Project Title: CarConnect – A Car Rental Platform

STEP-2: Project Requirements Breakdown and Prioritization

## 1. Introduction

This document outlines the functional and non-functional requirements of the CarConnect Car Rental System. It classifies each requirement by priority to assist development planning and feature delivery.

## 2. Priority Levels

The requirements are prioritized as follows:  
- High (H): Essential for the MVP (Minimum Viable Product).  
- Medium (M): Important but not critical for initial release.  
- Low (L): Enhancements or additional features post-MVP.

## 3. Functional Requirements

### User Authentication [H]

Secure login and authentication for customers and admins.

### Register Customer [H]

Allow new users to sign up with personal details.

### Customer Profile Management [M]

View and update customer profile.

### Vehicle Management [H]

Add, update, delete, and list vehicle data.

### View Available Vehicles [H]

Display available vehicles to customers.

### Reservation System [H]

Create and manage vehicle reservations with real-time availability.

### Conflict Resolution [H]

Prevent overlapping reservations for the same vehicle.

### Reservation Notifications [M]

Send email/SMS confirmations and reminders.

### Reservation History [M]

Display past and current reservations for users.

### Admin Management [M]

Admin can add, update, delete and view other admins.

### Report Generation [L]

Reports on usage, revenue, and fleet availability.

### Password Security [H]

Hash passwords before storing.

### Role-Based Access [H]

Different functionalities for customers and admins.

## 4. Non-Functional Requirements

### Performance [H]

System should support real-time booking and response.

### Usability [H]

Simple CLI interface for easy interaction.

### Maintainability [H]

Modular, object-oriented code with clean architecture.

### Security [H]

Secure sensitive data like passwords and personal information.

### Reliability [H]

Handle exceptions gracefully and ensure consistent database access.

### Scalability [M]

System should support an increasing number of users and vehicles.

### Testability [M]

Support unit testing for core services.