



Vehicle Rental Management System

Submitted as Mini Project for Special Topics: Programming with C++
Semester III

BACHELOR OF TECHNOLOGY

in

Computer Science and Engineering

Mehul Thakral

PES1201701122

Ritwik Sinha

PES1201700085

Vishnu Manoj

PES1201700801

Under Guidance of

Prof. Jamuna S Murthy

BE (CSE), M.Tech (SSE)

Assistant Professor

Aug 2018- Dec 2018

Department of Computer Science and Engineering

PES UNIVERSITY

Outer Ring Rd, Banashankari 3rd Stage, Banashankari, Bengaluru, Karnataka
560085

INTRODUCTION

Vehicle Rental Management System is an autonomous system which will preserve the records of all the vehicles available, vehicles rented etc. The user can rent a vehicle based on its efficiency, performance, effort or cost. The dealer can make a lot of use of this system by providing the vehicles.



The vehicle rental management system will keep the track of the record of all the activities and the records related to it in a centralized manner.

OBJECTIVE

Faster Process – To make sure a user get his desire vehicle as early as possible, the vehicle rental management system will provide the faster response to complete the process.

Minimize paperwork – As all the system is computerized, there is no need to fill any application from for renting purpose. So the paperwork will be very less.

Centralized – All type of data and the activities related to system will be kept in a single place so that it is easy to monitor the system and provide the customer the best service.

KEY FEATURES

The following features are the main points which will add the two stars in the system :

- Easy Access to buyers
- Multi User Account System
- Free Listings and inquiries
- Zero loss of customers
- Invoice Management
- Monitoring the whole Car Management System
- Management of all type of users' account
- Car report management
- Profile System

Enhancement Features

- Password hiding while typing
- Specific color scheme used for important statements
- System waiting time feature
- Going onto new pages after logging in or register symbolising session.
- Password confirmation while registering.
- Looking at the registered vehicles by the respective administrator.

DESCRIPTION

```
mehul@mehul-HP-250-G5-Notebook-PC:~/cpp_project/vehicle-rental-management-system
$ g++ admin.cpp
mehul@mehul-HP-250-G5-Notebook-PC:~/cpp_project/vehicle-rental-management-system
$ ./a.out

Welcome to Vehicle Rental Management System

Do you want to
1)Put your vehicle on rent
2)Rent a vehicle

Enter your choice 1 or 2:
1
```

MODULE DESCRIPTION

It would be a multi user account system as mentioned in key features. There will three types of main modules in the system

- Customer putting vehicles on rent(ADMIN)
- Customer taking vehicles on rent(USER)
- Invoice Management



ADMIN

Like every other management system the vehicle rental management system will have the admin. The admin will be the entity that will put his/her vehicles for rent.

Following are the some main facts related to the admin of the system.

1) After input being taken as admin we get the below shown admin page with login and register options. Password validation may lead to “Invalid username or password” in which case admin is prompted an option of whether to try again or if not an existing user they can register. *Password hiding while typing is in action.*

Below shown is the login option being selected.

```
                Welcome to the best vehicle rental facility
                You are few steps away from putting your vehicle on rent

Please 1)Login or 2)Register
Enter your choice 1 or 2:
1
Enter your username
nhd
Enter password:
Invalid username or password

Do you want to 1)Try again or 2)New User
Enter your choice 1 or 2:
2
Do you want to register
0
Thanks for visiting us!!
```



On **REGISTER** option being selected we will take personal information and login credentials to be used for future login. Here *password confirmation feature can be seen in action*.

Below shown is the register option being selected:

```
                Welcome to the best vehicle rental facility
                You are few steps away from putting your vehicle on rent

Please 1)Login or 2)Register

Enter your choice 1 or 2:
2

Enter name,username and email address
xyz xyz1 xyz@gmail.com
Enter password:
Confirm password:

Password didn't matched.Try again

Enter name,username and email address
xyz xyz1 xyz@gmail.com
Enter password:
Confirm password:

You have been sucessfully registered!!
```

2)Then the **SESSION** of the registered or logged in user starts.He/she has the option of choosing which type of his/her vehicle to be put on rent.

```
Congrats mehu1 you are in now, you can add your vehicle
```

```
Which vehicle do you want to put on rent
```

```
1)Car  
2)Motor Bike  
3)Bike
```

```
Enter your choice 1 , 2 or 3:
```

```
1
```

