A
Mini-Project Report on

# CAR RENTAL WEBSITE

Submitted in partial fulfillment of the requirements
for the degree of
BACHELOR OF ENGINEERING
IN
**Computer Science & Engineering**
Artificial Intelligence & Machine Learning

by

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2022-2023**

# A. P. SHAH INSTITUTE OF TECHNOLOGY

# CERTIFICATE

This is to certify that the project entitled "**Car Rental Website"** is a bonafide work of Ruchir Powar (21106036), Mansi Ghanwat (21106028), Khan Akramuddin (21106033) submitted to the University of Mumbai in partial fulfillment of the requirement for the award of **Bachelor of Engineering** in **Computer Science & Engineering (Artificial Intelligence & Machine Learning).**

_____                                      _____

Prof. Shraddha Shinde                                          Dr. Jaya Gupta

Mini Project Guide                                          Head of Department

# A. P.SHAH INSTITUTE OF TECHNOLOGY

# Project Report Approval

This Mini project report entitled "**Car Rental**" by **Ruchir Powar, Mansi Ghanwat and Khan Akramuddin** is approved for the degree of *Bachelor of Engineering* in *Computer Science &Engineering*, (AIML) *2022-23*.

External Examiner: _____

Internal Examiner: _____

Place: APSIT, Thane

Date:

# DECLARATION

We declare that this written submission represents my ideas in my own words and whereothers' ideas or words have been included, I have adequately cited and referenced the original sources. I also declare that I have adhered to all principles of academic honesty and integrity and have not misrepresented or fabricated or falsified any idea/data/fact/source in my submission. I understand that any violation of the above will be cause for disciplinary action by the Institute and can also evoke penal action from the sources which have thus not been properly cited or from whom proper permission hasnot been taken when needed.

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# ABSTRACT

The Car Rental System is being developed for customers so that they can book their vehicles from any part of the world. This application takes information from the customers through filling their details. A customer being registered in the website has the facility to book a vehicle which he requires. The proposed system is completely integrated online systems. It automates manual procedure in an effective and efficient way. This automated system facilitates customer and provides o fill up the details according to their requirements. It includes type of vehicle they are trying to hire and location. The purpose of this system is to develop a web site for the people who can book their vehicles along with requirements from any part of the world. The customers can also use the system to get car rent. The customer should create a new account before logging in or the user he / she can log into the System with his/ her created account. Then he/she can book the available cars and can book this car. The admin can control the system from admin menu too.

**Keywords:-** Car rental, Vehicle  management system,  Travel with rent.

# INDEX

# CHAPTER 1

# INTRODUCTION

# 1. INTRODUCTION

We developed this project to book a car on rent at the fare charges. In present system all booking work done manually and it takes very hard work to maintain the information of booking and cars. If you want to find which vehicle is available for booking then it takes a lot of time. It only makes the process more difficult and hard. This aim of the project is to automate the work performed in the car rental management system like generating daily bookings, records of car or cab available for booking, record of routes available, rental charges for cars for every rout, store record of the customer. Car rental management system is a car booking software that provides a complete solution to all your day-to-day car booking office running needs. This system helps you to keep the information of Customer online. You can check your customer information any time by using this system. Car rental management system is a unique and innovative product. Using this this you can also keep the information of number of bookings in current month or in last 6 month or in last year. This helps you to track your business and you earning in particular month or in any year. Based on this information you can take decision regarding your business development. Our car rental management system provides a total solution to the field of auto rental industry. The idea behind the proposed website is to develop a system that allows customers to rent any vehicle as per their needs on the selected date for required time and in any of the selected cities. This service will work 24x7. This system works online so allow anyone to book or rent a vehicle in a city without any time restriction. This system allows the customer to board the vehicle at his choice of location, pay for the rental online and could provide valuable feedback for improvement in services. With the help of a car rental management system you can maximize the revenue by increasing your reach to customers. user can also keep the detail of car route. Using car rental system your customer can view the routs and fare for that routs. It helps him to take decision of hiring a car for their journey. By using it your customers will be able to get estimate quotes, see estimated fare summary and make Car online reservations from your website, with just a few clicks. this system also keep the information of cancellation and modification of booking in current month. This facility take the admin control over booking of the car as he can cancel the car booking if car is not available or there is some issue in booking a particular car booking. This system also helps the administrator to check the business of the company.

# CHAPTER 2
# LITERATURE SURVEY

# 2. LITERATURE SURVEY

## 2.1-HISTORY

When cars were first introduced to the public, business people soon discovered a growing market for renting. However, what's even more interesting is that, even before Karl Benz and Wilhelm Maybach invented the modern car that we know today, people had already been renting out horses and carriages. Remember the action movies Troy and 300? Yes, even in ancient Rome, people rented horses and chariots

### Car Rentals in the 1900s

We can find the earliest car rental records in 1904 when a bicycle shop in Minneapolis started renting out cars. Then, around eight years later, in 1912, a German company named Sixt started renting out cars. At first, they started offering only three vehicles. However, it did not take long for the company to begin expanding. Two years later, in the US, a man named Joe Saunders realized that no one offered car rentals in their area in Omaha, Nebraska. So, he hired a salesperson named Frank Arndt, from Germany, and they decided to rent out Arndt's Model T, Ford's universal car. They were so successful that, in 1917, they were already renting out 120 of them. Joe named their company "Saunders Drive-It-Yourself System" and marketed it in their local newspaper. A few years later, Saunders' father and three brothers joined the business. By 1927, they were operating in more than 85 cities.

