Design Document

CarCtrl

3/24/25
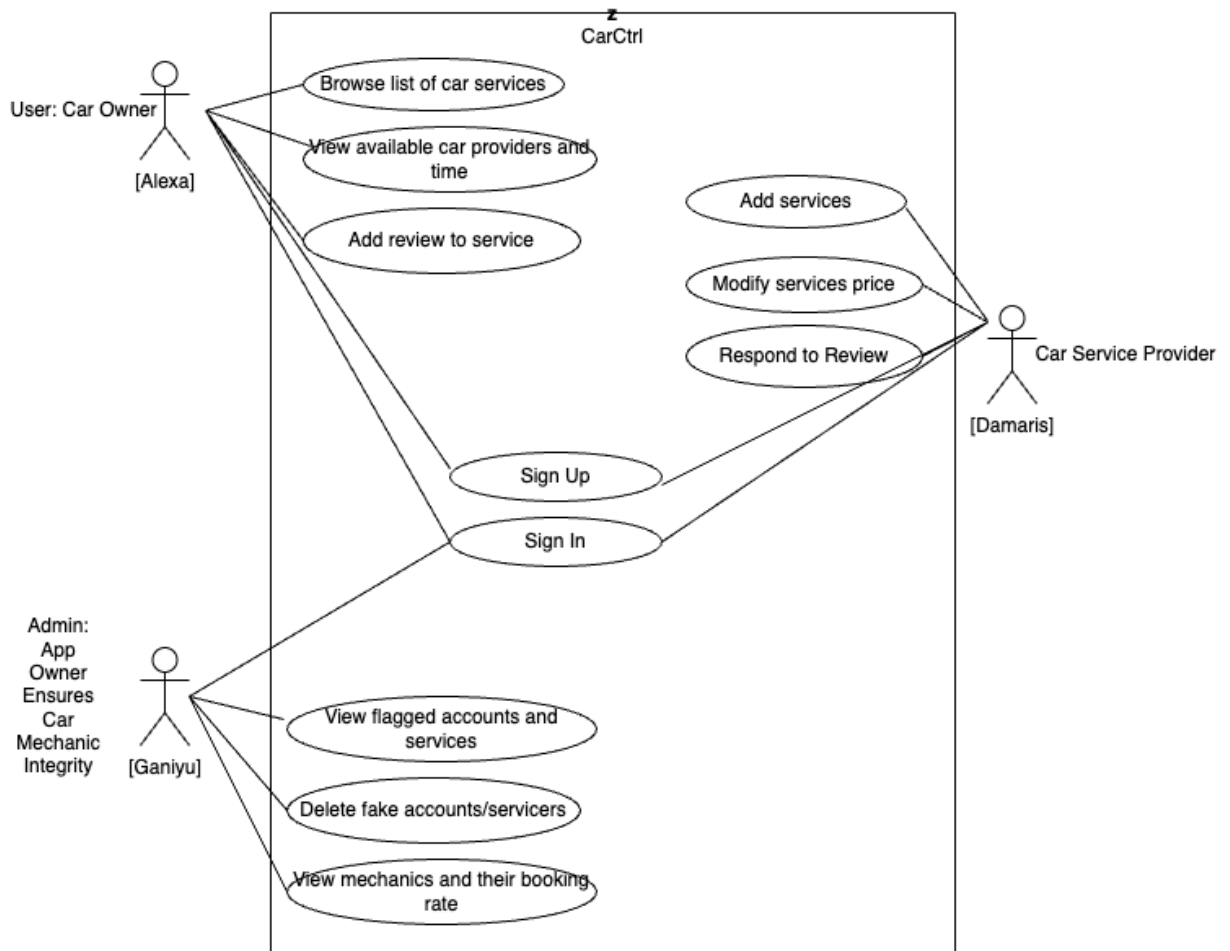
Version 1

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1. Project Overview

CarCtrl is a service provider locator application designed to help customers find mechanics and auto service providers. The platform enables users to book services, leave reviews, and interact with providers. Service providers manage their availability, services, and respond to customer feedback. A system administrator oversees quality control by moderating reviews and managing provider credentials.

2. Use-Case Model

3. Database Scheme

User
PK	user_id: int(5)
	name: varchar(20)
	username: varchar(20)
	password: varchar(50)
	email: varchar(100)
	phone_number: int(20)
	date_joined: date

Car
PK	car_id: int(5)
FK	user_id: int(5)
	car_model: varchar(20)
	car_make: varchar(20)
	car_color: varchar(10)
	car_year: int(4)

Managed_Accounts
PK	account_id: int(5)
	status: varchar(20)

Provider_Service
FK	service_id: int(5)
FK	provider_id: int(5)
	image_path: varchar(50)
	description: varchar(255)

Provider
PK	provider_id: int(5)
	provider_name: varchar(20)
	email: varchar(100)
	username: varchar(50)
	password: varchar(50)
	address: varchar(200)
	phone_number: int(20)
	operating_hours: int
	bio: varchar(255)
	status: varchar(10)
	date_joined: date

Service
PK	service_id: int(5)
	service_name: varchar(50)
	service_description: varchar(255)

Admin
PK	admin_id
	username: varchar(20)
	password: varchar(50)
	reportId: int(8)
	flagId: int(8)

Booked_Appointments
PK	appointment_id: int(5)
FK1	service_id: int(5)
FK2	user_id: int(5)
FK3	provider_id: int(5)
FK4	car_id: int(5)
	description: varchar(255)
	appointment_date: date
	appointment_time: int
	status: varchar(10)
	created_at: int

Review
PK	review_id: int(5)
FK1	appointment_id: int(5)
FK2	user_id: int(5)
FK3	provider_id: int(5)
	review_rating: int
	review_text: varchar(255)
	created_at: date
	provider_response: varchar(255)

Alerts
PK	alert_id: int(5)
FK1	provider_id: int(5)
FK2	user_id: int(5)
FK3	appointment_id: int(5)
	alert_type: varchar(50)
	message: varchar(255)
	created_at: date