IM3080 Design and Innovation Project (AY20xx/xx Semester x)
Individual Report

Name: Ariel Goh Soo Ning

Group No: 1

Project Title: NTUMart

Contributions to the Project (1 page)

Illustrations designed & made:
- Application Icon & Logo
- NTUMart version of NTU's mascot, Lyon the lion
- Category button icons
- Logo animation used in login page
- Chatbot button icon

Screens designed:
- Onboarding Screens
- Categories of Interest Selection Page
- Home Page
- Browse Page(deprecated)

Widgets designed:
- Search bar (deprecated)
- Circular category buttons
- Category mapping function for category buttons
- Horizontal view listings (deprecated)

General Contributions:
- Figma wireframes/mock-ups
- Case studies poster for base app selection
- Final group report
- Drafted business model & monetisation models for report
- Assisted in making of video showcasing use-case of app
- Final group presentation slides
- Group poster

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: (d) State the area: Design/development of Solutions

As I was part of the frontend team, I was responsible for the user interface design for the screens I was assigned. I also took it upon myself to design graphic elements that would be used in various aspects of our project such as the poster and subsequent final product. The graphic elements I designed were the logo, a rendition of NTU's mascot and the subsequent logo animation that would be used in the final product and video. The process of designing via Figma, and then implementing the screens through Flutter allowed me to break down the general process of "implementing screens for the app" into various steps, and I was able to review the quality of work I was producing at every step of the way, ultimately allowing me to submit a product that I would be proud of recognizing as my own work.

The process of animation was an arduous one, as I had to design each frame by hand, and the subsequent product would only be a 3-second animation, but I personally believe the effort was worth it as its versatility of use in various aspects of our final submission. Designing each individual frame also allowed me to carefully scrutinize the animation, and I was able to analyze the smoothness of the animation and quality of each subsequent frame.

Point 2: (i) State the area: Individual and Teamwork

Given the division of manpower into frontend, backend and full stack, a certain level of trust was needed for us to have faith in each team being able to complete their parts, such that the final product was cohesive and of sufficient quality. However, through the weekly meetings where we could check our progress, we were able to hold each other accountable so that we could meet our individual deadlines for work. However, I also contacted some of our groupmates privately throughout the duration of our project to assist them in miscellaneous work such as testing of the AR functionality of our app. Doing so allowed me to fully recognize the magnitude of the importance of my groupmates' work, even though previously I thought I had already understood the importance of teamwork. I am proud of the work that my groupmates submitted, as it allowed us to have a final product that was respectable and good quality. I fully appreciate the effort put in by everyone in their respective roles, and words are not enough for me to quantify the time and effort invested in their work.

Point 3: (e) State the area: Modern Tool Usage

Given the nature of our project, we were all at the same starting point in regards to the technology we needed for the aspects of our project. Frontend used Flutter, backend used Java Spring Boot, and additional technologies such as DialogFlow and ARCore were utilized in our project to add additional functionalities that would improve the useability of our final product. All of us were somewhat inexperienced in the technologies used, and the first few weeks while we were deciding on a direction for our project, we used to acquaint ourselves with the technology we would be utilizing for the rest of the project duration.

Given that I was new to Flutter, I had attempted various test-cases with Flutter and conducted multiple rounds of testing and checking when adding new elements to the screens before submitting my work. Fortunately, I became used to Flutter fairly quickly, since I had previously made prototype mobile apps through Android Studio, with the exception being the breadth of my knowledge regarding the many libraries and functions that Flutter provides. Even after submitting the first iteration of my work, I still continued experimenting with Flutter to improve my work, even if it was in minor adjustments or code clarity. As such, I am now proud of my proficiency in Flutter and I hope to use it in future projects or work.

Our group also utilized team-related technologies such as Figma, JIRA and GitHub. While I was new to both of them, eventually through the assistance of my groupmates and the multiple times I've had to use them, I learned to appreciate the usefulness of such technologies especially when working in a team where everyone has different responsibilities. GitHub especially was a lifesaver for me to observe changes in my code upon each commit, and allowed me to also observe my groupmates' work without any conflicts due to the ability to create branches. Figma allowed us to visualize our final product as we used it to create wireframes and to assess the subsequent UI/UX design, such that we could improve upon it to make our final product more user-friendly and intuitive.

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