

ABSTRACT

Among the ideas of sharing information, ride-sharing is one of the promising growing trends. The time taken travelling around the campus is high, and it is an issue as public transport are provided around the campus. The issue worsen when it comes to peak hour travel among faculties and colleges. In UPM Serdang Campus there are 3 units of single-seated MyCOMS. A mobile application has been designed to allow students and staffs of UPM Serdang campus to coordinate and use MyCOMS. However, the application is not deployed currently, and several weakness have been found in the application. This project aims to design and develop a secured in campus ride sharing Android application. Other than that, a prediction of station level demand can also be done based on simulation and real time data. Lastly the system design performance is evaluated. The application is built by using Android Studio. Google Maps API is used to obtained location information of both MyCOMS and user. The data obtained such as location of MyCOMS and user details is stored in Firebase. The application that has been developed is able to locate real time location of MyCOMS, place and manages booking of the vehicle. Fuzzy logic is used to predict the station level demand with simulation of data which includes location of station, temperature of the day, time of travel and population of station. In conclusion, the fully workable Android application is developed for MyCOMS is capable of providing convenience and resolving part of the issues in commuting in campus for UPM students and staff.

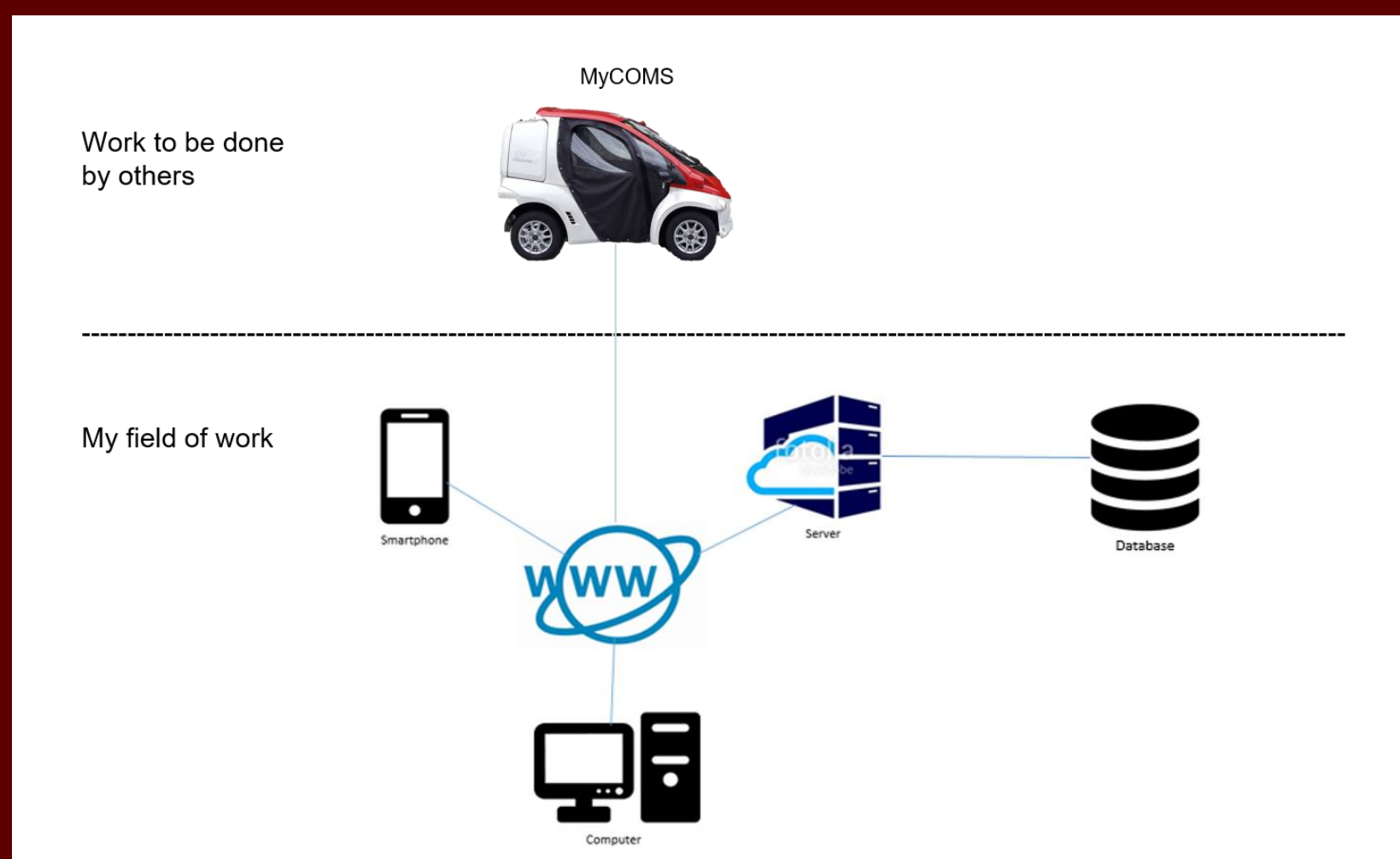
AIM AND OBJECTIVES

The aim of this project is to develop a fully working secured in campus ride-sharing application.

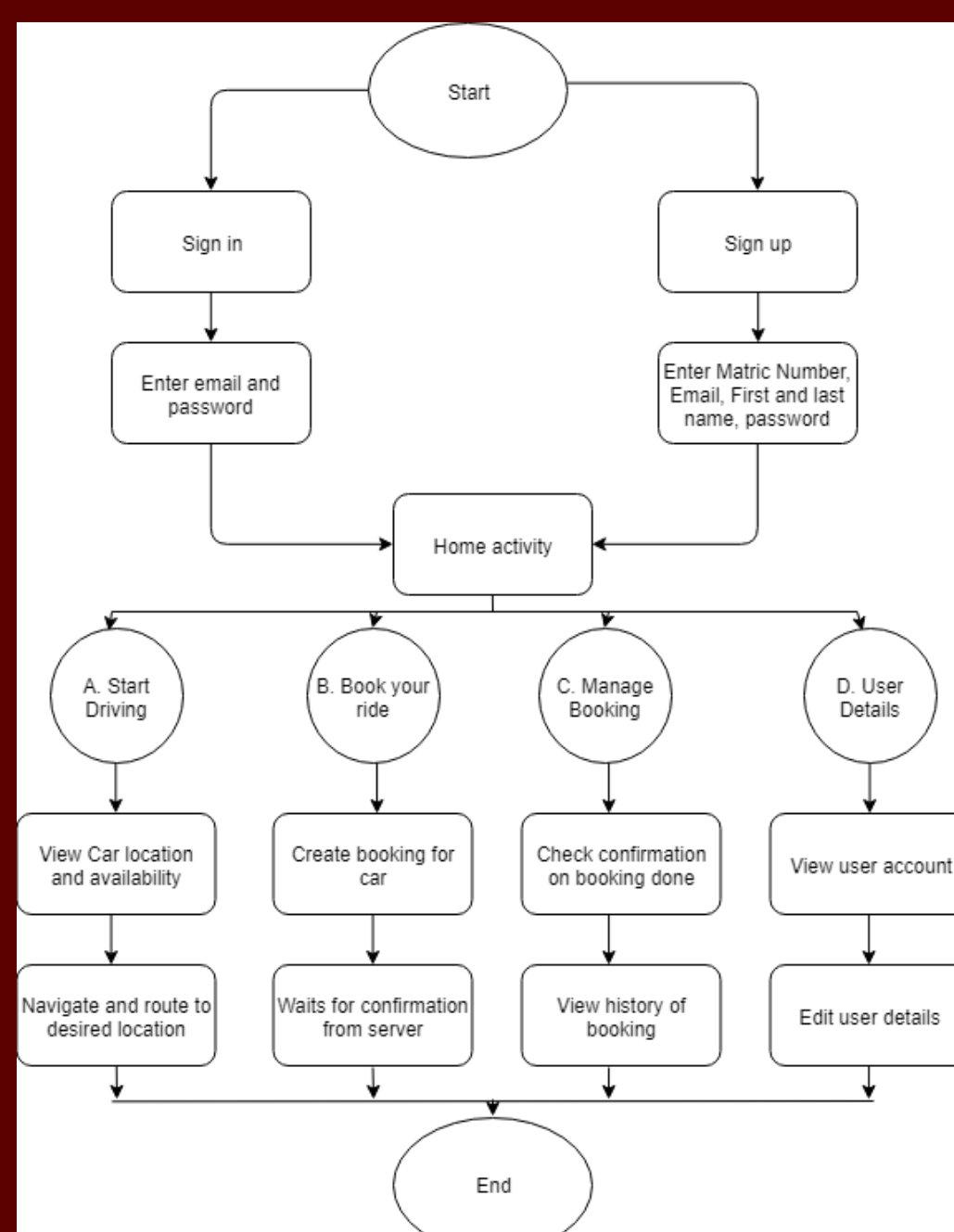
The objectives of this project are:

