**Car Pooling**

**Business Requirement Specification**

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# 1. Introduction

# Document Purpose

This document communicates the business requirements and scope for developing Car Pooling System. The scope of this document is to define the functional and non functional requirements, business rules and other constraints requirements.

# Project Background

As urban areas face increasing traffic congestion and environmental concerns, there is a growing need for more efficient transportation options. People who travel similar routes often struggle to find a convenient and reliable way to share rides. This leads to wasted resources, higher fuel consumption, and increased pollution, as many individuals continue to drive alone without a streamlined way to coordinate carpooling.

# Goals of the project

The main objective of this project is to create a web platform that facilitates carpooling by connecting drivers who have available seats with passengers seeking rides. Individuals looking to share rides will be able to register on the site and easily find and book available rides based on their travel routes and schedules. At the same time, drivers can list their rides, manage bookings, and efficiently coordinate with passengers. This solution aims to reduce traffic congestion, lower fuel consumption, and minimize environmental impact by promoting shared transportation.

# Customers and Stakeholders

Customers:

1. Drivers (vehicle owners)

2. Riders (passengers)

# 2. Business Requirements Overview

# User profiles to store essential information (name, contact details, preferences) for matching compatible carpool partners.

# Ride requests and offers for passengers and drivers to connect for specific routes, dates, and times.

# Route planning and matching algorithms to optimize travel time and minimize detours.

# Real-time tracking of carpooling journeys with estimated arrival times.

# Transparent cost calculation and secure in-app payment processing.

# Customizable notifications and reminders for ride requests, confirmations, and updates.

# Safety features including driver/passenger verification, emergency contact info, and in-app communication.

# Post-ride ratings and reviews to build trust within the carpooling community.

# Customizable preferences and filters (smoking, music, gender, interests).

# Reporting system for incidents or inappropriate behavior with dedicated customer support.

# 3. Functional Requirements Overview

**1. User Management Module**

* Users can register, log in, and manage their profile information.
* Users can select a role (Driver or Passenger) upon registration.
* Profile management includes viewing and updating personal details.
* Password management allows users to reset or change their password.
* **Rating System**: Allows passengers to rate drivers after each ride and vice versa, providing feedback to enhance user experience.
* **Review Display**: User profiles display ratings and feedback summaries to help other users make informed decisions when booking.

**2. Driver Module**

* Drivers can create and manage rides with details like pickup/drop-off locations, date, time, and fare.
* Drivers can view all passenger bookings for their rides.
* Drivers can accept or reject passenger booking requests.
* Drivers receive ratings and feedback from passengers after each ride.

**3. Passenger Module**

* Passengers can search for available rides based on location and time.
* Passengers can book seats in a chosen ride and receive booking confirmation.
* Passengers can cancel their booking if needed, with notifications sent to the driver.
* Passengers rate drivers after each completed ride.

**4. Notification Module**

* Real-time notifications are sent for booking requests, confirmations, and cancellations.
* Passengers and drivers receive reminders for upcoming rides.
* System notifications are sent to inform users of any major updates or maintenance.

**5. Admin Module**

* Admins can view and manage all user accounts, with options to deactivate if needed.
* Admins can monitor and cancel rides flagged for violations.
* Admins have access to system-wide ratings, reviews, and feedback.
* Analytical reports on user activity, ride bookings, and cancellations can be generated.

# 4. Non-functional Requirements

# The website should use professional design, look and feel and color scheme.

# Users will have no limitations for accessing the application through Internet. The portal being an internet application, it is difficult specify exact number of visitor or users. Hence, we will target the system to support between 5 and 10 million users on launch of phase 1.

# Being a public website, the site must follow general usability guidelines for menus, navigation, colors, links and other actions provided on the screens.

# The system should be designed in such a manner that user will be able to complete tasks in minimum number of steps.