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Section: 9S090

Project Report: Car Rental Service

### 1. Introduction

The Car Rental Service is a dynamic, web-based platform designed to offer luxury car rental services across India. It caters to weddings, corporate travel, and special events, providing a seamless digital experience for both customers and administrators.

## **Technology Stack:**

→ **Backend:** Django (Python)

→ Frontend: HTML, Tailwind CSS, JavaScript

→ Database: PostgreSQL

## **Objectives:**

- → Enable easy browsing and booking of luxury cars.
- Provide an admin interface for managing users, bookings, and vehicles.
- → Ensure a responsive and user-friendly experience across all devices.

## 2. Project Overview

## **Key Features:**

- **→** User Module
- **→ Registration & Authentication:** Secure login and sign-up features.
- **User Roles:** Differentiates between Admin and Customer.
- Profile Management: Edit and update personal information.

## **Car Management Module:**

- **Car Listings:** Browse available cars with filtering options (type, price, seats).
- → Car Details: View detailed specifications, pricing, and booking options.
- → Admin Controls: Add, update, or remove cars from the fleet.

## **Booking Module:**

- → Online Booking System: Select pickup date, return date, and location.
- **→ Booking History:** View past and upcoming rentals.
- → Status Management: Booking statuses Pending, Confirmed, Cancelled, Completed.

## **Content Management:**

- → About Us, Services, and Locations pages for static business information.
- → **Testimonials** & **FAQs** to enhance user trust and clarity.

### **Admin Dashboard:**

Manage users, car listings, and bookings from a central dashboard.

## 3. Technologies Used:

Frontend: HTML, Tailwind CSS, JavaScript

Backend: Python, Django

Database: PostgreSQL

**Authentication:** Django's built-in auth system

## **Database**

The platform uses PostgreSQL as the backend relational database. The data is organized into multiple normalized tables for efficient querying and integrity

### 4. Database Structure

### **Main Tables:**

Users: user\_id, name, email, password, phone, address, user\_type

Cars: car\_id, model, type, seats, price, availability

**Bookings:** booking\_id, user\_id, car\_id, pickup\_data, return\_data, status

Content Tables: Services, Location, Testimonials, FAQs

## ER Diagram:

#### User

PK: user\_id username emall password phone address city pincode user\_type date\_joinen

#### Car

PK: car\_id model car\_type seats price\_per\_day is\_available image description features

#### Booking

PK: booking\_id FK: user\_id FK: car\_id pickup\_city start\_date end\_date total\_price status created\_at updated\_at

