



Institute for Advanced Computing and Software Development (PG-DAC)

Documentation On
“Car Rental System”
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Last but not the least we thank the entire faculty and the staff members of Institute for Advanced Computing and Software Development (PG-DAC) for their support.

e-DAC Sep 21Batch,

IACSD Pune

ABSTRACT

This Car Rental System project is designed to aid the car rental company to enable renting of cars through an online system. It helps the users to search for available cars view profile and book the cars for the time period. It has a user-friendly interface which helps the user to check for cars and rent them for the period specified. They could also make payment online. Based on the type of car required by the customer, the user shall be able to make bookings. The use of internet technology has made it easy for the customers to rent a car any time and for any location. This Car Rental System makes the bookings easy. It saves time and labour. The system shall ask the user for information such as the date and time of journey, type of car etc. Also, it will need an identification number. Using these details, the system shall help the customer to book a car for the journey.

Features of Car Rental System : Maintaining record of every booking history,
Feedback mechanism for increasing service quality, Online payment option.

Front End: React Js.

Back End: Spring-Boot

Database: MYSQL

INDEX

1. INTRODUCTION	6
1.1 Introduction	6
2. REQUIREMENTS	8
2.1 Functional Requirements	8
2.1.1 Use case for User	8,9
2.1.2 Use case for Admin	10,11
2.1.3 Use case for Employee	12,13
2.2 Non - Functional Requirements	14
2.2.1 Interface	14
2.2.2 Performance Requirement	14
2.2.3 Constraint	14
2.2.4 Other Requirements	14
3. PROJECT DESIGN	
3.1 Data Model	
3.1.1 Database Design	15-19
4. PROJECT SCREENSHOTS	20-30
5. CONCLUSION	31
6. REFERENCE	31

LIST OF TABLES

Table Title	Page
Users	15
Cars	16
Car booking	16
Payments	17
Feedback	17

LIST OF FIGURES

Figure Title	Page
ER Diagram	18
Data Flow Diagram	19
Class Diagram	--

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. Cab rental management system is a unique and innovative product.

This system gives following features to the customers

Registration : in this system user have to become a registered user to rent a car. User have to fill up his contact information like his name, address, mobile number in the registration form. After submitting the form he get username and password to login the system.

Date Scheduling : use can select the date of car booking. To book a car on selected date he have to give pick up place information and drop off place information.

Payment : You can pay using debit or credit cards or UPI for our service.

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 system also keep the information of cancellation and modification of booking.