### Car Rentals in the 2000s

Today, car rental companies have long moved on from the old Model T. They now have hundreds of different car brands in their fleets. Aside from that, some companies rent out cars, trucks, vans, and boats. Some companies even rent out helicopters! Furthermore, car rental companies have sprung up worldwide in the twenty-first century as demand has increased. People are traveling at an unprecedented rate now that the world has become more globalized. As a result, they hire cars, vans, and other vehicles more frequently than before. More importantly, before, when you want to rent a car, you would have to go through a lot of paperwork. However, with advancements in technology, renting a car today has become more accessible and convenient. For instance, car rental companies can install a car rental website. Doing so will help streamline their car rental process, which would allow their customers to rent a car with only a few clicks of a button.

## 2.2-LITERATURE REVIEW

[1] Ahmed, Falah YH, Eizwan Bin Hazlan, and Muhammad Irsyad Abdulla. "Enhancement of Mobile-Based Application for Vehicle Rental." In *2021 IEEE 11th IEEE Symposium on Computer Applications & Industrial Electronics (ISCAIE)*, pp. 163-168. IEEE, 2021.

This paper proposes a knowledge-based model that can be used digitally via a smartphone application to service the vehicle rental system in Malaysia called EZGO. EZGO is a website that allows consumers to look for vehicles such as cars, bikes and rental vans that can have the most satisfactory outcome and avoid the rejection of unavailable car rental by providing substitute vehicles that are close to the needs of the customer. Our research reveals the analysis and comparison of the problems faced in the general car rental system for the search mechanism and identifies the value of the rental car. The project implemented an agile approach for the design and development of mobile apps, developed UML diagrams for the car rental system, and performed a survey of prospective customers using questionnaires. This smartphone application is particularly relevant in Malaysia as it offers an alternative option for Malaysian drivers and drivers to provide personal transportation without the need to purchase and own for themselves.

[2] Thakur, Amey. "Car Rental System." *International Journal for Research in Applied Science and Engineering Technology* 9, no. 7 (2021): 402-412.

Customers will be able to reserve their vehicles from anywhere in the world due to the Car Rental System. Consumers provide information to this application by filling in their personal information. When a consumer creates an account on the website, he or she can reserve a car. The proposed system is an online system that is fully integrated. It effectively and efficiently automates manual procedures. Customers are aided by this automated method, which allows them to fill in the specifics according to their needs. It contains information on the sort of car they want to hire as well as the location. The goal of this system is to create a website where customers can book their automobiles and request services from anywhere in the world. There are three phases to this car rental system mentioned in the introduction. Keywords: DBMS, XAMPP, PHP, PHPMYADMIN, Functional and Non-functional Requirements, Database Connection.

[3] Sathya, R., G. Srujan Reddy, Grandhi Ram Teja, Vedantham PS Srinivasa Iyengar, and Prabhat Kumar. "Car Hiring System using Web Technology." In *2023 IEEE International Students' Conference on Electrical, Electronics and Computer Science (SCEECS)*, pp. 1-6. IEEE, 2023.

Traveling is one of the things people do to lessen their strain or stress. By utilising the most

recent technologies, we were able to simplify the process of renting cars in our project. When a person does not drive their own car or does not have one in any way, renting a car makes it more practical for them to get around. However, in the modern world, there are numerous risks, such as added costs, driver cancellation after learning the cost, or extremely long journeys. Therefore, a character who wants transportation must identify an employer for an automotive apartment and execute a contract. This tactic also promotes customer retention while also making it easier for businesses to hire and retain employees. Using the XAMPP database, this project has improved the assistance provided by the vehicle rental companies for the clients regarding the booking status and the availability of the held vehicle. This project has used insight into using technology to construct and integrate the online framework with SMS innovation. As a result, the framework offers a practical method of observing. Additionally, this framework makes it simple to use PHP to obtain vehicle information, reserve a vehicle, and immediately lease a vehicle.

[4] Reddy, Chaganti Sandeep, and Dr Preeti Savant. "Car Service Slot Booking System." *International Journal for Research in Applied Science & Engineering* 10 (2022): 1836-1839.

The purpose of implementing this application was for users to book a slot for car servicing by using the car bath app. The automobile Car Bath industry is additionally growing staggeringly and automobile owners favor requesting cleanup services through their mobile devices. To make the automotive wash programming computer code additional reliable, distinctive panels are developed for all users. The service provider's panel advantages to showcasing and automatizing the entire automotive particularization and washing services business online are viable in a very single click. The options of our appointment booking computer code have created the net automotive wash system sturdy. easy showing the services, booking the appointments 24/7, the choice of fixing the service packages, on-line transactions, etc. area unit a number of the main characteristics to spice up productivity. This application is simple and users will book the automotive service squeeze the automotive Car Bath app. This application mostly saves time and human work free. Users can book the services at anytime and anywhere. This type of service is now growing very rapidly and the booking system is used very easily and more accessible. Now every ware there is all online services and just one click away. The car Bath app is allowed to book the slot for car service. By using this app customers can book the service at their flexible time. It's a user-friendly application. In this application customer, data will store very securely. By using this application customers can save time and energy. By using this app, we can book any type of vehicle for service. Currently, technology is very fast. People want to measure an expensive life with minimum physical work. This application is an

android app that will be run on any android compatible tablet and portable. The app can alter any automobile user to book an appointment for automobile service

[5] Shelar, Sanjeev, Wasim Sheikh, and Pratik Shinde. "Vehicle information system." *Int. J. Comput. Sci. Inf. Technol* 6, no. 2 (2015).

