# Semester Project Brief

## Overview

Our client is a large research University in the Eastern United States. The University would like us to design and build a Web application that accurately tracks student attendance. Instructors who opt to use this application in their classroom should be able to upload their class roster to the application to enable attendance tracking. Once an instructor sets up their class on the application (by uploading their roster and entering additional information about the course), the application will generate a virtual list of class meetings. For instance, say we are in the Fall semester of 2024 and the instructor is teaching a course that Meets on Mondays. Say there are 15 meetings of the course in a semester. The application will generate a list view with one row for each meeting. To record attendance for a meeting of the course, the instructor will select the relevant meeting from their list. Once selected, a minified link will be generated along with a QR code. The instructor will project this information in the classroom, or distribute the link via zoom.

When students click on the link, they will be taken to a view in which they can enter their unique student identifier, and select a seat in the classroom that corresponds to their physical location within the room. During course setup, the professor would have indicated the meeting room. The application should have a built-in record of the layouts of all classrooms. Students should be presented with an interactive graphic of the room's seating arrangements. They will indicate their position by selecting a segment of the graphic that most closely matches their seating position. Remote students will have a dedicated button on the page that captures their attendance. Once seating position or remote attendance is reported by the student, they will be asked to sign an honor pledge indicating that they truly are present in the classroom.

The client would like you to propose a name for the application.

## Login View

Instructors will login using their employee ids. They simply navigate to the application's home URL which should present two inputs. One input will be labeled as "for instructors" and the other as "for students." Students can enter their student ids in the designated inputs. Once information is entered and submitted, students will be sent to the student dashboard view and instructors will be sent to the instructor dashboard view.

## Instructor Dashboard

Instructors can use this view to examine historical student attendance in their courses. Instructors should be able to initiate the creation of a new course using this dashboard. Instructors should also be able to see a list of active courses. The list should include some actions that the instructor may wish to take for a particular course: the instructor should be able to delete a course and should be able to initiate attendance tracking.

## Record Attendance View (Instructor)

When an instructor selects the attendance recording action for a course in their dashboard, they should be presented with a screen containing a QR code and a short link. They will project this view in the classroom and it should be designed with that in mind.

## Course Creation View

Here instructors should be able to provide a course title, number, description, meeting room, etc., to create a new course in the application. Instructors should also be able to upload a CSV roster for the course. Once uploaded, the roster will be parsed in real time with results displayed to the instructor. The instructor can save the new course. That course will be listed in their dashboard.

## Student Dashboard

When students login, they are taken to the student dashboard. Here, they should only be able to view their attendance records. We want this information to presented in a compelling way.

## Report Attendance View (Student)

When students click on the link or scan the QR code generated in the instructor's "Record Attendance View," they are taken to the Report Attendance View. Here, they will enter their student id and select their seating location from an interactive schematic of the classroom. A button or some other interaction should be available for the student to opt out of reporting their seating position if they are joining the class remotely.