2. REQUIREMENTS

2.1 FUNCTIONAL REQUIREMENTS

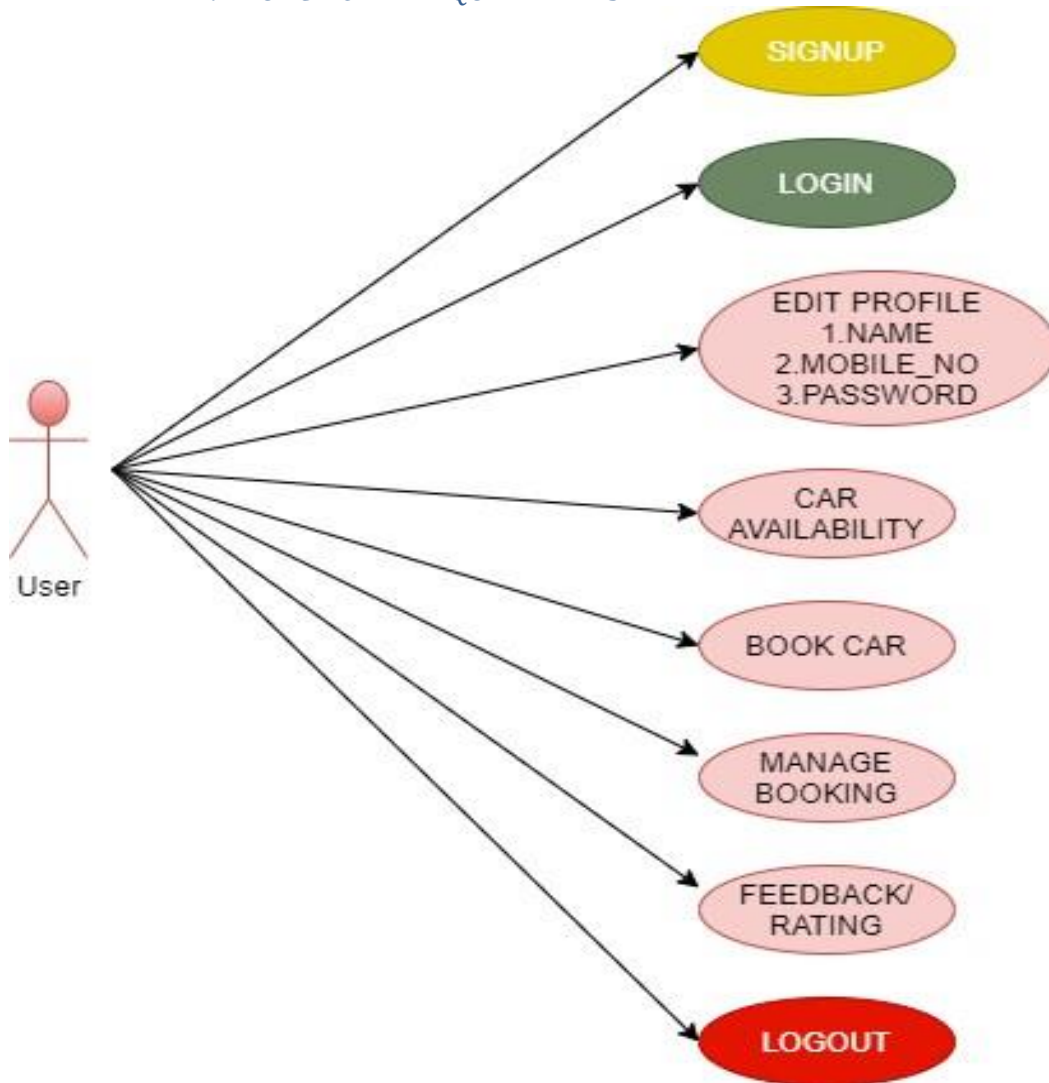


Fig 2.1.1 User

❖ USER

Login: Firstly user click on Login button if user is already sign up then user will be login. but user is not sign up then click on sign up button the user will go to the sign up screen After sign up user will be redirect in login page then user will login then user will be able to see the user Dashboard.

After that user will be able to see all the functionality of employee.

Car Availability: In car availability user will be able to see all the cars details available in the database.

Book Car : In book car functionality according to the available cars user will be able to book the car according to his choice.

Manage Booking : In manage booking functionality User can see the his booking list and also cancel the booking .

Edit Profile : In edit profile functionality user will be able to edit profile by changing the name password and mobile number.

Feedback : In feedback functionality user will be able to give the feedback using message and rating for the booking.

