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

**Individual Report**

Name: **\_\_\_\_\_\_\_\_\_\_Liu Xiao\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_**

Group No: **\_\_\_\_\_\_\_Group 5\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_**

Project Title: **\_\_\_\_\_My Health\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_**

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

**Creation and configuration of SQLite database**

As the in-charge person of the backend implementation I decided to use SQLite database for our After conducting online research and trial and error. As it is the friendliest database for react-native application and there are several online tutorials available to follow through.

I first created an independent database using SQLite DB Browser which consist of 5 tables, including user login info, user symptoms info, user diet tracking, appointment and care person info. Each table consist of a unique auto increment Id.

**Set up backend connection for SQLite database**

I manage to set up the backend connection between our react-native mobile app and the SQLite database I created, using Visual Studio Code and Typescript. In the beginning there were numerous compatibility issues, but I managed to solve it accordingly. Our app is now able to perform CRUD functions to the database.

**Created Login function and User info display on the App Home page**

Ideally the app is supposed to authenticate using Singapass API, however, considering the time constrain and the main focus of the app, I decide to use a simple login instead to validate the user and display basic user info.

**Collect user input for e-consult Q&A page Creation of User Info Summary page**

For the E-consult function we have a Q&A session for users to check up their current status and symptoms before consulting the doctor. My job was to keep track of the user input for each of the declaring pages by post the info to database for future reference. Also, on the user summary page, all the user input will be display and verified by performing a get function from database.

**Other general contributions**

Apart from the implementation of the backend connection and database, my other general contribution also includes helping on research and the implementation of video call function, creating the prototype, report writing and presentations etc.

**Reflection on Learning Outcome Attainment**

Point 1: **\_\_\_\_\_\_ Lifelong Learning\_\_\_\_**

During the development of this application, I have picked up some new app development tools which I have never used before. Such as SQLite DB Browser and react native format. At the planning stage I recommended OutSystem for our app development, it is a low code and well-integrated tool which I am familiar with. However, due to the unfamiliarity of other team members I had to use react native to develop the application which costed me extra time to pick up. It was huge challenge for me as the format doesn’t work well with most backend codes that I am unfamiliar with. I spend much time watching online tutorial and achieved very little progress in the beginning. However, as I practice on more files, I began to get proficient with it. Then, I discovered another tool SQLite DB Browser to assist me on backend debugging. I manage to set up the backend connection smoothly. Sometimes we need to have an open mind to the new technology and a learning attitude, so we can keep up the trend.

Point 2: **\_\_\_\_\_\_The Engineer and Society\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_**

At the very beginning of our project when we were deciding which topic to choose from, I did some research on the medical service and the aging population situation of Singapore, I found out that there are approximately 38% of the elderly residents have three or more chronic health conditions, these conditions mostly effecting their mobility and thus causing most of them unable to obtain timely medical services. However, the data shows there are in fact plenty of e-medical apps available online for people like them. But none of the apps are trending. It is only when I read a paper about digital literacy of the older generation caused the low adoption rate. Thus, we decided to develop an e-health app which is designed especially for older generation to address this issue. This experience taught me that we as engineers must focus on the ‘pain points’ of the issue before start to work on the development process. After all, engineering is to help the society.