An application which will facilitate the user for not worrying about carrying the documents of their vehicle. We can digitalize all documents which are taken care of with so much efforts and hard work. This application will make sure you have all the documents with you every time anywhere wherever you go. Different documents like License, PUC, RCBook, Insurance papers can be easily handled. This app can help you not to carry all the documents with you every time you drive a vehicle. You can just use the mobile app which contains all the documents .There is no fear of losing these documents as these are digitalized. Different documents that can be used are License, PUC, RC Book, Insurance papers. If any other person except the owner drives the vehicle and uses the application for verifying the documents then a message alert will be sent to the owner of the vehicle.

# CHAPTER 3

# Problem Statement

# 3. Problem Statement

Car rental companies often face challenges in managing their fleet of vehicles, reservations, and payments efficiently. Customers may experience long waiting times, limited availability of desired vehicles, unclear pricing, and cumbersome booking and payment processes. These issues can lead to customer dissatisfaction, lost revenue, and reduced competitiveness in the market. Therefore, there is a need for a car rental system that can streamline the rental process, improve customer experience, and optimize fleet utilization and revenue. Such a system should incorporate advanced technologies, such as online booking, real-time vehicle tracking, automated payment, and data analytics, to enable efficient operations and data-driven decision-making. The system should also ensure data security, privacy, and compliance with relevant regulations. By addressing these challenges, the car rental system can enhance the customer value proposition and contribute to the growth and sustainability of the car rental industry.

# CHAPTER 4

# Experimental Setup

# 4.Experimental Setup

## 4.1 Hardware Setup

The hardware setup for an online travel agency will depend on a few factors, such as the size of the agency and the volume of traffic it expects to handle. Generally, here are some hardware components that you might need:

1. Opreating System : Windows 10/11

2. Processor : Intel Core i5

3. 4 GB Ram

## 4.2 Software Setup

The software setup for an online travel agency is crucial in ensuring a smooth and efficient operation. Here are some key components that you might need:

1. Linux/Windows OS

2. HTML 5

3. CSS3

4. PHP 8.2

# CHAPTER 5

# Proposed System & Implementation

# 5.Proposed system & Implementation

## 5.1 BLOCK DIAGRAM
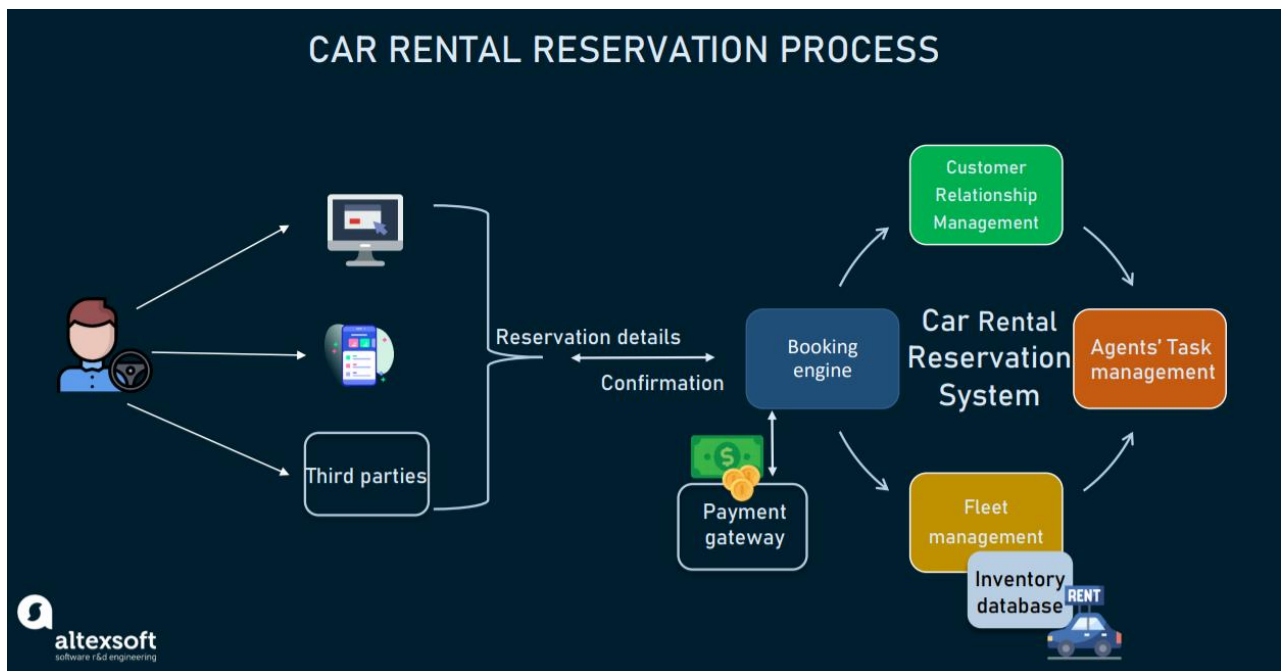


Fig 5.1 Block Diagram

## 5.2 Implementation

These are the steps of implementation of PHP project with MYSQl

- Firstly we installed VSCode into our device and then we set up all our environmental variables.

- We have used PHP as our core language in our project

- Next we created a folder called VMS to store all our files

- We started creating our files first into VSCode with a extension

- We started with making sign up page registeration page for the user login.

- Then we created admin file to manage the whole system

- On the other hand we installed XAMPP  server 8.0.28 for our php and MYSQL database  connectivity.

- We created a file name carrental.sql (mysql file- database) and implemented the sql code and added tables into it.