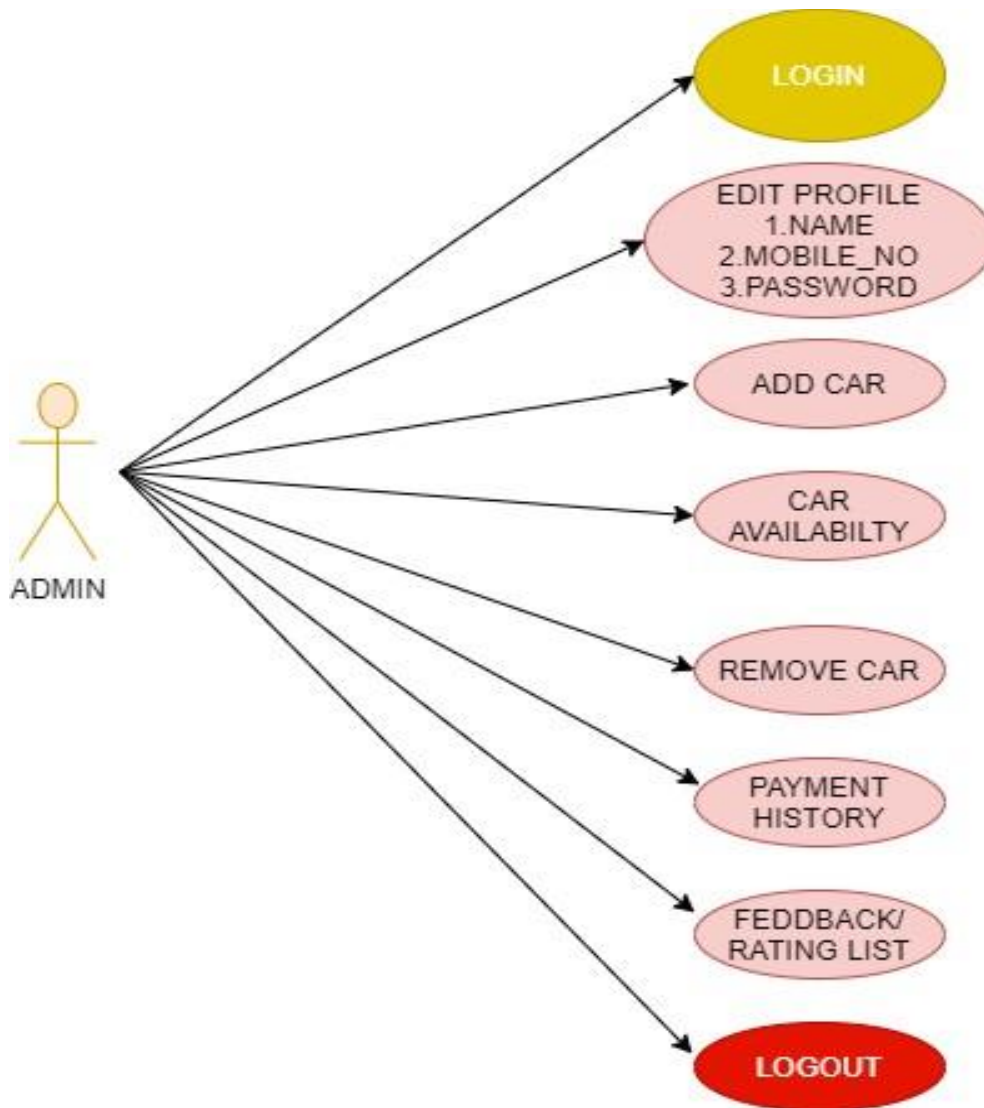


Fig 2.1.2 Admin

❖ ADMIN

Login: Firstly admin click on Login button and after the login admin will be able to see the admin Dashboard.

After that he will be able to see all the functionality of admin.

Car Availability: In car availability admin will be able to see all the cars details available in the database.

Add Car : In add car functionality admin will be able to add all the details of car like model name, plate number, capacity, fuel type, price.

Remove Car : In Remove Car functionality admin will be able to remove the cars details from the database.

Edit Profile : In edit profile functionality admin will be able to edit profile by changing the name password and mobile number.

Payment History : In payment history functionality admin will be able to see the all payment history of the all users and the status of the booking.

Feedback/Rating History : In feedback/rating History functionality admin will be able to see the feedback and rating list given by the user.

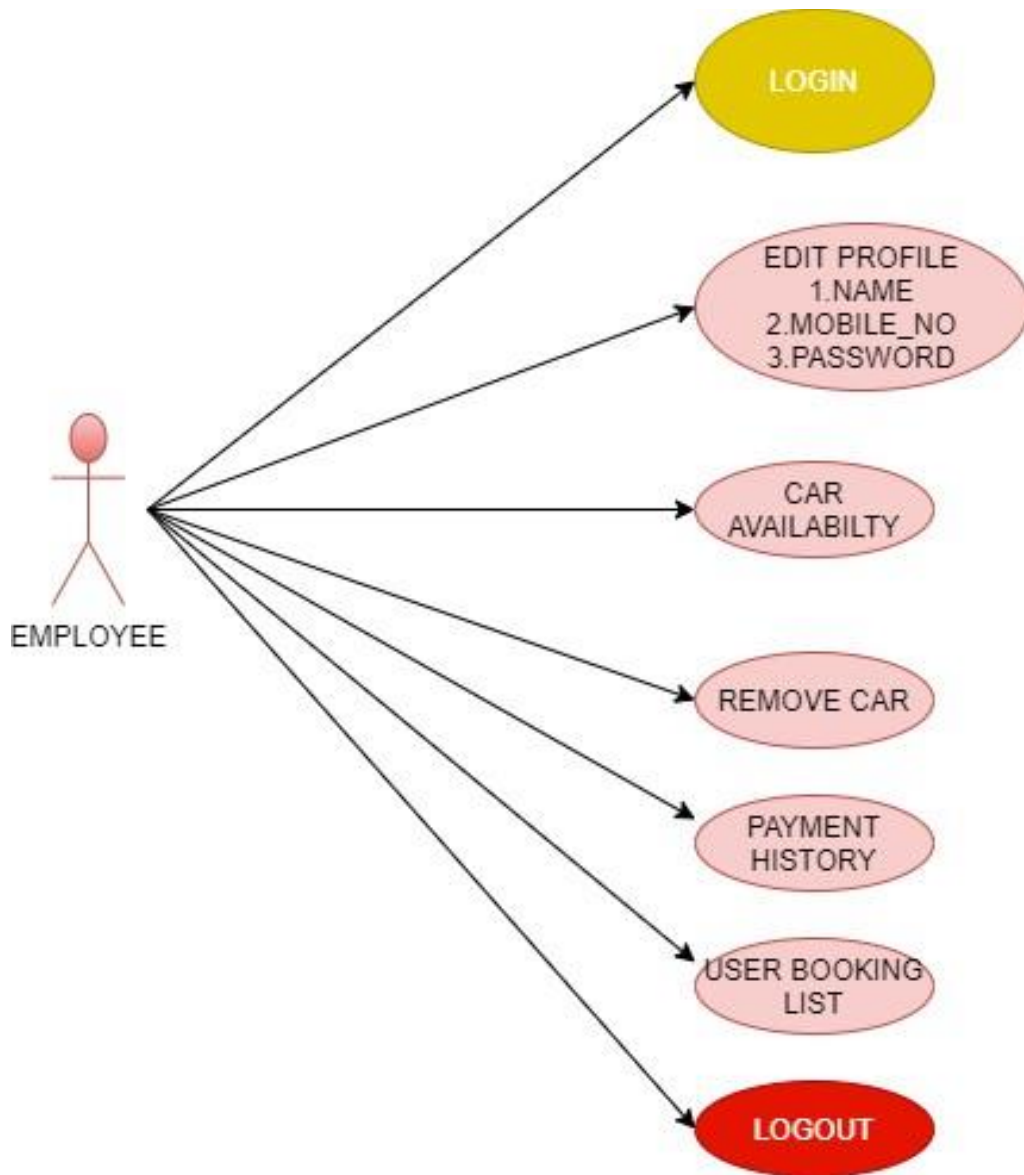


Fig 2.1.3 Employee

❖ Employee

Login: Firstly employee click on Login button and after the employee login admin will be able to see the employee Dashboard.

