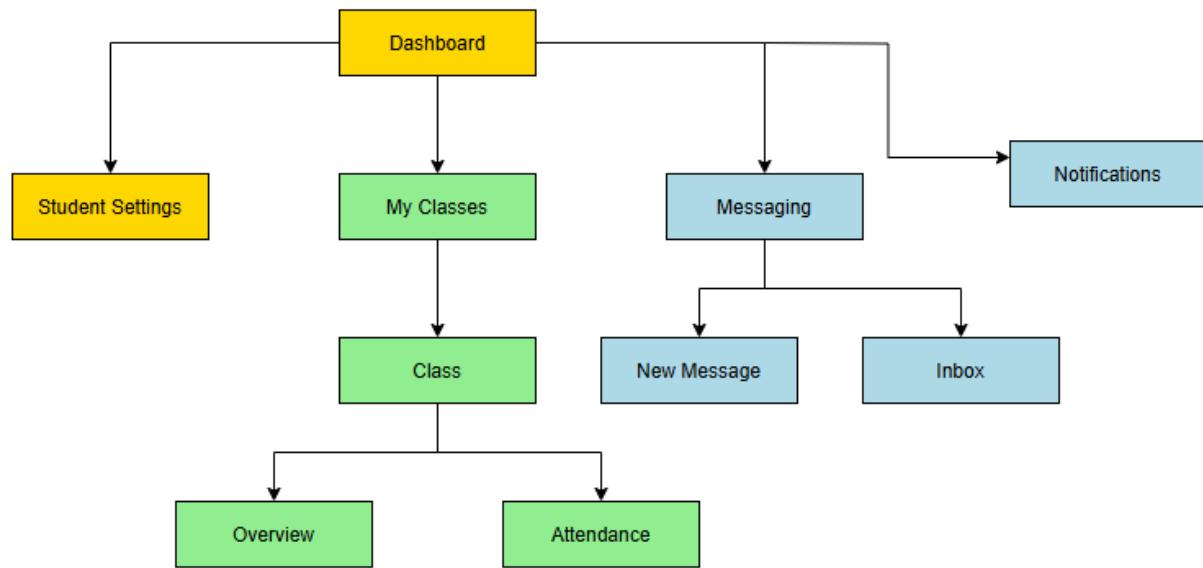


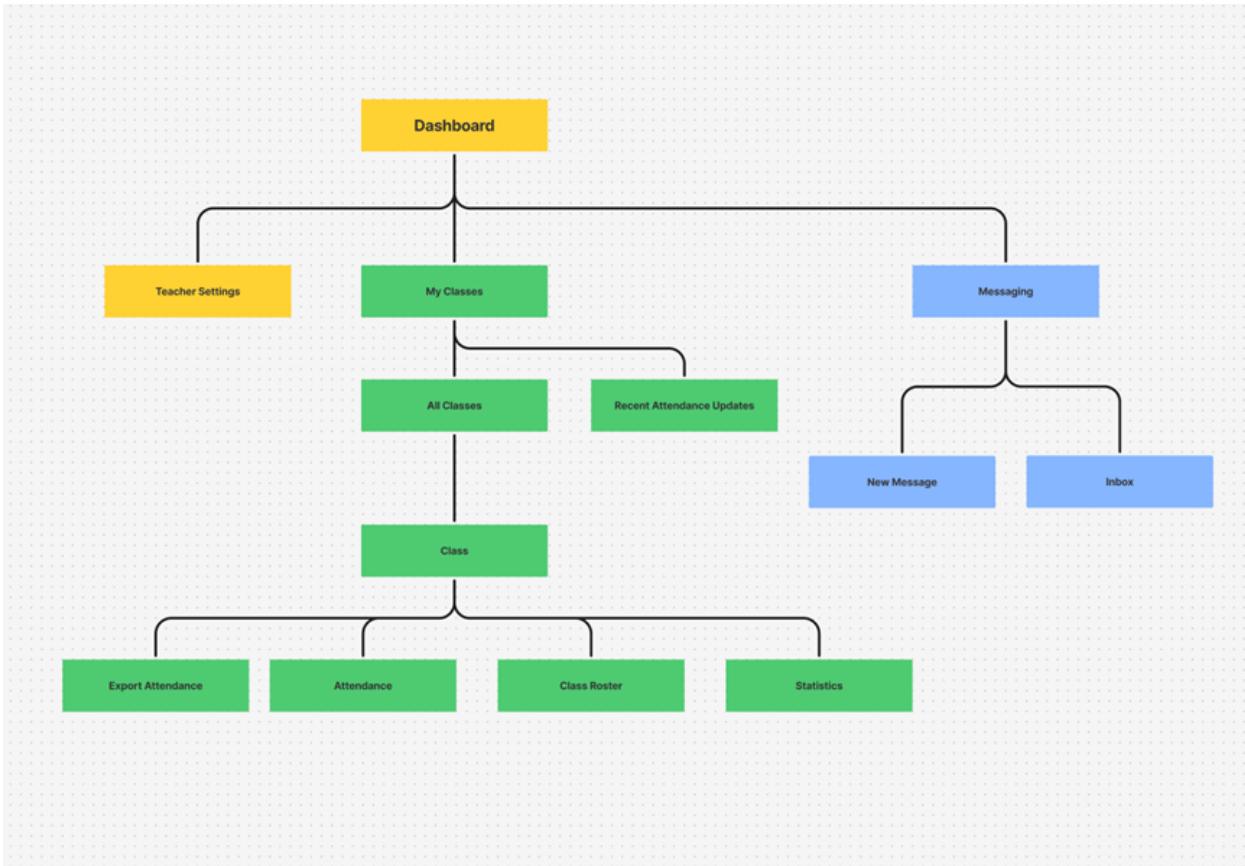
Detailed Design Specification - AttendU

System Architecture

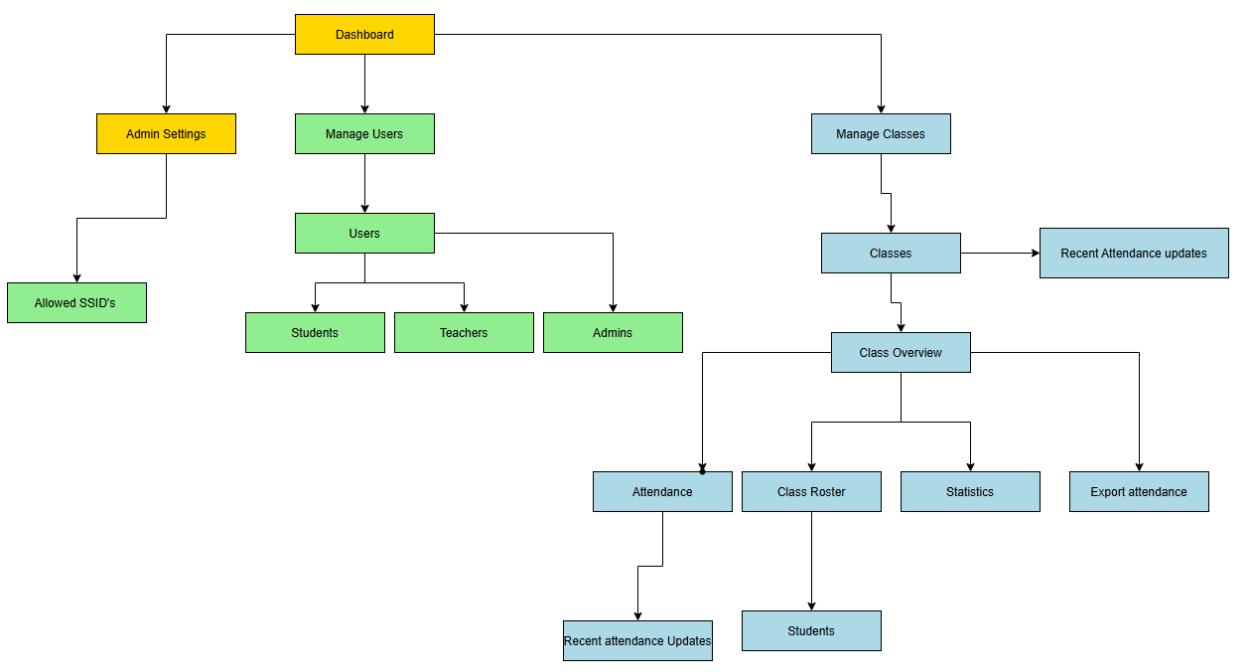
Student



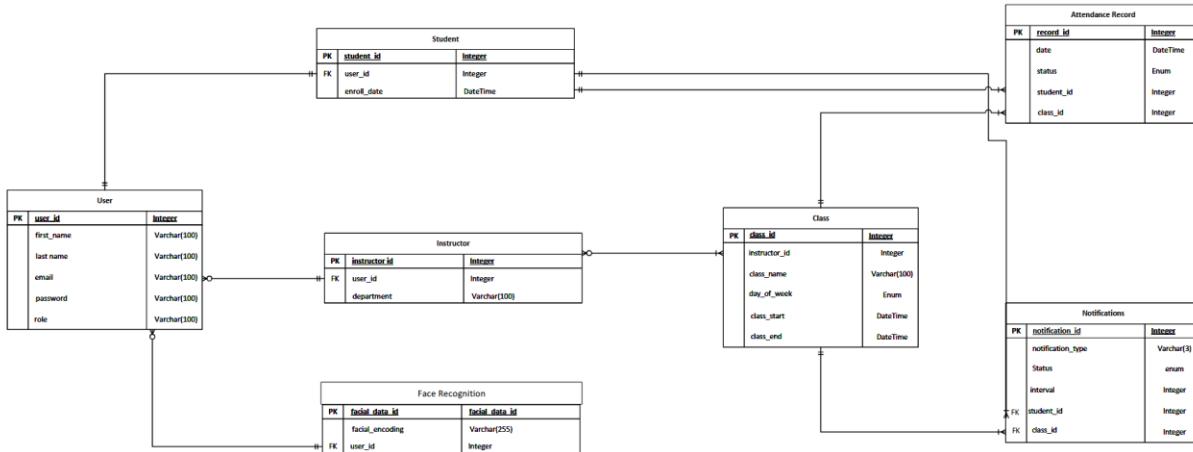
Teacher



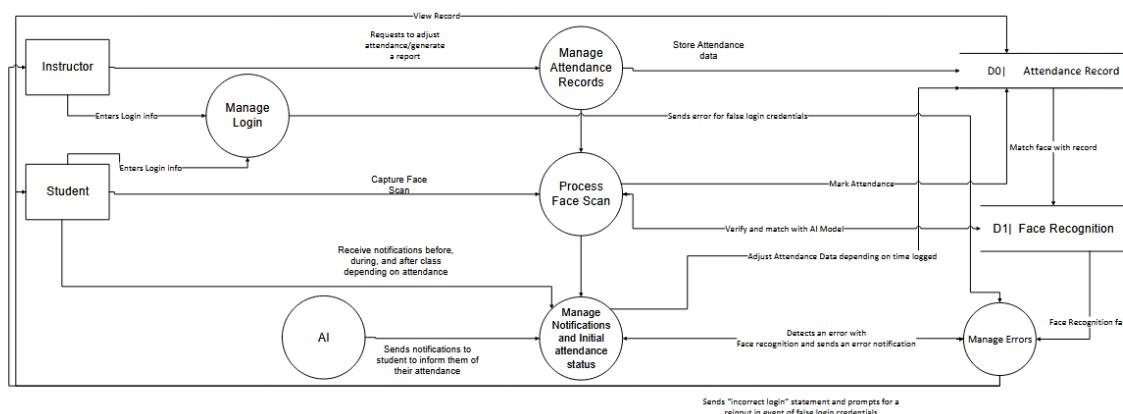
Administrator



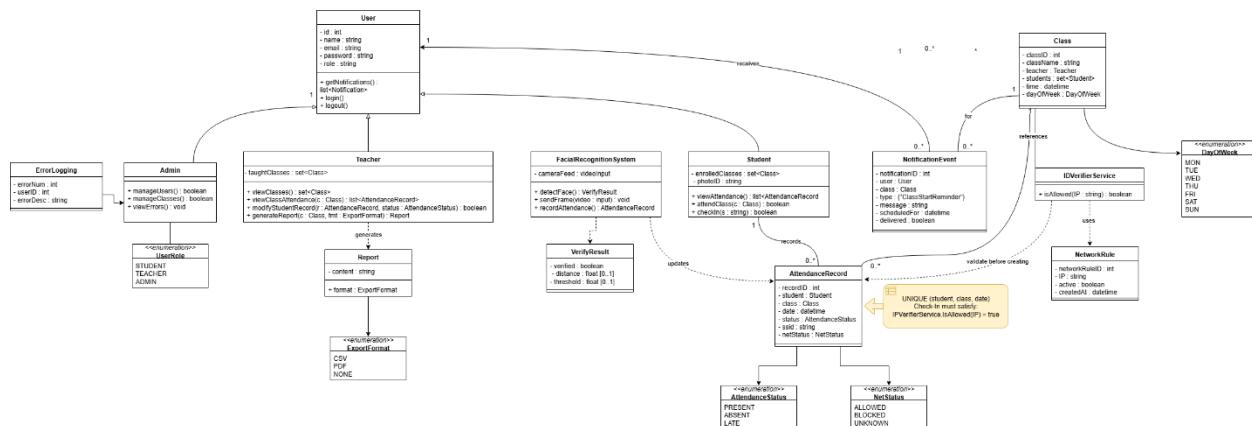
Entity Relationship Diagram



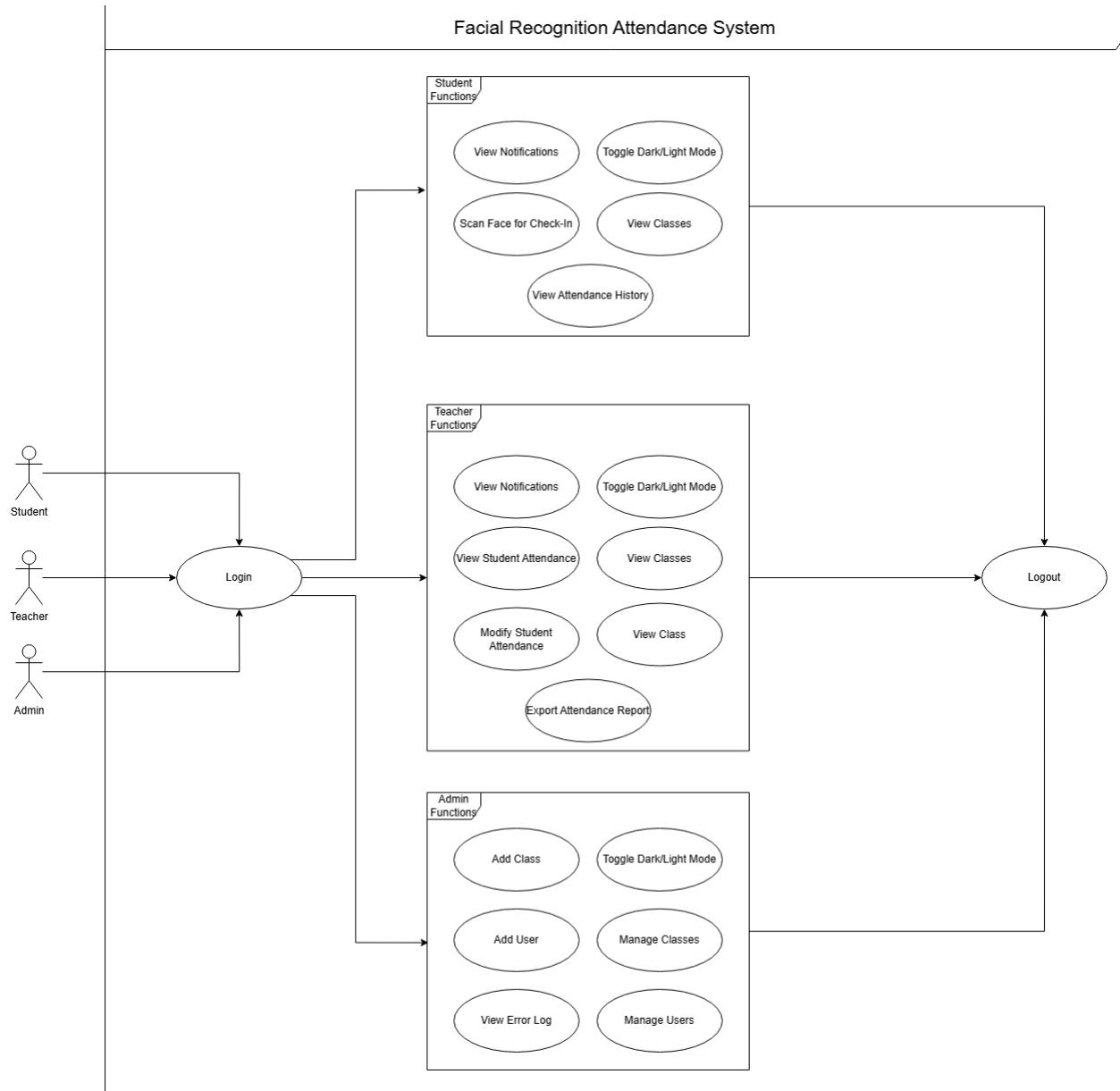
Data Flow Diagram



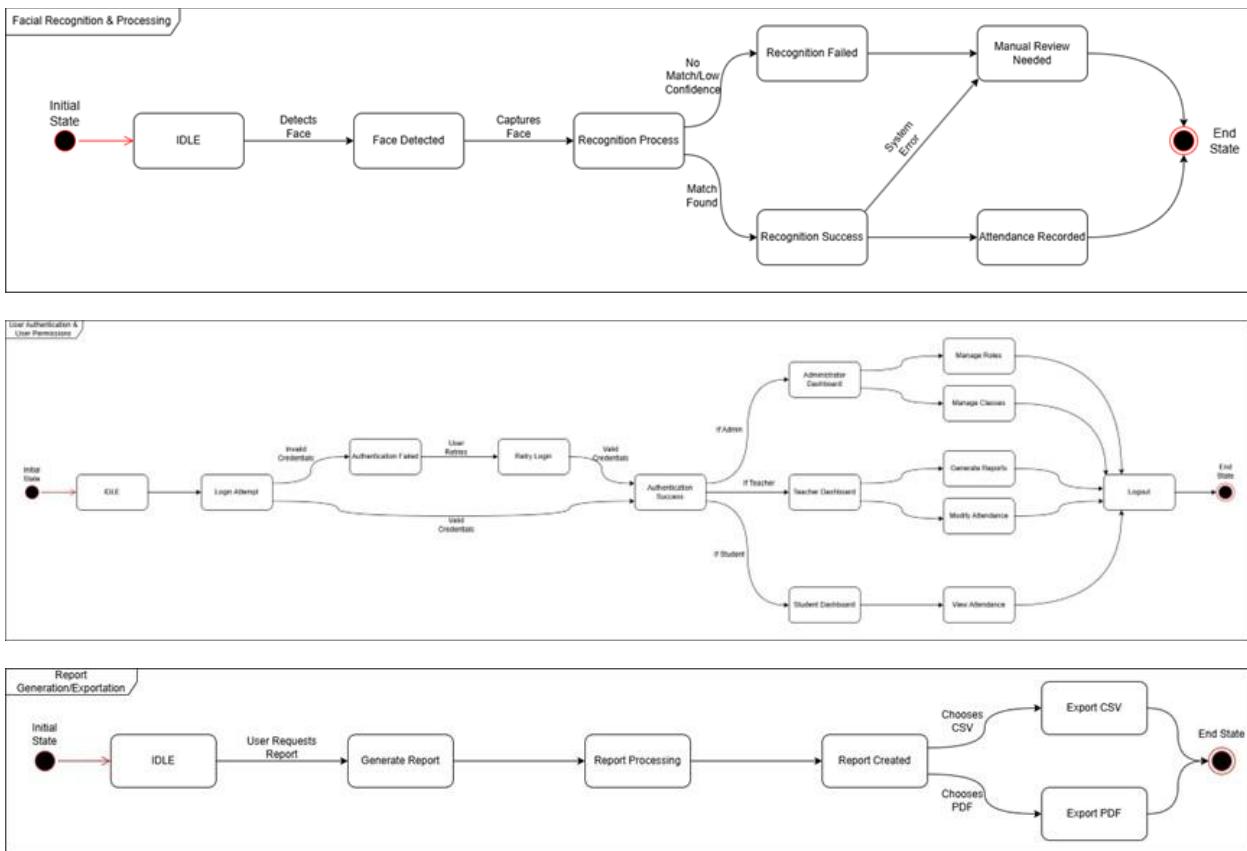