## 5.3 ADVANTAGES

There are several advantages to having a car rental system in place:

1. Convenience: Car rental systems offer customers the convenience of renting a car when and where they need it. This is particularly useful for people who are traveling to a new location or who need a vehicle temporarily.

2. Wide range of vehicles: Rental companies typically offer a wide range of vehicles to choose from, including cars, trucks, SUVs, and luxury vehicles. This allows customers to select the vehicle that best suits their needs and budget.

3. Flexibility: Car rental systems offer flexible rental periods, allowing customers to rent a car for as little as a few hours or as long as several weeks or months.

4. Cost-effective: Car rental systems can be cost-effective, particularly for customers who only need a car for a short period of time. Renting a car can be less expensive than buying a new car or using a taxi or ride-hailing service.

5. Maintenance and repairs: Rental companies are responsible for maintaining and repairing their vehicles, ensuring that they are in good condition for customers to use.

6. Improved mobility: Car rental systems can improve mobility for people who don't own a car or who need a second vehicle for a short period of time. This can be particularly useful for business travelers or people who live in urban areas where owning a car may not be practical.

Overall, a car rental system can provide customers with a convenient, flexible, and cost-effective way to rent a vehicle, while also offering rental companies the opportunity to generate revenue and improve customer satisfaction
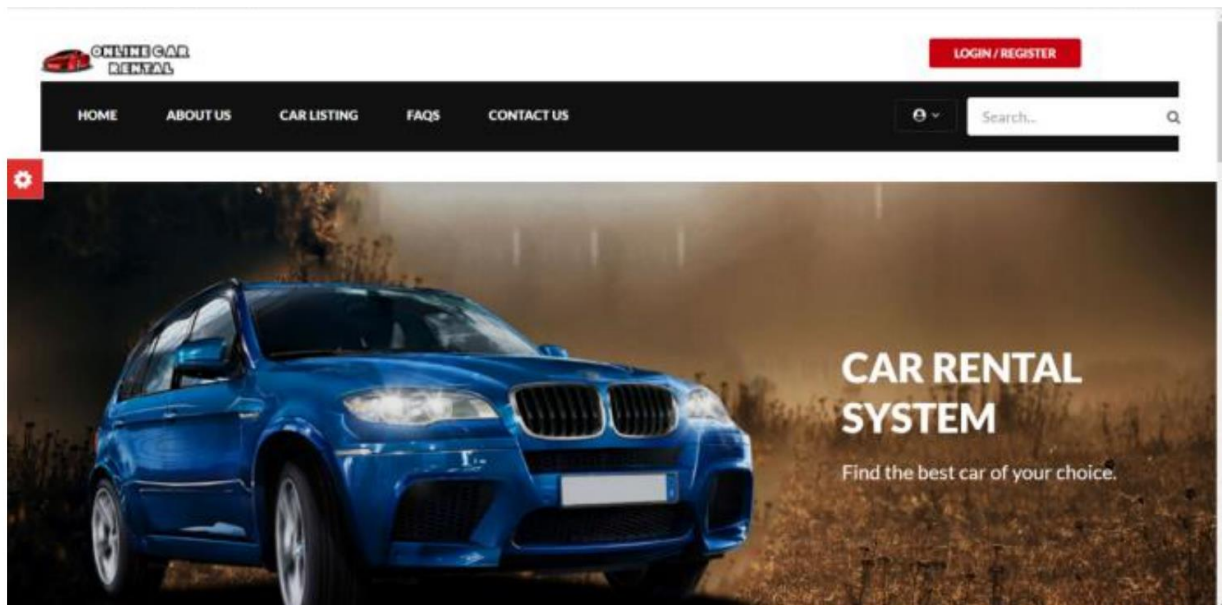
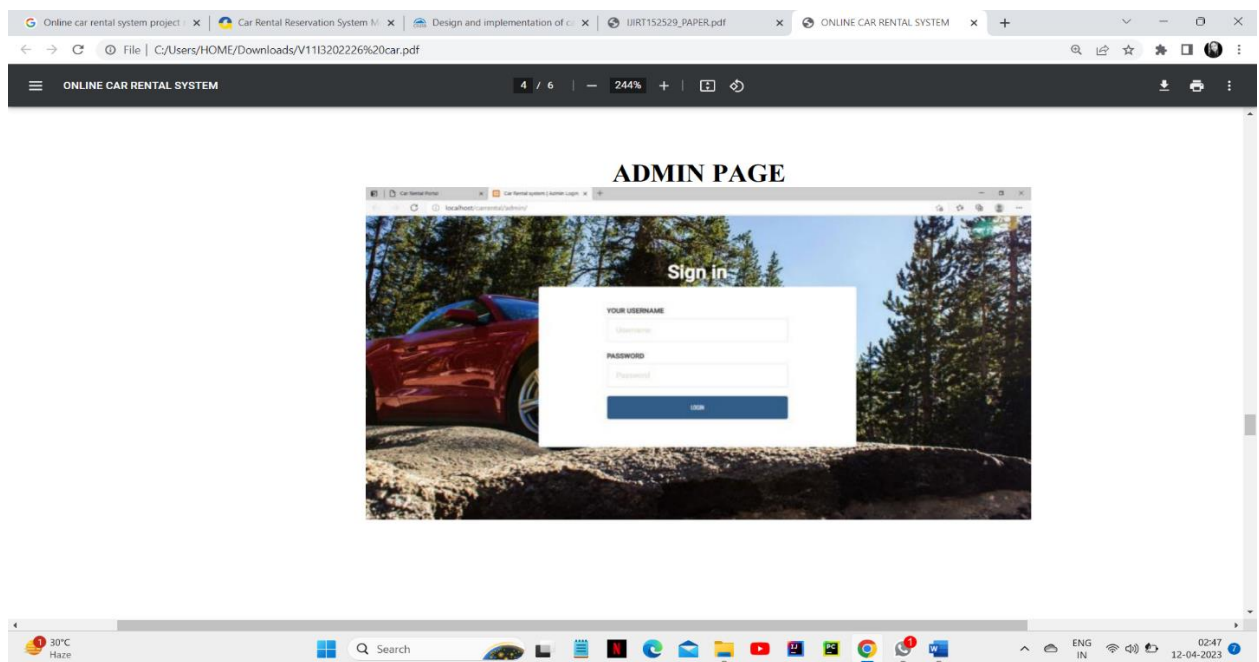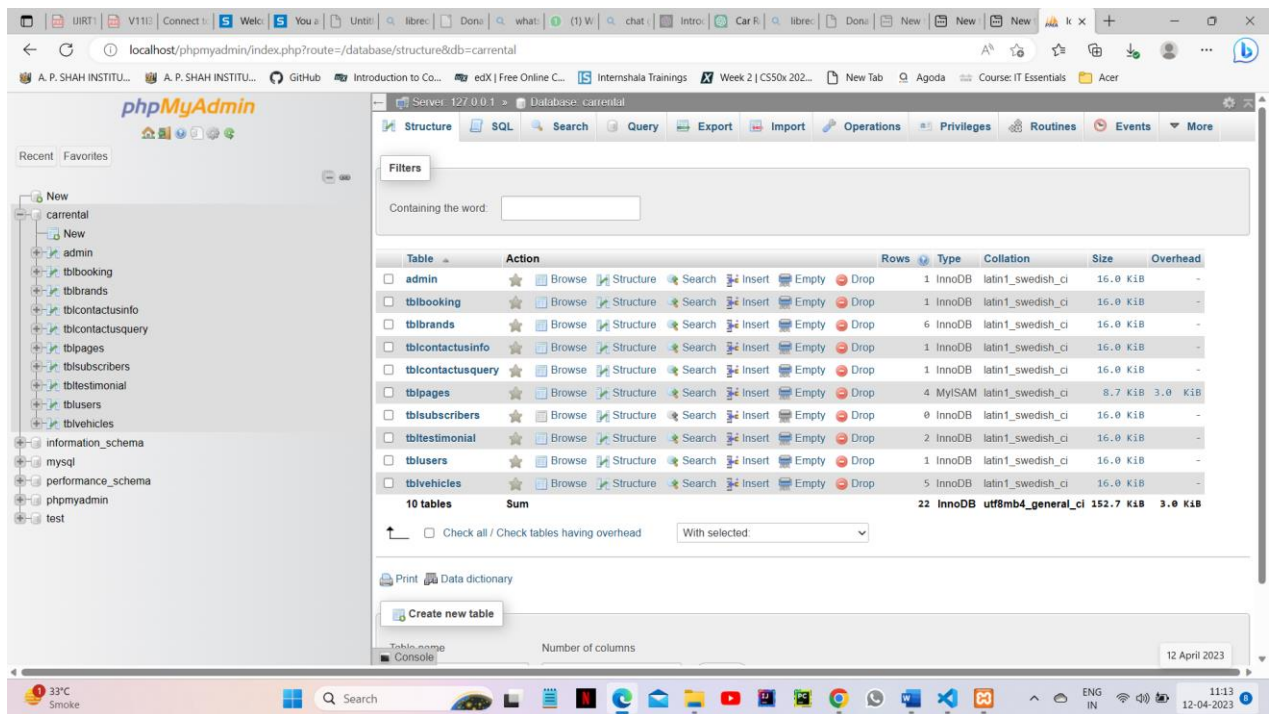**5.4 OUTPUT**



