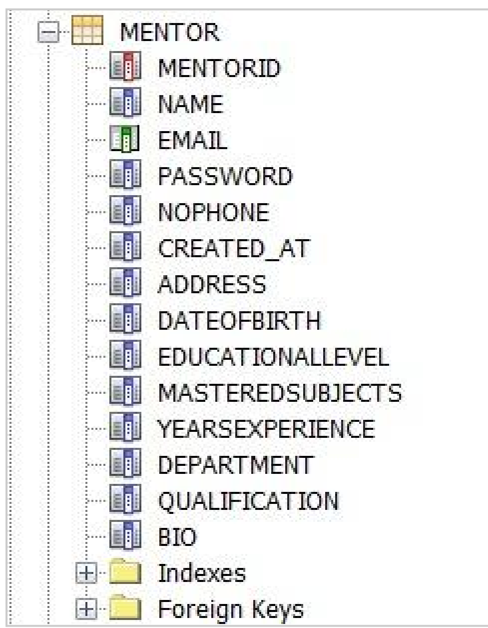


***Figure 9.2.3** Mentor Table*

- Mentorship table

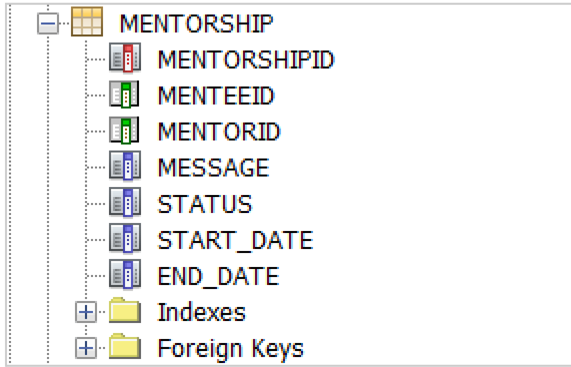


Figure 9.2.4 *Mentorship Table*

- Meeting table

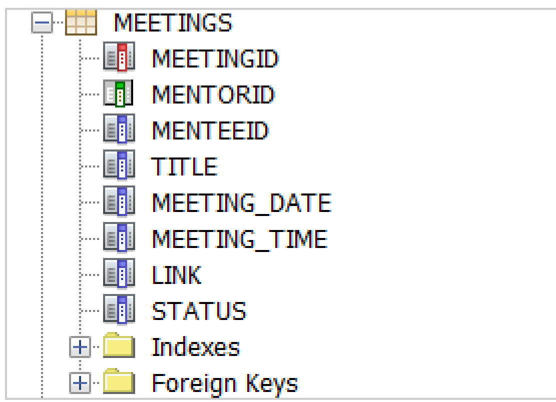


Figure 9.2.5 *Meeting Table*

- Announcement table

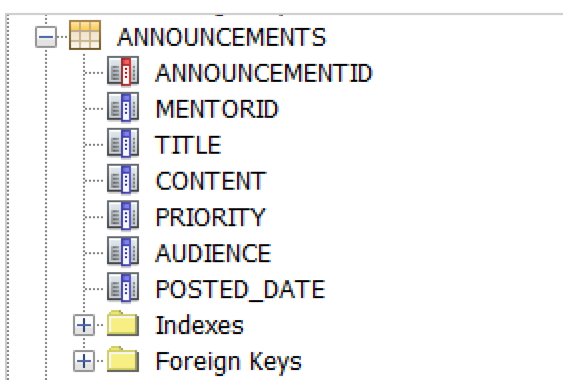


Figure 9.2.6 *Announcements Table*

- Notes table

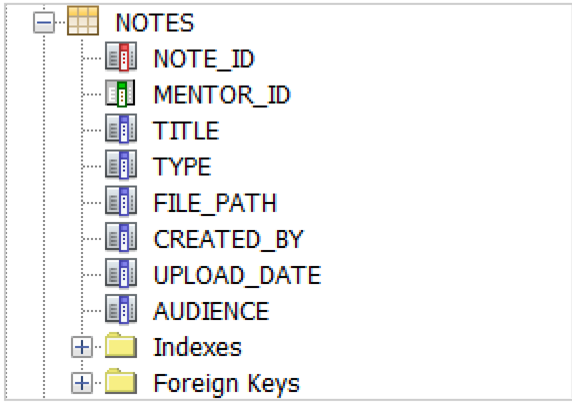


Figure 9.2.7 *Notes Table*

- Profession table

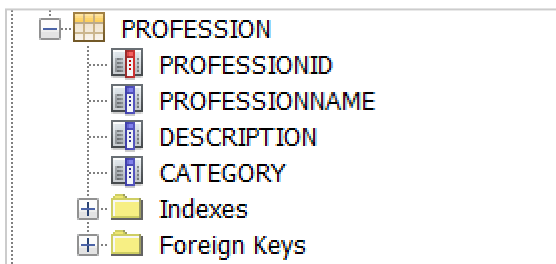


Figure 9.2.8 *Profession Table*

- Department table

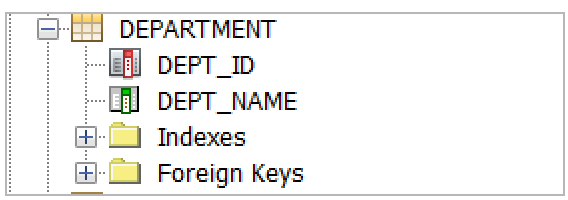


Figure 9.2.9 *Department Table*

9.3 Server Configuration

The application is deployed on GlassFish Server, an open-source Java EE application server that provides the runtime environment for Java web applications.

GlassFish Server Setup

GlassFish Server must be installed and configured before deploying the Student Mentorship Program System. The server provides servlet containers for executing Java servlets, JSP engines for rendering JavaServer Pages, connection pooling for database access, and session management for maintaining user login states. Administrators should ensure that the GlassFish Server version is compatible with the Java Development Kit (JDK) version used during application development.

Deployment Instructions

