Project Name: Inter-city Car Pooling System
Branch PG-DAC Mar-2023

Documentation On

"Inter-city Car Pooling System"
PG-DAC MARCH 2023

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1. Introduction:

1.1 Document Purpose:

This document communicates the business requirements and scope for developing Inter-city Car Pooling System. The scope of this document is to define the functional and non functional requirements, business rules and other constraints requirements.

1.2 Project Background:

There is a growing awareness of the challenges associated with individual commuting, such as increasing traffic congestion, rising fuel costs, and environmental concerns. Inefficient use of private vehicles and the lack of convenient alternatives contribute to these challenges.

1.3 Aim & Objectives:

The online carpooling system is a platform designed to connect individuals who are traveling in the same direction so they can share a ride together. It aims to provide a more sustainable and cost-effective transportation option by reducing the number of vehicles on the road and optimizing the use of existing resources.

2. Business Requirements Overview:

- Online car pooling system is the public Web Application.
- Online car pooling system will be opened to the global, but in the phase 1, the main target is in the Maharashtra .
- There are mainly two types of user. One is the **User** and other is **Car owner**.
- User can find out the minimum price ride and then user can send the request to particular Car owner.
- There are mainly two types of users.One is the Car-owner and the other one is Users who get a ride with car owner .
- Online car pooling system provides the functions which connect the users and the Car owner efficiently and directly.
- Online car pooling system could be maintained by **Administrator**.

Inter-city Car Pooling system provides such functionalities through which Users can book ride and make ride share with Car-owner who is travelling in that direction.

3. Functional Requirements Overview:

Inter-city Car Pooling System consists of three modules described as below.

1. Car owner Module
2. Users Module
3. Admin Module

3.1 Car owner Module

- Car owner can register and create his own account.
- Car owner should be able to registered by providing their personal information, vehicle details, driving-license information and contact details.
- Car owner will have login first before the send the request.
- Inter-city Car Pooling System provides the function which allows Car owner to publish his travelling details like date, time, price and location.
- He/she is able to select existing user with their choice.
- Car owner should have the ability to set their availability by specifying their preferred routes,range of fixation of amount, timings, and the number of available seats in their vehicles.

3.2 User Module

- User can register and create his own account.
- Online car pooling system provides functionality which allows user to find out the rides where he/she wanted to go.
- User can find out the minimum price ride and then user can send the request to particular Car owner.

3.3 Admin Module

- Online car pooling system should provide all function to admin how to handle the System.
- Admin can had a authority to accepts whole Car owner verified and Users to allow to use the system.
- What all are the Car owner and Users using this system and are they authorized,valid actual or not all those things are checking the responsibility of admin.
- Admin had the authority to see the worst review of the users according to that they select the Car owner disabled or blocked.

4. Non-Functional Requirement:

- The website should use professional design, look and feel and color scheme.
- Users will have no limitations for accessing the application through Internet.
- The portal being an internet application, it is difficult specify exact number of visitor or users. Hence we will target the system to support between 1 and 5 million users on launch of phase 1.
- Being a public website, the site must follow general usability guidelines for menus, navigation, colors, links and other actions provided on the screens.
- The system should be designed in such a manner that user will be able to complete tasks in minimum number of steps.

