CPEN 321
Project Reflection
Float

The following reflection is divided into multiple sections, each of which describe a specific phase of the project. These phases include: design, planning, implementation and testing & validation.

Design

One of the major mistakes we made during the design phase of the project was assuming that all the chosen components and APIs would be compatible. Not checking the compatibility of the chosen component costed us greatly during the implementation phase. As an example of this, we initially thought that Android would support a MySQL database. However, it was later realized that connecting MySQL to Android would require another communication layer using a server side language. This would lead to a substantial amount of unplanned work. Additionally, by the time we realized Android was not compatible with MySQL, we had spent around three weeks designing the MySQL database schema, populating the database with test data and setting a Mysql database server. This effort proved to be wasted, as we have switched to using Firebase for our project. This all goes to show that, if we were to do this project again, we should have spent extra time checking the compatibility of components in our initial design before moving to the implementation phase.

Planning

When we made the sprints tables for the project, we were inexperienced and were not able to foresee and account for potential problems. Therefore, the time estimations we gave in the planning phase were overly optimistic. A lot of the tasks turned out to require much more time than we had expected. In the future, we will aim to have our estimations/time log checked by people who have more experience, in order to make our estimation more realistic and leave a margin for unforeseen problems.

Implementation phase

During the course of the project, the main problem we faced that hindered project efficiency was communication. This was because we used a Facebook group chat as the main channel for short-latency responses. This worked in the beginning, but led to some redundancies as the project progressed. Due to the magnitude of sent messages, code snippets or links send by group members were often buried, leading to others having to request information again.

Formal project documents, meeting notes and group time logs were stored in a shared Google Docs project folder. This method proved to be superior, as it was orderly and efficient. With Google Docs, all documents could be properly titled and organized into subfolders, providing easy navigation. In hindsight, we should have saved code snippets or important links in the project folder as a document as well. This would have avoided unnecessary look-up time scrolling through the Facebook group chat history.

Testing & validation

All members in the group did not have any previous experience with automated testing regarding Android projects. As a result of this, the currently written tests are still sparse and limited. That being said, much of the our time has been put into learning how to create these tests rather writing the actual test case. Because of this, we were unable to have a automatic testing suit when doing implementation. Most features were tested manually using exploratory testing when they were implemented. Therefore, we progressed on the project without confidence of the correctness for the previous implementation. This proved to be costly when we need to debug a problem.