3)On choosing a type of vehicle admin is prompted to add its details , followed by the option of adding more vehicles.*If not input then exit else redirection to the initial options.*

```
Congrats xyz you are in now, you can add your vehicle
```

```
Which vehicle do you want to put on rent
```

```
1)Car  
2)Motor Bike  
3)Bike
```

```
Enter your choice 1 , 2 or 3:
```

```
2
```

```
Enter the following values space seperated:
```

```
Enter motorbike name,model,motorbike number,type(sports/normal),fuel type,no.of  
seats,mileage in km/l,base fare,fare per day  
honda cv ka41ab6547 normal petrol 2 67 200 150
```

```
Motorbike has been sucessfully added!!
```

```
Do you want to add more vehicles 0)No 1)Yes
```

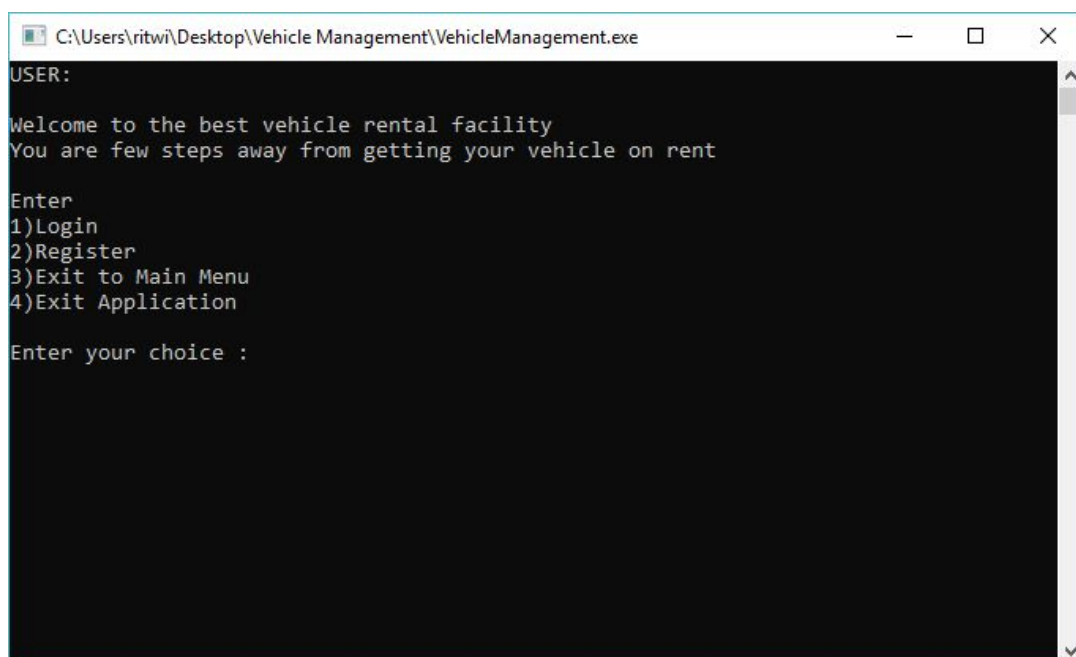
```
0
```

```
Thanks for visiting us!!
```

NOTE:There are fallback options in each input selection in order to exit or redirect to other facilities available.

USER

The user has the right to book a vehicle of his choice based on availability. The first page of the login page shows two options to either login or register or go back to the main menu.



```
C:\Users\ritwi\Desktop\Vehicle Management\VehicleManagement.exe
USER:
Welcome to the best vehicle rental facility
You are few steps away from getting your vehicle on rent

Enter
1)Login
2)Register
3)Exit to Main Menu
4)Exit Application

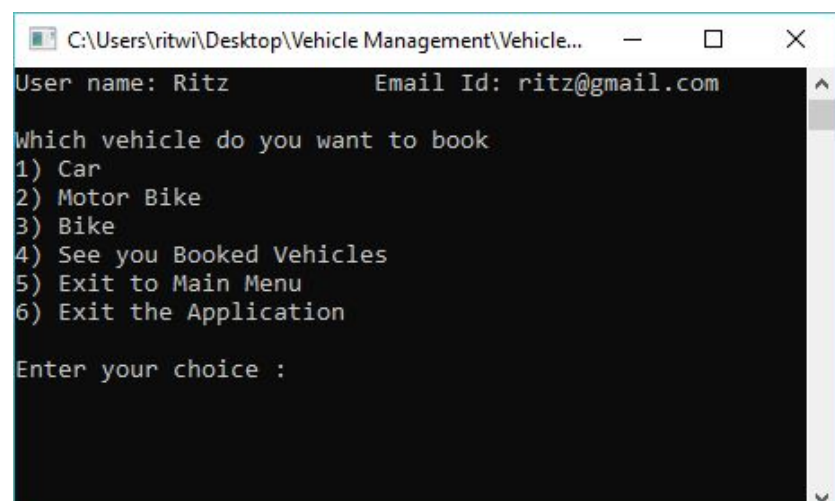
Enter your choice :
```

Here the user can either login or register accordingly.