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5. Use-Case Diagram

5.1 Car Owner:

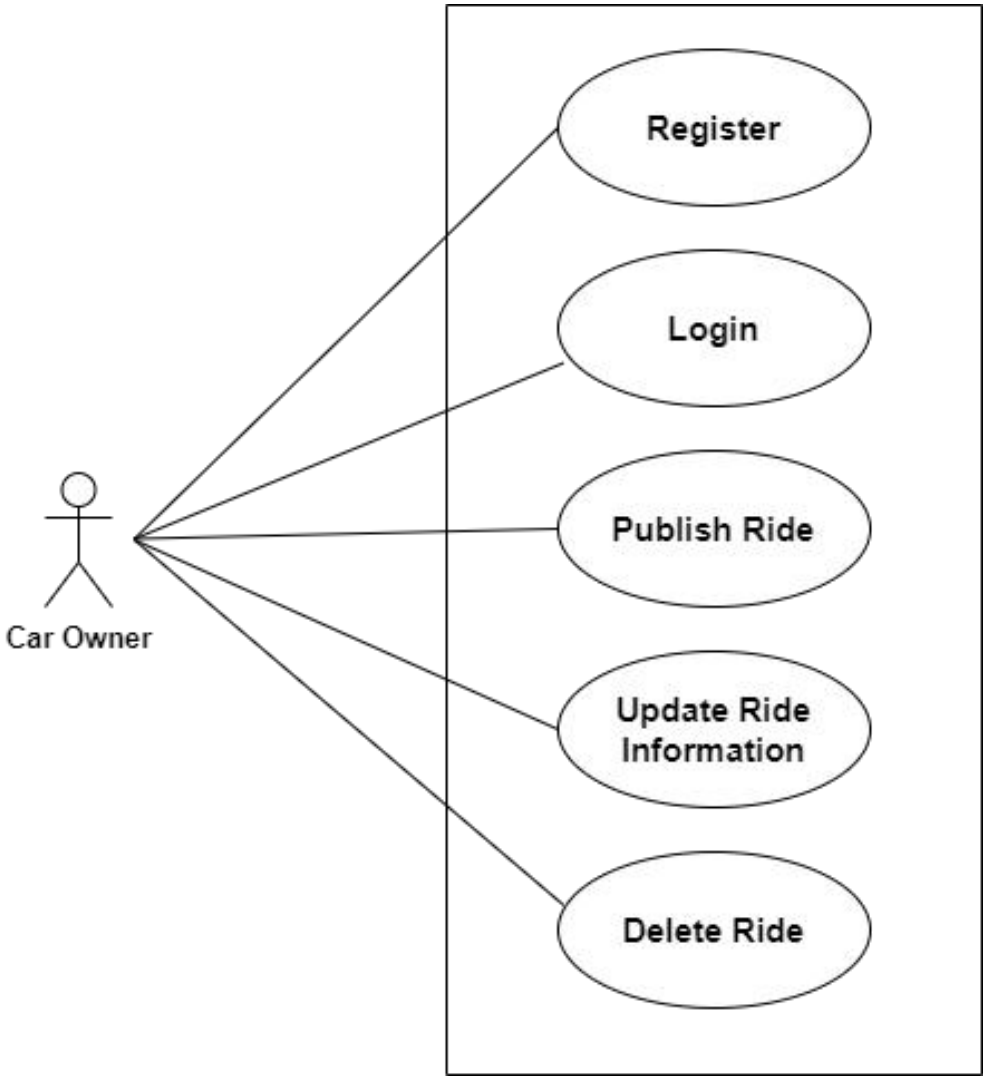


Fig. Use-Case Diagram for Car owner

5.2 User:

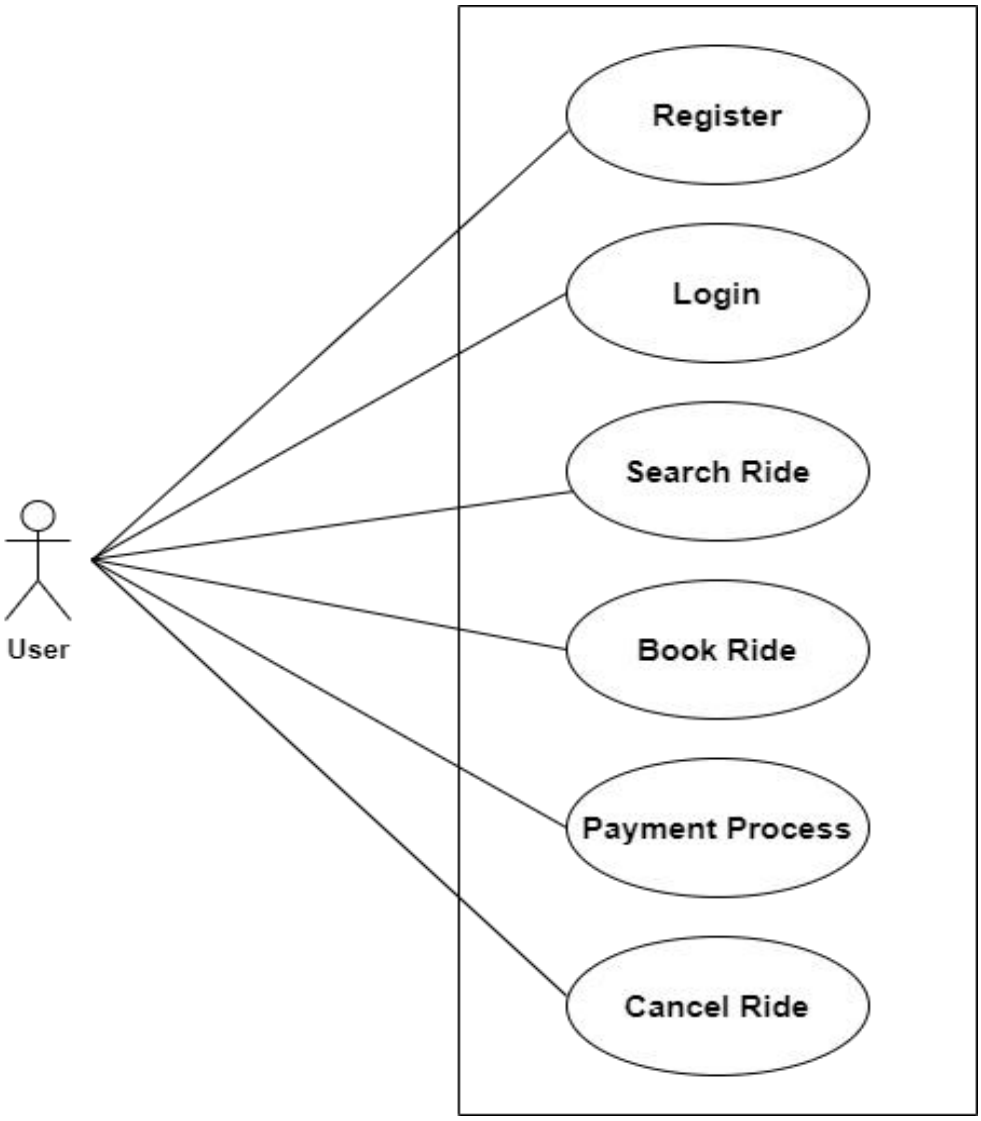


Fig. Use-Case Diagram for User

5.3 Admin:

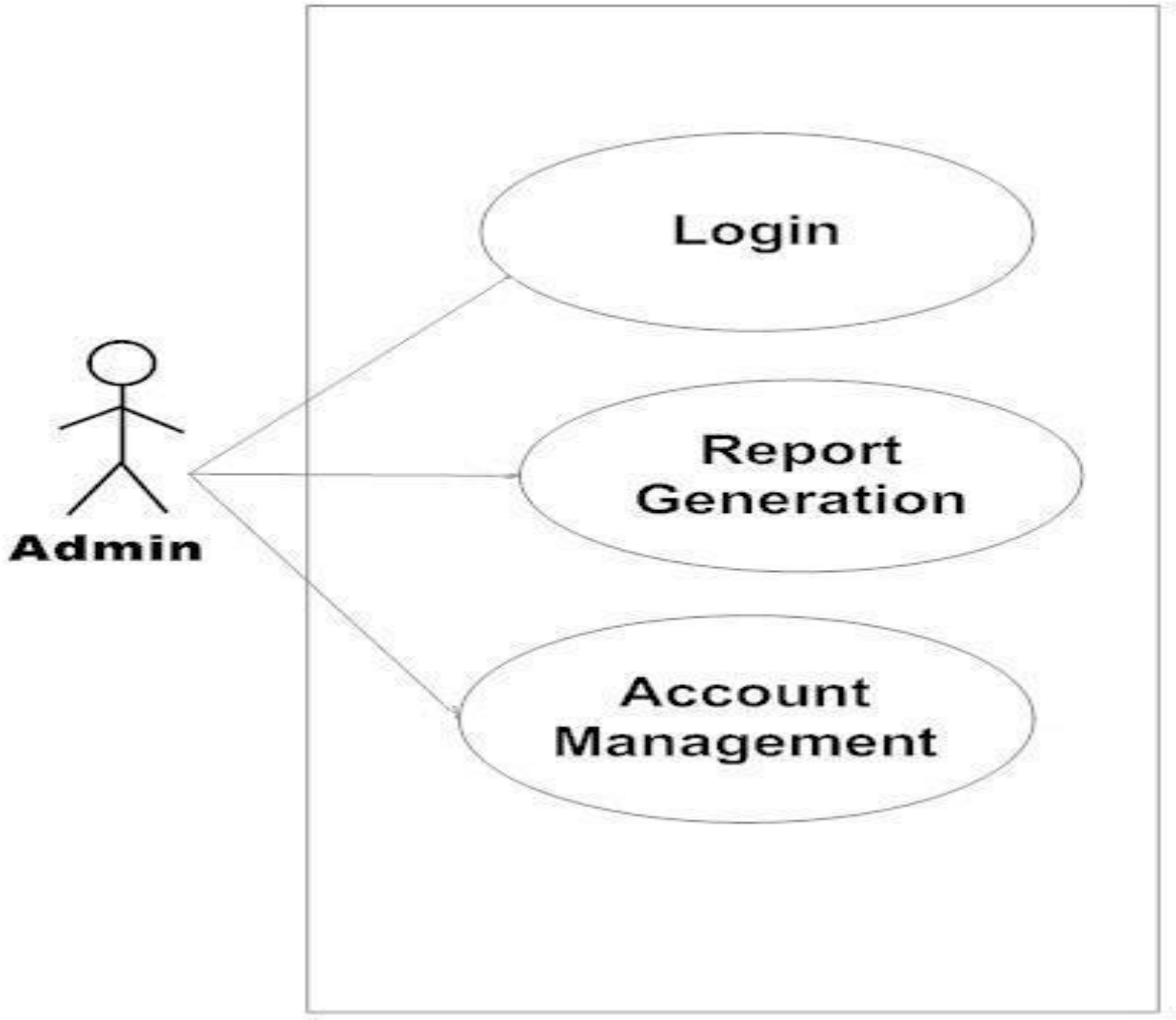


Fig. Use-Case Diagram for Admin

6. Database Design:

1] Role

Field	Type	Null	Key	Default	Description
id	Integer	No	Primary key	Null	Role ID
role	Varchar(45)	No		Null	Which type of user is enrolled.

2] Login

Field	Type	Null	Key	Default	Description
id	Integer	No	Primary key	Null	Which type of user logged in
roll_id	Integer	No	Foreign key	Null	Reference to roll_id(Tbl_Role)
login_id	Varchar(100)	No	Unique	Null	Login_id
password	Varchar(100)	No		Null	Password
status	Tinyint	No		Null	Login Status

3] Users

Field	Type	Null	Key	Default	Description
id	Integer	No	Primary key	Null	Car_owner/User
user_id	Integer	No	Foreign key	Null	reference to Login_id(Tbl_login)
password	Varchar(100)	No		Null	Password of user
aadhar_no	Varchar(45)	No		Null	Aadhar number of user
fname	Varchar(100)	No		Null	First name of User
lname	Varchar(100)	No		Null	Last name of User
gender	Varchar(45)	No		Null	Gender of User
dob	Date	No		Null	Date of Birth of User
licence	Varchar(45)	Yes		Null	
phone-no	Varchar(45)	No		Null	Phone no of User
primary email	Varchar(100)	No		Null	email id of User for login
secondary_email	Varchar(100)	Yes		Null	Secondary email id of User

4] Co_passenger

Field	Type	Null	Key	Default	Description
id	Integer	No	Primary key	Null	Co-passenger ID
passenger_id	Integer	No	Foreign key	Null	Reference to User_id (Tbl_User)
aadhar_no	Varchar(45)	No		Null	Aadhar no of co_passenger
phone_no	Varchar(45)	Yes		Null	Phone no of co_passenger
email	Varchar(45)	Yes		Null	Email of co_passenger
fname	Varchar(45)	No		Null	First name of co_passenger
lname	Varchar(45)	No		Null	Last name of co_passenger
Gender	Varchar(45)	No		Null	Gender of co_passenger

5] Car_company

Field	Type	Null	Key	Default	Description
id	Integer	No	Primary key	Null	Admin ID
company_name	Varchar(100)	No		Null	Company name of car

6] Car_Models

Field	Type	Null	Key	Default	Description
id	Integer	No	Primary key	Null	Admin ID
Company_id	Integer	Yes	Foreign_key	Null	Reference to Car_company_id(Tbl_**Car_company**)
model_name	Varchar(100)	No		Null	Model name of car
fuel_type	Varchar(100)	No		Null	Fuel type of car
model_type	Varchar(100)	No		Null	Model type of car

7] Vehicles

Field	Type	Null	Key	Default	Description
id	Integer	No	Primary key	Null	Vehicle id
carowner_id	Integer	No	Foreign key	Null	Reference to Users_id(Tbl_**users**)
model_id	Integer	No	Foreign key	Null	Reference to Car_Model_id(Tbl_c**ar_model_**)
year	Integer	No		Null	Year of buying car
color	Varchar(45)	No		Null	Color of car
rc-book	Varchar(200)	No		Null	Registration card of car owner

8] Rides

Field	Type	Null	Key	Default	Description
id	Integer	No	Primary key	Null	Ride Id
carowner_id	Integer	No	Foreign key	Null	Reference to Carowner_id(Users_Tbl)
start_Location	Integer	No	Foreign key	Null	Reference to Cid (Tbl_City)
end_Location	Integer	No	Foreign key	Null	Reference to Cid (Tbl_City)
vehicle_id	Integer	No	Foreign key	Null	Reference to Vid (Tbl_Vehicle)
time_of_departure	Time	Yes		Null	Time of departure
time_of_arival	Time	Yes		Null	Arrival time
price_per_seat	Integer	No		Null	Price per seat amount
Available_seats	Integer	No		Null	Total available seats in car
status	Varchar(100)	Yes		Null	Ride is confirmed or not
date_of_journey	Date	Yes		Null	Date of Journey

9] Booking

Field	Type	Null	Key	Default	Description
id	Integer	No	Primary key	Null	Booking ID
passenger_id	Integer	No	Foreign key	Null	Reference to passenger_id(Tbl_User)
ride_id	Integer	No	Foreign key	Null	Reference to Ride_id(Tbl_Ride)
time	DateTime	No		Null	Booking time
no_of_seats	Integer	No		Null	How many seats are booked
total_price	Integer	No		Null	Total price acc to passenger
status	Varchar(100)	Yes		Null	Status of booking confirmation or not

10] Payment

Field	Type	Null	Key	Default	Description
id	Integer	No	Primary key	Null	Payment ID
booking_id	Integer	No	Foreign key	Null	Reference to Booking_id(Tbl_Booking)
passenger_id	Integer	No	Foreign key	Null	Reference to passenger_id(Tbl_Co_passenger)
amount	Integer	No		Null	Total amount
Date_Time	Datetime	No		Null	Date and time of payment
payment_method	Varchar(45)	No		Null	Permanent method
status	Varchar(100)	No		Null	Paymnt is succesfull or not

11] State

Field	Type	Null	Key	Default	Description
id	Integer	No	Primary key	Null	State id
state	Varchar(45)	No		Null	State name

