

# Requirement Analysis and Specification Document

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# Introduction

## 1.1 Purpose

This document aims to describe, specify and analyze the software requirements for *My Taxi Service*.

My Taxi Service is needed to provide a passenger-friendly interface to interact with the city's taxi service, and ensure a fair management of the city-wide taxi deployment.

## 1.2 Scope

The passengers should be able to use an application (either mobile or browser based) to request a taxi through the system, which in turn should answer with the ETA<sup>1</sup> and identification code of the incoming tax.

The passengers should be compelled to provide their current location to the system, for their request to be accepted.

The taxi drivers should be able to use a mobile application to communicate their availability to the system, and accept or refuse incoming calls.

The system shall manage a queue of taxis for each taxi zone<sup>2</sup>.

The system shall receive GPS location data from each taxi, and use that information to assign each taxi to a taxi zone; an available taxi is automatically placed into the taxi queue belonging to the taxi zone it currently occupies.

The system shall remove a taxi from the queue upon receiving a confirmation in which the driver accepts an incoming call; a further confirmation is also sent back to the driver. If a taxi (driver) does, on the other hand, refuse an incoming call, the system shall move it to the bottom of its taxi queue.

The system matches a passenger's position to a taxi zone, and uses that information to forward the call to the first taxi available in the relative taxi queue.

The system shall provide an Application Programming Interface, to make room for future improvements.

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<sup>1</sup>Estimated time of arrival

<sup>2</sup>Partition of the city

**1.3 Definitions, Acronyms and Abbreviations**

**1.4 Reference documents**

**1.5 Overview**

# Overall description

## Specific requirements