When registering, the application asks for name, username, password, and email address.

After registration the user is logged in automatically and the user is ready to book vehicles.

When Logged in it shows,



```
C:\Users\ritwi\Desktop\Vehicle Management\Vehicle...
User name: Ritz          Email Id: ritz@gmail.com

Which vehicle do you want to book
1) Car
2) Motor Bike
3) Bike
4) See you Booked Vehicles
5) Exit to Main Menu
6) Exit the Application

Enter your choice :
```




Here one can choose from the above three types of vehicles i.e. Car, MotorBike and Bike.

when car ie. first option is entered it shows this,

```
Enter your username and password (Use spaces or enter to input) :
vish
vish
Congrats vishnu are in now, you can book your vehicle

User name: vishnu          Email Id: vish@gmail.com

Which vehicle do you want to book
1) Car
2) Motor Bike
3) Bike
4) See you Booked Vehicles
5) Exit to Main Menu
6) Exit the Application

Enter your choice : 1
Avaible Cars are :
Sl. no.      Name      Model      Vehicle No. Type      Fuel      Seats      Mileage      Base Fare      Fare Per Day
1           alto        LX         ka41pr5674 normal    petrol     5          15.00        100.00        50.00
2           wagonr      vxi        ka41pr3452 normal    petrol     4          23.00        100.00        120.00
3           civic       1.8       190        normal    petrol     5          6.00         2000.00       500.00
4           abc         bac        12345      suv        petrol     5          10.00        1000.00       200.00
5           verna       sx         6779       sedan     petrol     4          10.00        800000.00    5000.00

Choose a Car from the above options :
```

Here one can choose any car from the list.

It then asks for the duration of renting the vehicle.

Once selecting that it asks for card details and transact req. amount.

```
C:\Users\ritwi\Desktop\Vehicle Management\VehicleManagement.exe
Enter your card details:
Entering your card details:....

Verifying card details.....
Verified...Transaction in processing.Dont exit here.
Success.You have booked successfully

Congrats, You have successfully booked your vehicle with following details :

*****
Type: Car
*****
Name: alto
Model: LX          Vehicle Number: ka41pr5674
Type: normal       Fuel Type: petrol
Seats: 5           Mileage: 15.000000
Base Fare: 100.000000   Fare per day: 50.000000
Total Calculated Fare : 600
Return before "10" days or fine will be levied at 25%.

Press any key to continue . . .
```



In this way it displays everything in the required format.

We can also see the booked vehicles in the user login as well.

It shows the details in the format below.

A screenshot of a Windows command prompt window titled "C:\Users\ritwi\Desktop\Vehicle Management\VehicleManagement.exe". The window displays text for booking two vehicles. The first vehicle is a "Car" named "abc" with model "bac", vehicle number "12345", fuel type "petrol", and 5 seats. Its base fare is 1000.000000 and fare per day is 200.000000, resulting in a total calculated fare of 2000. The second vehicle is a "Car" named "alto" with model "LX", vehicle number "ka41pr5674", fuel type "petrol", and 5 seats. Its base fare is 100.000000 and fare per day is 50.000000, resulting in a total calculated fare of 600. Both bookings have a 25% fine for late return. The prompt ends with "Press any key to continue . . .".

```
C:\Users\ritwi\Desktop\Vehicle Management\VehicleManagement.exe
Return before "5" days or fine will be levied at 25%.
*****
Type: Car
*****
Name: abc
Model: bac           Vehicle Number: 12345
Type: suv           Fuel Type: petrol
Seats: 5            Mileage: 10.000000
Base Fare: 1000.000000   Fare per day: 200.000000
Total Calculated Fare : 2000
Return before "5" days or fine will be levied at 25%.
*****
Type: Car
*****
Name: alto
Model: LX           Vehicle Number: ka41pr5674
Type: normal        Fuel Type: petrol
Seats: 5            Mileage: 15.000000
Base Fare: 100.000000   Fare per day: 50.000000
Total Calculated Fare : 600
Return before "10" days or fine will be levied at 25%.
Press any key to continue . . .
```

So this way one can book a vehicle in an efficient manner where it's easy for both the administrator and the customer. Here the administrator can use the same application and register vehicles which can be booked by the customers.

Conclusion

We were very happy to work under the guidance of Prof. Jamuna Murthy. This made us learn a lot of coding concepts like File Management System. We also came to know about new coding softwares like Visual Studio .