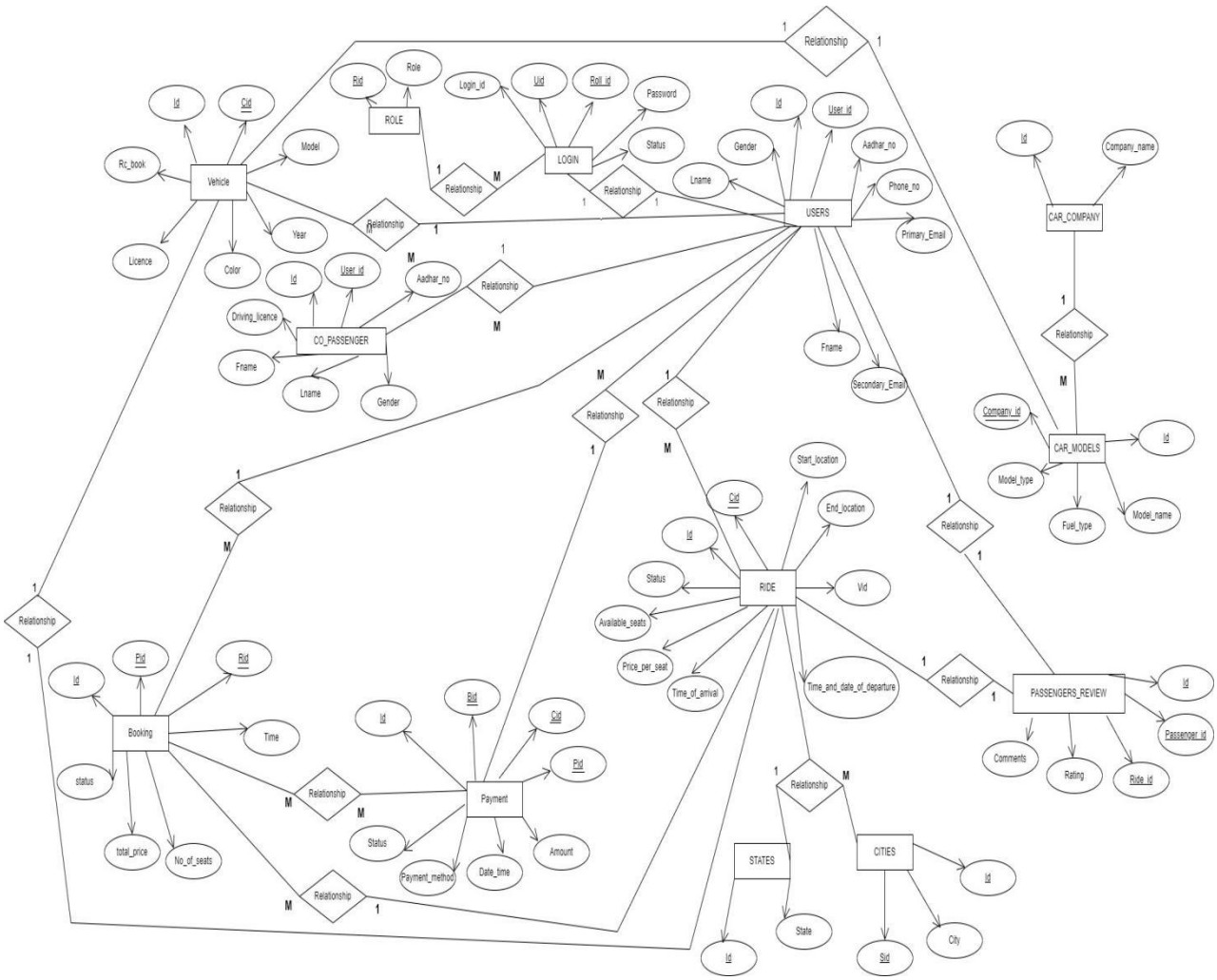
12] City

Field	Type	Null	Key	Default	Description
id	Integer	No	Primary key	Null	City id
city	Varchar(45)	No		Null	City name
state_id	Integer	No		Null	Reference to State_id(Tbl_State)

13] Passenger_review

Field	Type	Null	Key	Default	Description
id	Integer	No	Primary key	Null	City id
passenger_id	Integer	No	Foreign key	Null	Reference to User_id(Tbl_User)
ride_id	Integer	No	Foreign key	Null	Reference to Ride_id(Tbl_Ride)
rating	Decimal(3, 2)	No		Null	Rating given by user to car_owner.
comments	Varchar(100)	Yes		Null	Any comments.

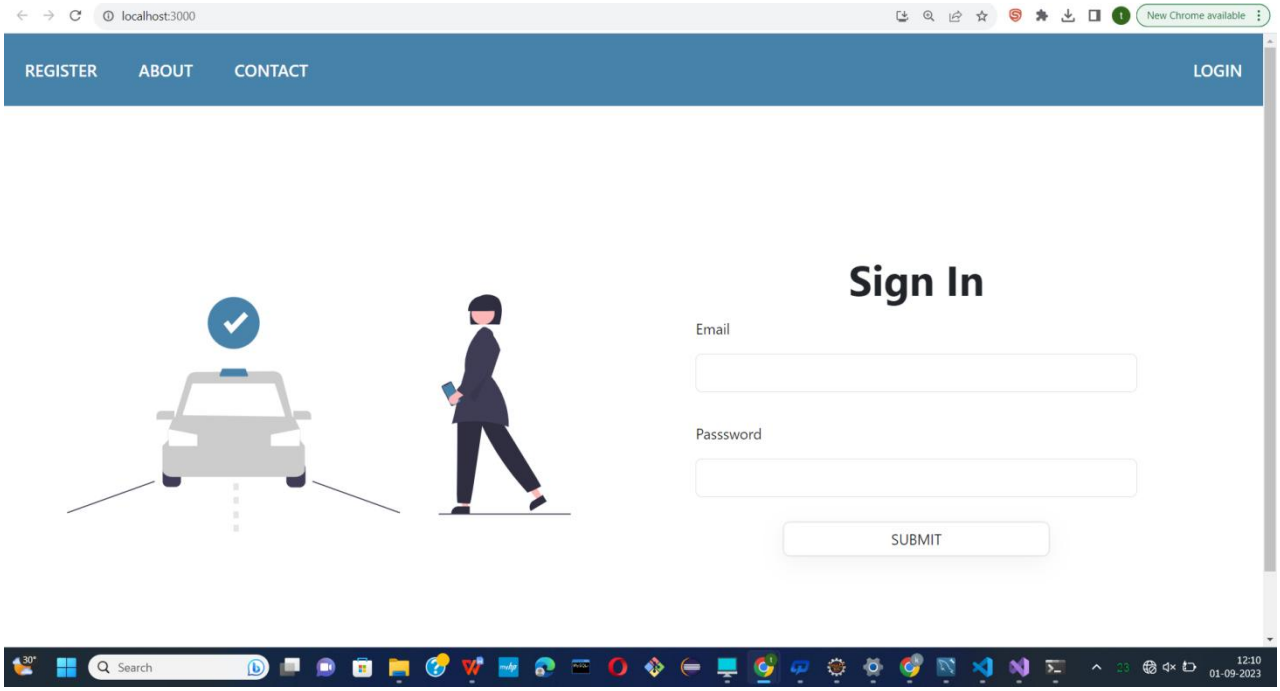
7. ER-Diagram:


Relationship
Role
Rid
ROLE
Login_id
Uid
Roll_id
Password
LOGIN
Status
Id
Cid
Model
Rc_book
Vehicle
Year
Licence
Color
Relationship
Gender
Id
User_id
Aadhar_no
Lname
Phone_no
USERS
Primary_Email
Fname
Secondary_Email
Id
Company_name
CAR_COMPANY
Company_id
CAR_MODELS
Id
Model_type
Fuel_type
Model_name
Id
User_id
Aadhar_no
Driving_licence
CO_PASSENGER
Fname
Lname
Gender
Start_location
End_location
Cid
Id
Status
RIDE
Vid
Available_seats
Price_per_seat
Time_of_arrival
Time_and_date_of_departure
PASSENGERS_REVIEW
Id
Passenger_id
Comments
Rating
Ride_Id
Pid
Rid
Id
Booking
Time
status
total_price
No_of_seats
Bid
Id
Cid
Pid
Payment
Status
Payment_method
Date_time
Amount
STATES
Id
State
CITIES
Id
Sid
City

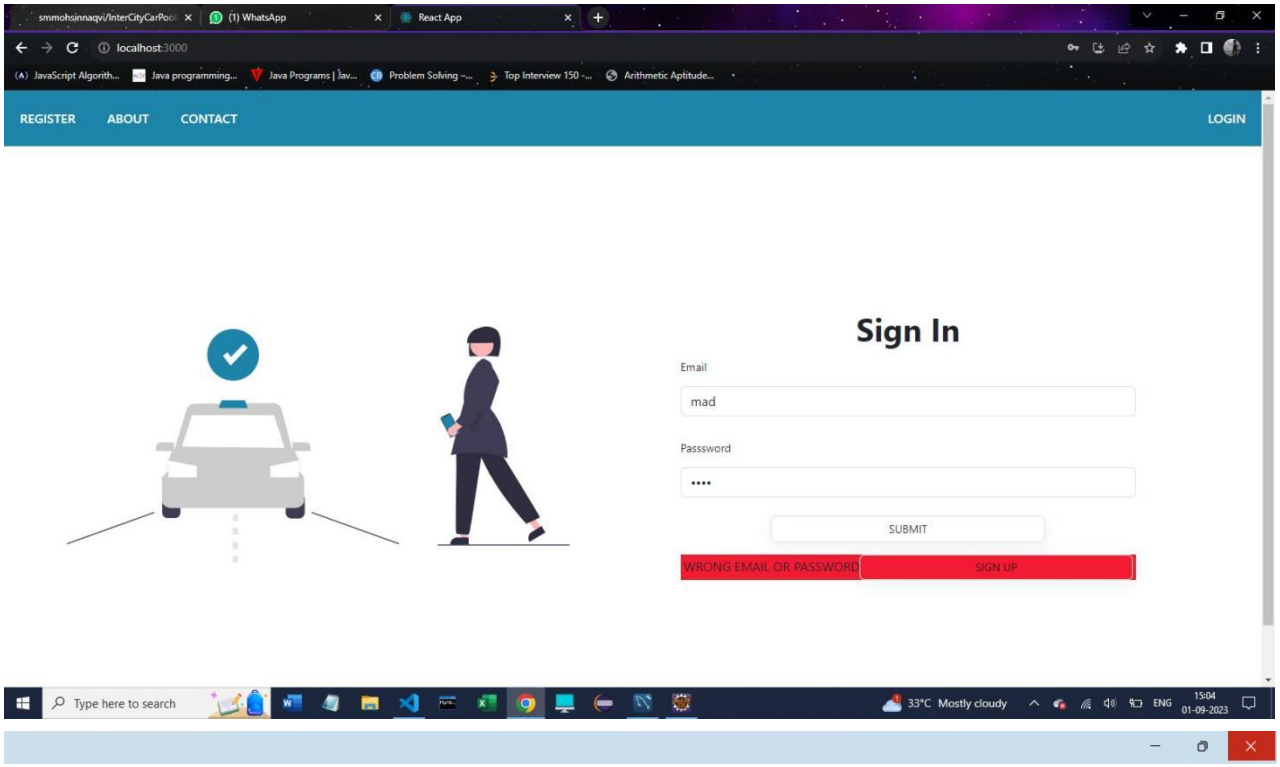
E-R diagram shows database of Inter-city Car Pooling System