After that he will be able to see all the functionality of employee.

Car Availability : In car availability admin will be able to see all the cars details available in the database.

Booking List : In Booking List functionality the employee will be able to see the all users booking list.

Remove Car : In Remove Car functionality employee will be able to remove the cars details from the database.

Edit Profile : In edit profile functionality admin will be able to edit profile by changing the name password and mobile number.

2.2 NON FUNCTIONAL REQUIREMENTS

2.2.1 Interface

Go to Appendix B for user interfaces

2.2.2 Performance

Number of Concurrent Users:

It can handle many number of users at a time.

Car Booking:

The system is susceptible to any temporary server failure since it uses the strong feature of Spring boot and Hibernate.

2.2.3 Constraint

System shall be able to handle at least 100 customers a time.

2.2.4 Other Requirements:

Hardware Interfaces

The machine 64 bit and 8GB RAM equivalent or above, 1TB HDD.

Software Interfaces

We use Spring Tool Suite (Spring Boot) for backend and Visual Studio (React Js) for frontend.

It configures to work with MySQL database. This System works on Apache. Tomcat server. It uses Chrome version 89.0.4389 & above.

3. DESIGN

3.1.1 Database Design

The following table structures depict the database design.

Table 1: Users

Key Type/ Constraint	Column Name	Data Type	Length	Allow Null (1=Yes;0=No)
PRI	u_id	int	-	0
0	aadhar_card	varchar	15	0
0	dob	date	-	1
UNI	email	varchar	25	1
0	licence_no	varchar	15	0
0	mobile_no	varchar	13	1
0	name	varchar	30	1
0	password	varchar	20	0
0	role	varchar	255	1

Table 2: Cars

Key Type/ Constraint	Column Name	Data Type	Length	Allow Null (1=Yes;0=No)
PRI	c_id	int	-	0
0	capacity	int	-	1
0	fuel_type	varchar	30	1
0	model_name	varchar	15	1
UNI	plate_number	varchar	20	0
0	price	double	-	1
0	status	varchar	255	1
0	is_deleted	Bit	1	1

Table 3: Car Booking

Key Type/ Constraint	Column Name	Data Type	Length	Allow Null (1=Yes;0=No)
PRI	booking_id	int	-	0
0	destination	varchar	30	1
0	end_datetime	date	-	1
0	source	varchar	30	1
0	start_datetime	date	-	1
MUL	car_id	int	-	1
MUL	user_id	int	-	1
0	booking_status	varchar	30	1

