Transportation Fleet Tracking System

Alp Eren Eskigöçmen – Çavuş Çiçek – Oğulcan Demirdizen
Advisor: Sadık Eşmelioğlu

Çankaya University, Department of Software Engineering

Abstract

Transportation Fleet Tracking System (TFTS) is a mobile devices based application to allow users find their shuttle location, report problems, track their shuttle's destination and also they can check shuttle's quota.

Introduction

Nowadays, it is a big problem to know where the school and workplace shuttle buses are, whether there is room left or not, and how long it will take to reach the stop. We will fix this problem with our project. There is some related works such as "EGO CEPTE" but we can't see the quota in this app. Also it's not integrated to private shuttle companies.

Company Info

The target users of the Transportation Fleet Tracking System (TFTS) project are students, teachers, company employees and shuttle drivers.

Solution

The Transportation Fleet Tracking System (TFTS) addresses the problem of tracking school and workplace shuttle buses, monitoring their occupancy, and estimating arrival times. Our solution encompasses several key functionalities:
1-Real-Time Tracking
2- Occupancy Monitoring
3- Problem Reporting
4- Integration with Private Shuttle Companies

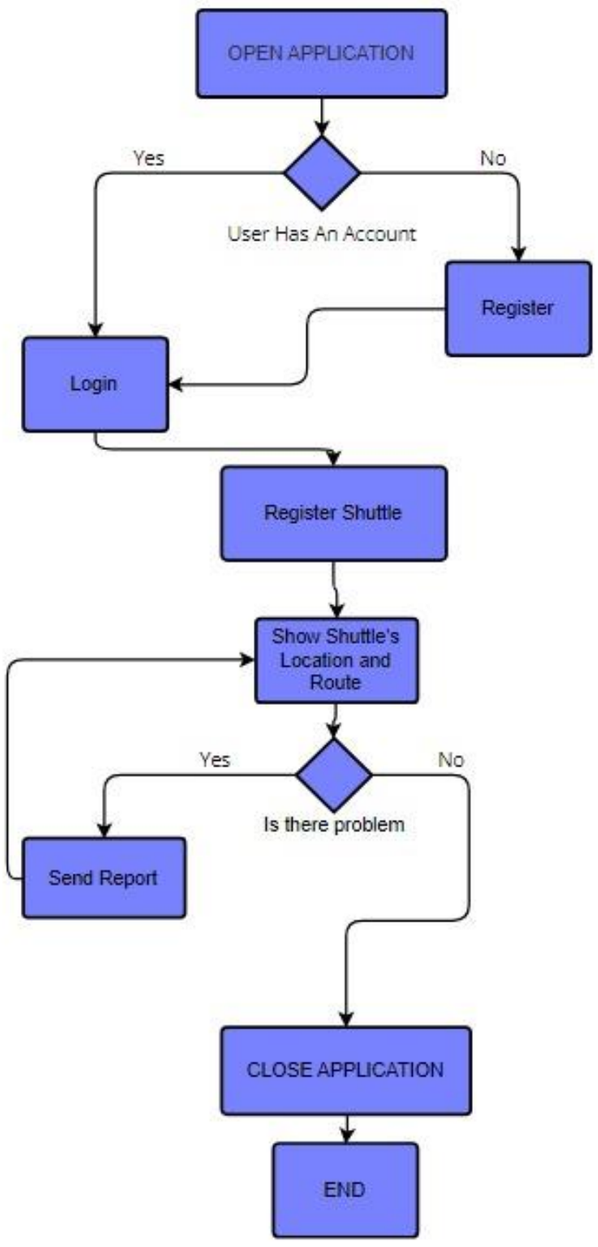

Figure 1 - Flowchart

Figure 2 – Database

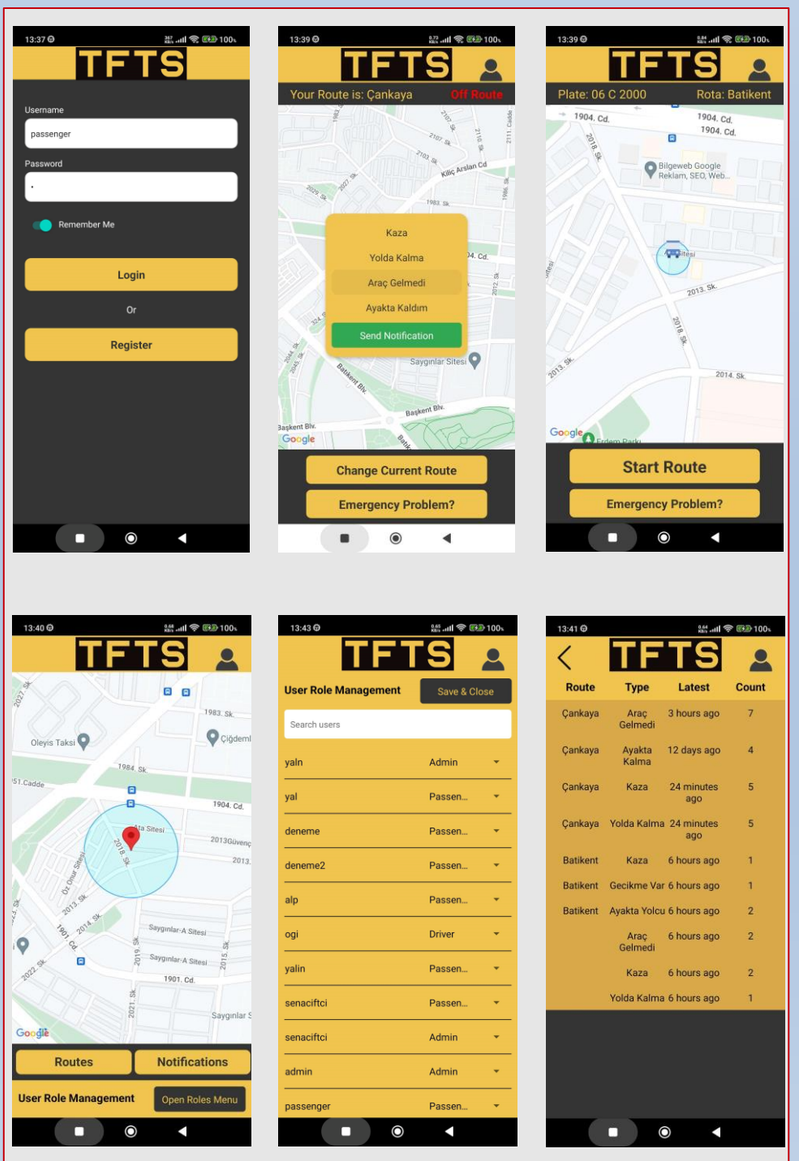

Figure 3 – Finished Product

Results & Conclusion

Since we used unfamiliar software technologies in this project, our adaptation process was long and painful, but it also contributed a lot to us. What we learnt while doing this project: project management and creation of documents, problems that may occur when we use time inefficiently, Expo, GO, JWT, MongoDB. Before starting the project, we did market research. Then we created a project plan by thinking about the work we will do. The first thing we did was to complete the first version of SRS. We completed our first draft by creating the SDD in line with SRS. We created our Test Plan document by taking these documents as a source. After doing code implementation for the first sprint, we completed the tests of the features and finished our sprint. Using this cycle, we did three sprints in total and finalised our project.

Acknowledgement

We do not get any help from third person except our advisor Sadık Eşmelioğlu. He leaded the process and kept us motivated. Thanks to our advisor, we gained a lot of experience.

Alp Eren Eskigöçmen - Çavuş Çiçek - Oğulcan Demirdizen