1. To design and create an EV ride-sharing application in UPM Serdang campus.
2. To predict station level demand of EV.
3. To evaluate the system design performance.

METHODOLOGY

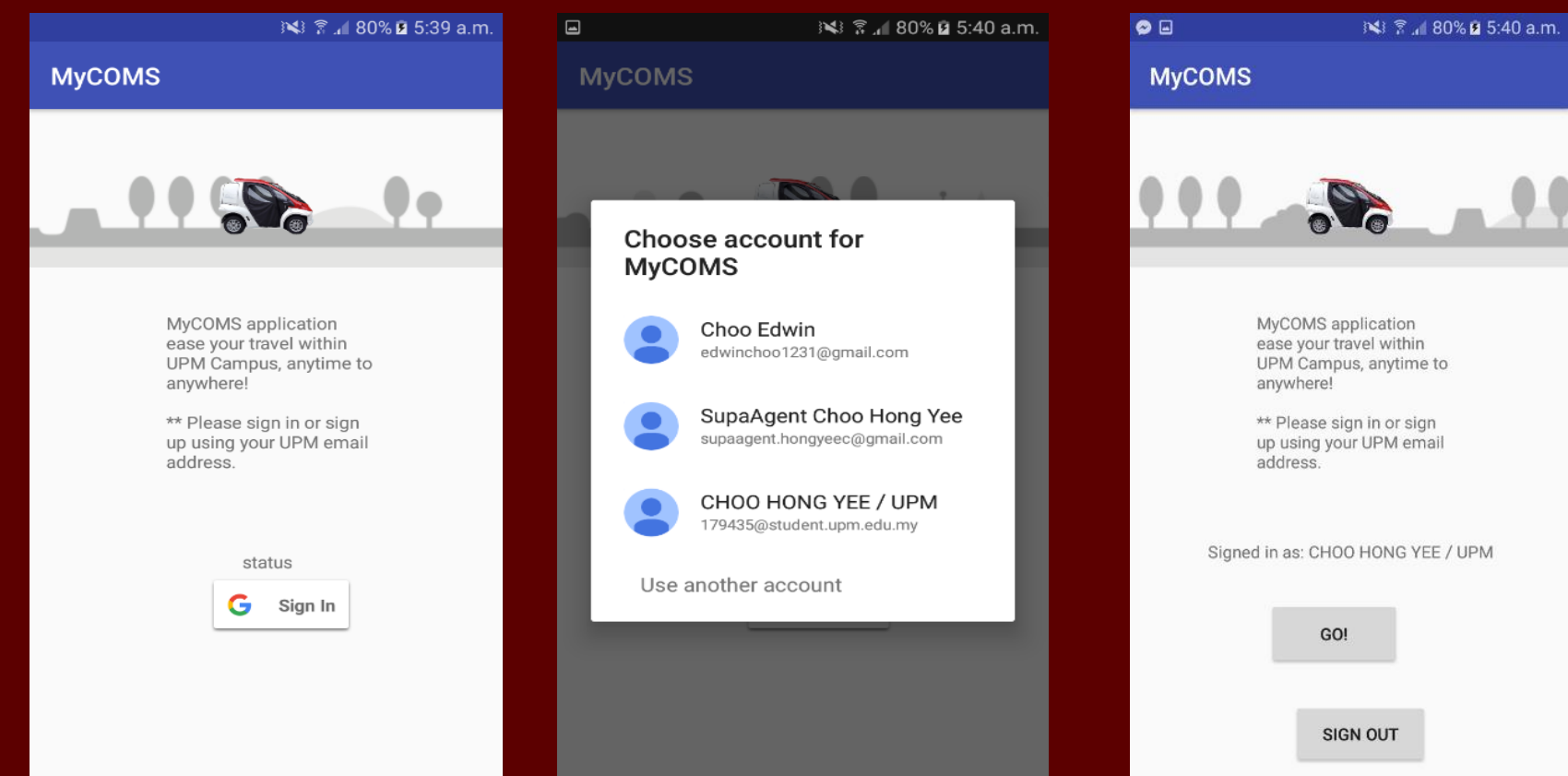


