IM3080 Design and Innovation Project (AY2021/22 Semester 1)

Individual Report

Name: Pan Shu Ting

Group No: 6

Project Title: CoHab

Contributions to the Project

General
- Conducted research and generated a mini-proposal for a potential idea based on HealthHub when group brainstorming for an existing application to improve on. Eventually, our team decided on Roommate.
- Attended all team meetings throughout the semester to give progress updates, exchange feedback or suggestions and contribute ideas or solutions to issues faced

Figma Prototype
- Conceptualised and sketched user-interface appearance and functions for Task and Calendar screen
- Designed task screen, task modals and functions using Figma
- Discussed team ideas and finalised CoHab's user interface and navigation flow with Figma team
- Revised and edited Figma prototype to ensure consistency and cohesiveness CoHab design

Presenter
- Created slides for Week 6 presentation
- Speaker for DIP group presentations in Week 6

Graphics Designer
- Conceptualised and designed user-interface navigation icons using Adobe Illustrator to be used in Cohab screens as part of UI team
- Conceptualised and designed CoHab logo and application icon using Adobe Illustrator
- Created and designed morning, afternoon and night sky mobile backgrounds for Group screen using Adobe Illustrator as part of UI team
- Designed and animated Splash screen using Blender, Adobe After Effects and exported with Adobe Media Encoder

CoHab Application Developer
- Wrote and tested code for Chores screen, Chores modal, Chore card and Splash screen
- Implemented functions in these areas including HTTP GET in Chores screen from database
- Updated GitHub repository with every new implementation of code

Group Report Writing
- Facilitated and coordinated allocation of the writing of our group report among team members
- Wrote for multiple sections in the group report, including designing of CoHab logo, navigation icons, Splash screen, Login screen, user guide, technologies used, background, appendix, etc.
- Formatted, revised and finalised group report for submission i.e labelling figures, font sizing, language edits, consistency, etc.

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: Modern Tool Usage

In the development aspect, this project marked my first time using React Native, Expo-CLI, Javascript and GitHub. In the beginning, it was challenging to pick up how to use these tools, but thankfully, one of our team members, Jixiang, had experience with these resources before and generously taught the rest of us, who were "newbies", how to set up and execute the basics. After that point, carrying out my self-learning of these tools was an uphill but fulfilling experience. These open-source tools had many online forums and documentation resources I could refer to whenever I needed to find new methods of implementing a feature or solutions to issues I encountered while developing CoHab. Fortunately, my prior experience in software languages such as Java, C++, C#, HTML and CSS greatly enabled me to easily understand Javascript syntax and concepts, which allowed me to immediately start implementing code on the first day of writing code for CoHab.

I was able to practise and accomplish writing functional and efficient Javascript code for the development of the CoHab application. Over time, I was able to identify and solve issues faster and could even think of solutions without relying on online forums or official documentation, which was personally quite satisfying.

On the other hand, in the design aspect, I was familiar with Adobe Illustrator before this project and volunteered to take up roles that would involve its use. While designing on Illustrator, I was able to further refine my skills and learn new techniques such as creating graphics in an isometric perspective which could be done using a transformed and rotated grid as a design guide.

As a designer, I was very motivated to create graphics that would be as if they were in a published application on Google Play or the App Store. I enjoyed putting a lot of thought and consideration into the concept and appearance of the graphics I designed and felt accomplished in creating the graphics that CoHab now uses.

Nonetheless, I also learnt new software such as Blender and Adobe After Effects to design CoHab's splash screen. These were software programs I have heard of and always wanted to try out, so it felt like a passion project as I was learning how to use them to animate and design. My approach to learning how to use them was largely based on video tutorials as I am a visual learner and video tutorials would often show the most efficient way of using these software programs. It was challenging to learn After Effects as the functions and user interface were not very intuitive, while it was easier to learn how to animate on Blender. Eventually, I was able to pick up the skills I needed in order to create and implement what I had envisioned for CoHab's splash screen.

Point 2: Communication

Over the course of this project, I had the opportunity to work with the whole team, in subteams as well as individually.

In the beginning, it was slightly intimidating as our 11-member team is the biggest group size I have ever worked with, and was apprehensive that coordinating ourselves would be extremely challenging. However, I was able to allay my worries after our first few team meetings on Zoom, as everyone was friendly and the whole team was able to cooperate and keep our discussions going in order for progress to be made. This built my faith and confidence that our team would work well together throughout the semester.

Unfortunately, we encountered our first roadblock in the beginning when there was a miscommunication issue which led to team members being upset. However, it was a chance for us to honestly communicate and clear up any misunderstandings, as well as foster greater empathy amongst ourselves. In retrospect, I believe that this incident helped us to build a good foundation for our team dynamic that surrounded honest and clear communication.

As a whole team, coordination and organisation was definitely harder given our group size, and would often require someone to facilitate discussions in order to keep our meetings productive and on track. I was able to practise being a team player and give suggestions or feedback to my teammates as we discussed. Different teammates would step up every meeting to get the ball rolling, and sometimes I also had the opportunity to facilitate, which helped to build my confidence as a team leader.

At times, there were differing views amongst us which, if each of us were to be stubborn, would obstruct our team decision-making process and hinder progress. Thankfully, we would be able to quickly resolve such instances by discussing the pros and cons and unanimously come to a decision. Through these instances, I have witnessed and further understood the value of compromise which is needed in order to keep making progress. In our team discussions, I have also gradually become less self-conscious about sharing my ideas and have started to enjoy giving suggestions as me and my teammates have always remained respectful towards one another while giving our feedback or opinion on each other's ideas.

During this project, I worked in subteams, such as with Sherry in the UI team, with Danielle and Sherry in coding the chores screen before Ziyi joined and we worked on linking it to the database, with Jixiang and Khin in the presentation team and with Bryce, Jeremy and Danielle in the report finalisation team. I was able to work more closely with most of my teammates through these subteams and hear great ideas from them while collaborating with them. We would also play to our strengths and build upon each other's ideas to come to a final product. Admittedly, there was an incident where I felt frustrated when communicating with a particular team member as they were producing half-hearted work which was inconsiderate to how it would affect the rest of the team. It was quite a discouraging experience when I attempted to communicate to them about the issue, but they remained dismissive and apathetic. Eventually, I decided to patiently endure until our task was done before I was able to transfer to another subteam. Unfortunately, conflicts are hard to navigate while working in a team and maintaining the necessary rapport. I acknowledge that there is only so much I can do to let a teammate know when they are not being a team player, without their own initiative to decide to change.

In this project, when doing individual work, I would always consider how my work would affect the rest of the project in terms of overall cohesiveness. Individual work also gave me a platform for personal input, creatively or technically, and a sense of personal accomplishment. I also had a chance to advocate for my ideas when presenting my work to the rest of the team, while receiving constructive feedback to further improve.

Overall, I am thankful for the rest of my teammates for being friendly, approachable and generally easy to work with. Without the collaborative spirit and contributions of each member, our group would not have been able to achieve so much within the semester to create CoHab and complete IM3080.