Class Diagram



Use Case Diagram

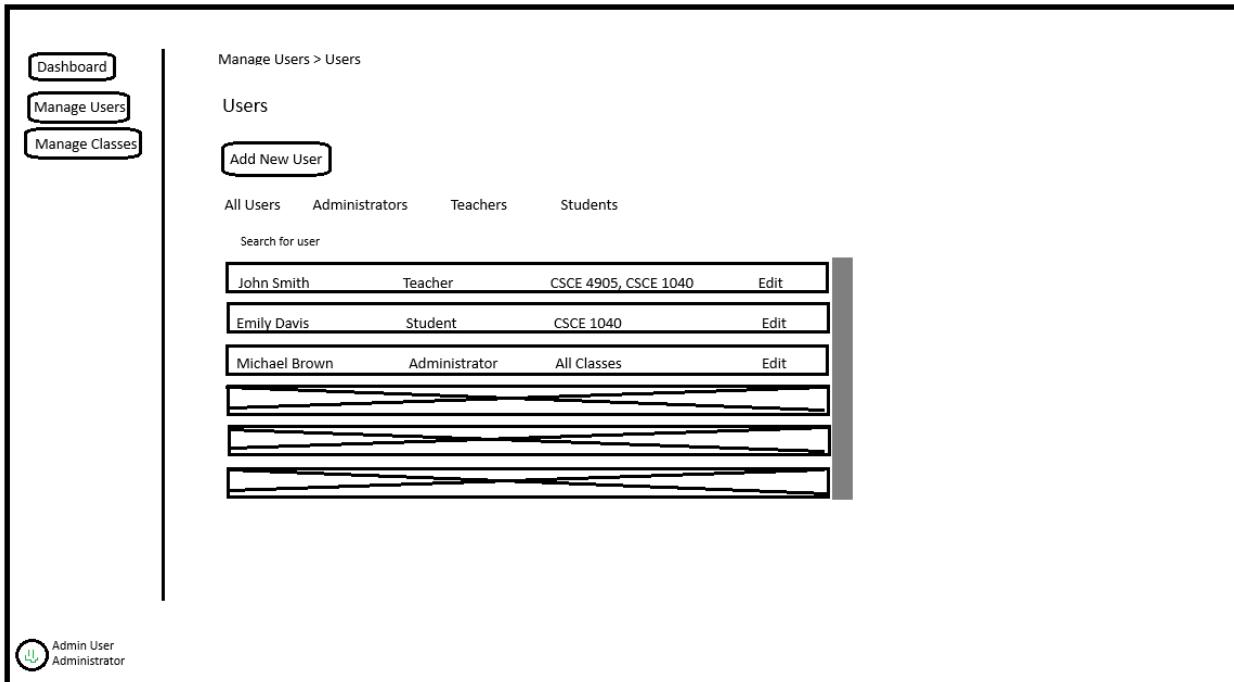
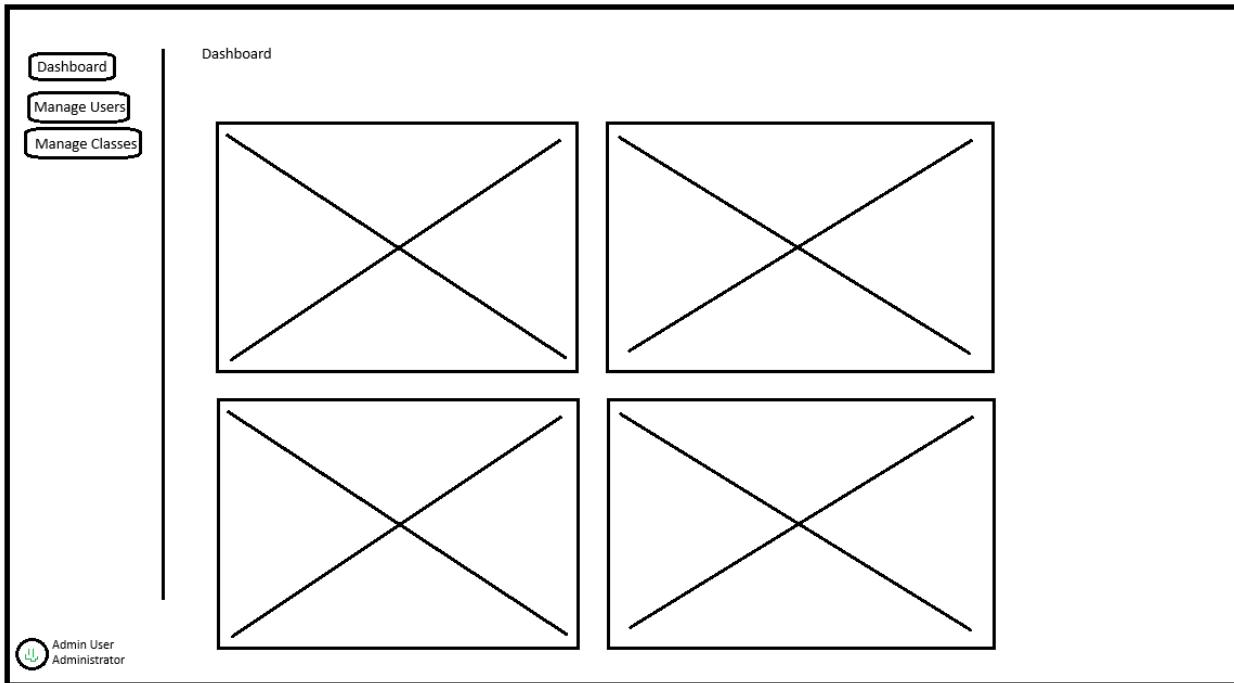


State Transition Diagram



UI Design

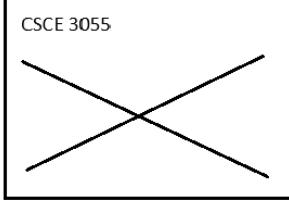
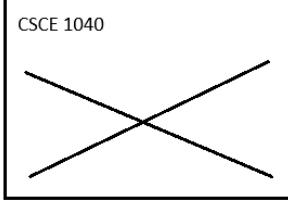
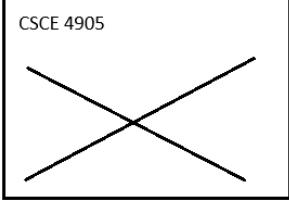
Low Fidelity



Dashboard > Manage Classes > Classes

Dashboard
Manage Users
Manage Classes

CSCE 4905 CSCE 1040 CSCE 3055



Recent Attendance Updates

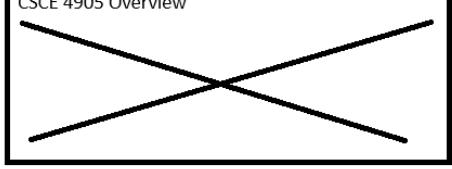
CSCE 4905	John Doe	Present	4 mins ago
CSCE 1040	John Smith	Present	14 mins ago
CSCE 3055	John Apple	Present	36 mins ago

 Admin User
Administrator

Dashboard > Manage Classes > Class Name

Dashboard
Manage Users
Manage Classes

CSCE 4905 Overview



Attendance Class Roster Statistics

Search student name

Mark Wilson	Present	Edit

 Admin User
Administrator



Dashboard

My Classes

Dashboard

Quick Actions

Attendance History

[View History](#)

My Classes

CSCE 4905

CSCE 3055

John Doe
Student

This wireframe shows a student dashboard. On the left, there are two buttons: 'Dashboard' and 'My Classes'. Below them is a circular profile picture of 'John Doe' with the text 'Student' underneath. The main area is titled 'Dashboard' and contains a 'Quick Actions' section with a box for 'Attendance History' and a 'View History' button, both crossed out with large X's. Below this is a 'My Classes' section with boxes for 'CSCE 4905' and 'CSCE 3055', also crossed out with large X's.