Fig 5.2 Front Page
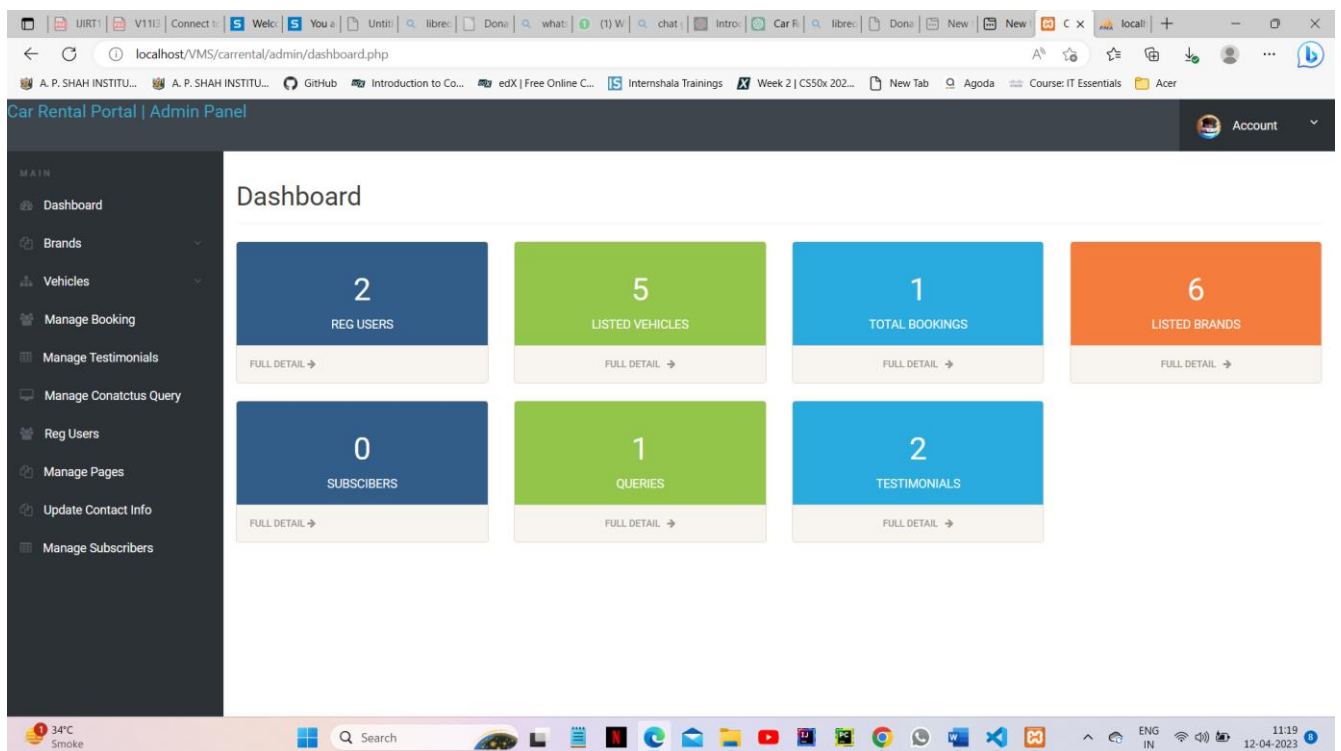


Fig 5.3 Admin Page

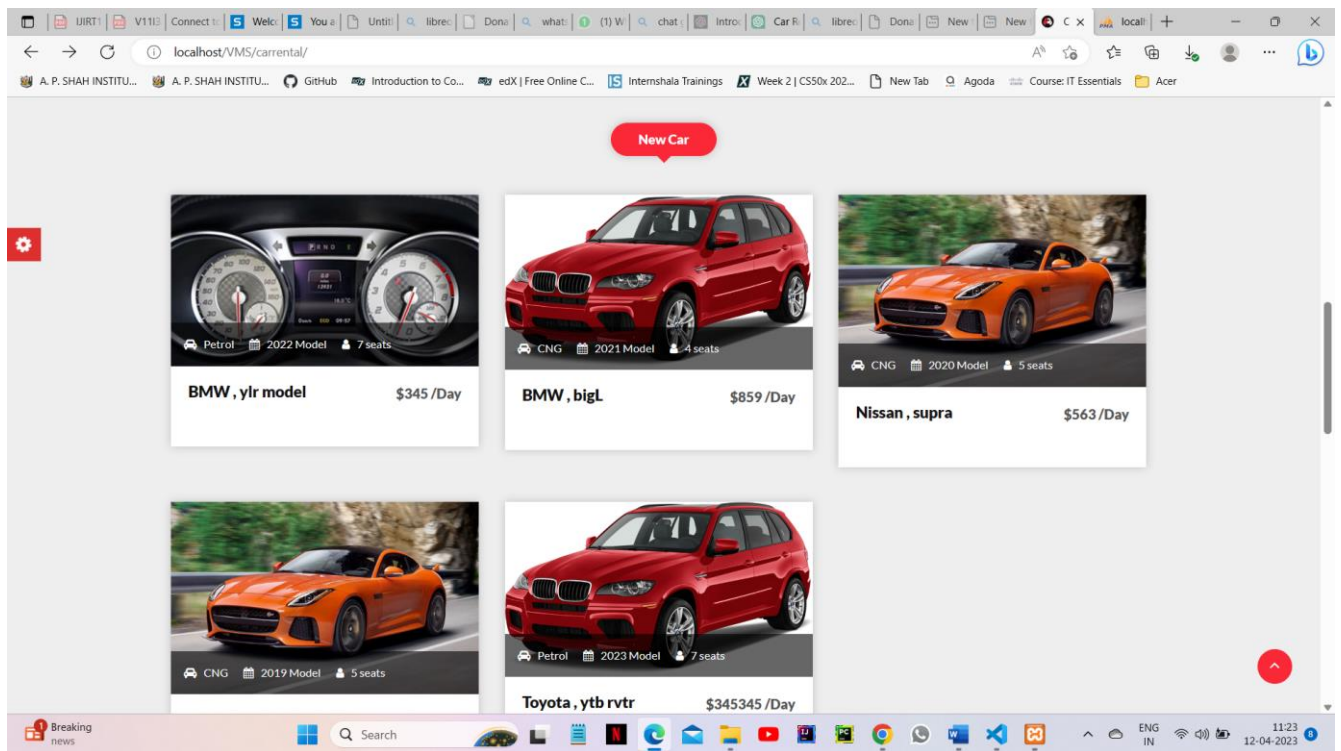Fig 5.4 Database



