

# **Car Dealer management system - SRS**

Date : 20-09-2023

Course : MC212 DBMS

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**Objective** : To create a user friendly car dealer management system for customers.

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# 1.Problem Domain

## 1.1 Purpose

The purpose of this document is to provide a comprehensive overview of the software requirements for the development of a Car Dealership System. This system aims to streamline the operations of a car dealership, improve customer experience, and enhance the efficiency of managing inventory and sales.

## 1.2 Scope

The Car Dealership System will cover the following key functionalities:

- Inventory Management: Tracking and managing the stock of cars, including details such as make, model, year, price, and availability.
- Customer Management: Managing customer information, preferences, and purchase history.
- Sales and Financing: Handling the sales process, including pricing, financing options, and generating sales agreements.
- Reporting and Analytics: Providing insights into sales trends, inventory turnover, and customer behaviour.
- User Management: Defining roles and access levels for admin,customers,mechanics.

## 1.3 Definitions, Acronyms, and Abbreviations

- CRM: Customer Relationship Management
- GUI: Graphical User Interface
- SQL: Structured Query Language

## 1.4 Description

The car dealer management system(CDMS) is designed to provide a user-friendly platform for dealerships to efficiently manage their car inventory, enhance customer interactions, and make informed decisions regarding sales and rentals.

In our system we have user roles like admin,customers,mechanics. We define various accessibility and functionality to each of them.

Customers can create an account and after logging in they can buy a new or old car or sell an old car.They can even take a car on rent.Mechanics can also create an account to provide services to the customers.

Customers can put requests for car services and Mechanics can accept service requests according to their convenience by filtering requests (like Area).

Customers can use many filters to sort the cars according to price , colour , brand etc. There is also a bargaining feature to buy old cars.

Admin takes 5% commission when old cars sell to one customer to another customer with our website, also get profit when sells a new car, mechanics subscription charge and also get money when give car on rent.

Mechanic has to register first on our website and at that time he has to buy a subscription on a monthly basis of 1000 rupees to receive requests from customers. Customers can get a car on rent on charges when the car is available in inventory.

# 2.Document the Requirements Collection

## 2.1 Background reading

- Reading 1: Industry report on "Challenges and Trends in Car Dealership Management" (Smith, J., 2022).
- Reading 2: Research paper on "CRM Systems in Automotive Retail" (Johnson, A., 2021).

### **Combined Requirements from Background Reading/s**

- Requirement 1: Real-time inventory tracking and management (Reading 1).
- Requirement 2: Integration of CRM for personalised customer interactions (Reading 2).

## 2.2 Interviews

System : car dealership management system

Participants: Jay sabalpara ( client)

Dhaval malsattar ( client )

Mohnish Jagda

Date: 20/9/2023

Time : 14:30

Duration : 45 minutes

Place: DA-IICT

### Purpose of Interview :

Preliminary meeting to identify problems and requirements regarding Car dealership system

### Agenda:

- Discuss software requirement
- Discuss the inventory system
- Discuss some specific features like bargaining

### Documents to be brought to the interview :

Any documents relating to the current car dealership system

### **Client/Admin :**

- What features would improve inventory management and sales tracking?
- How do you currently handle customer inquiries and leads?
- What functionalities do you need to efficiently manage car rentals?
- What are the key business objectives for the car dealership?
- Are there any specific compliance or regulatory requirements?
- Are there any specific document management needs?
- Do you need access to customer data and transaction history?
- Would you like to add a feedback feature for customers?
- Do you want to accept old cars from customers to sell?
- What is the preferred method for managing invoices and payments?
- Do you want to provide any facility related to car service?
- If yes, do you want permanent service providers (Mechanics) or remote?
- Do you want any privileges to manipulate customers' data?
- How much commission do you want to take per sale of an old car by a Customer (as a seller)?
- Do you want to take any kind of subscription charges from Mechanic and Customers?

### **Requirement from interviews:**

- Requirement 1: Update availability in real-time for both new and old cars.
- Requirement 2: support for browsing and renting a car
- Requirement 3: need for a customer feedback system.
- Requirement 4: defining customers' roles as buyer, seller, as one to get a car on rent and as one to get car services.
- Requirement 5: accepting new mechanics as service providers and defining the mechanic's role.
- Requirement 6: search filtering features for vehicle selection in both sales and rentals.
- Requirement 7: Provide car services to customers.
- Requirement 8: Way for client to see details of registered customers and Mechanics.
- Requirement 9: Make a separate transaction table to calculate profits from Rents , Commission from old cars, Subscriptions etc.

## **2.3 Questionnaires**

### **Customers:**

- What features would you most like to see in an online car browsing platform ?  
→Advanced Search Filters / User Reviews and Ratings / Price

#### Comparison Tools

- Would you like to add a feature of bargaining ?  
→yes / no
- How often do you rent or buy cars?  
→frequently / occasionally / very rarely
- What factors influence your decision to choose a specific car model?  
→Budget and Affordability / Brand Reputation and Reliability / car ,

#### colour

- Have you faced any problem in the online car dealership system before ?  
→ never / very often / sometimes
- Please note any comment/feedback for our car dealership system.
- Please write any suggestions for improving car dealership.