Dashboard

My Classes

My Classes

CSCE 4905 - IT Capstone I
Prof. Rabah | T 12:30PM | Room 1

CSCE 1040 - Computer Science II
Prof. Keathly | TTH 2:30PM | Room 5

John Doe
Student

This wireframe shows a student dashboard. On the left, there are two buttons: 'Dashboard' and 'My Classes'. Below them is a circular profile picture of 'John Doe' with the text 'Student' underneath. The main area is titled 'My Classes' and lists two courses: 'CSCE 4905 - IT Capstone I' (taught by Prof. Rabah on Tuesdays at 12:30PM in Room 1) and 'CSCE 1040 - Computer Science II' (taught by Prof. Keathly on Tuesdays and Thursdays at 2:30PM in Room 5). To the right of the course list are two large rectangular boxes, each containing a large X, indicating they are currently inactive or unavailable.

Dashboard

My Classes

My Classes > CSCE 4905

CSCE 4905 - IT Capstone I
Professor Rabah
T 12:30PM
Room 1

Overview Attendance

Jan 18th, 2025	12:30 PM	Present
Jan 25th, 2025	12:30 PM	Present
Feb 1st, 2025	12:30 PM	Absent

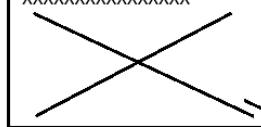
John Doe
Student

Dashboard

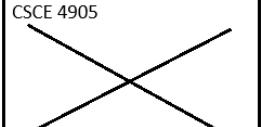
My Classes

Quick Actions

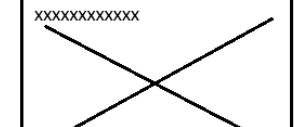
Generate Report 

XXXXXXXXXXXXXXXXXXXX 

My Classes

CSCE 4905 

CSCE 3055 

XXXXXXXXXXXX 

Recent Attendance Updates

Sarah Johnson
Teacher

Dashboard

My Classes

My Classes > All Classes

CSCE 4905	28 Students enrolled	Edit
CSCF 3055	17 Students enrolled	Edit
CSCE 1040	47 Students enrolled	Edit
XXXXXXXXXXXXXXXXXXXXXXXXXXXX		

Recent Attendance Updates

XXXXXXXXXXXXXXXXXXXX

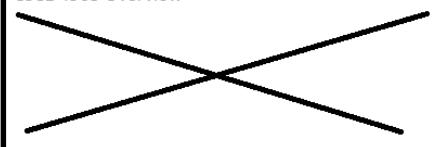
 Sarah Johnson
Teacher

Dashboard

My Classes

My Classes > CSCE 4905

CSCE 4905 Overview



Attendance Class Roster Statistics

Search student name

Mark Wilson	Present	Edit

 Sarah Johnson
Teacher

Export Attendance

Medium Fidelity



Attendance System

- [Dashboard](#)
- [Manage Users](#)
- [Manage Classes](#)

Admin User
Admin

Dashboard 2

Manage Users 3

Manage Classes 4

Annotations

- 1 The sidebar will provide quick access to key sections: Dashboard, Manage User and Manage Classes. Clicking "Dashboard" would direct the user to the currently viewed page. Clicking "Manage Users" leads to a complete list of users on the system. Clicking "Manage Classes" leads to a complete list of classes for the institution.
- 2 The page header clearly indicates the current section "Dashboard"
- 3 The "Manage Users" Card provides another link to allow the user to view the Manage Users page
- 4 The "Manage Classes" Card provides another link to allow the user to view the Manage Classes page
- 5 This section will display the User's name as well as their role.



Attendance System

- [Dashboard](#)
- [Manage Users](#)
- [Manage Classes](#)

Admin User
Admin

Manage Classes 2

Classes

Class:	# of Users:	Instructor:	Action
CSCE 4905.001	32	John Smith	Edit 3
CSCE 1040.001	56	William Brown	Edit 4
CSCE 3955.501	28	Jane Greene	Edit 5
CSCE 4010.002	107	John Smith	Edit 6

Annotations

- 1 The sidebar will provide quick access to key sections: Dashboard, Manage User and Manage Classes. Clicking "Dashboard" would direct the user to the currently viewed page. Clicking "Manage Users" leads to a complete list of users on the system. Clicking "Manage Classes" leads to a complete list of classes for the institution.
- 2 The page header clearly indicates the current section "Manage Classes"
- 3 The "Add New Class" Button brings up a prompt where the admin is able to add a class to the system
- 4 The "Search for Class" section provides a search bar to find a specific class and display only that class on the list
- 5 This section will display the User's name as well as their role.
- 6 The "Classes" list lists all classes in the system as well as shows the number of users (Teachers and Students), who is the instructor of the class, and an edit feature to adjust anything related to the class in the system



Attendance System

- [Dashboard](#)
- [Manage Users](#)
- [Manage Classes](#)

Admin User
Admin

Manage Users 2

Users

Name:	Role:	Classes:	Action
John Smith	Teacher	CSCE 4905, CSCE 1040	Edit 3
Emily Davis	Student	CSCE 1040	Edit 4
Michael Brown	Administrator	All Classes	Edit 5
Jerry Hicks	Student	CSCE 4905	Edit 6

Annotations

- 1 The sidebar will provide quick access to key sections: Dashboard, Manage User and Manage Classes. Clicking "Dashboard" would direct the user to the currently viewed page. Clicking "Manage Users" leads to a complete list of users on the system. Clicking "Manage Classes" leads to a complete list of classes for the institution.
- 2 The page header clearly indicates the current section "Manage Users"
- 3 The "Add New User" Button brings up a prompt where the admin is able to add a user to the system
- 4 The "Search for User" section provides a search bar to find a specific user as well as filters to narrow down the list depending on role
- 5 This section will display the User's name as well as their role.
- 6 The "Users" list lists all users in the system as well as shows their role, classes they have access to, and an edit feature to adjust anything related to the user in the system

Login

1

2

Login
3

Annotations

- 1 This is the email input field. It allows users to enter their email.
- 2 This is the password input field. It allows users to enter their email.
- 3 Login button should trigger form validation and redirect users based on role.