#### Service

PK: service\_id title description icon\_class

#### Location

PK: location\_id city address phone email

#### **Testimonial**

PK: test\_id name role content image rating

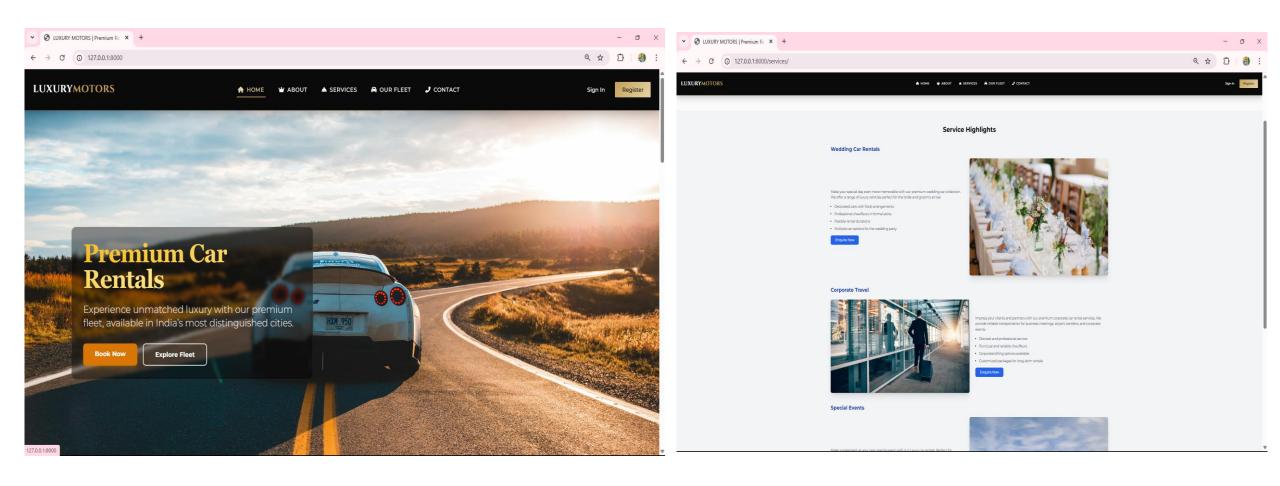
#### **FAQ**

PK: fag\_id question answer is\_active

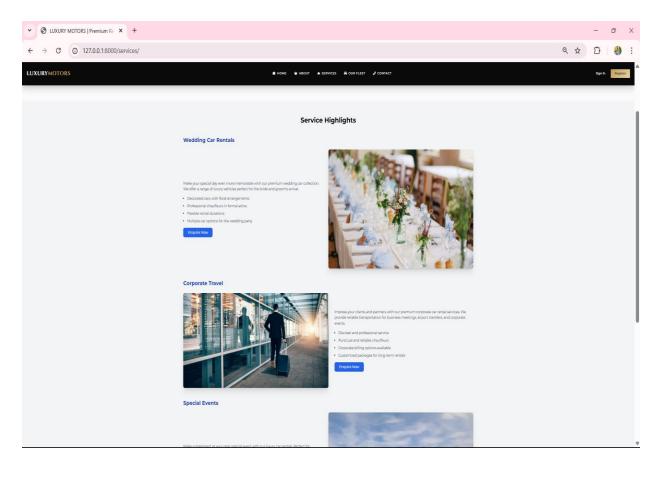
## **Screenshots:**

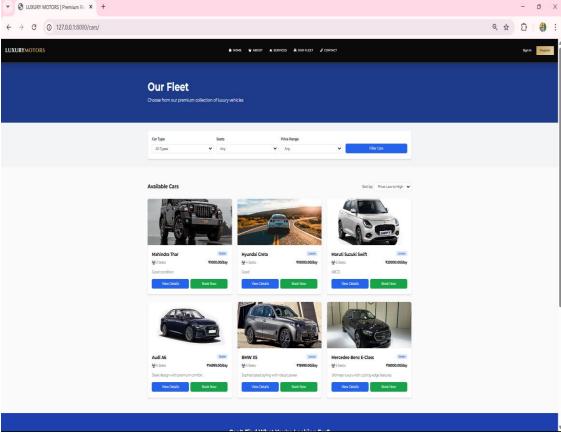
# **Home Page:**

## **About:**

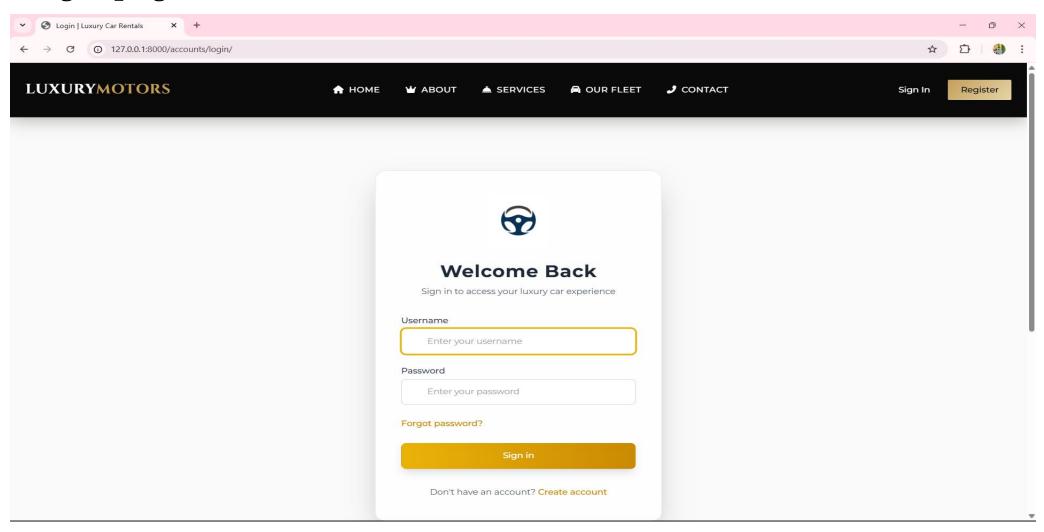


Services: Our Fleet:

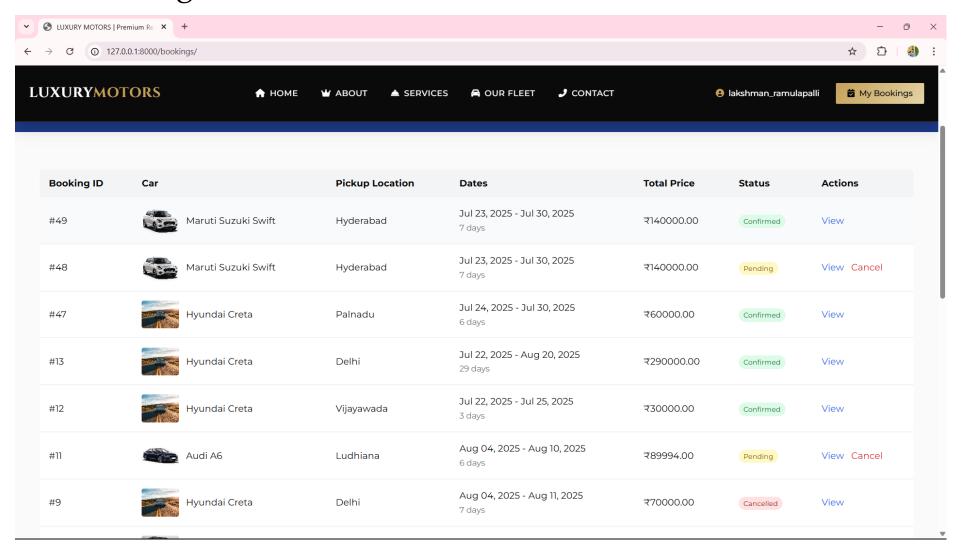




# Login page:



# User Bookings:



## **Feature Enhancements (Future Scope):**

## **Payment Gateway Integration**

Enable online payments via Razorpay or Stripe

## **Google Maps API Integration**

Show nearby cars or rental offices

## **Customer Reviews & Ratings**

Collect feedback post-booking

## **Loyalty Program**

Reward frequent users with discounts or credits

## **Mobile App Version**

Build cross-platform mobile app using Flutter or React Native

### **Email & SMS Notifications**

Notify users of booking confirmations or status updates

### **Conclusion:**

The **Car Rental Service** project is a fully functional, responsive web application for managing luxury car rentals in India. With powerful admin tools and a seamless booking process, it showcases:

Effective use of Django and PostgreSQL for backend development Tailwind CSS for a modern, mobile-first user interface Practical implementation of role-based access and booking logic This project lays a strong foundation for scaling up with advanced features like payments, maps, and mobile apps, making it a production-ready solution for the real-world rental industry.