8. Snapshots:

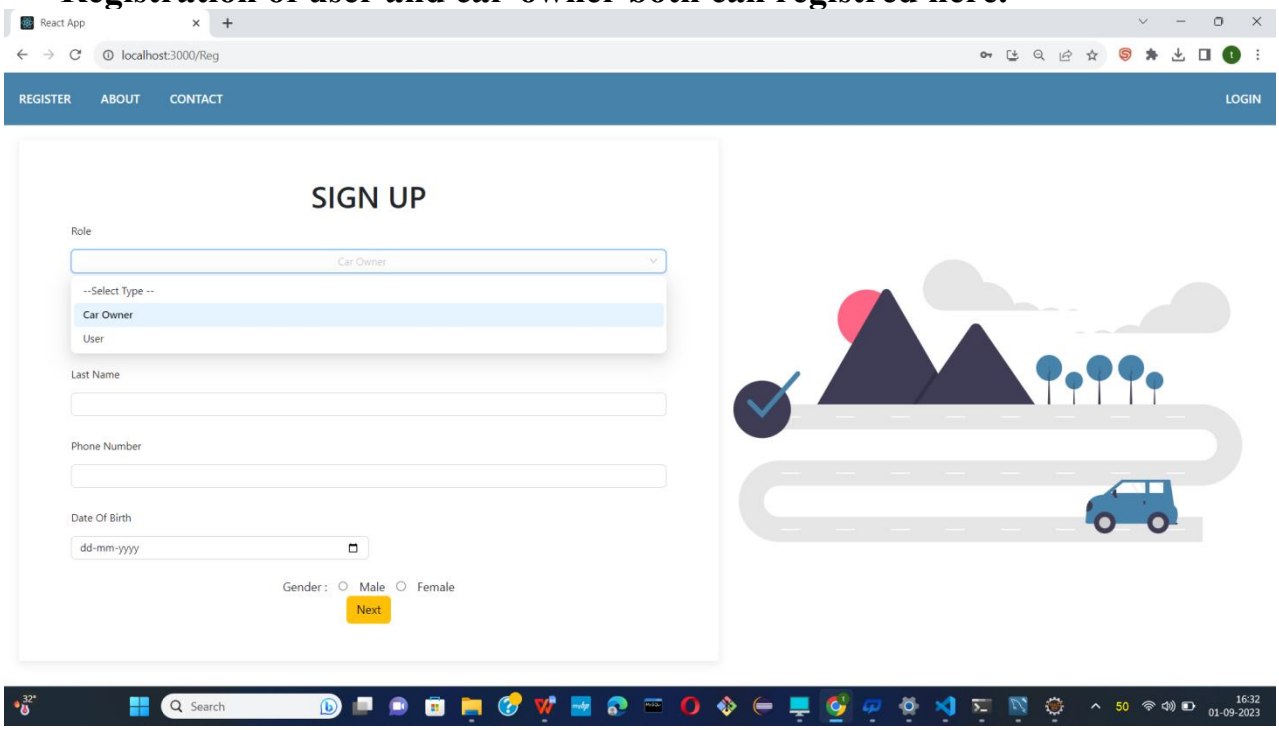
8.1 Home Page:



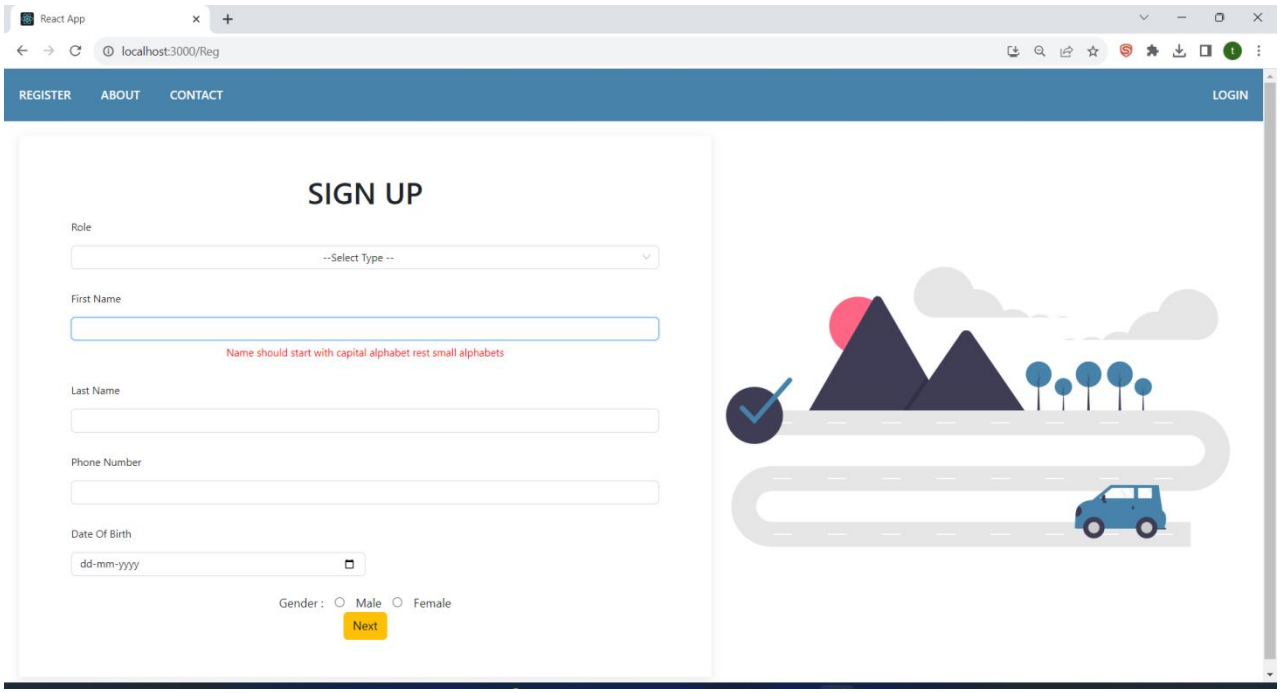
- Following snapshot shows the Home page of Inter-city Car Pooling System.



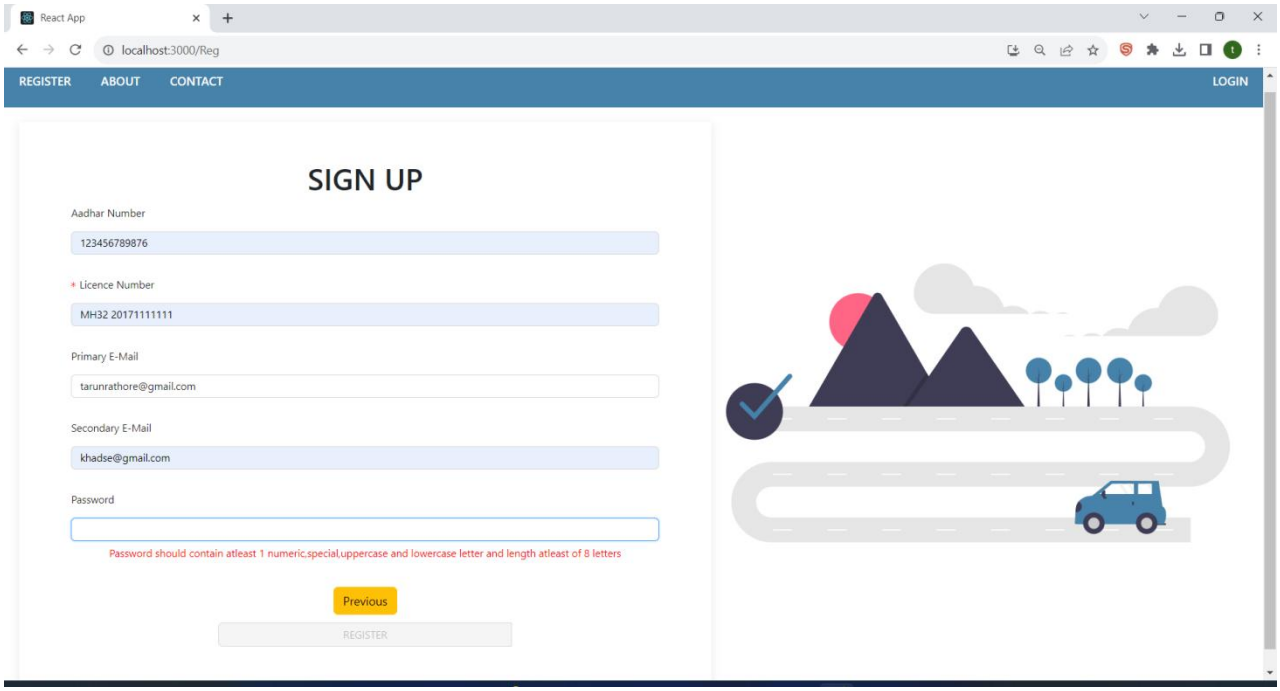
- **Registration of user and car-owner both can registred here.**