Attendance System

1 **Dashboard**

2 **My Classes**

3 **Messages**

4 **John Smith Student**

Dashboard

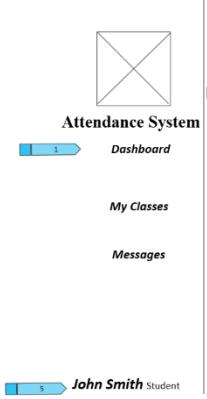
Attendance History
Check your attendance records

View History

CSCE 4905	Prof. Rabah	12:30 PM	Room 442
CSCE 1040	Prof. Keethly	11:00 AM	Room 203
CSCE 3600	Prof. Smith	12:30 PM	Room 305

Annotations

1. The sidebar will provide quick access to essential sections like Dashboard, My Classes, and Messages. By clicking the Dashboard tab, it will direct the student to their dashboard.
2. Clicking on view history will take the student to a page where they can see a complete overview of their entire attendance history.
3. Each card represents a class the student is registered in, clicking the class will show the student their attendance history for that specific class.
4. The page header messages lets the student know what page they are in.
5. This section will display the students name as well as their role.



4

Messages

3

2

- John Doe
Attendance Marked Incorrectly • 3:42 PM View
- John Doe
Attendance Marked Incorrectly • 3:42 PM View
- John Doe
Attendance Marked Incorrectly • 3:42 PM View
- John Doe
Attendance Marked Incorrectly • 3:42 PM View
- John Doe
Attendance Marked Incorrectly • 3:42 PM View

Annotations

1. The sidebar will provide quick access to essential sections like Dashboard, My Classes, and Messages. By clicking the Dashboard tab will direct the student to their home dashboard. If they click on My Classes it will show all the classes they have registered for that semester. Clicking Messages will take the student to a overview of all the open chats they have open with their professors.

2. Clicking on view will take the student to the chat with the professor.

3. Each card represents a open chat the student has with a professor, the newest chats are automatically at the top.

4. The page header messages lets the student know what page they are in.

5. This section will display the students name as well as their role.

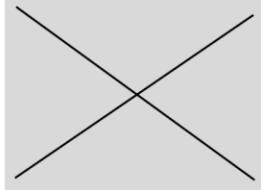


Attendance System

- 1 Dashboard
- 2 My Classes
- 3 Messages

Sarah Johnson **5**
Teacher

CSCE 4905 Overview 2



Student List 3

Student List 3	
Search student name	
Brendon Stepanek	Edit
Josh Odegai	Edit
Maximiliano Hernandez	Edit
Neel Patel	Edit
Zain Jamal	Edit

4 Export Attendance

Annotations

- The sidebar will provide quick access to key sections: Dashboard, My Classes, and Messages. Clicking "Dashboard" will direct the user to the dashboard page. Clicking "My Classes" will lead to a page that lists all the classes a teacher teaches. Clicking "Messages" will lead to a list of conversations that the teacher has with students.
- The page header clearly indicates the current section "CSCE 4905 Overview".
- The "Student List" action will list all the students that are enrolled in the class. It will feature a search bar for teachers to quickly find a specific student. Each student in the list will have their own "Edit" button that will allow the teacher to modify the student's attendance records manually.
- The "Export Attendance" button will allow a teacher to export attendance for a class in PDF or CSV format.
- This section will display the user's name as well as their user role.
- This represents the logo for our system.
- This will feature a pie chart containing the attendance data. It will be divided by statuses like Present, Absent, and Late.
- Upon clicking the "Edit" button, a modal window will open allowing for the user to select a date and an attendance status.

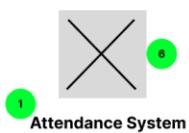
Edit Attendance

Student: Brendon Stepanek

Select Date:

Attendance Status:

Cancel Save Changes



Attendance System

Dashboard

My Classes

Messages

My Classes 2

All Classes 3

CSCE 4905

28 Students Enrolled

[View](#)

CSCE 3055

17 Students Enrolled

[View](#)

CSCE 1040

47 Students Enrolled

[View](#)

Recent Attendance Updates 4

CSCE 4905

Alice Johnson

Present

(1 hour ago)

CSCE 1040

Jane Smith

Absent

(14 mins ago)

CSCE 3055

John Doe

Late

(4 mins ago)

Sarah Johnson
Teacher



Attendance System

Dashboard

My Classes

Messages

Dashboard 2

My Classes 3

CSCE 4905

CSCE 3055

CSCE 1040

Recent Attendance Updates 4

CSCE 4905

Alice Johnson

Present

(1 hour ago)

CSCE 1040

Jane Smith

Absent

(14 mins ago)

CSCE 3055

John Doe

Late

(4 mins ago)

Sarah Johnson
Teacher

Annotations

- 1 The sidebar will provide quick access to key sections: Dashboard, My Classes, and Messages. Clicking "Dashboard" will direct the user to the dashboard page. Clicking "My Classes" will lead to the currently viewed page. Clicking "Messages" will lead to a list of conversations that the teacher has with students.

- 2 The page header clearly indicates the current section "My Classes".

- 3 The "All Classes" will contain each class that a teacher is teaching. Here it shows the number of students enrolled in that class as well as a button to view a detailed class page for each class.

- 4 The "Recent Attendance Updates" section will display recent student attendance status updates for specific classes.

- 5 This section will display the user's name as well as their user role.

- 6 This represents the logo for our system.

Annotations

- 1 The sidebar will provide quick access to key sections: Dashboard, My Classes, and Messages. Clicking "Dashboard" will direct the user to the currently viewed page. Clicking "My Classes" leads to a list of classes assigned to the teacher. Clicking "Messages" will lead to a list of conversations that the teacher has with students.

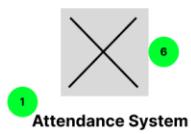
- 2 The page header clearly indicates the current section "Dashboard".

- 3 Each card represents a class that the teacher teaches. Clicking on a class card will redirect the teacher to the class view page.

- 4 The "Recent Attendance Updates" section will display recent student attendance status updates for specific classes.

- 5 This section will display the user's name as well as their user role.

- 6 This represents the logo for our system.



Attendance System

Dashboard

My Classes

Messages

Sarah Johnson
Teacher

Chat with John Doe 2

Chat interface showing a conversation between a teacher and a student.

Teacher message: Hello, I need help with my attendance.

Teacher message: Example test to show chat box

Student message: Example test to show chat box

Type a message...

Send 4

Annotations

- 1 The sidebar will provide quick access to key sections: Dashboard, My Classes, and Messages. Clicking "Dashboard" will direct the user to the dashboard page. Clicking "My Classes" will lead to a page that lists all the classes a teacher teaches. Clicking "Messages" will lead to the page that displays all of the teacher's ongoing chat conversations.
- 2 The page header clearly indicates the current section "Chat with XYZ student".
- 3 This section contains the conversation between the teacher and their student. Gray text boxes represent the student's messages and blue text boxes represent the teacher's messages.
- 4 This section contains a text box where the user will begin to type their message before clicking "Send" to send the message to the conversation.
- 5 This section will display the user's name as well as their user role
- 6 This represents the logo for our system.