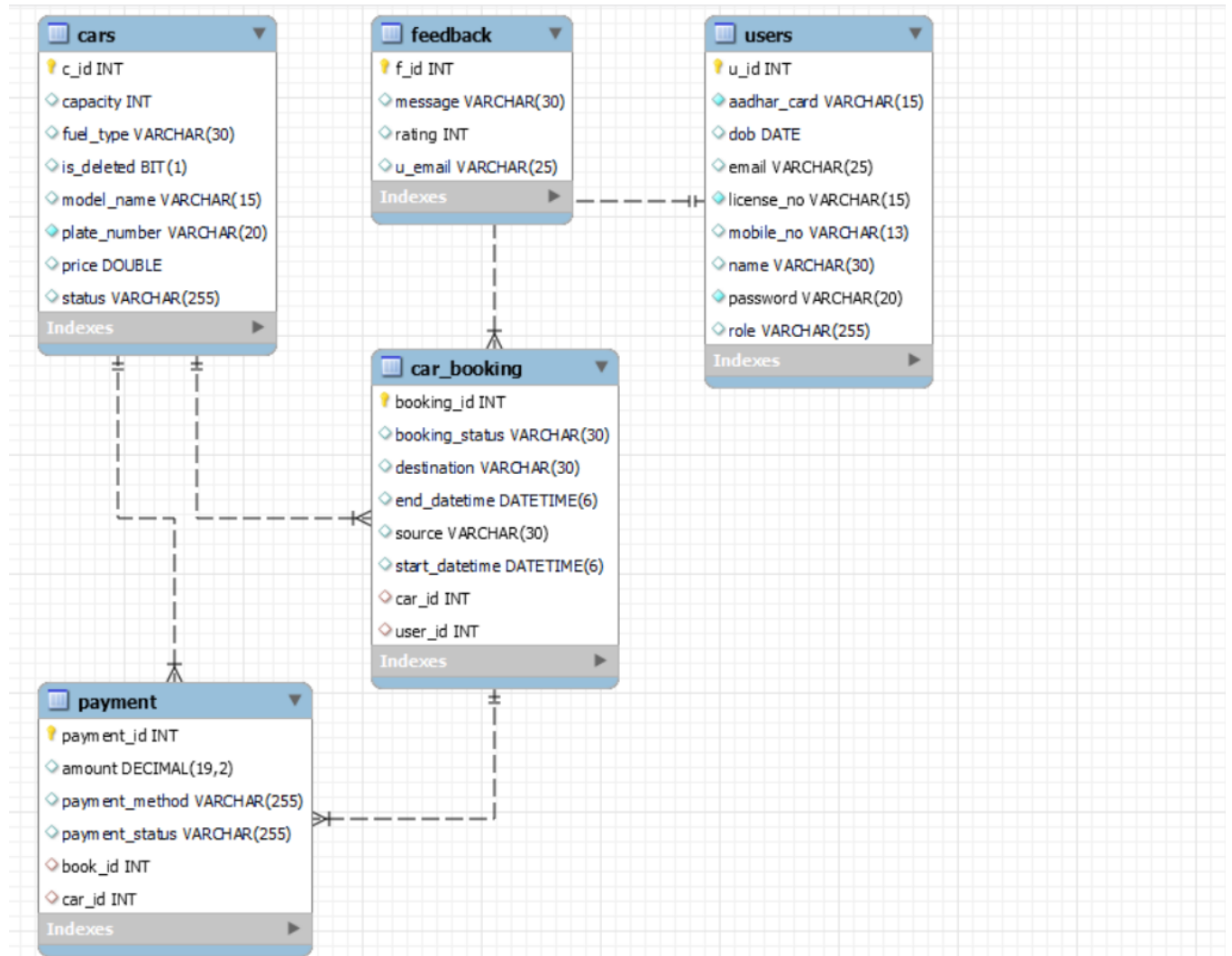
Table 4: Payment

Key Type/ Constraint	Column Name	Data Type	Length	Allow Null (1=Yes;0=No)
PRI	payment_id	int	-	0
0	amount	decimal	19,2	1
0	payment_method	Varchar	255	1
0	payment_status	Varchar	255	1
MUL	book_id	int	-	1
MUL	car_id	int	-	1

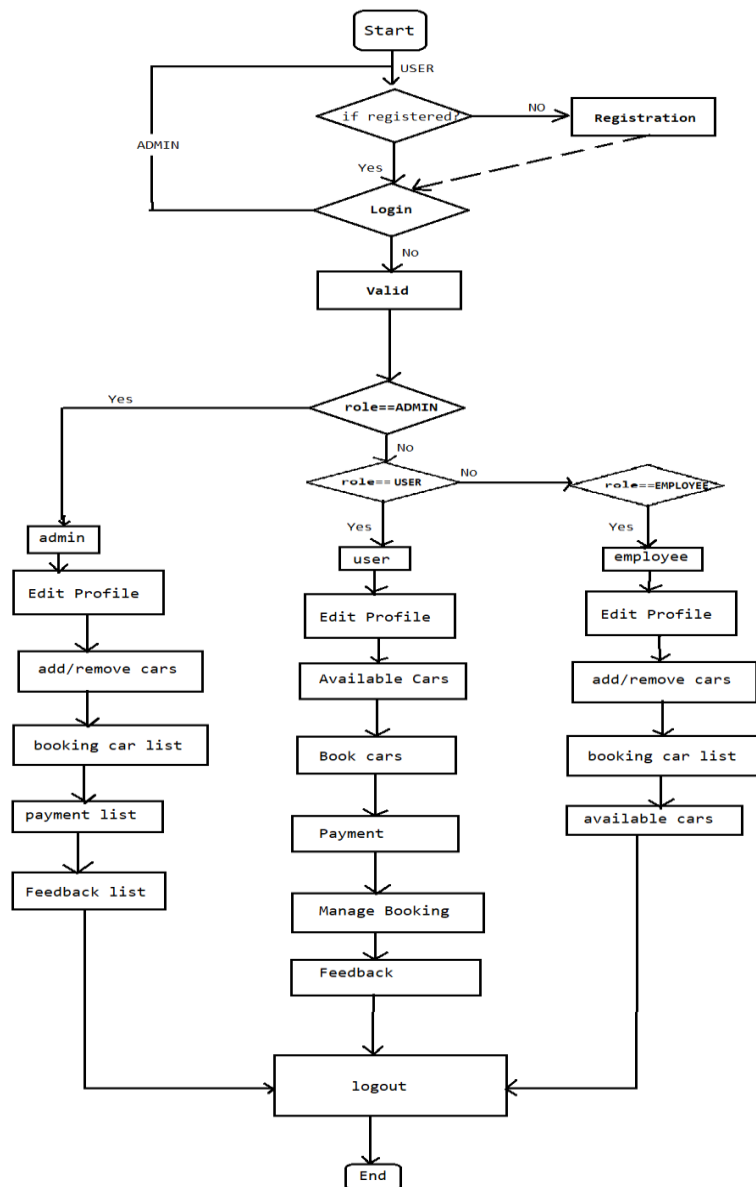
Table 5: Feedback

Key Type/ Constraint	Column Name	Data Type	Length	Allow Null (1=Yes;0=No)
PRI	f_id	int	-	0
0	message	varchar	255	1
0	rating	int	-	1
0	u_email	Varchar	25	1

