

EE/CprE/SE 492 GROUP PROGRESS REPORT

Group number: 40

Project title: HandRaise

Client: Md Maruf Ahmed

Advisor: Md Maruf Ahmed

Team Members: Brian Sayre, Jeremy Tracz, Nick Oswald, Michael Kies, Vance Kaw, Daniel King, Robert Walling

- **Project Summary:** *(Short summary about the project. What are the design goals? Have the direction or scope of the project changed? This should be about a paragraph in length.)*

In this project, the students will design an interactive learning platform (i.e., web-based application) that will allow students to participate in any class activity (e.g., quiz, poll, etc.) or post questions anytime (e.g., during the lecture or outside of lecture time) and the instructor will be able to provide feedback. The instructor will use this interactive platform to post any question for an immediate answer, post a quiz or open a discussion for the knowledge test. This learning platform will also provide student participation statistics that can be used for grading purposes. Our scope has largely stayed the same during the first semester and we plan on completing the main features of this project this semester.

- **Accomplishments** *(Please describe/summarize as to what was done, by whom, when and, collectively as a group since the last report. This should be about a paragraph or two in length. Bulleted points are acceptable as well. Please keep only your technical details related to your project. Figures, schematics, flow diagrams, pseudocode, and project-related results are acceptable, but please ensure that they are legible (clear enough to read) and to provide an explanation. If researching a topic, please add a few details about what was learned and how it is relevant to the project. If two or more people worked on a single task, be sure to distinguish how each member contributed to the task. Specific details relating to the assistance provided to other members may be included here.)*

Frontend

The front-end team (Nick Oswald, Robert Walling, Jeremy T, and Daniel K) has learned Flutter, a front-end framework, and are working on the app pages. The frontend team continues to focus on creating and improving pages including course additions and edits, chat features, and more, for three specific types of users, as well as developing the skeleton for the integration of websockets. In addition, Nick and Robert have been working on building new pages and app features while improving code efficiency by removing duplicate code, as well as working on UI improvements. Jeremy has been working on app pages as well, specifically a secure login and registration for students, TAs, and professors, as well as additional features. The skeleton for integrating websockets has been created, and is ready to implement with the backend. Daniel has been working on app testing and experimenting with future app developments. Additionally, the frontend was able to get a working roundtrip with the websockets implemented in the backend. This will allow us to finish the features needed for the final demo. In the coming weeks we are looking to continue and conclude development of the app while testing and improving the UI.

Backend

The back-end team (Brian Sayre, Michael Kies, and Vance Kaw) has finished the initial work on a Spring Boot application using MySQL server to store the data for our project. We have completed a majority of the back-end application and have set up server space through Iowa State to get the API hosted on a server. The back-end team has also completed a lot of documentation for the application and API. Since the last report, the backend team has completed the web socket application. We now have the backend capability to host live polls for class sessions while also having a live chat/question feature in those sessions. After sessions are over the data, like polls and poll responses, gets stored in our database. This will allow professors to see the metrics for each poll, session, and section in general.

- **Pending issues** *(If applicable: Were there any unexpected complications? Please elaborate.)*

A pending issue for the backend team is testing the application. With limited time left in the semester, there may be issues that arise when the frontend team eventually tries to hit and use our API or web sockets that we don't have time to fix. Hopefully, this can be mitigated by testing the applications ourselves before any user testing.

For the frontend, there are a few minor bugs that we are sorting out that are related to flutter. Along with that, we are still figuring out the best way to handle the user information and data once the user has successfully logged in.

- **Advisor Input:** It is very important that you meet regularly with your advisor. Please have your advisor select one of the options below.

_____ I am pleased with the progress the team is making.

_____ The team's progress could use some minor improvements.

_____ The team's progress has some major concerns.

Your advisor's selection must be confirmed by either an email attached to this report (merge files into a single pdf) or a physical signature obtained from an in-person meeting. Please provide this report to your advisor at least 1 week before the due date so that they have time to respond.

Signature: _____