Attendance System

Dashboard

My Classes

Messages

Sarah Johnson
Teacher

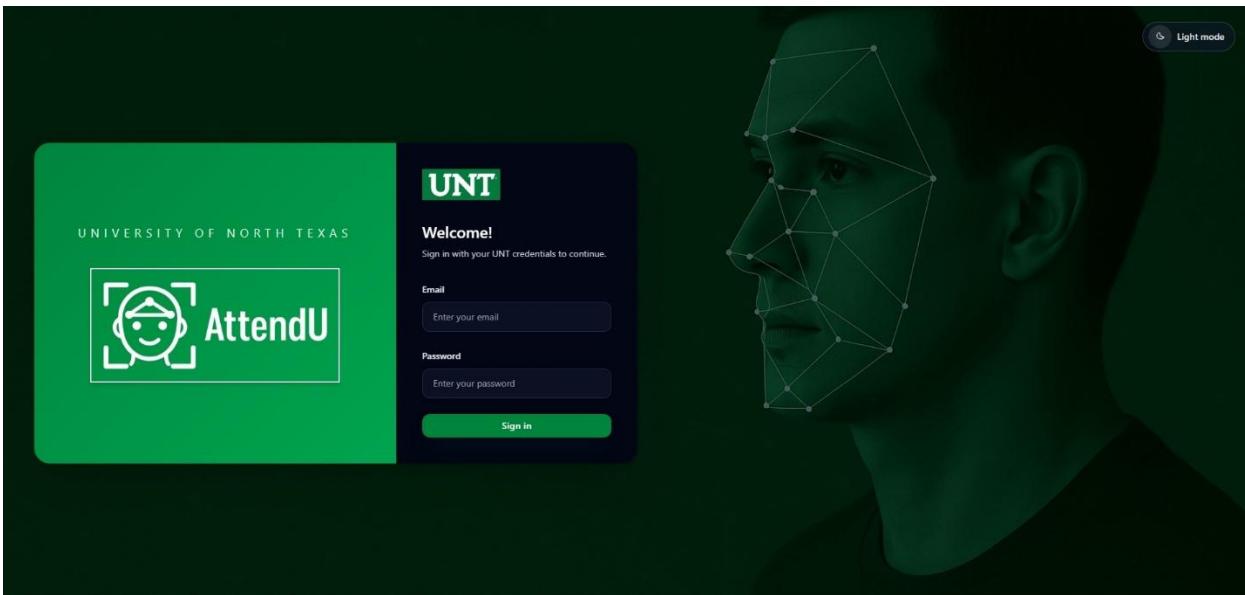
Messages 2

John Doe	Attendance Marked Incorrectly - 3:42 PM	View
Emily Smith	Absence Notification - Yesterday	View
Michael Brown	I won't be in class today - 2 days ago	View
Sarah Johnson	Attendance Question - 1 week ago	View
David Garcia	I'll be late to class today - 2 weeks ago	View

Annotations

- 1 The sidebar will provide quick access to key sections: Dashboard, My Classes, and Messages. Clicking "Dashboard" will direct the user to the dashboard page. Clicking "My Classes" will lead to a page that lists all the classes a teacher teaches. Clicking "Messages" will lead to the currently viewed page.
- 2 The page header clearly indicates the current section "Messages".
- 3 This section is the teacher's inbox. It's going to contain all of the messages that a teacher receives from their students. Clicking on the "View" button will take you to another page to view the entire conversation.
- 4 This section will display the user's name as well as their user role
- 5 This represents the logo for our system.

High Fidelity



A high-fidelity screenshot of the AttendU dashboard. The left sidebar shows navigation options: Dashboard (selected), My Classes, and Notifications. The main content area includes sections for Attendance History (with a "View History" button) and Record Attendance (with a "Start Scan" button). The My Classes section lists two courses: CSCE1040 - Computer Science II and CSCE4905 - IT Capstone I, each with a "View Class" button.

AttendU

STUDENT PORTAL
Attendance for CSCE1040

Light mode | Sign out | Notifications

Dashboard | My Classes | Notifications

James Smith
teststudent@student.com

Attendance Calendar
November 2025

SUN	MON	TUE	WED	THU	FRI	SAT
26 <input checked="" type="radio"/> No record	27 <input checked="" type="radio"/> No record	28 <input checked="" type="radio"/> Present	29 <input checked="" type="radio"/> Present	30 <input checked="" type="radio"/> Present	31 <input checked="" type="radio"/> Absent	1 <input checked="" type="radio"/> No record
2 <input checked="" type="radio"/> No record	3 <input checked="" type="radio"/> No record	4 <input checked="" type="radio"/> No record	5 <input checked="" type="radio"/> No record	6 <input checked="" type="radio"/> No record	7 <input checked="" type="radio"/> No record	8 <input checked="" type="radio"/> No record
9 <input checked="" type="radio"/> No record	10 <input checked="" type="radio"/> No record	11 <input checked="" type="radio"/> No record	12 <input checked="" type="radio"/> No record	13 <input checked="" type="radio"/> No record	14 <input checked="" type="radio"/> No record	15 <input checked="" type="radio"/> No record
16 <input checked="" type="radio"/> No record	17 <input checked="" type="radio"/> No record	18 <input checked="" type="radio"/> No record	19 <input checked="" type="radio"/> No record	20 <input checked="" type="radio"/> No record	21 <input checked="" type="radio"/> No record	22 <input checked="" type="radio"/> No record
23 <input checked="" type="radio"/> No record	24 <input checked="" type="radio"/> No record	25 <input checked="" type="radio"/> No record	26 <input checked="" type="radio"/> No record	27 <input checked="" type="radio"/> No record	28 <input checked="" type="radio"/> No record	29 <input checked="" type="radio"/> No record
30 <input checked="" type="radio"/> No record	1 <input checked="" type="radio"/> No record	2 <input checked="" type="radio"/> No record	3 <input checked="" type="radio"/> No record	4 <input checked="" type="radio"/> No record	5 <input checked="" type="radio"/> No record	6 <input checked="" type="radio"/> No record

Present | Absent | No record

Record Attendance

Scan your face to mark your attendance for a class.

Cancel

Select Class

Choose the class you want to check in for and begin scanning.

CSCE1040 - Computer Science II

Capture Face

INSTRUCTOR PORTAL

Dashboard

Welcome, Rick Sanchez!

