Namal University, Mianwali

Department of Computer Science
Software Engineering

Software Requirements Specification (SRS)

FareShare

A Ride-Sharing System

Team Members:

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Submission Date: December 28, 2025

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1 Introduction

1.1 Purpose

This document specifies the software requirements for the FareShare application. It provides a detailed description of the functions and constraints of the system, serving as the primary technical agreement between the developers and stakeholders.

1.2 Scope

FareShare is a cross-platform mobile application designed to optimize ride-sharing in Pakistan. The software facilitates the connection between riders and drivers, offering fair pricing algorithms, real-time GPS tracking, and enhanced safety features.

The system will:

- Enable secure user registration and authentication
- Match riders with nearby available drivers
- Calculate dynamic but fair pricing
- Provide real-time tracking and navigation
- Ensure user safety through emergency features

1.3 Definitions, Acronyms, and Abbreviations

- SRS: Software Requirements Specification
- RP: Requirement Provider
- NoSQL: A non-relational database for real-time data handling

1.4 References

1. IEEE Std 830-1984, IEEE Guide to Software Requirements Specifications
2. FareShare Project Proposal, Namal University

2 General Description

2.1 Product Perspective

FareShare is a standalone mobile application ecosystem consisting of separate interfaces for Riders and Drivers.

2.2 Product Functions

- User Management: Secure registration and login
- Ride Booking: Map-based pickup and drop-off
- Live Tracking: Real-time visualization

3 Specific Requirements

3.1 Functional Requirements

- FR-1 Registration using phone number with OTP verification
- FR-2 Fare estimation before ride confirmation

3.2 Non-Functional Requirements

3.2.1 Performance Requirements

- Matching latency less than 5 seconds

4 Appendices

4.1 Context Diagram

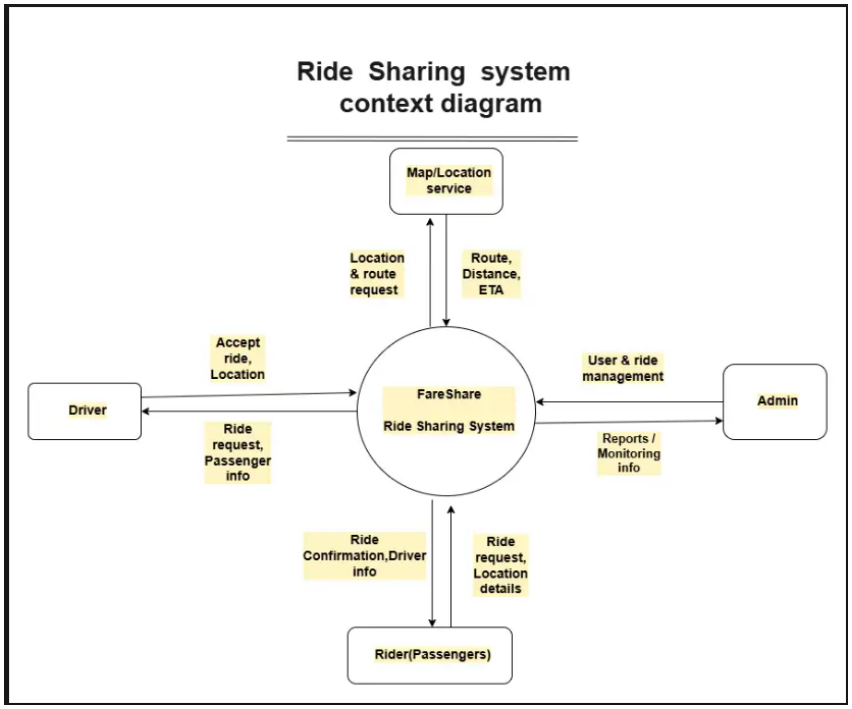

Figure 1: Context Diagram of FareShare System

4.2 Use Case Diagram

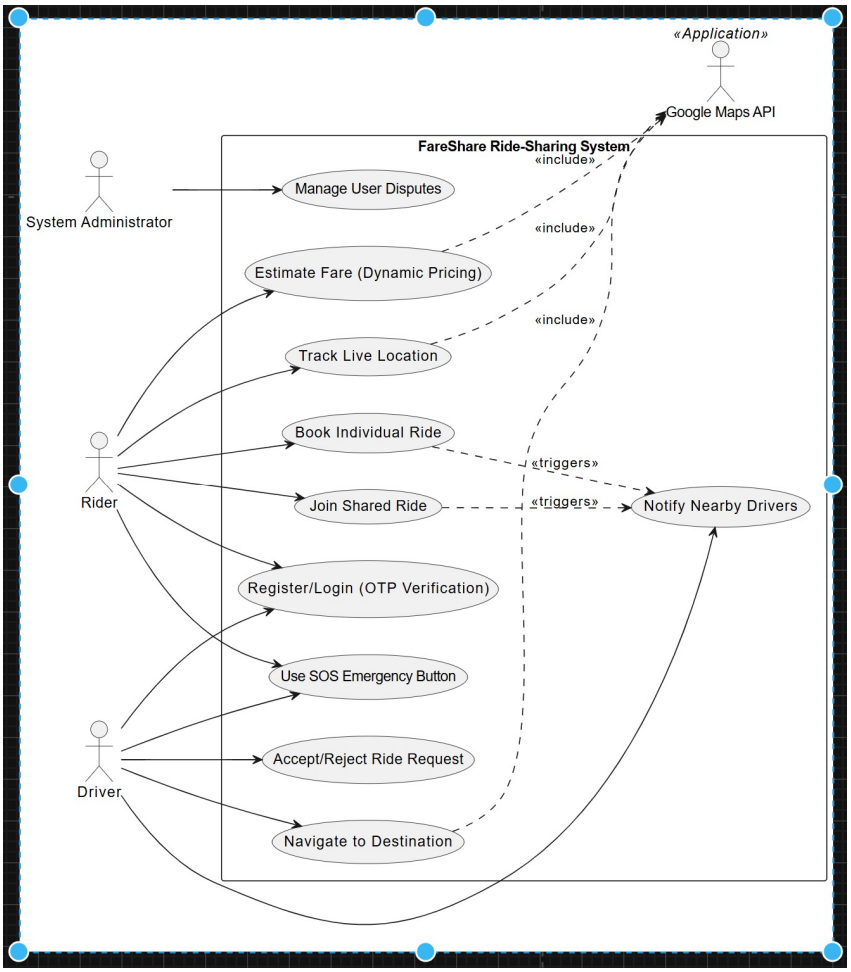

Figure 2: Use Case Diagram of FareShare System