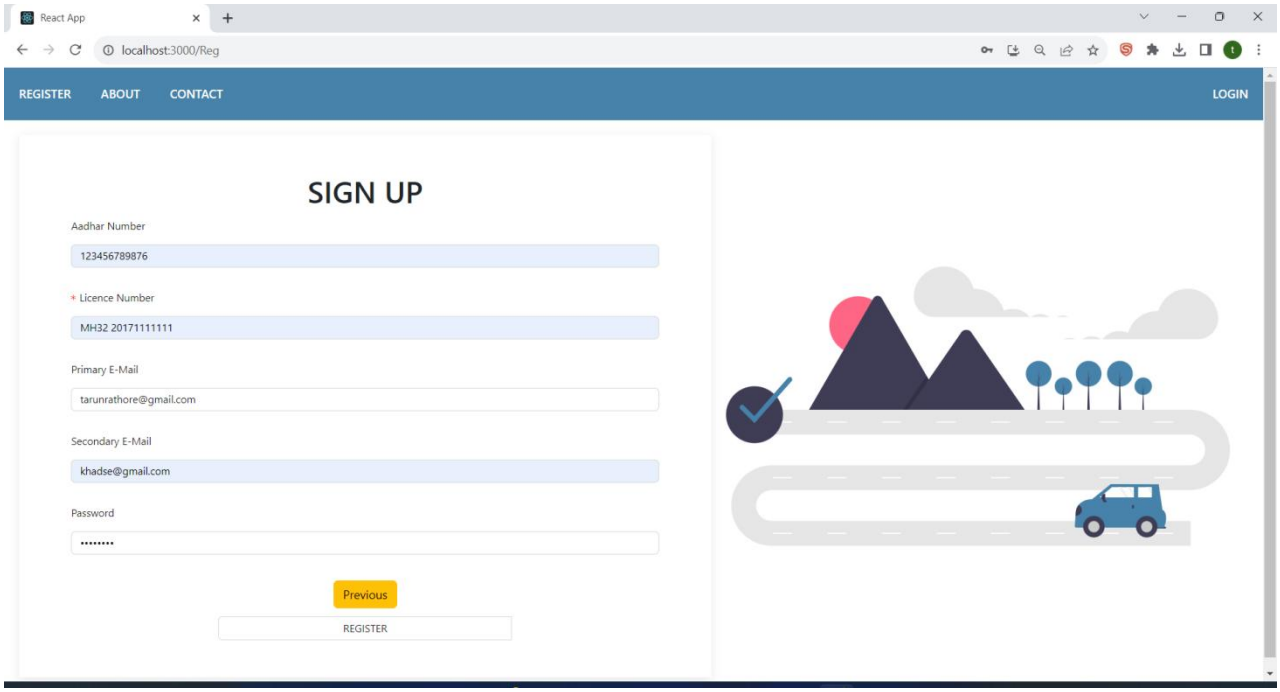
Selecting type of User

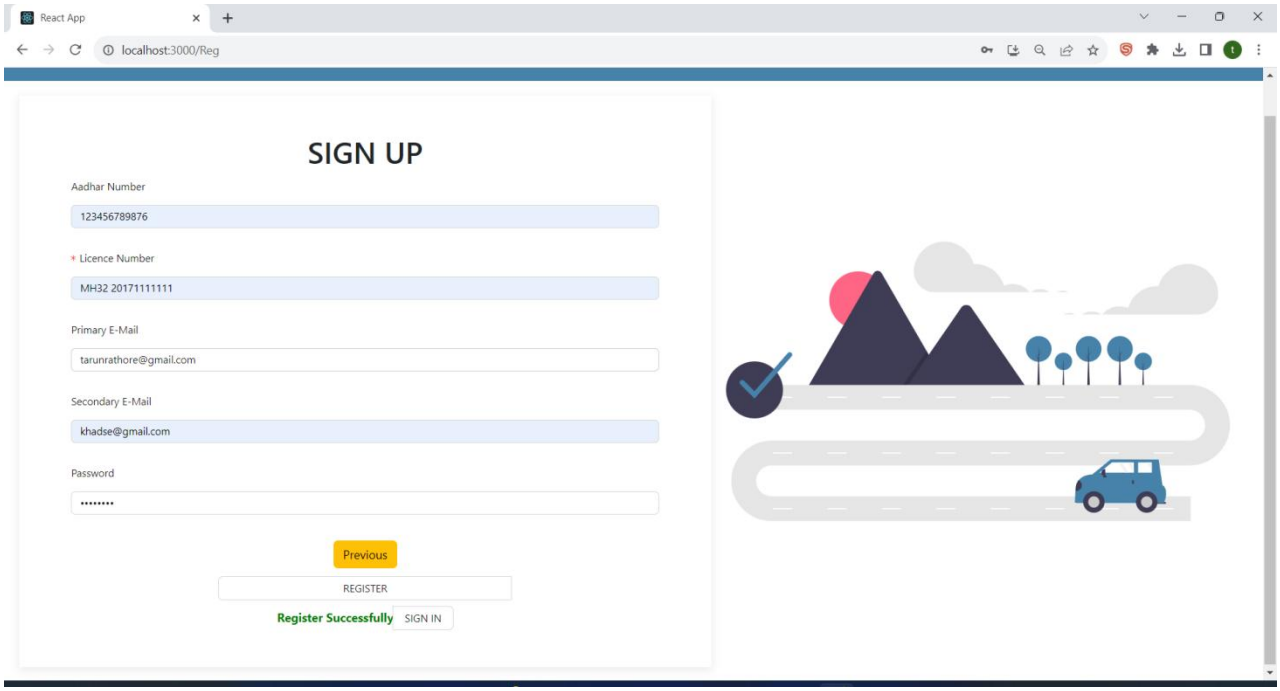


-



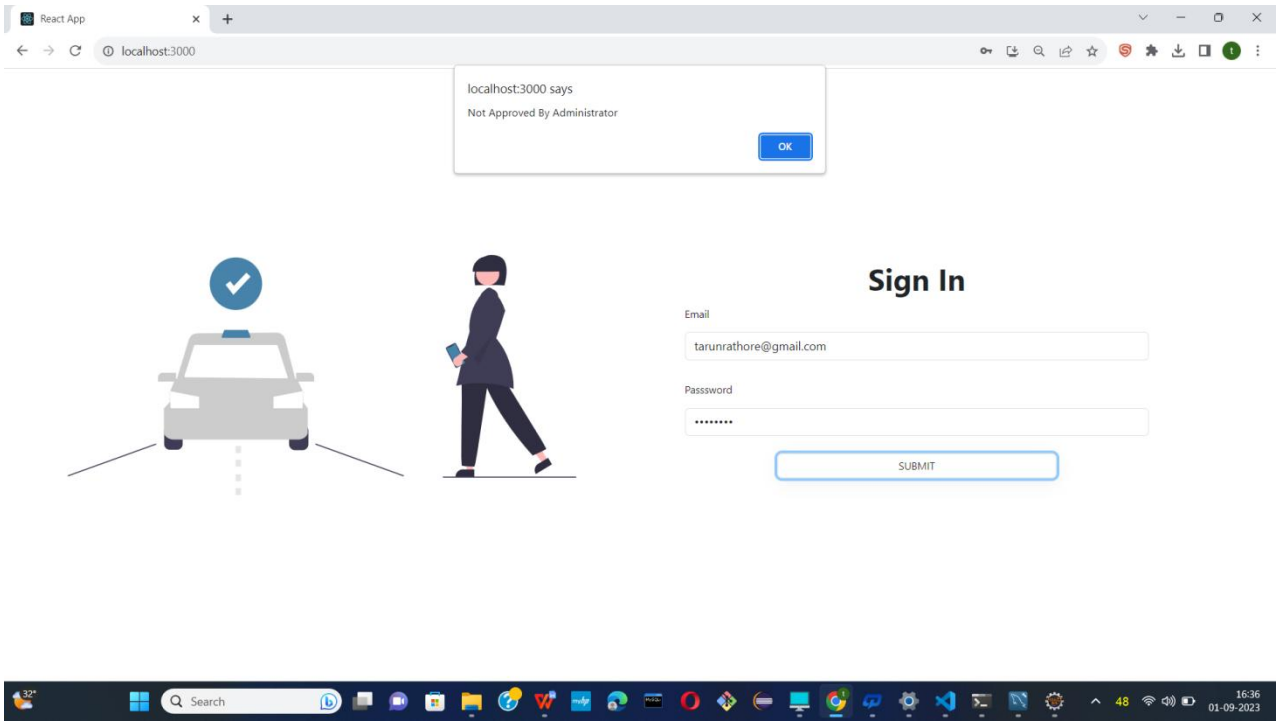
Validation on all required fields



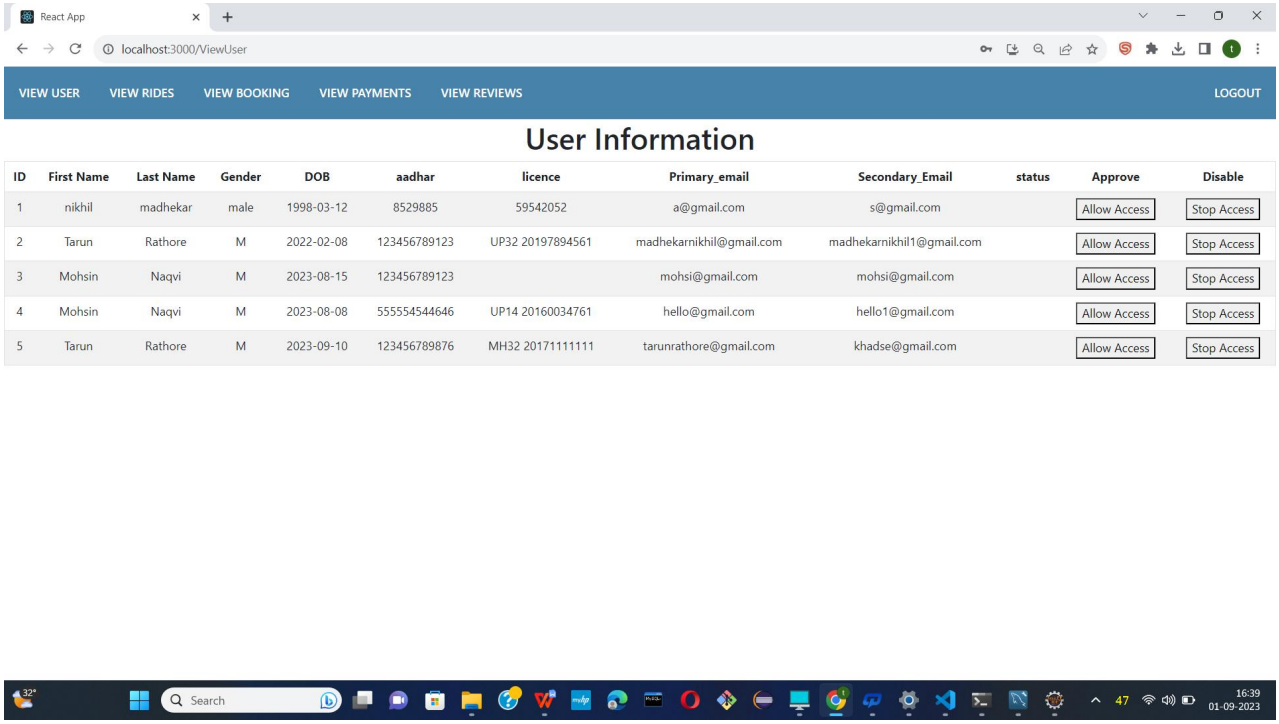


Registered Successfully.

