

# Online Car Dealership

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**Abstract:** *In this digital age, everything is becoming online and accessible anywhere. From ordering foods, groceries, clothes, shoes, to fast-moving consumer good people use internet for this. The car buyers also make the use of internet in their car purchasing journey. The Car dealer portal helps the user in this process. It allows them to view cars, specifications, images. And many more. They can also get in touch with the dealer through this portal. The customers can book test drive of the car from their home and also, the user can register their interest in a car by giving their contact number. It saves the customer's time. The car dealership also gets more customers due to online presence.*

*This is a current project for a classic Car buys/sell a business on online platforms. A web interface is provided for the system. It is useful to keep a record of the user information as well as the CAR details. If a customer wants to obtain a car, he or she can do that by finding specific price ranges from high to low or low to high. This vision is to create a marketplace for car buying and selling that will allow taking interest car buyers or sellers to replace the manual processes of car buying now use in the country, with the use of the internet. It also gives information about every single item for sale in terms of suitable or appropriate quality and variety and cheap pricing. The web application makes it simple for consumers to buy or sell car..*

**Keywords:** Car Dealer, Used Cars, Website, Vehicles

## I. INTRODUCTION

More users are using the Internet to search for cars. Online tools used by car buyers to research a car include Search Engines, YouTube, and Dealer Websites. The buyers can access those on their smartphones, Desktops, and laptops. They can get all the information they want at their fingertips. And can access it anytime anywhere. A car dealership is a business involved in the retail sale of new or used cars. It acts as an intermediary between the customers and car manufacturers, offering employment to salespeople to do the selling, sometimes providing maintenance service for cars. It allows the users to buy cars online, without physically having to visit the car dealer's showroom office. Customers can purchase their desired cars from anywhere in the world. The cars shall be displayed on the website. The customer shall be able to see car models, specifications, images, etc. They can then fill the contact form to reach the dealership. They can also book the test drive of the car.

Until recently, the automotive industry was heavily reliant on physical showrooms and face-to-face transactions. However, this is rapidly changing due to the proliferation of online car dealerships. Online dealerships afford consumers the convenience of researching, comparing, and buying a vehicle without necessarily having to engage a traditional dealership.

## II. PROBLEM DEFINITION

Traditional car dealerships rely on physical showrooms, which limit customer reach and require significant overhead costs. Buyers must visit multiple dealerships to compare options, negotiate pricing, and complete paperwork, making the process time-consuming and inefficient. The current car buying and selling process is inefficient, lacks transparency, and is often geographically limited



### **III. METHODOLOGY**

#### **Requirement Analysis**

- Identify key stakeholders (buyers, sellers, dealerships, financing institutions).
- Conduct market research to analyze customer needs and pain points.
- Define functional and non-functional requirements (e.g., security, scalability).

#### **System Design & Planning**

- Architecture Design: Choose a suitable architecture (e.g., cloud-based, microservices).
- Technology Stack Selection: Decide on frontend, backend, database, and hosting solutions (e.g., React, Node.js, MongoDB, AWS).
- Database Schema: Define data models for vehicles, users, transactions, etc.
- User Interface (UI) & User Experience (UX) Design: Create wireframes and prototypes for seamless navigation.

#### **Development Phase**

- Frontend Development: Implement responsive UI with interactive features.
- Backend Development: Develop APIs for authentication, listings, payments, and document processing.
- Database Implementation: Store and manage vehicle details, user data, and transaction history.
- Third-party Integrations: Integrate payment gateways, financing APIs, and mapping services.

### **IV. ARCHITECTURE**

#### **A. Process**

- **Platform Setup:** Explain how online dealerships establish their platforms. This includes website design, mobile app development, inventory management, and integration with third-party services (e.g., vehicle history reports).
- **Inventory Management:** Discuss how online dealerships manage and update their car inventories, whether through their own stock, third-party dealerships, or consignment models.
- **Customer Journey:** Describe the steps a customer goes through, including:
  - **Vehicle Search:** Searching for cars using filters such as make, model, price, and condition.
  - **Virtual Viewing:** Technologies like virtual tours, 360-degree views, and video walkarounds