System block diagram of the system

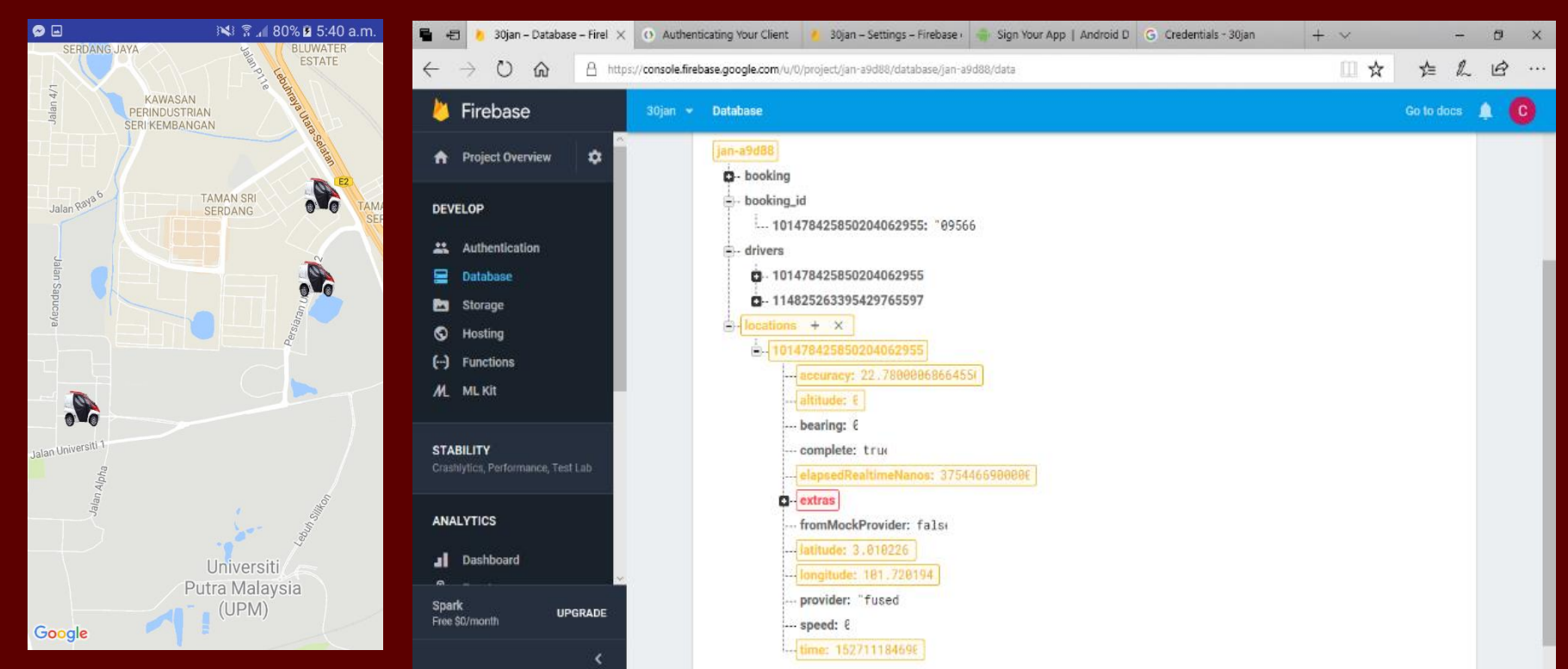


Flowchart of the system

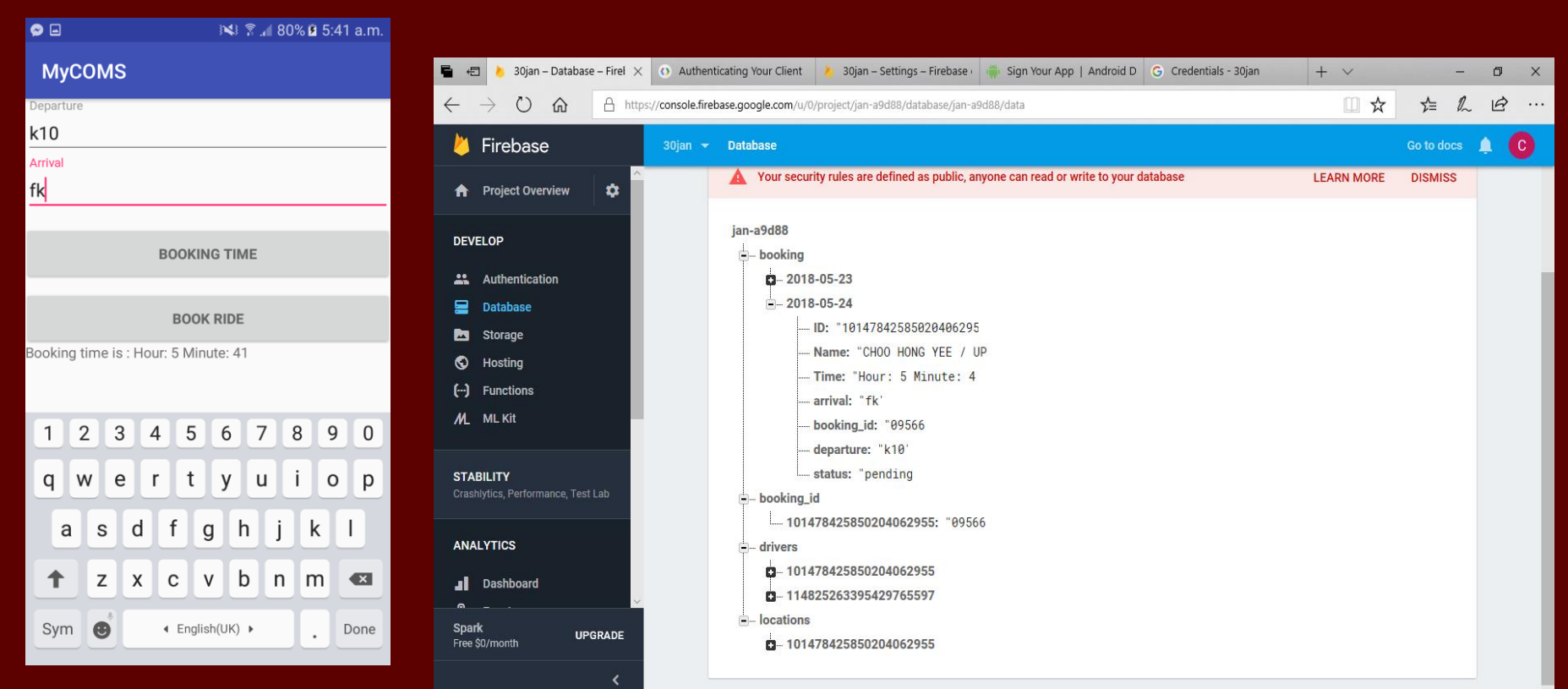
RESULTS



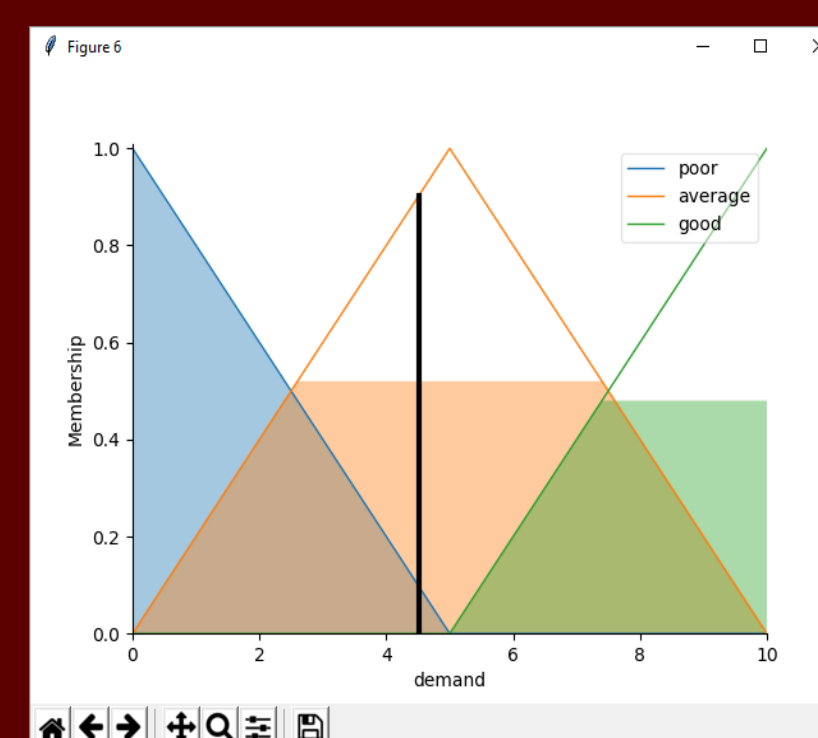