To deploy the application, package all JSP files, servlets, DAO classes, model classes, utility files, CSS stylesheets, and JavaScript files into a WAR (Web Application Archive) file using

NetBeans or the command-line build tool. Access the GlassFish Admin Console (typically at http://localhost:4848), navigate to Applications, click Deploy, and upload the generated WAR file. Configure the database connection pool with the correct database URL, username, and password in the GlassFish server settings to ensure DBConnection.java can establish connections. After deployment, start the application from the Admin Console, and the system becomes accessible through the configured URL.

Port Configuration

GlassFish Server typically runs on default ports: port 8080 for HTTP traffic (user access), port 8181 for HTTPS traffic (secure connections), and port 4848 for the Admin Console. These ports can be modified in the domain.xml configuration file located in the GlassFish domains directory if conflicts occur with other applications. After changing port configurations, restart the GlassFish server for the changes to take effect, and update any documentation or bookmarks with the new access URLs.

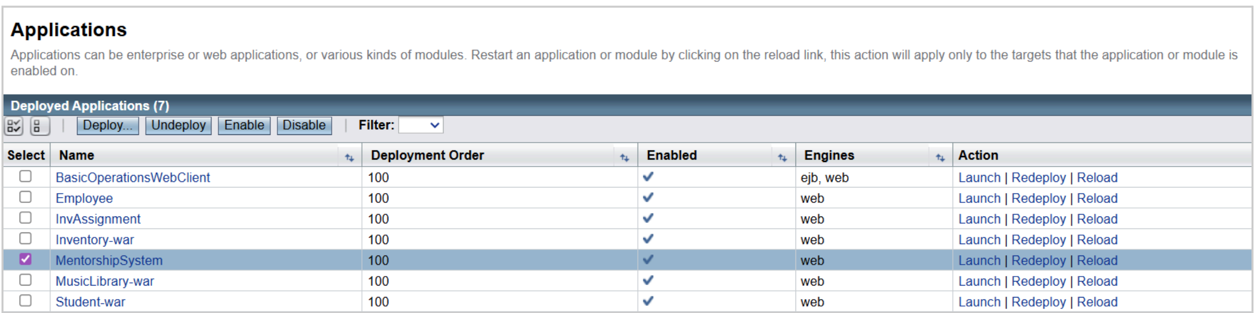


***Figure 9.3.1** Port Configuration*

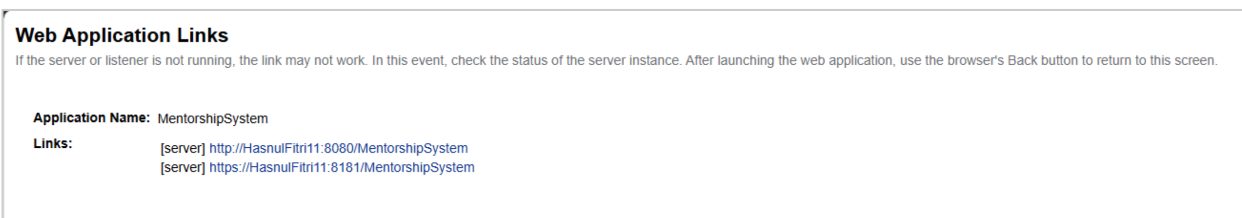


***Figure 9.3.2** Web Applications Links*