1 Entity Relationship Diagram

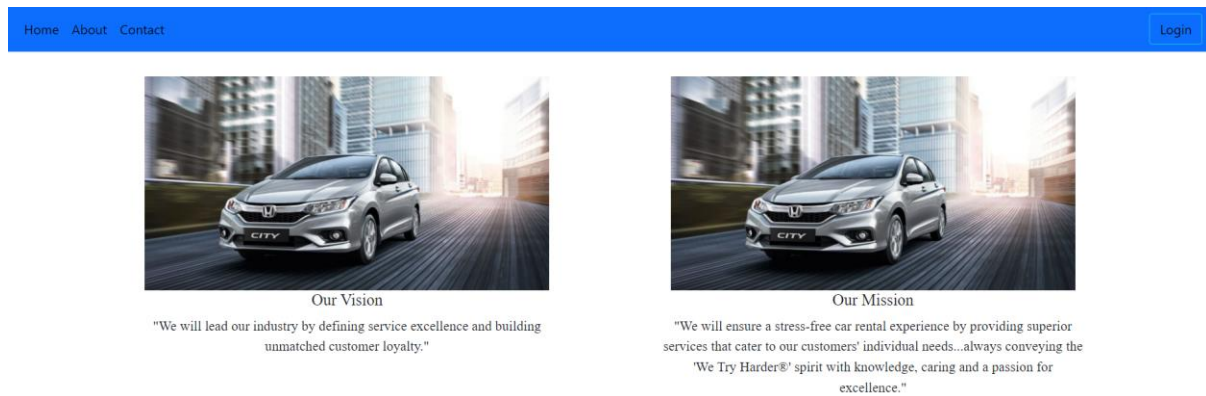
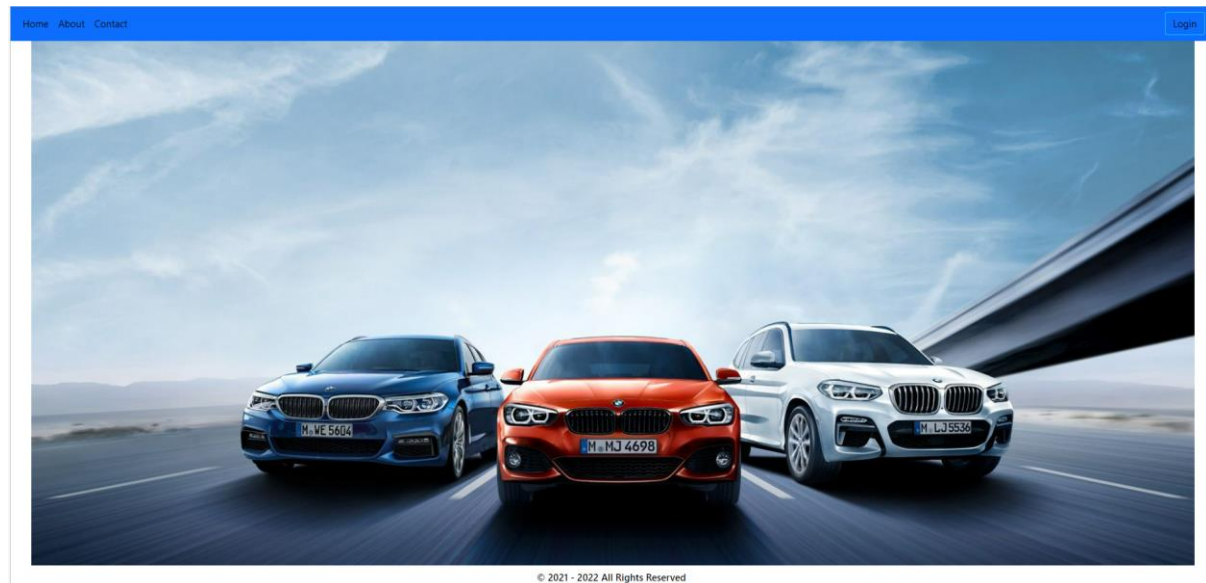


2.Data Flow Diagram:



4.Project Screenshots-

Homepage:



Contact Us

WhatsApp US
Omkar Kolge :99222 03458
Manish Jaiswal : 90989 80889

Email US
omkarkolgem@gmail.com
mmjaiswal04@gmail.com

Contact US
1800 890 1222
7:00 AM to 8:00 PM,365 Days

Concerns Not Address
It is our priority to positively respond and address any concerns you may have at the earliest. To ensure this, our team is continuously working to provide you the best of support, through a few concern/ issues that are complex in nature may require additional time to resolve. In unlikely event that your concerns are not addressed satisfactorily, you could communicate directly to higher authority to facilitate and better manage this we have aligned a structure to aid communication.