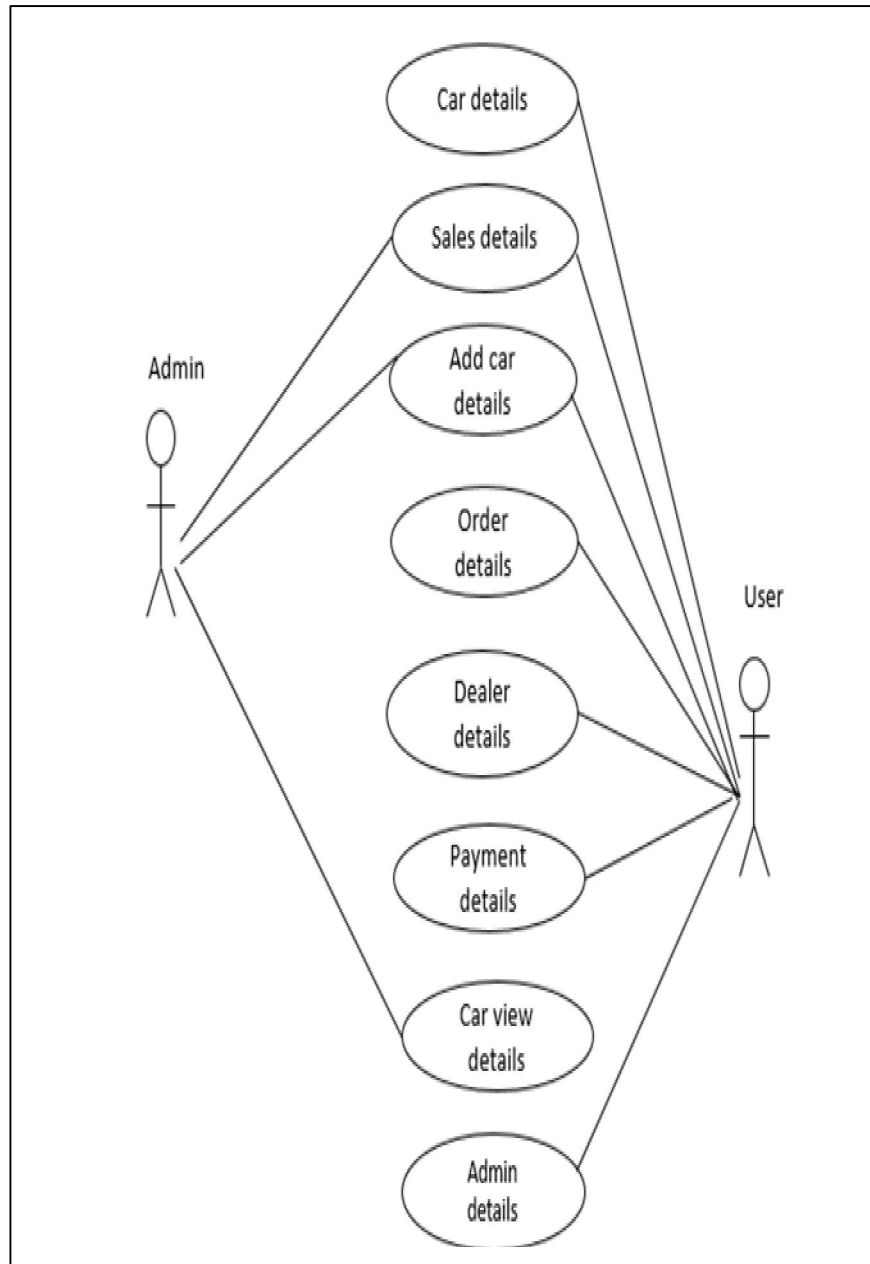


Fig 1: System work

## V. RESULTS

Following snapshots shows the implementation result of purposed System:



Fig 2 is the homepage of the project from where we can navigate to other pages of the website i.e., about, contacts, etc.