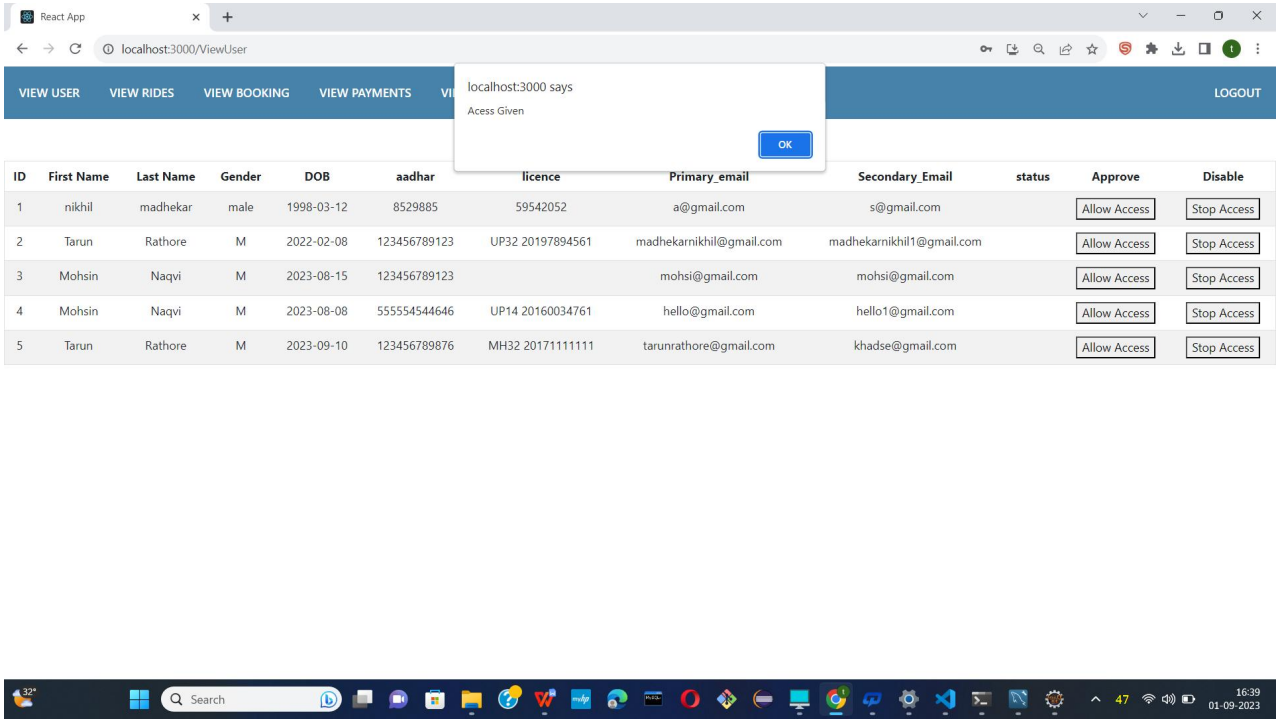
8.2 Need Approval by **Admin**



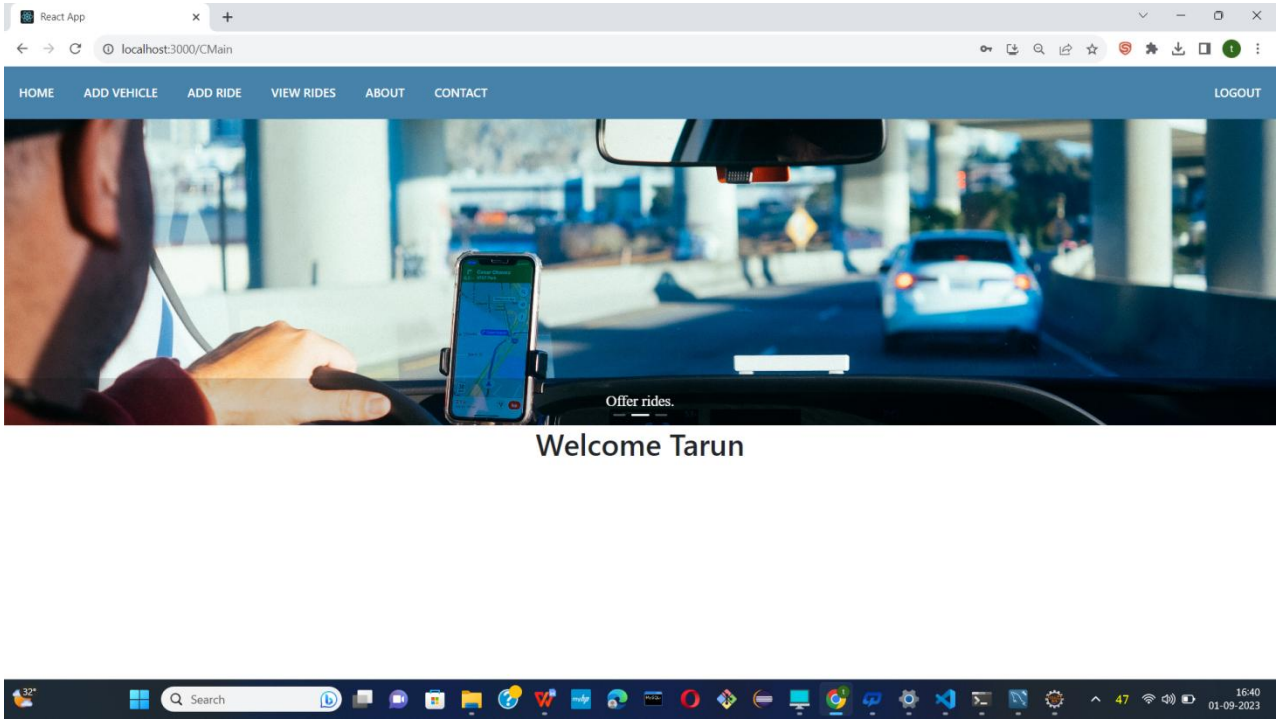
- Login as **Admin**



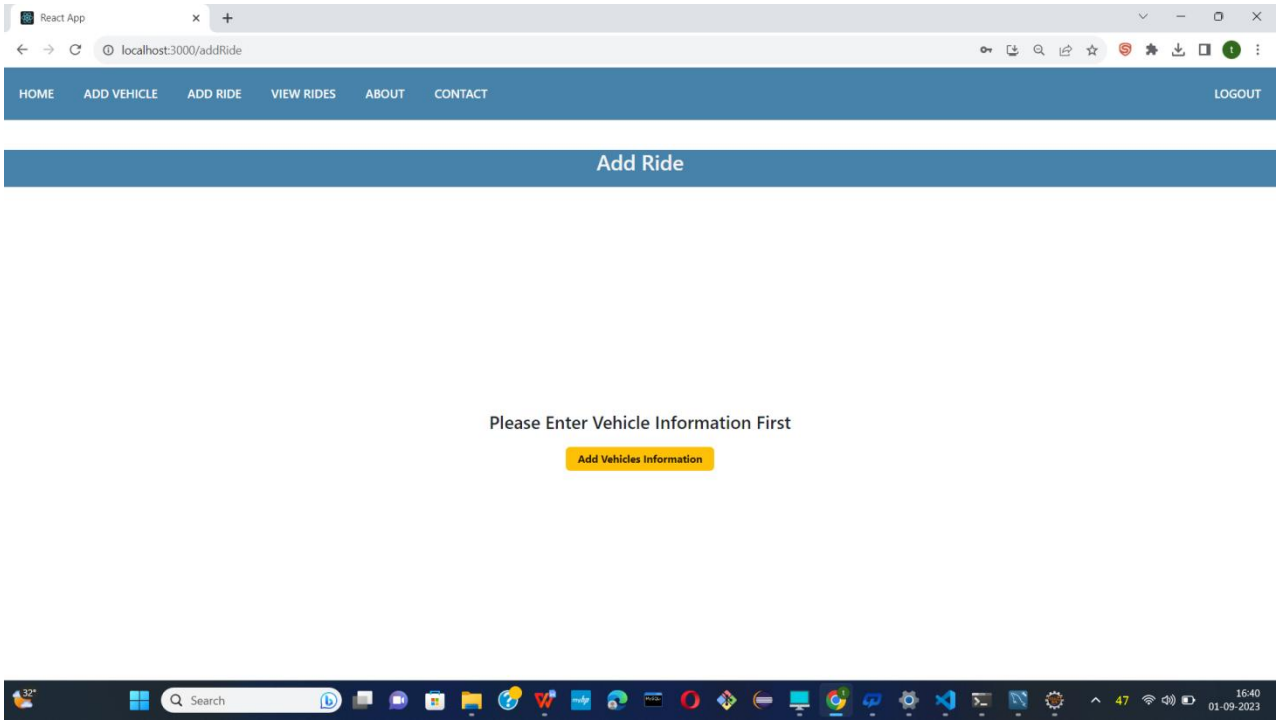
- Now Admin allow access New Car owner .



