

# **IM3080 Design and Innovation Project (AY20xx/xx Semester x)**

## **Individual Report**

Name: Garry Shi Jia Hong

Group No: 1

Project Title: NTUMart

### **Contributions to the Project (1 page)**

**Role:** Team leader

#### **Project Management**

- Created Jira Board / Created, assigned, and managed Jira Tickets
- Initialized, customized Github repository with licenses, updated Readme.
- Conducted Github Pull Request and Code Reviews
- Organized meetings with mentor (virtual and in-person)

#### **UI/UX Design**

- Designed initial login, signup, forget password, reset password pages.
- Developed User Journey Diagram

#### **Software Development (Full stack)**

- Developed Taskbar v1, browse page.
- Linked routes and navigators to taskbars with transition animations
- Converted individual flutter pages to individual components.
- Cleaned up screens that were rendering in different sizes on different devices.
- Initialized Spring backend service, developed user signup API.
- Developed backend service to check for users first time login and prompt selection of interests.
- Developed frontend itemCards to retrieve items from backend.
- Developed AR feature.
- Developed Stories & Roomchat feature.

#### **Devops**

- Taught groupmates how to use Github and Git version control.
- Optimized QA testing process by teaching groupmates emulator usage for Flutter

#### **Student**

- Created infographic for existing reference mobile applications.
- Presented and prepared slides for 3 presentations
- Prepared and recorded demo projects prior to fortnightly presentations
- Edited final video for presentation.

## Reflection on Learning Outcome Attainment

Reflect on your experience during your project and the achievements you have relating to at least two of the points below:

- (a) Engineering knowledge
- (b) Problem Analysis
- (c) Investigation
- (d) Design/development of Solutions
- (e) Modern Tool Usage
- (f) The Engineer and Society
- (g) Environment and Sustainability
- (h) Ethics
- (i) Individual and Team Work
- (j) Communication
- (k) Project Management and Finance
- (l) Lifelong Learning

### Point 1: Project Management and Finance

My prior internship experiences have not allowed me to experience being the project manager, and this experience allowed me to experience being the project manager and managing project management tools such as Jira instead of simply being assigned tickets to work on. One such problem during the project management process was also the fact that we were students, and being students we had additional commitments, not just this project to deal with, unlike working professionals who were able to focus on a project at a time. Therefore, it was essential to balance the amount of work hours that the members were allocated to minimize the effect of this project on other commitments as well. One of the things I learnt as an inexperienced project manager thus was my working style, and to have a certain level of trust in the team that I was managing, and I am confident that with this project, I will be able to do a lot better in project management in future projects as well.

### Point 2: Design/development of Solutions

One of the biggest things I learnt from this project came in the form of system design, in which I had to plan an entire complex full-stack application system from the ground up, and being my first foray into system architecture planning, it was interesting and a relatively fresh experience being able to design the way systems interact with each other. One of the main examples of this was our image uploading API for profile pictures, for which we had to identify a method of storing and receiving images from the database/server based on our use case, and we had the choice of exposing APIs by endpoint and a named file directory stored in the server vs. blob storages in the database. Many design/development of solutions had to cater to our specific use case, and it was a very enriching experience to be able to make big design/development decisions such as choosing to not use MySQL vs a BaaS such as Firebase. I do expect that there were more efficient ways of doing what I set out to do, but I believe that being able to have the opportunity this early to design an entire system as compared to in work is a big learning experience for me and will help me in the future if I am involved in system design.