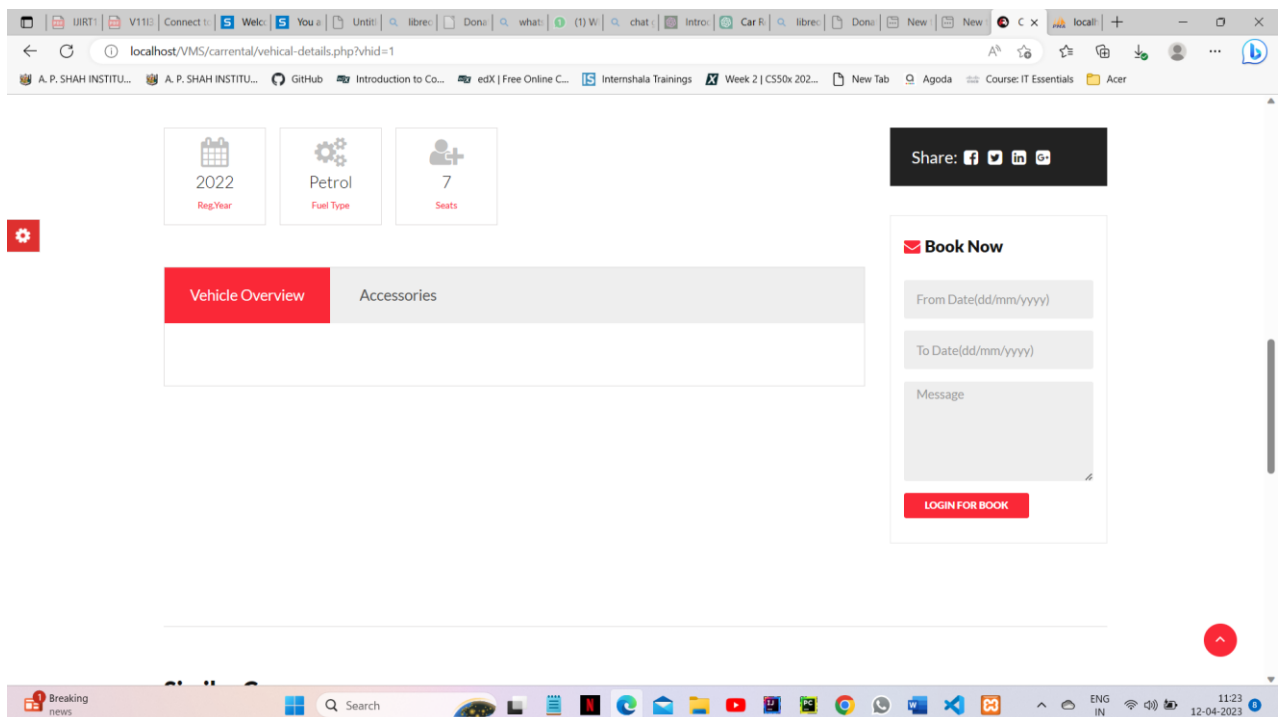Fig 5.5 Admin Dashboard
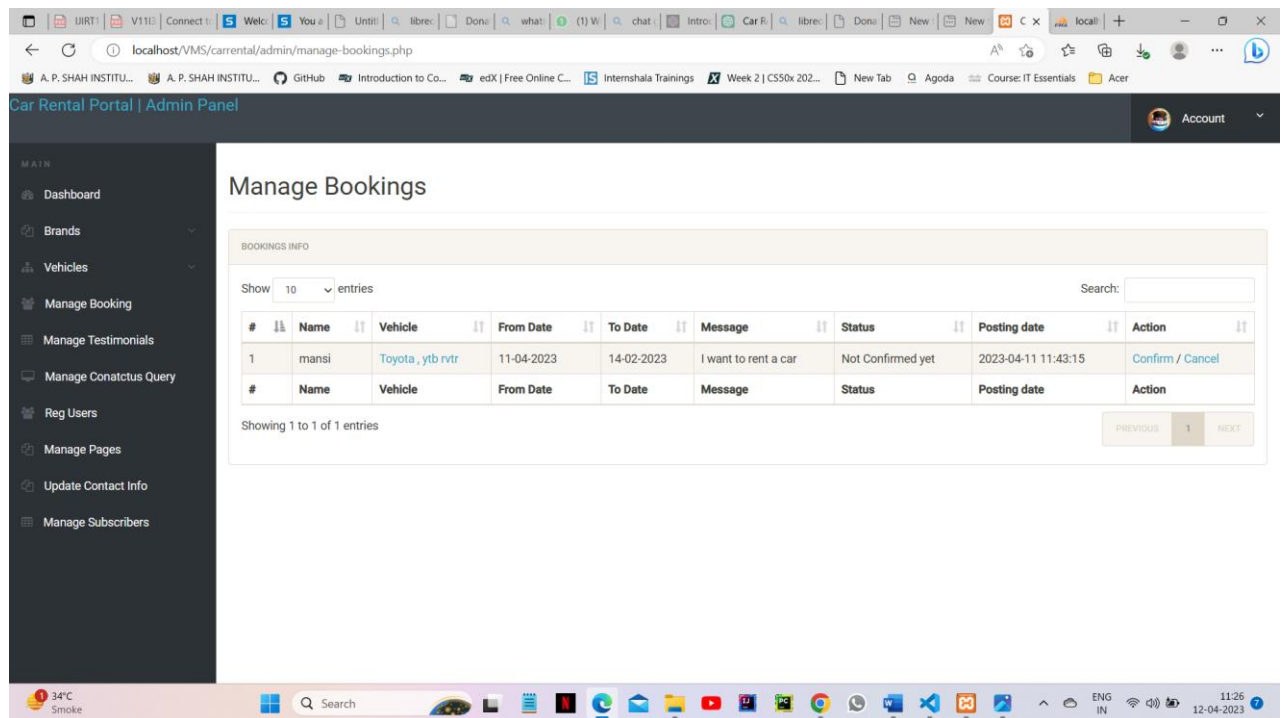
Fig 5.6 Types of cars

