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

**Individual Report**

Name: Jovan Hermawan

Group No: 2

Project Title: Float

**Contributions to the Project** (1-2 page)

**Ideation**

1. Came up with the idea of the chatroom system along with its architectural designs, how it works, and it’s purpose.

**Front End Coding**

1. Implemented the front-end coding for the profile page.
2. Built the authentication feature, pin verification code along with Jun Qian and Violin.
3. Implemented the front-end for the entirety of the chat-room system along with the integration of Gifted Chat APK. Implemented the buttons to find a chat-partner and integrated it in the profile page.
4. Created the edit-profile page, along with the edit password system.
5. Implemented the keyboard avoiding view function to some pages that require input from the users to prevent keyboards form blocking user’s views.
6. Implemented the front-end for login page along with the registration page.
7. Integrated the calendar APK with the application.
8. Linked some pages with each other to give a proper pathway form each individual page.
9. Updated some front-end from some pages to the updated design for the app.

Here are some of the pages in which I did the coding for the **front-end**

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Description automatically generated with medium confidence

A screenshot of a computer

Description automatically generated

Graphical user interface, application, Word

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**Back End Coding**

1. Created a firebase platform specifically for the chatroom feature.
2. Connected and integrated the chatroom feature with Firebase.
3. Added Cloud messaging to allow users to chat with each other in real time.
4. Added Realtime Database and Cloud Firestore to be able to store all the messages within all the chatrooms that are available.
5. Set the anonymous authentication system within the Firebase

**Project Report**

1. Created the project report for my section including the profile page, chatroom page and also some of the backend for the chatroom system.
2. **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:**

1. Engineering knowledge
2. Problem Analysis
3. Investigation
4. Design/development of Solutions
5. Modern Tool Usage
6. The Engineer and Society
7. Environment and Sustainability
8. Ethics
9. Individual and Team Work
10. Communication
11. Project Management and Finance
12. Lifelong Learning

Point 1: Engineering Knowledge, Problem Analysis, Modern Tool Usage, Lifelong Learning

Having some experience in app developing have helped me a lot in working on this project. I already have some experience with many app development tools including the design (Figma), front-end (React-Native, React, Android-Studio, Flutter, etc.), and back end (Firebase, Microsoft-Azure, Java). Hence, when starting up with the project and coming up with the correct tool/platform to use for some part, I was able to give some suggestions on which tools/platforms would be more suitable, which tools/platforms would be easier to use based on my experience.

However, I also would like to give myself a new challenge. Hence, I come up with the chatroom idea, which I have zero experience to build something like that. The process to build the chatroom system is not as easy as I previously though, however the result sure is rewarding as I also gained a lot of new knowledge from the engineering point of view and I am also able to utilize many tools from APKs, Firebase to make the chatroom functional.

I also get to learn more about GitHub, as I have only been doing projects either solo or in a very small group, I have never explored the more complex part of GitHub. However, working in a big team really pushed us to use many functionalities of GitHub and we are able to learn how useful GitHub is for developers.

Because of the COVID-19 pandemic, and we need to do everything remotely, we are always able to find a way by utilizing some tools across the internet to help us work together, discuss with each other without having to meet up face to face. We used online design platform such as Figma, and other online tools such as Discord, GitHub, Google Docs, Slides, etc.

Point 2: Individual and Team Work, Communication

Working in a team of 11 people is not an easy task. We need to understand each other’s point of views and need to compose ourselves to be able to work together coherently. Although seemingly, we are only doing a remote project, in which we are doing everything remotely, we still need to acknowledge the integrality of the team as we are working on a big project in such a small amount of time. I learnt a lot on communication in a team, as we constantly rely on each other, especially interaction between the 3 sub-teams which are the front-end, back-end, and design. Working on the front-end, I need to contact closely with both of the other teams, as I need to keep track with the designs from the design team and I also have to inform the back-end team about the front-end codes which I have coded based on the design team’s design.

I always find, individual work to be easier than Team Work, the main reason of this is because of GitHub. Prior to this project, I have always been scared to use GitHub. However, after having a proper understanding and knowledge about GitHub, along with a good communication between each individual of the team, I think Team Work would greatly help us especially in doing a big project.