Active Classes: 3

Enrolled Students: 3

My Classes

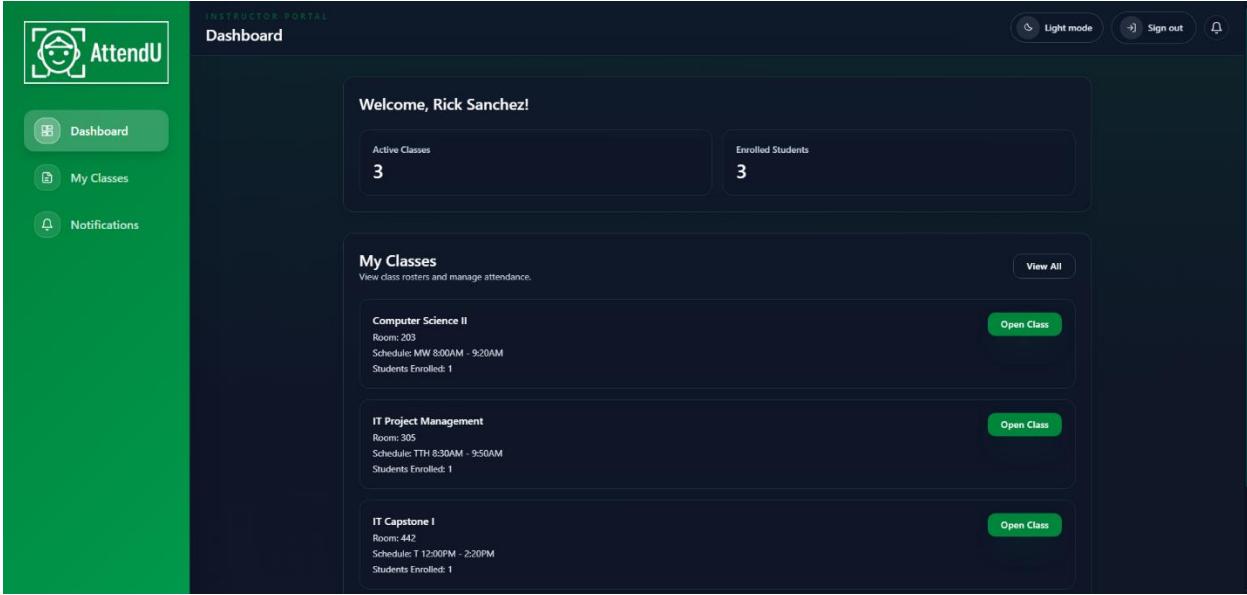
View class rosters and manage attendance.

Computer Science II
Room: 203
Schedule: MW 8:00AM - 9:20AM
Students Enrolled: 1

IT Project Management
Room: 305
Schedule: TH 8:30AM - 9:50AM
Students Enrolled: 1

IT Capstone I
Room: 442
Schedule: T 12:00PM - 2:20PM
Students Enrolled: 1

View All **Open Class** **Open Class** **Open Class**



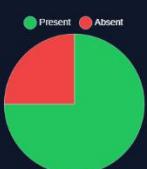
INSTRUCTOR PORTAL

CSCE1040 Overview

— Back to classes

Attendance Overview

Review class-wide attendance at a glance.

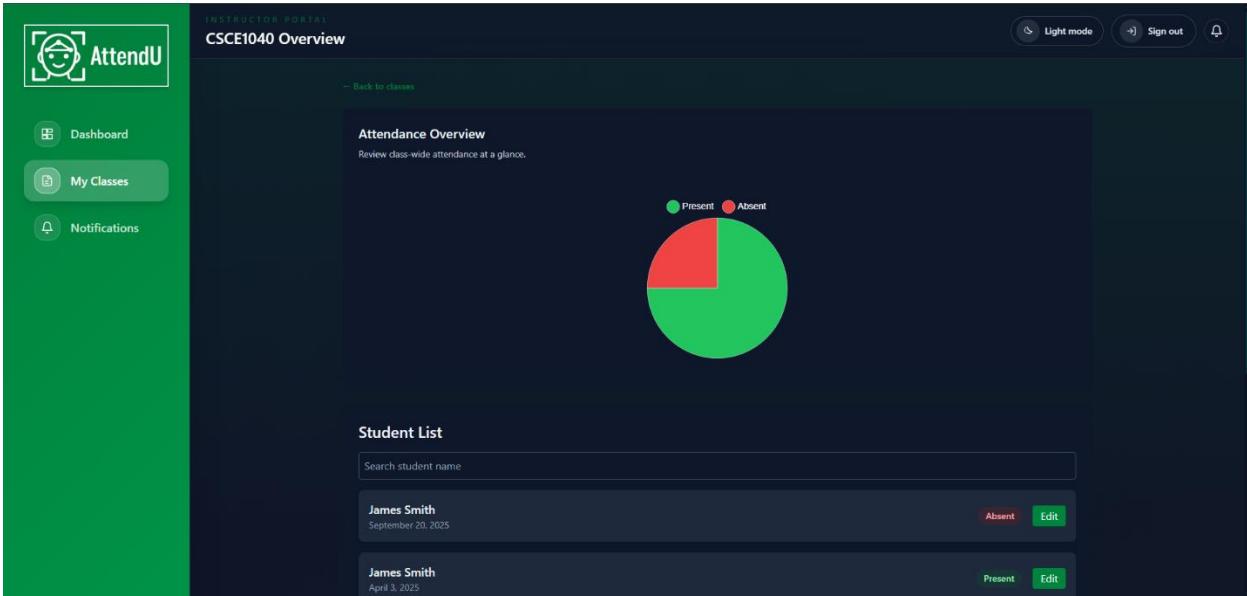


Student List

Search student name

James Smith
September 20, 2025 **Absent** **Edit**

James Smith
April 3, 2025 **Present** **Edit**



Attendance Overview

Attendance breakdown for this student.

Edit Attendance

Student: **Brendon Stepanek**

Select Date

December 4, 2025

Attendance Status

Present

Reason For Edit (Optional)

0/50 characters

Cancel **Save changes**

Add Attendance

Attendance Overview

Attendance breakdown for this student.

● Present ● Absent ● Pending

Add Attendance

Create a new attendance record for Brendon Stepanek.

Attendance Date

12/04/2025

Status

Present

Cancel **Add attendance**

Add Attendance

The screenshot shows the 'Notifications' section of the AttendU Instructor Portal. On the left is a sidebar with a dark green background, featuring the AttendU logo, a user icon, and three navigation items: 'Dashboard', 'My Classes', and 'Notifications'. The 'Notifications' item is highlighted with a light blue background. At the bottom of the sidebar is a user profile card for 'Rick Sanchez' with the email 'rick.sanchez@teacher.com'. The main content area has a dark header with the text 'INSTRUCTOR PORTAL' and 'Notifications'. Below the header is a 'Light mode' button, a 'Sign out' button, and a lock icon. A sub-header 'Inbox' with the sub-instruction 'View your alerts, reminders, and updates here.' is followed by a list of notifications. The first notification is from 'Nov 20, 3:46 PM' and reads: 'Brendon Stepanek has 5 absences in Computer Science II'. It includes a link 'Brendon Stepanek (S1000) now has 5 recorded absences in Computer Science II.' and buttons for 'Delete', 'Unread', and 'Read'. There are also 'All', 'Unread', and 'Read' buttons at the top of the notification list.

The screenshot shows the 'User Management' section of the AttendU Instructor Portal. On the left is a sidebar with a dark green background, featuring the AttendU logo, a user icon, and three navigation items: 'Dashboard', 'My Classes', and 'User'. The 'User' item is highlighted with a light blue background. At the bottom of the sidebar is a user profile card for 'Rick Sanchez' with the email 'rick.sanchez@teacher.com'. The main content area has a dark header with the text 'User Management'. Below the header is a modal window titled 'ADD USER' with the sub-instruction 'Create a new user'. The modal contains fields for 'First Name' (empty), 'Last Name' (empty), 'User ID' ('S1007'), 'Email' (empty), 'Role' ('Student'), and 'Classes'. The 'Classes' section lists several courses with checkboxes: 'Computer Science II' (checked), 'IT Project Management' (unchecked), 'IT Capstone I' (unchecked), 'IT Capstone II' (unchecked), and 'Calculus I' (unchecked). At the bottom of the modal are 'Cancel' and 'Create User' buttons.

Logo

