

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

Individual Report

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Group No: 6

Project Title: COHAB Application

Contributions to the Project (1-2 page)

In the first 3 weeks of the project, we started the brainstorming process by coming up with project ideas and existing apps that we could improve on. My idea of improving the “Roommates” application and creating an application for cohabitation was then chosen to be the idea we would work on as a group. Subsequently, we had to come up with wireframes of the application. I pitched the idea of gamifying our app by making the home screen simulate a realistic room, which was later adopted as one of the selling points of our application.

After brainstorming, we then moved on to create a prototype of the app on Figma, a platform used to design application prototypes. I was in charge of designing the home and group screen with Bryce. I first designed the home screen in Procreate, an application for illustrations. However, after much discussion with Bryce, we decided to use existing 3D models to do a mock-up of how we wanted the final screen to look like. I sourced for several existing models, on which we decided on a final model which matched the tone and design we wanted for our final look. I also sourced for various 3D models for icons to be implemented across all the screens of our application. For the group screen, I pitched the idea of the groups being represented by buildings and designed a mock-up of the screen, which was then adopted as the final design for our group screen.

After we did the prototype on Figma, we were split into three teams to work on the implementation of our app – development, design (UI/UX and 3D) and back-end. I was on the 3D design team where I first learnt how to use Blender. My groupmates and I were in-charge of different furniture that represented our main functions. I was in-charge of creating the calendar model to represent our calendar function.

In Week 6, I presented with Ji Xiang and Shu Ting on our progress. After our presentation, our group felt that we needed to hasten up our development progress. As such, my groupmates in the 3D Design team moved onto the development team. I remained in the 3D design team as I felt I was more familiar with designing. With Bryce’s initial design, I worked on the final design of our home screen, including both the room and the surrounding environment. I first came out with a layout of the room and several additional furniture to be added. Using Blender, I then designed the additional furniture for the room, such as the kitchen counters, sofa, and television. I also worked on the colour palette and materials of the room and furniture.

After designing the room, I moved on to designing the group screen on Blender. I brainstormed for different building designs and took inspiration from real-life HDB and NTU Hall buildings. I also designed the environment for the group screen, including the road, trees, and streetlamps. To enhance the visuals of the group screen, I also designed and animated two cars to drive along the road across the screen. Finally, I generated three different lighting and materials for the group screen so that it could change with time.

After the group screen, I re-designed the environment for the room in the home screen to match the context and be more cohesive with our group screen.

After my work in Blender, I went on to help the group with the video and final presentation slides. For the video, I helped with the ideation and the storyboarding for the video. I also acted in the video alongside Ophelia. For the final presentation, I was in charge of making the slides on Microsoft Powerpoint, in which I got creative and used the Morph function to make our slides more interactive and vibrant. I also represented my group to present for the final 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: Modern Tool Usage & Design of Solutions

Through this project, I learnt how to use various software like Blender and GitHub. For Blender, I have always wanted to learn how to use the program as I was interested in 3D design. In this project, I had the opportunity to work extensively on Blender to create several models. Through working on the home and group screen, I not only learnt how to build the 3D models, but also adding in appropriate materials and lighting to bring my 3D models to life. I also experimented with various features like Sculpting, and even made an animation through Blender. For GitHub, even though I was not intensively involved in the development process of our app, I learnt the basic usage of GitHub, specifically on how to pull and push files into the repository. Through this project, I also got to explore existing software like Microsoft Powerpoint and try new features in the software. To make the slides for the final presentation, I learnt how to use the Morph function on Powerpoint and how to incorporate various animations and transitions to make the slides more engaging.

Other than software, I also learnt more about interface design and thinking out of the box to make interactive interfaces for users. In designing the home and group screen, I researched and saw many references on how other designers were designing their applications. I also got to explore the 3D models built by other designers and learn why they are visually aesthetic. My experience from art modules like DA2002 also allowed me apply design concepts like color theory to improve my designs. Designing 3D models also allowed me to look at objects and furniture in a different perspective and I learnt how to break them down into simple objects that could later be transformed and morphed into complicated designs. All in all, this project has made me more confident in my abilities as a designer as well as my skills in using design software such as Blender.

Point 2: Communication & Project Management

Through this project, I learnt the importance of having open and honest communication with groupmates. When we first started discussing on potential ideas for our application and the initial wireframe, we encountered a few instances of miscommunication when we could not understand one another. These instances may have been frustrating, but they allowed us to take a step back and work out our differences more carefully before proceeding. In our initial stages, there was quite a lot of confusion and uncertainty on where our application was headed. However, having open and honest conversations with my groupmates on how we wanted to implement our ideas helped in bringing us forward. Since 11 of us were not close to one another prior to this project, this project has taught me to work with people I might not be familiar with and be open-minded to their ideas and their working styles. I also learnt to be more honest with my schedule and capabilities so that the team can benefit from my strengths as well as fill in on my weaknesses.

Initially, I helped to coordinate admin matters for our groups like setting up a meeting schedule and links for our Zoom meetings. This taught me the importance of scheduling and coordinating across different people to find a common time for meeting.

Through this project, I also worked closely with certain groupmates on different aspects of our project, may it be the designing, the video, or the presentation. Through these tasks, I learnt to be more confident in taking the initiative to give opinions and suggestions. I also learnt to take constructive feedback and criticism, and to detach my emotions from critiques given to my work.

Finally, I learnt the importance of prioritizing and managing my personal time through this project. As I was busy with other commitments through the semester, I struggled with finding enough time to work on the project. However, after I prioritized my commitments, I was able to put in more energy and time into the project and contribute to the team.