Login

Email Address

abc@example.com

Password

[Login](#)

New around here? [Sign Up](#)

SignUp

Name

Email Id

Password

Mobile Number

Aadhaar Card

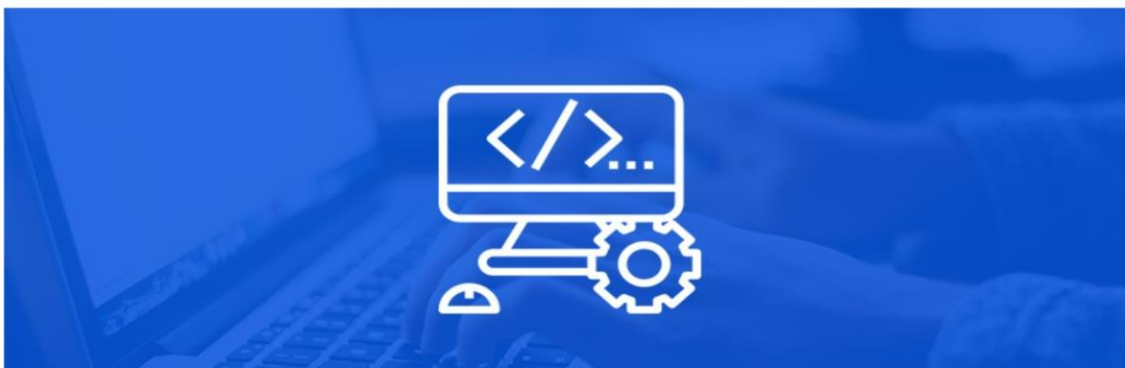
License No

DOB



Already a User? [SignIn](#)

Welcome Admin Omkar Kolge



Add New Car

Model Name

Plate Number

Fuel Type

Capcity

price

[Add Car](#)

Car Details

Car Id	Model Name	Plate Number	Fuel Type	Capacity	Price	Status
7	Ertiga	MH 08 AP 1236	Petrol	6	4500	AVAILABALE
8	Creta	MH 12 AB 1447	Diesel	5	4500	UNAVAILABALE
9	WagonR	MP 08 AN 8521	CNG	4	3500	AVAILABALE
10	Nano	MH 08 AP 4562	Petrol	4	4000	AVAILABALE

Edit Profile

Name

Omkar Kolge

Password

Mobile Number

9322203458

Edit

Car Details

Car Id	Model Name	Plate Number	Fuel Type	Capacity	Price	Status	Delete Car
7	Ertiga	MH 08 AP 1236	Petrol	6	4500	AVAILABLE	Delete Car
8	Creta	MH 12 AB 1447	Diesel	5	4500	UNAVAILABLE	Delete Car
9	WagonR	MP 08 AN 8521	CNG	4	3500	AVAILABLE	Delete Car
10	Nano	MH 08 AP 4562	Petrol	4	4000	AVAILABLE	Delete Car

Payment History

Payment Id	Booking Id	Car Id	Amount	Payment Method	Payment Status
1	9	7	4500	DEBIT_CARD	SUCCESS
2	11	6	3000	DEBIT_CARD	SUCCESS
3	12	7	4500	DEBIT_CARD	SUCCESS
4	18	8	4000	CASH_ON_DELIVERY	PENDING
5	29	10	4000	DEBIT_CARD	SUCCESS
6	30	7	8996.88	DEBIT_CARD	SUCCESS
7	31	10	6500	CASH_ON_DELIVERY	PENDING
8	32	8	7125	CASH_ON_DELIVERY	PENDING

Feedback/Rating History

Feedback Id	User Email Id	Rating	Message
1	rama@gmail.com	5	Best Service
2	kir@gmail.com	4	Good
3	manish1@gmail.com	4	Good