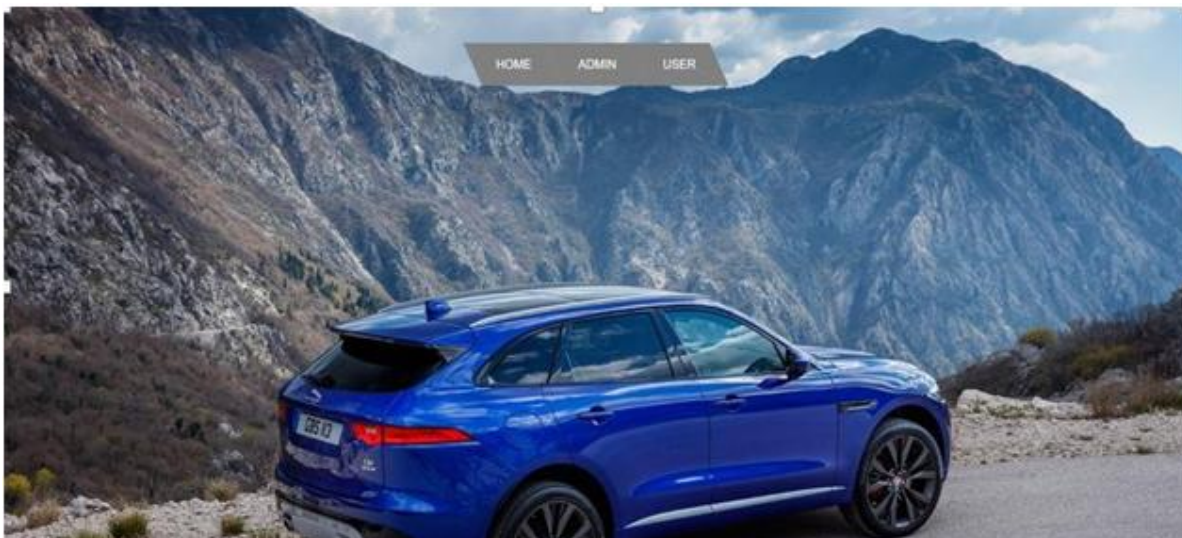


Fig 2 : Home Page

Fig 3 is the Login Page from where customer can login to the website and set their login credentials.

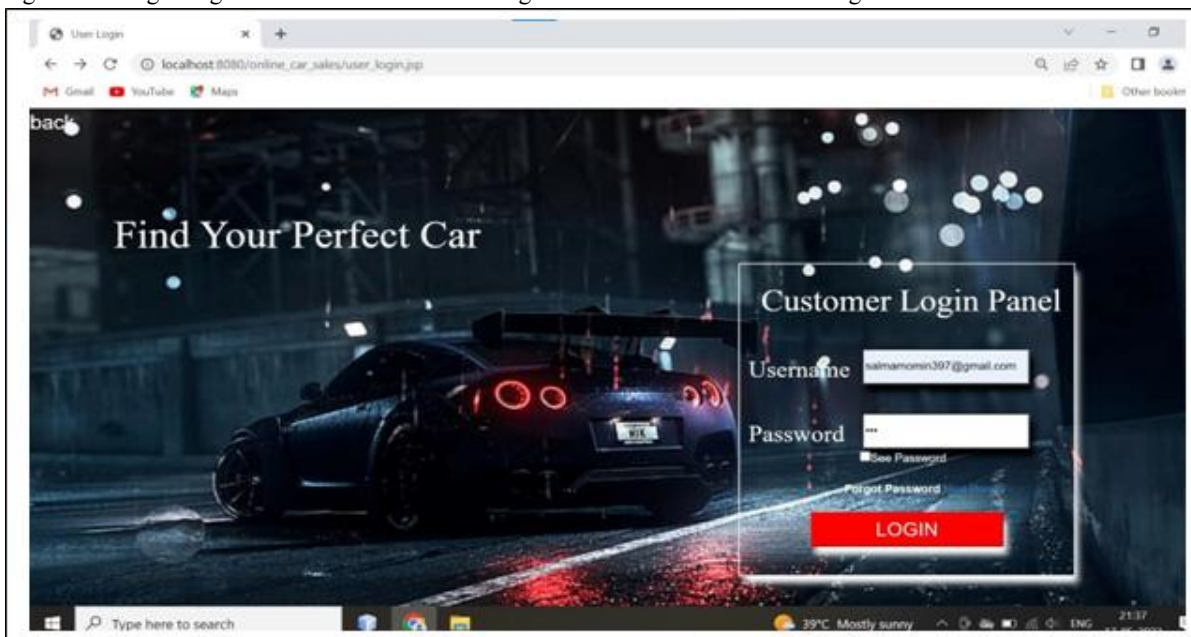


Fig 3: Customer Login Page





Fig 4 is the Customer Registration Page from where customer can register to the website and set their login credentials.

