

Milestone 1 – Updated Project Requirements

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Care dealership management :

The system is a car dealership management platform that streamlines operations for administrators, salespersons, and customers. It enables inventory management by allowing admins to add, update, and track vehicle details, while also supporting customer interactions such as booking test drives, managing profiles, and viewing car offers. The platform features role-based access, ensuring that users only access functionalities relevant to their roles, like generating sales reports for admins or scheduling test drives for customers.

To enhance efficiency, the system includes tools for tracking bookings, scheduling vehicle maintenance, and generating invoices. Customers can search and filter cars, save favorites, and receive notifications for updates or test drive appointments. Admins benefit from a dashboard summarizing key metrics, automated stock alerts, and detailed error tracking to ensure smooth operations. The system is secure, mobile-friendly, and scalable, making it a reliable tool for modern car dealership management.

Functional Requirements

REQ_ID	Requirement Description	Category
REQ_001	The system must allow adding, updating, and deleting car details (e.g., make, model, year, price).	M
REQ_002	The system must manage and display car inventory (available, sold, under maintenance).	M
REQ_003	The system must allow customers to schedule test drives for available cars.	M
REQ_004	The system must support customer profile creation and management.	M
REQ_005	The system must record and track customer inquiries	M
REQ_006	The system must enable filter by price range.	M
REQ_007	The system must allow vehicle maintenance scheduling and tracking.	M
REQ_008	The system must include a dashboard summarizing total sales, inventory, and bookings.	M
REQ_009	The system must include user roles (e.g., Admin, Salesperson, Customer) with proper access levels.	M
REQ_010	The system should provide sales reports	S
REQ_011	The system should allow exporting reports	S
REQ_012	The system could provide an AI-based recommendation system for similar car models.	C
REQ_013	The system could send automated notifications for scheduled test drives or offers.	C
REQ_014	The system could provide real-time updates on car availability.	C
REQ_015	The system could integrate a chatbot for customer inquiries.	C
REQ_016	The system will handle car insurance services.	W

Non-Functional Requirements

REQ_ID	Requirement Description	Category
REQ_017	The system must be compatible with all major browsers (e.g., Chrome, Firefox, Edge).	Usability
REQ_018	The system must have a user-friendly and intuitive interface for non-technical users.	Usability
REQ_019	The system should respond within 2 seconds for user actions (e.g., filter).	Performance
REQ_020	The system should handle up to 100 concurrent users without performance degradation.	Scalability

Use Cases

Use Case 1: Signing Up

Use Case ID: UC_001

Use Case Name: Customer Signup

Actors:

- **Primary: Customer**

Preconditions:

- The customer is on the login page.
- The system displays a link to the signup page.

Basic Flow:

1. The customer clicks the "Sign up here" link on the login page.
2. The system displays the signup form.
3. The customer enters their Name, Email, Password, and confirms their Role as "Customer."
4. The customer clicks the "Sign Up" button.
5. The system validates the input (e.g., checks if the email is unique and the password is valid).
6. If validation passes, the system creates a new customer account and redirects the user to the login page.
7. The system displays a message: "Signup successful. Please log in."

Postconditions:

- A new customer record is created in the database.
 - The customer can log in using their newly created account.
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Use Case 2: Booking a Car

Use Case ID: UC_002

Use Case Name: Book a Car

Actors:

- **Primary:** Customer

Preconditions:

- The customer must be logged in.
- At least one car must be available for booking.

Basic Flow:

1. The customer logs into the system and navigates to the "Book a Car" page.
2. The system displays a list of available cars, including details such as Make, Model, and Price.
3. The customer selects a car they want to book.
4. The customer clicks the "Book" button.
5. The system records the booking with a status of "Pending" and displays a confirmation message: "Car booked successfully."

Postconditions:

- A booking record is created in the database with a Pending status.
 - The car remains in the inventory until the booking is approved.
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Use Case 3: Approving a Pending Booking

Use Case ID: UC_003

Use Case Name: Approve a Pending Booking

Actors:

- **Primary: Salesperson**

Preconditions:

- The salesperson must be logged in.
- At least one booking with a Pending status exists.

Basic Flow:

1. The salesperson logs into the system and navigates to the "View All Bookings" page.
2. The system displays a list of bookings with their details (Customer Name, Car, Status).
3. The salesperson identifies a Pending booking.
4. The salesperson clicks the "Approve" button for the selected booking.
5. The system updates the booking status to "Approved".
6. The system updates the car's availability to Unavailable.
7. The system sends a notification to the customer: "Your booking has been approved."
8. The system displays a success message: "Booking approved successfully."

Postconditions:

- The booking status is updated to Approved in the database.
- The car's availability is updated to Unavailable in the inventory.
- A notification is sent to the customer.