IM3080 Design and Innovation Project (AY2022/23 Semester 1)
Individual Report

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Group No: Group 1

Project Title: NTU Marketplace Application Development

Contributions to the Project (1 page)

1. **Figma Designs Screens (4 Screens)**
2. **Coded "Product List" Widget**
3. **Coded Flutter "Item Card" Widget which was used throughout multiple screens**
4. **Code and design of Profile Screen**
5. **Redesigned and coded Selling Screen (Added Dropdown Buttons & fixed design)**
6. **Linked profile page to settings page**
7. **Involved in the filming and acting in demo video**
8. **Did the slides for "Background and Key Features" section as a presenter for the final presentation.**

Reflection on Learning Outcome Attainment

Reflect on your experience during your project and the achievements you have relating to <u>at least two</u> 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: Engineering Knowledge & Lifelong Learning

Through this project I have learnt the Flutter framework (Dart Programming) and improved many of my existing skills such as Figma and MySQL.
During the planning phase of the project, we had to decide which tech stack to use for the mobile application. Being appointed as the frontend developer in the team, I had to decide between React Native - a coding framework that I had self-learn throughout my 2023 summer holidays, or Flutter -a newer framework that uses dart language.
Being an inquisitive person, I choose the later which would later lead me to spend my next 2 weeks following YouTube tutorials and code-with-me videos of Flutter. I really enjoyed the time learning a new language and framework love the feeling of accomplishment when I finished my first working screen.

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Point 2: _____Modern Tool Usage_____
Through this project, I have learnt how to use and utilize Jira, a project management tool which works well in conjunction with GitHub pull branch feature. It was convenient to have all the pending tasks you have to do in ticket form. Whenever there is time to code, I can just hop on to Jira and choose a ticket to do. After completing the task, create a new branch and file a merge pull request, indicating the Jira ticket number so that other teammates can see the task stated in the Jira ticket and crosscheck your work. This system makes it easy and convenient for developers to work of on the same code together, understand the task they are required to do and prevent any overlaps of tasks (prevent a unique task being done twice by two people). Jira also allows the team leader to have a bird eye view on all the different parts of the project and make sure the project stays on

schedule._____
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Point 3: _____Individual and Team Work_____

All the coding projects so far has been a 2-man project.
This was the first time working on a coding project together with so many people. Initially, it was hard to code when there is so many people working on the same code. I learn that it is important to organize files properly with folders to indicate what type of file is it (Widget, database, pages). I couldn't assign random names for files, classes, and variables anymore as my teammates would get confused. Most importantly, it is important for my code to be readable and neat. Commenting is essential for the frontend developers to communicate with the backend developers, indicating which parts of the code are the ones that need to be linked to the database (Stateful Widgets). It is also useful to indicate the purpose of the code and what it does.

I also learnt the importance of delegating workload and giving groupmates specific roles in the project (Frontend/ Backend Developer). It is better if each one of us focus on one aspect of the development of the software and master it. This way the project would be more cohesive and have a higher quality. However, I also understand the importance to have someone who can do both front-end and back-end (Full-Stack Developer) to help liaise with both party and help integrate the backend and frontend portion of the code.