Authentication of the system



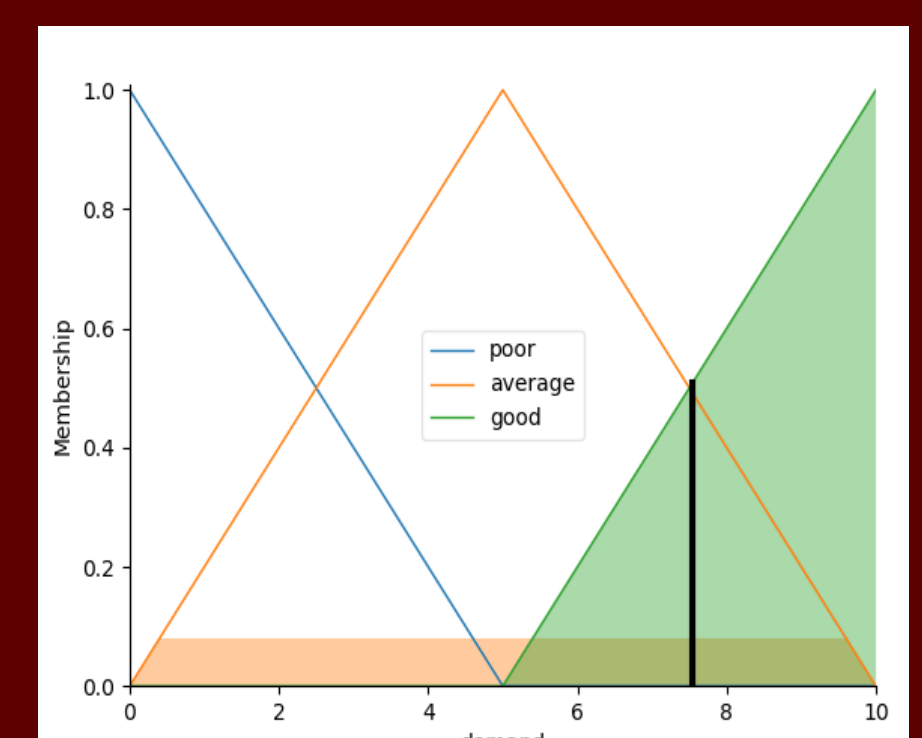
Location tracking



Managing booking



Case 1: Fixed input



Case 2: Demand level > 7.5

CONCLUSION

In conclusion, an Android based single-seated vehicle booking and ride sharing system is developed and presented in a form of Android mobile application, MyCOMS. MyCOMS application is developed with real time viewing and booking of vehicle features.

