Software Requirements Specification

For

Any CAB

Prepared by

<NAME1>

<NAME2…>

October 06, 2014

# Introduction

AnyCab is a taxi cab finder that combines the web and mobile android platform. AnyCab connects you directly to taxi drivers through the agency in the TAP of a button; you can find yourself in a taxi cab faster than ever.

## Purpose

AnyCab introduces a completely unique driver’s application, where drivers can receive push notifications of the passenger’s location. The driver’s application like the passenger app is completely Free and light. AnyCab is a great online / mobile platform for both taxi drivers and passengers. No more waving or whistling to stop a taxi, just “TAP for Taxi” and AnyCab will instantly connect you.

## Product Scope

Users can download an application on to their phones which can be used to locate cabs which are nearby to their current location by taking the GPS coordinates of the user. He/she can then call the cab agency to book a ride in that cab. The agency would forward the users coordinates on to the cabbies application and the cabbie can locate the user without any hassle.The cab agency can track each cab driver using the information from their mobile phones. Users can notify authorities if a cabbie misbehaves as the application provides users with information on the cab driver.

# Overall Description

## Product Perspective

Anycab provide a system where the entire cab system has a central control. Every cab agency or private cabbies can register at our site. Details of every cab driver would be stored inside the database. Each cabbie would have an android application on their mobiles. The application that calls the taxi cab driver near you. Let your cell phone with GPS to find the nearest taxi from his position. To order a taxi online with the phone simply select your starting point . You see your current location and taxis available nearby. Just use the button REQUEST TAXI . You can follow the driver in real time , will know which vehicle he will be arriving ( car model and plate) and receive information to be able to get in touch with him directly .

# External Interface Requirements

## Hardware Interfaces

Processor : Pentium Dual-Core

Memory : 2 GB RAM or higher

Processor Speed : 782 MHz

Storage : 320 GB HDD

Monitor : 1024 \* 768 Resolution Color Monitor

## Software Interfaces

The product will be comprised of interaction between the following software products:

1. **Java Standard Edition (JAVA SE)**

It includes a huge upgrade to the Java programming model and a coordinated evolution of the JVM, Java language, and libraries. Java 8 includes features for productivity, ease of use, improved polyglot programming, security and improved performance

1. **Android SDK**

Android software development is the process by which new applications are created for the Android operating system. Applications are usually developed in the Java programming language using the Android Software Development Kit.

1. **Eclipse Kepler**

Eclipse is an integrated development environment (IDE). It contains a base workspace and an extensible plug-in system for customizing the environment. Written mostly in Java, Eclipse can be used to develop android applications.

**FRONT END:**

**a) JAVA**

Java Soft, an operational company of sun Microsystems, spend years developing a high-powered programming language for the 90’s beyond. Java delivers on promise by being most robust, easy-to-use, and versatile programming language available today. It includes the best aspects of earlier programming languages such as C and C++, allows you to create powerful applications, has features such as built-in multimedia capabilities that make creating multimedia presentations easier than ever, and leaves out those things we all hated about C and C++ like multiple inheritance, operator overloading, and pointers.

Java is first and foremost an object-oriented programming language. Many programmers are surprised when they discover how easy it is to follow sound object-oriented design practices with Java. The following sectors give you a better understanding of what java offers.

**b) JAVA SERVER PAGES** (**JSP**)

It’s a technology that helps software developers create dynamically generated web pages based on HTML, XML, or other document types. Released in 1999 by Sun Microsystems,[3] JSP is similar to PHP, but it uses the Java programming language. To deploy and run JavaServerPages, a compatible web server with a servlet container, such as Apache Tomcat or Jetty, is required

JSP can be used independently or as the view component of a server-side model view controller design, normally with JavaBeans as the model and Java servlets (or a framework such as Apache Struts) as the controller. This is a type of Model 2 architecture. JSP allows Java code and certain pre-defined actions to be interleaved with static web markup content, with the resulting page being compiled and executed on the server to deliver a document. The compiled pages, as well as any dependent Java libraries, use Java byte code rather than a native software format. Like any other Java program, they must be executed within a Java virtual machine (JVM) that integrates with the server's host operating system to provide an abstract platform-neutral environment. JSPs are usually used to deliver HTML and XML documents, but through the use of Output Stream, they can deliver other types of data as well. The Web container creates JSP implicit objects like page Context, servletContext, session, request & response.

**BACK END:**

**a) CLOUD DATABASE**

* A cloud database is a database that typically runs on a cloud computing, such as Amazon EC2, GoGrid, Salesforce and Rackspace. There are two common deployment models: users can run databases on the cloud independently, using a virtual machine image, or they can purchase access to a database service, maintained by a cloud database provider. Of the databases available on the cloud, some are SQL -based and some use a No SQL data model. Most database services offer web-based consoles, which the end user can use to provision and configure database instances. For example, the Amazon Web Services web console enables users to launch database instances, create snapshots (similar to backups) of databases, and monitor database statistics.
* Database services consist of a database manager component, which controls the underlying database instances using a service API. The service API is exposed to the end user, and permits users to perform maintenance and scaling operations on their database instances. For example, the Amazon Relational Database Service's service API enables creating a database instance, modifying the resources available to a database instance, deleting a database instance, creating a snapshot (similar to a backup) of a database, and restoring a database from a snapshot.
* Database services make the underlying software stack transparent to the user - the stack typically includes the operating system, the database and third-party software used by the database. The service provider is responsible for installing, patching and updating the underlying software stack.
* Database services take care of scalability and high availability of the database. Scalability features differ between vendors - some offer auto-scaling, others enable the user to scale up using an API, but do not scale automatically. There is typically a commitment for a certain level of high availability (e.g. 99.9% or 99.99%).

**3.4 SQLite**

SQLite is a relational database management system contained in a C programming library. In contrast to other database management systems, SQLite is not a separate process that is accessed from the client application, but an integral part of it.

SQLite is ACID-compliant and implements most of the SQL standard, using a dynamically and weakly typed SQL syntax that does not guarantee the domain integrity.

SQLite is a popular choice as embedded database for local/client storage in application software such as web browsers. It is arguably the most widely deployed database engine, as it is used today by several widespread browsing, operating systems, and embedded systems, among others. SQLite has many bindings to programming languages. The source code for SQLite is in the public domain.

Unlike client-server database management systems, the SQLite engine has no standalone processes with which the application program communicates. Instead, the SQLite library is linked in and thus becomes an integral part of the application program. The library can also be called dynamically. The application program uses SQLite's functionality through simple function calls, which reduce latency  in database access: function calls within a single process are more efficient than inter-process communication. SQLite stores the entire database as a single cross-platform file on a host machine. SQLite read operations can be multitasked, though writes can only be performed sequentially.

# Other Requirements

## Performance Requirements

• The overall system should be fast and error free.

• It should have built in error checking and correction facilities.

• The system should be able to handle large amount of data comfortably.

## Software Quality Attributes

Reliability

In order to ensure reliability, this system is being designed using software that is established to be stable and easy to use.

Availability

This system is designed to run 24/7 and be readily available to the user.