Welcome Employee Rajat Sadkar



User Booking List

Booking Id	Source	Destination	Start DateTime	End DateTime	User Id	Car Id
7	Pune	Mumbai	2022-04-11T10:17:00.000+00:00	2022-04-12T13:00:00.000+00:00	9	7
8	Pune	Mumbai	2022-04-11T10:17:00.000+00:00	2022-04-11T12:17:00.000+00:00	9	7
9	Mumbai	Thane	2022-04-10T17:00:00.000+00:00	2022-04-11T17:00:00.000+00:00	9	7
11	Thane	Mumbai	2022-04-16T12:00:00.000+00:00	2022-04-16T22:00:00.000+00:00	6	6
12	Thane	Pune	2022-04-10T18:00:00.000+00:00	2022-04-11T17:00:00.000+00:00	9	6
13	Lonavala	Satara	2022-04-10T18:00:00.000+00:00	2022-04-11T17:00:00.000+00:00	9	7
14	Bhivandi	Karad	2022-04-10T19:00:00.000+00:00	2022-04-11T18:00:00.000+00:00	8	6
15	Pimpri	Satara	2022-04-10T20:00:00.000+00:00	2022-04-11T19:00:00.000+00:00	8	7
16	Chiplun	Karad	2022-04-10T20:33:00.000+00:00	2022-04-11T18:34:00.000+00:00	10	6
17	Kalyan	Pimpri	2022-04-10T22:00:00.000+00:00	2022-04-11T21:00:00.000+00:00	8	7
18	Kolhapur	Satara	2022-04-11T10:00:00.000+00:00	2022-04-12T10:00:00.000+00:00	9	8
19	Chiplun	Mumbai	2022-04-11T11:00:00.000+00:00	2022-04-12T10:30:00.000+00:00	22	10
20	Chiplun	Ratnagiri	2022-04-12T23:28:00.000+00:00	2022-04-13T21:32:00.000+00:00	9	9
21	Chiplun	Mumbai	2022-04-12T22:40:00.000+00:00	2022-04-13T21:42:00.000+00:00	9	10
22	Karad	Chiplun	2022-04-11T22:46:00.000+00:00	2022-04-12T21:52:00.000+00:00	9	8
23	Kalyan	Nagpur	2022-04-12T23:12:00.000+00:00	2022-04-13T21:16:00.000+00:00	9	9
24	Kolhapur	Keral	2022-04-12T22:33:00.000+00:00	2022-04-13T22:34:00.000+00:00	9	10
25	Chiplun	Kerla	2022-04-12T23:36:00.000+00:00	2022-04-13T21:37:00.000+00:00	9	10
26	Thane	Kalyan	2022-04-11T23:44:00.000+00:00	2022-04-12T22:43:00.000+00:00	9	10
27	Chiplun	Nashik	2022-04-12T22:45:00.000+00:00	2022-04-13T22:45:00.000+00:00	9	8
28	Chiplun	Nashik	2022-04-12T22:45:00.000+00:00	2022-04-13T22:45:00.000+00:00	9	8
29	Chiplun	Nashik	2022-04-12T22:48:00.000+00:00	2022-04-13T22:48:00.000+00:00	9	10
30	karad	Chiplun	2022-04-12T22:53:00.000+00:00	2022-04-14T22:52:00.000+00:00	9	7

Car Details

Car Id	Model Name	Plate Number	Fuel Type	Capacity	Price	Status	Delete Car
7	Ertiga	MH 08 AP 1236	Petrol	6	4500	AVAILABALE	Delete Car
8	Creta	MH 12 AB 1447	Diesel	5	4500	UNAVAILABALE	Delete Car
9	WagonR	MP 08 AN 8521	CNG	4	3500	AVAILABALE	Delete Car
10	Nano	MH 08 AP 4562	Petrol	4	4000	AVAILABALE	Delete Car

Welcome User Ankur Sharma





Car Details

Car Id	Model Name	Plate Number	Fuel Type	Capacity	Price/Day	Status	Book
7	Ertiga	MH 08 AP 1236	Petrol	6	4500	AVAILABLE	Book This Car
8	Creta	MH 12 AB 1447	Diesel	5	4500	UNAVAILABLE	
9	WagonR	MP 08 AN 8521	CNG	4	3500	AVAILABLE	Book This Car
10	Nano	MH 08 AP 4562	Petrol	4	4000	AVAILABLE	Book This Car



Book Car Form

Start Date



Start Time



End date



End Time



Source

Destination

[Book This Car](#)



Payment Screen

Booking Id	Car Model	Car Plate Number	Start Date Time	End Date Time	Source	Destination	Amount to be Paid
33	WagonR	MP 08 AN 8521	2022-04-13 12:00:00	2022-04-14 18:00:00	Mahad	Karad	4375

Payment Method

CASH_ON_DELIVERY

Payment Status

PENDING

[Initiate Payment](#)



My Booking List

Booking Id	Source	Destination	Start DateTime	End DateTime	Booking Status	Action
16	Chiplun	Karad	2022-04-10 20:33:00	2022-04-11 18:34:00	SUCCESS	Cancel Booking
33	Mahad	Karad	2022-04-13 12:00:00	2022-04-14 18:00:00	SUCCESS	Cancel Booking


Car Availability

Book Car

Manage Booking

Edit Profile

Feedback

 Rinku Sharma

Logout

Home

Bookings

Feedback

+

FeedBack

Email Id

abc@example.com

Rating in 1 to 5

1 to 5

Message

Message

Submit

5.CONCLUSION:

In conclusion, the system will be able to serve as a web base application when it is finally developed, where these small upcoming companies can make use of it to publish their services in a wide range and also help the company to manage their service more effectively.

6.REFERENCE

<https://www.zoomcar.com/>
all over the world.