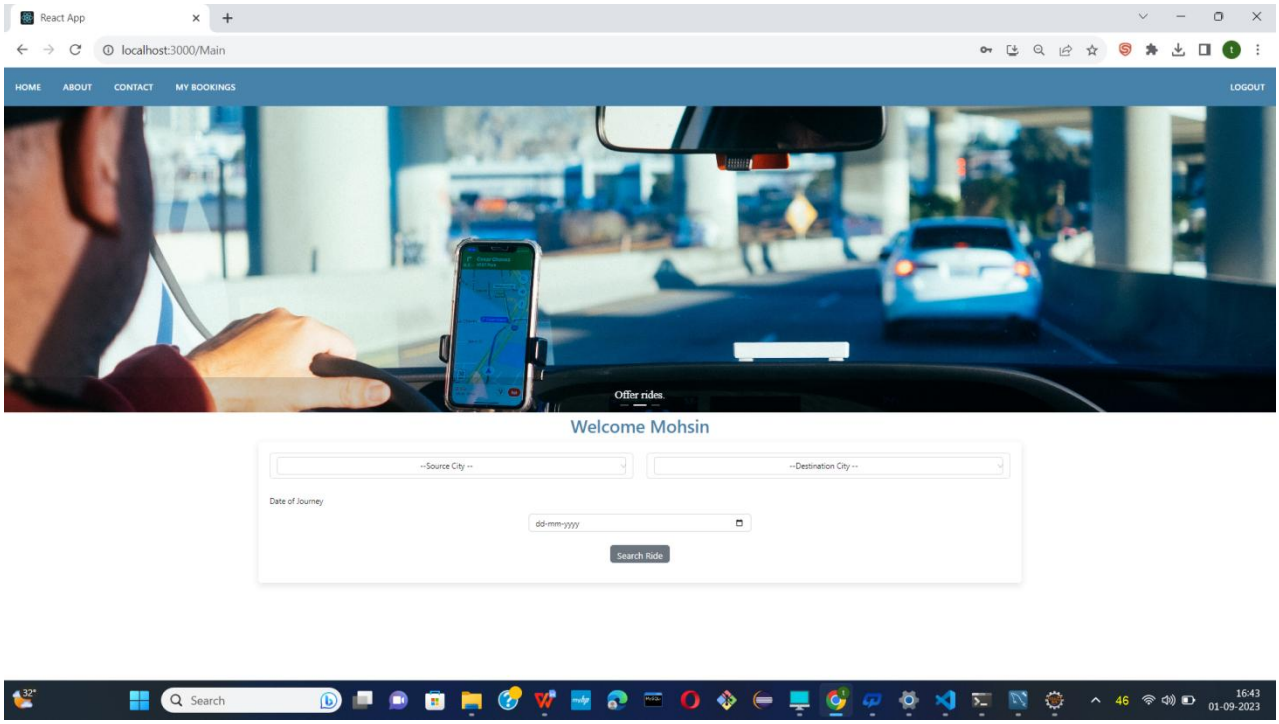
- Access allow.

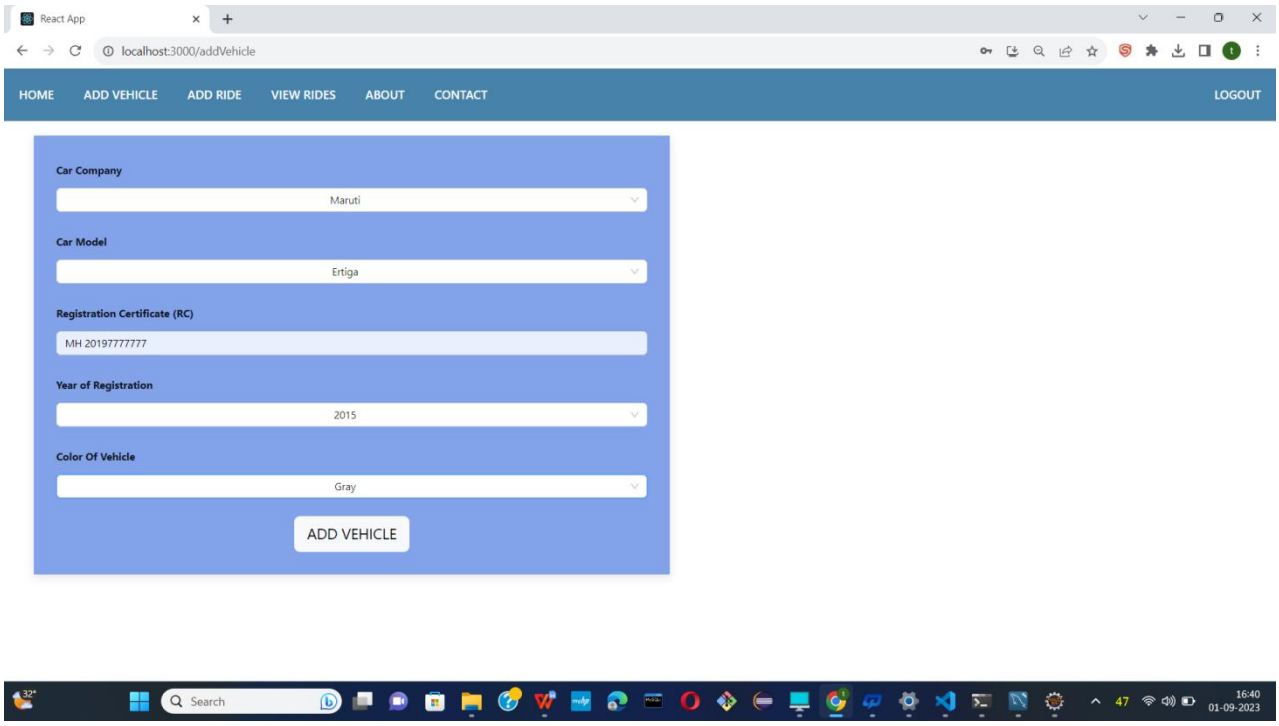


- Login as a Car owner

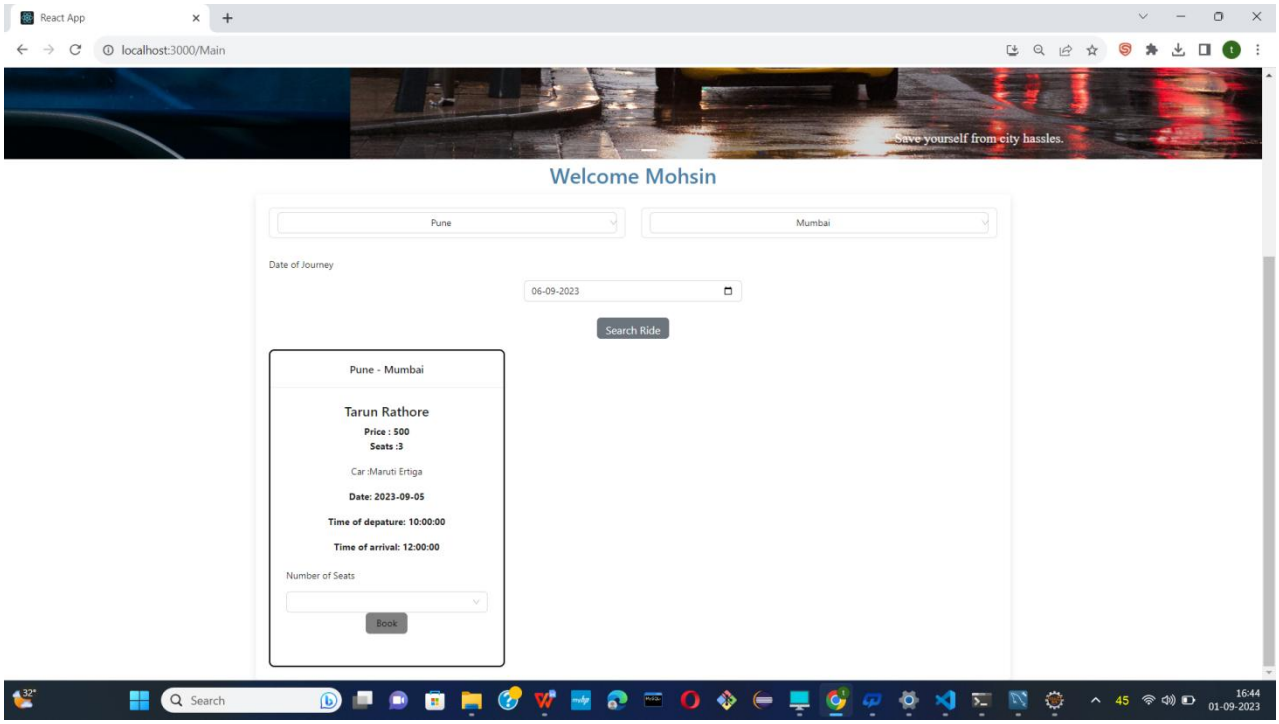


- Car-owner add vehicle information first.