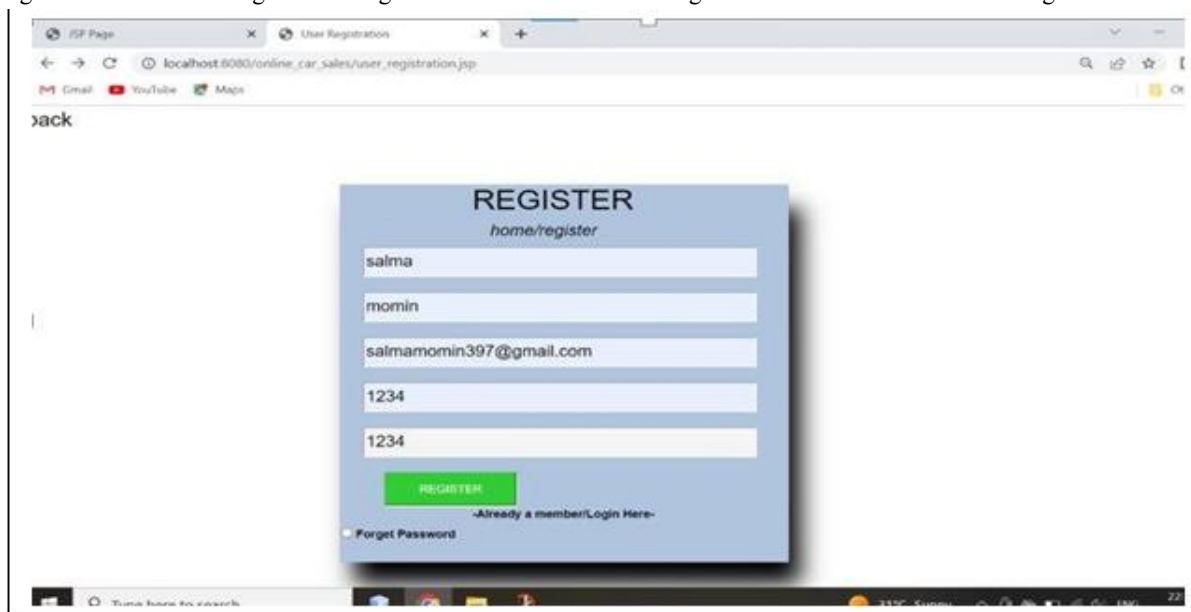


Fig 4: Customer Registration Page

Fig 5 is the Customer Dash Board from customer and their profile apply for view previous variety of cars.

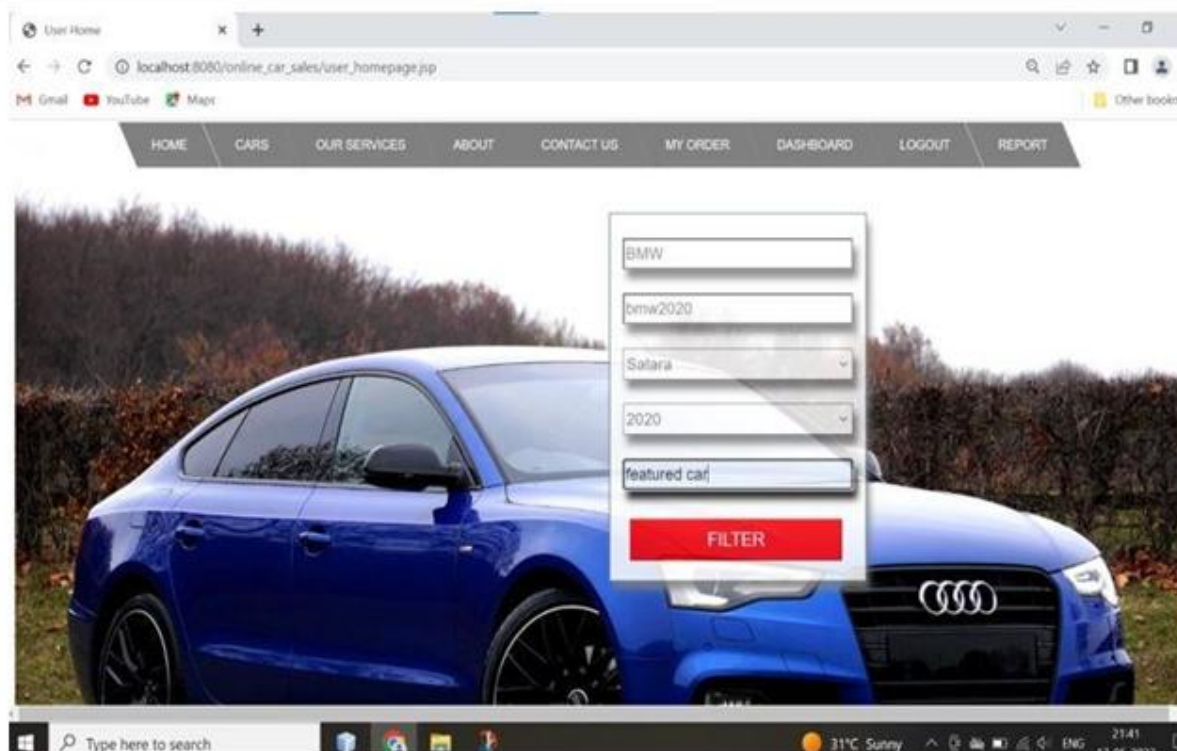


Fig 5: Customer Dash Board



## **VI. CONCLUSION**

In all, online networks established between the various websites of car dealerships have made buying cars much easier and comfortable for people. As a matter of fact, customers can compare prices of a wide variety of vehicles and can even go on to make purchases from their homes comfortably. The sites also support buyers in making good choices by availing detailed information, reviews, and virtual tours without necessarily having to physically present themselves at the dealership.

Though online car dealerships save one's time and offer more varieties, a lot of challenges are there, such as the inability to test drive or inspect in-person. Despite such issues, online buying of cars, with the advancement of technology, gains momentum nowadays and might further continue in the future. In general, this gives an online car dealership a much more flexible and accessible way of buying cars, changing the way we shop for vehicles.

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