### **Requirement from Questionnaires:**

- Requirement 1: Update availability in real-time for both new and old cars.
- Requirement 2: Store customer preferences for tailored recommendations in both sales and rentals
- Requirement 3: support for browsing and renting car
- Requirement 4: Enhanced search filters for vehicle selection in both sales and rentals.
- Requirement 5:Customer can bargain to buy old car
- Requirement 6: Customer can ask for car-service
- Requirement 7:CustomersCustomers can sell old cars.
- Requirement 8: Availability of old cars to buy in nearby-area.
- Requirement 9:Customers can give a mechanic rating.
- Requirement 10:A customer who wants to sell his car can approve a request about bargaining and Choose the highest price from other customers.

- Requirement 11: Customer can see mechanic's details when mechanic accepts his request.

### 3.Fact finding chart

Objective	technique	subject(s)	Time commitment
User registration and authentication	knowledge	-	-
Mechanic identifies the need for notifications about new service requests	Interview	Mechanic	2*1 hour each
To get background on the company and the advertising industry	background reading	Company reports, trade journals	0.5 day
Handling availability in real-time (new cars)	interview	Admin	1 hour
Allocating mechanics to customer	Questionnaires	Mechanic	1 hour
Store customer preferences	Interview	Customers	15 minute each
Enhanced search filters for vehicle selection	Questionnaires	Customers	1 hour
Handling old car for rent	Questionnaires	Admin	1 hour
Bargaining feature for customer	Questionnaires	Admin	1 hour
Customer support and service	background reading	Admin	4 hour

Define role for mechanic customer and admin	Interview	Admin	2 hour
Security and access control	Interview	Admin	2 hour
User interface and user experience	Questionnaires	User	20 minute each
Establish buy and sell report	Background reading	Admin	1 hour
Establish what records and resources are maintained	Interview	Admin	1 hour



## **4. List All Final Functional Requirements**

- 1) User Registration and Authentication.
- 2) Customers can use functionality like sell, buy and take cars on rent.
- 3) Admin has a database of car companies for new cars.
- 4) Update availability(inventory) in real-time for both new and old cars.
- 5) search filters for vehicle selection in buy , sales and rentals.
- 6) Bargaining feature for customers to buy old cars.
- 7) Store customer preferences for tailored recommendations in both sales and rental.
- 8) Customers can ask for car-service.
- 9) User-friendly online portal for both new and old vehicles.
- 10) New Mechanics can be added to provide services to customers.
- 11) Mechanics can accept service requests from customers.
- 12) Security and access control.
- 13) Buy and sell reports.
- 14) Mechanics can filter requests according to area.
- 15) Admin can see details of registered customers and Mechanics.
- 16) Admin can manipulate inventory.
- 17) Admin can view all transactions.

# 5. User classes and Characteristics

## 1) Admin:

### Characteristics:

- inventory management, manage sell and buy reports.
- Interaction with car companies to buy new cars.
- Takes feedback from customers and improves the website/database.
- Monitor transaction details.

## 2) Customers:

### Characteristics:

- Create an account and Buy and sell car
- Get car on rent
- Get service for car
- Give feedbacks
- Rate mechanic service

## 3) Mechanic:

### Characteristics:

- Create an account and available himself for service of cars.
- Can accept requests from customers for car services.

# 6. Privileges

## 1) Admin:

- Can see customers and mechanic information.(personal info. , service req. , accepted req. , transaction history etc.)
- Edit inventory, take new cars from car companies.
- Access to feedback System.
- Access to the transaction table.

## 2) Customer:

- ❖ Customer as a seller:
  - can see all other requests and approve/ignore requests from all buyers.
- ❖ Customer as a buyer:
  - Customers can view inventory and can buy new cars or old cars and can do bargaining for old cars.
- ❖ Can take the car on rent.
- ❖ Access on feedback System.(To give feedback)
- ❖ Can Edit personal info.
- ❖ Can see list of nearby mechanic for servicing of car.

## 3) Mechanic:

- Access privileges of service requests to some extent.(like accepting req.)
- Can log in or sign up on the website.

## 7. Assumptions

- Users have access to a reliable internet connection
- Sufficient training and support will be provided during system implementation.
- We do not concern ourselves with how a user conducted the transaction; it is outside the scope of the project. Our focus is solely on confirming that the transaction has occurred.

This simplified SRS document outlines the requirements for the Car Dealership Management System, encompassing both new and old car sales and rentals and car services.

## 8. Contribution

->Problem Domain, Interviews and questionnaires done by jay and mohnish.

->Fact finding chart and Final Functional Requirements done by dhaval and deep.

->User Classes and Characteristics, Privileges and assumption done by kishan.