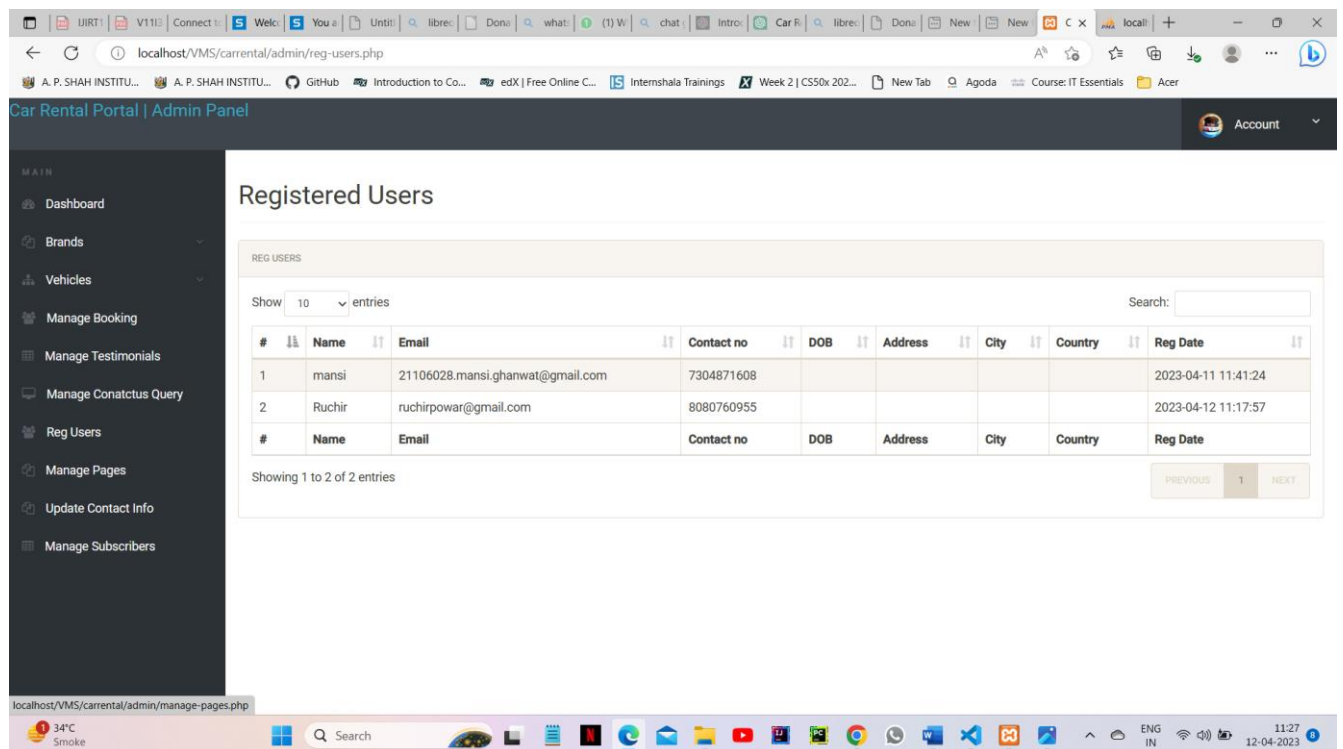

Fig 5.7 Booking Panel

Fig 5.8  Booking Entries



Fig 5.9 Registered Users

# CHAPTER 6

# Conclusion

# 6. CONCLUSION

Generally speaking, a well-designed car rental system can offer several benefits to both customers and rental companies. Customers can enjoy the convenience of renting a car at their desired location and time, choosing from a wide range of vehicle options, and making online reservations and payments. Rental companies can benefit from increased customer loyalty, improved operational efficiency, and better insights into their business performance through data analytics. However, implementing a car rental system also comes with challenges such as managing inventory, ensuring vehicle maintenance and safety, handling customer complaints and disputes, and complying with legal and regulatory requirements. Therefore, careful planning, execution, and continuous monitoring and improvement are necessary to ensure the success and sustainability of a car rental system. In conclusion, a car rental system can be a valuable asset for both customers and rental companies, but it requires a well-thought-out strategy and robust technology and processes to deliver a seamless and satisfying experience for all stakeholders.

# References

[1] Ahmed, Falah YH, Eizwan Bin Hazlan, and Muhammad Irsyad Abdulla. "Enhancement of Mobile-Based Application for Vehicle Rental." In *2021 IEEE 11th IEEE Symposium on Computer Applications & Industrial Electronics (ISCAIE)*, pp. 163-168. IEEE, 2021

[2] Thakur, Amey. "Car Rental System." *International Journal for Research in Applied Science and Engineering Technology* 9, no. 7 (2021): 402-412.

[3] Sathya, R., G. Srujan Reddy, Grandhi Ram Teja, Vedantham PS Srinivasa Iyengar, and Prabhat Kumar. "Car Hiring System using Web Technology." In *2023 IEEE International Students' Conference on Electrical, Electronics and Computer Science (SCEECS)*, pp. 1-6. IEEE, 2023

[4] Reddy, Chaganti Sandeep, and Dr Preeti Savant. "Car Service Slot Booking System." *International Journal for Research in Applied Science & Engineering* 10 (2022): 1836-1839.

[5] Shelar, Sanjeev, Wasim Sheikh, and Pratik Shinde. "Vehicle information system." *Int. J. Comput. Sci. Inf. Technol* 6, no. 2 (2015).

**URLS**

[7] https://www.youtube.com/watch?v=R1djM9B0ay0

[8] https://www.apachefriends.org/docs/hosting-xampp-on-aws.html

[9] https://youtu.be/at19OmH2Bg4