

IM3080 Design and Innovation Project (AY2023/24 Semester 1)

Individual Report

Name: Lee Yong Jin

Group No: Group 1

Project Title: NTU MART

Contributions to the Project (1 page)

- Created Database Diagram
- Created and Organised our MySQL tables
- Created an API for Profile Upload Image
- Created an API for writing up Reviews
- Created an API for Searching by Parameters
- Added a Sorting feature to our Interests
- Help Create a Populator on startup
- Linking of API to frontend
- Help in organizing Image File directories
- Involvement in Project Video
- Presentation Slides

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: Communication

In a group project, communication is one of the most important key points that lead to the success of the product. During the initial phase of the project, we had a brainstorming session, to come up with an innovative app. To ensure the success and delivery of our app, we ensure that the our alignment of goals are on track. From objectives to milestones to individual responsibilities. Each group member understood their role and task at hand. JIRA was a project management tool to help manage tasks at hand to inform others whether a function is done as it may be required as a prerequisite. Within our sub-groups of Frontend and Backend, we also demonstrated active communication with one another. Distributing work and notifying one another when we are done or require assistance. Voicing out concerns and throwing ideas around help to clear any misunderstandings with our group, allowing better understanding of how to tackle the problem. As we work on a function e.g. Listing of items, I had to bridge the gap between frontend and backend to ensure the backend functions seamlessly intertwine with the frontend interfaces. During face-to-face meetups, I would consult the frontend group to discuss on the operations of our function. It was important get everyone on the same page to understand basically the User Interaction Diagram while acknowledging the diversifying skillsets we have on the team. The wonderful feedback from the group presentations and our supervisor Mr Andy Khong, provided us with deep insights to revise and improve our project. Mr Kong's guidance and constructive criticisms from the professors, offered invaluable perspectives that guided the way of the strengths and areas needing improvement. All in all, communication whether through feedback or discussion helps encourage active collaboration, problem problem-solving and foster innovation which are key aspects that drove us to our project accomplishments

Point 2: Lifelong Learning

Embarking on a journey to make a software app for about 13 weeks in a group of 9 other individuals opened my eyes to so many new program and concepts that I had never otherwise heard before. To start off, as part of the backend group, we were given the freedom to decide what language and framework we could use. I was unfamiliar with most frameworks, but we decided to settle on Java Spring Boot framework. Java Spring Boot looked complex on first launch but actually, everything was grouped up in respective folders and was somewhat straightforward. When it comes to APIs, I was lost initially. I had never written one from scratch. However, upon further research and examples, I realise it was great opportunity to pickup on of the key components of web development which was a route I intend on pursuing. In the end, I was capable of crafting an API and test the end-to-end points through the help of Postman. The term populator was introduced by one of our groupmates to ensure a standardisation of entries in our database. As a team, we research on the subject and were managed to come up with a fully functioning populator that could be easily edited with a change in the JSON file. The overall exposure to so many new frameworks and features such as learning how to use JIRA, GitHub and Flutter, really felt like I was apart of an actual working environment. Overall, the exposure and journey in learning these new software development tools is truly an important skill that I need when I graduate and this project had served as a stepping stone to the exposure and teamwork of the working industry. Lifelong Learning is truly an essential skill for software developers as I would need to upgrade myself for the industry.