

Software Requirements Specification for WitsCABS

Lab 2 Submission - Group 10

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August 29, 2017

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1 Introduction

1.1 Purpose

The purpose of this document is to describe what is required for the development of WITSCABS (a lift service similar to the one provided by Uber). This document is meant to convey how we have decided to develop our system and the functionality required for the first release. This will be achieved through a description of the scope of the software being designed, so that the project bounds are clearly defined, in order to prevent scope creep. The document will then for both the front and back ends describe their functional requirements. There will also be a description of the software required to be integrated with our software solution in order for it to be functional according to the requirements. In addition to this, a fully descriptive documentation of all programming techniques as well as software engineering techniques that we as a group will follow during development will be included. These techniques will be substantiated in order to provide a clear systematic approach to the complete design of our project. Furthermore, all resources consulted will be included as well.

1.2 Analysis of Front-end System (Mobile App)

We have decided to make use of an android application as the primary user-accessible interface for our project. The reason for choosing a mobile application is quite obvious in our case as the drivers who will be using the application have to be in their vehicle at the time of using the application as well as moving in the vehicle while using it. This automatically squashes any idea of a desktop application or web based application as the accessibility would be a major issue. The possible downside to this would be that each driver requires a cellphone/tablet which will support the software WITSCabs as well as a mobile data connection.

The call centre will be using a desktop application in conjunction with the android application although the users will not be registered to the database but instead will have access to the database in a read-only capacity. This will allow the call-centre to access client details as well as drivers details which will in turn allow them to run statistics checks as well as be prepared in the case of an emergency. For this, it is clearly most beneficial to use a desktop application preferably with an internet connection as immediate run-time

statistics as well as driver locations etc. are imperative.

For this purpose we have chosen to develop our software as an android application as it is the most common operating system friendly platform for a mobile application. Linking with this, it has been decided as a group that a predominant bulk of the code used should be Java as it is the most commonly used programming language for Android applications as well as the most familiar between each member of the group. Adding to this, we have decided to use IntelliJ idea as an IDE for our app development as it is popular, free to students and boasts many high-end features which will benefit the development of our project.

2 Functional Requirements

2.1 Front-End Mobile App

- Send Status updates to the ser on whether this driver is available or not
- Send location updates so the server knows where you are when status is marked available.
- Be able to receive passenger information that will help the driver find the passenger.
- Find the quickest route to the destination.
- Update Driver details
- Register Driver onto the system.

3 Credentials

3.1 The Credentials

- Purpose by Robert, Rashad, and Jason (Section 1.1)
- Scope by Amine (Section 1.2)
- Image Process Diagram by Robert
- Overview by Jason (Section 1.3)
- Team Management by Jason (Section 2.1.1)
- Team Meetings by Jason (Section 2.1.2)
- System Architecture Analysis by Jason (Section 2.2)
- Analysis of Front-end System (Mobile App) by Rashad (Section 2.3)
- Analysis of Front-End System (Desktop App) by Robert (Section 2.4)
- Analysis of Back-End System by Robert (Section 2.5)
- Additional Software APIs Required by Amine (Section 2.6)

3.2 Task and Responsibilities Dedications

- Front-End Mobile App to be handled by Amine and Rashad (Section 3.1)
- Front-End Desktop Application to be handled by Robert (Section 3.2)
- Back-End Server to be handled by Jason (Section 3.3)