

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

## **Individual Report**

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Group No: 7

Project Title: joinTU

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

During the first few weeks, our group decided to split into 3 sub groups — design, coding group 1 and coding group 2. I was assigned to the coding group 2 which was in charge of the work and part of community aspect in our application.

After we were split into the sub groups, we were each assigned with a part of the application to work on. For me, it was the “Friends” system.

The friends system was crucial in the community aspect as it was the one of the key features in our application as we aim to unify NTU.

#### **1. Viewing and Searching of Users**

Before adding friends, we have to read the different users profile based on what they have entered as they sign up and set up an account. The details of the users are saved and also read via our database. The profile consists of the user’s avatar, name and course. As the users list might be too long, there is a search function where the user will be able to find their friends quickly.

#### **2. Adding of Friends**

When a user wants to add friend, they will have click on the profile of that specific user and send friend request. The request will then be updated in the firebase as pending.

#### **3. Accepting Friend Request**

After a friend request is sent, the other user will have to log in to their account to accept the request. Their friendship status will then be updated in their individual database.

#### 4. Display of Added Friends

Users will also be able to view their added friends in another page as the friends details is being read from the database

#### 5. Deleting of Friends

After we have added friends, we will also be able to delete them in the specific user's profile. As the friend is deleted, the friendship status will then be updated in their individual database. Also, their profile will be deleted in the added friends page.

### **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 (how you work with the team)
- (j) Communication (with I)
- (k) Project Management and Finance
- (l) Lifelong Learning

Point 1: b) Problem Analysis

When the project just begun, I have faced many troubles trying to get the desired outcome. Therefore, I broke down the problems and found out that it was easier to understand. This was extremely useful as when we get into the workforce, not everything will be explained in details to us hence, by breaking the problem down into sub problems we will be able to finding the solution will be easier.

Point 2: c) Investigation

Before we started with the coding, our group were finding for the right tools to use. With the problem specification that we had, we went online and search to find a suitable resources. Not only that, as I face errors or when I am unsure with the coding, I will first approach my group members to check if they know how to tackle the problem. After that I will search for the key points online and see if there is any relevant information for it.

Point 3: d) Design/development of Solutions

Just like point 1, as I work towards the coding for my part, I broke the problem down into smaller sub-problems and look for solutions for each of them. I had a logic map which shows the part that are related so it was easier for me to link the codes together.

Point 4: e) Modern Tool Usage

The tools that were used for this project were mainly Figma, Android Studio and Firebase. Figma was used for the development of framework, design and logic of the application. Android Studio was used for the main coding and development of the application, it uses Java language and the application was familiar to us as we have used it for our previous projects in IDP last year. Lastly, Firebase, where we store the database of our application in it. We were all new to the firebase therefore, we all had to learn the rules and change it according to the desired rule that we wanted for our application.

Point 5 & 6: i) Individual and Team Work & j) Communication

As it was an 11 people group project, we split up the group into 3 sub groups — Design, Coding Group 1 and Coding Group 2. This way, we could complete the project more effectively and efficiently. We have meetings almost every other week and discuss on the main points of our projects, updates from each sub group and areas that we could improve on based on our design 1.0. Whenever we were unsure of the requirements, we would approach our supervisor and he would always give us conducive feedback so that our application can be better. When part of my code required another group member's code, I would contact them and ask for a short zoom session to discuss. Not only that, as there were many parts of coding to our application, if we did not communicate properly, our parts and coding could clash with one another. Overall, I feel that Communication is one of the most important aspect in the entire project.