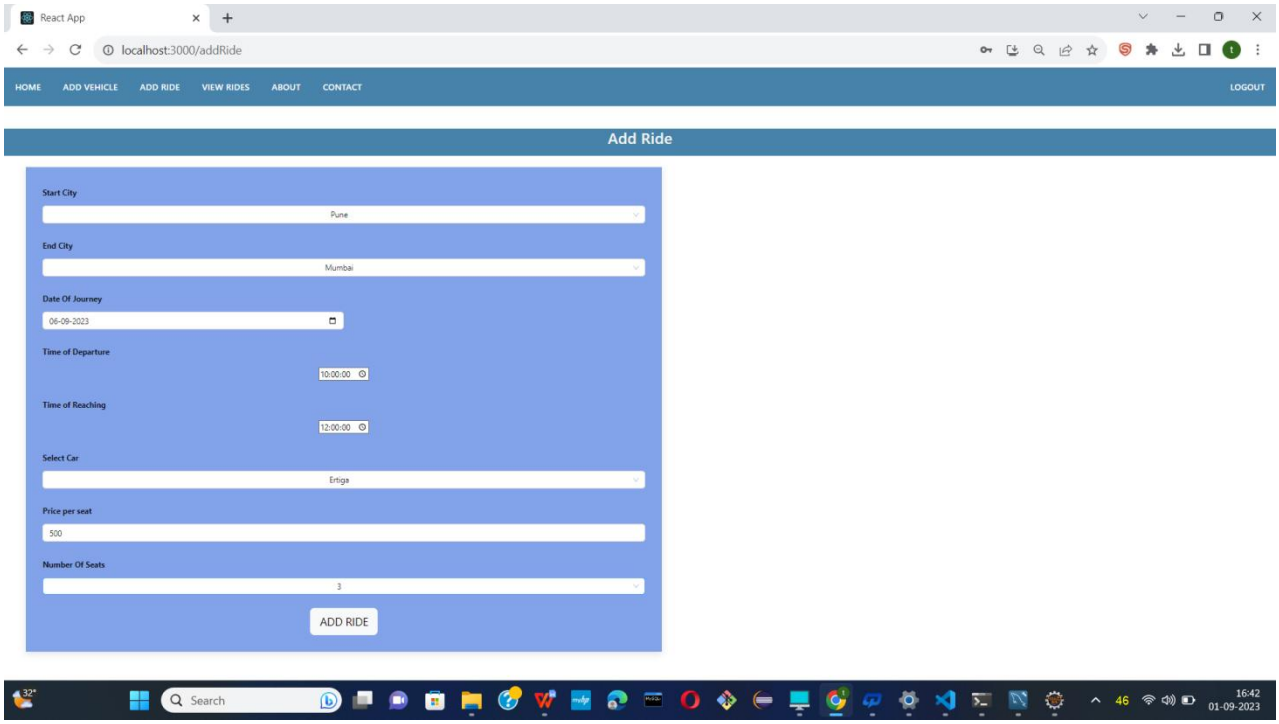




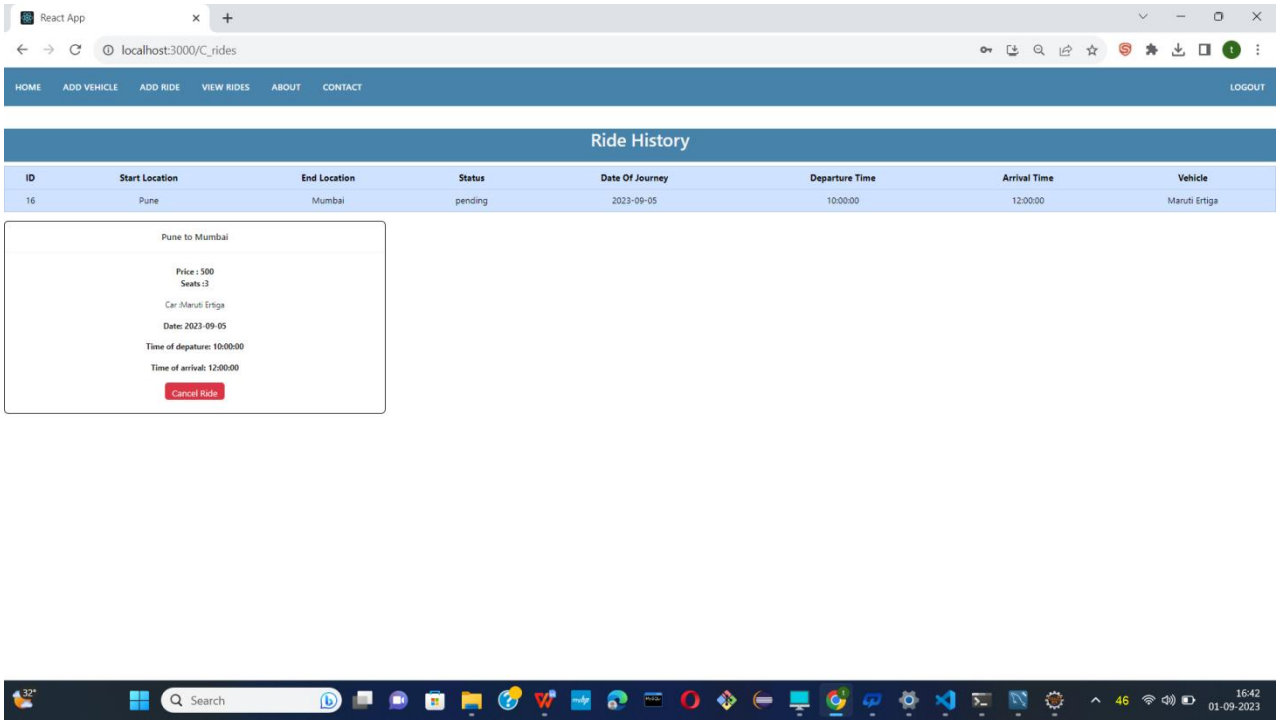
- Add vehicle information.



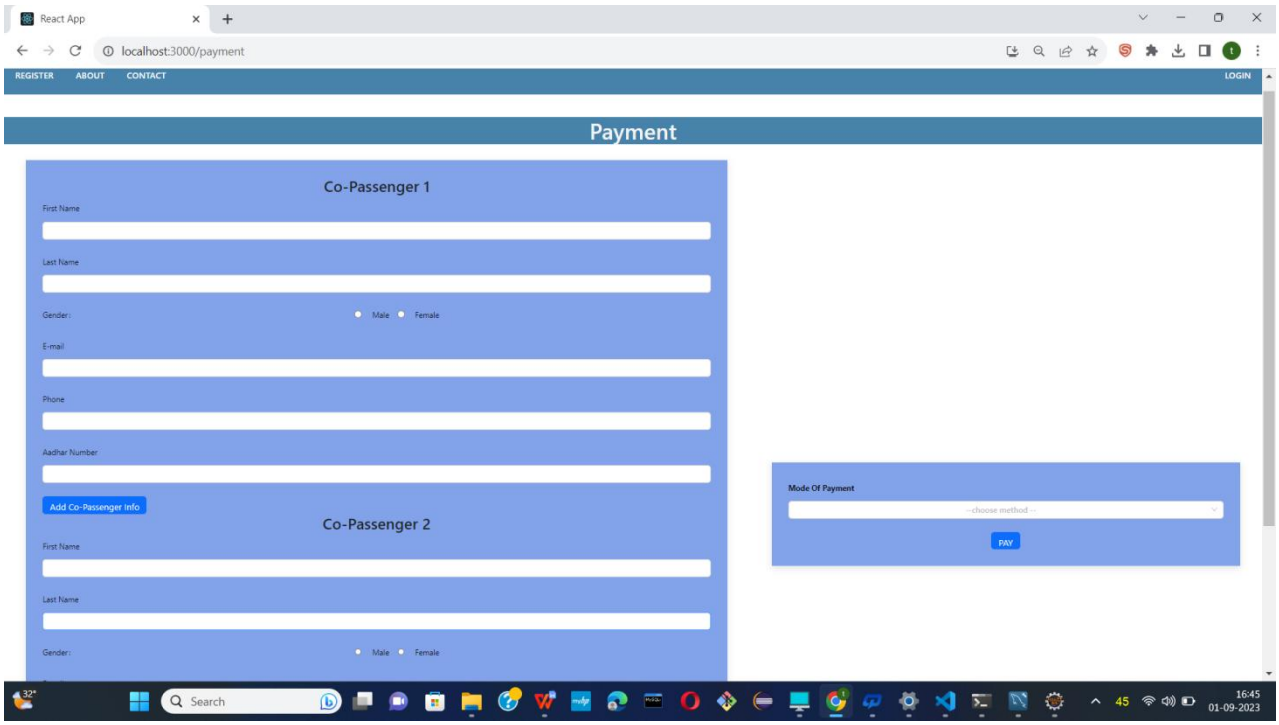
8.3 Login as a User and can search ride.



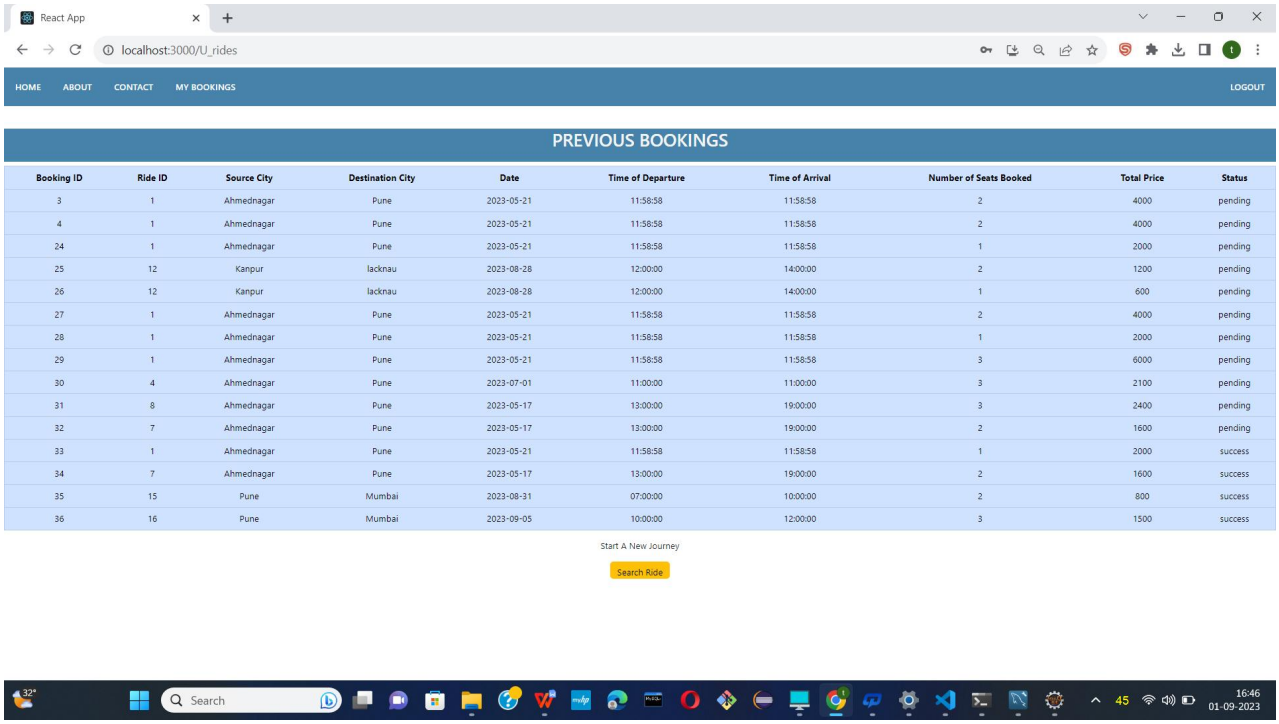
- Create ride information.



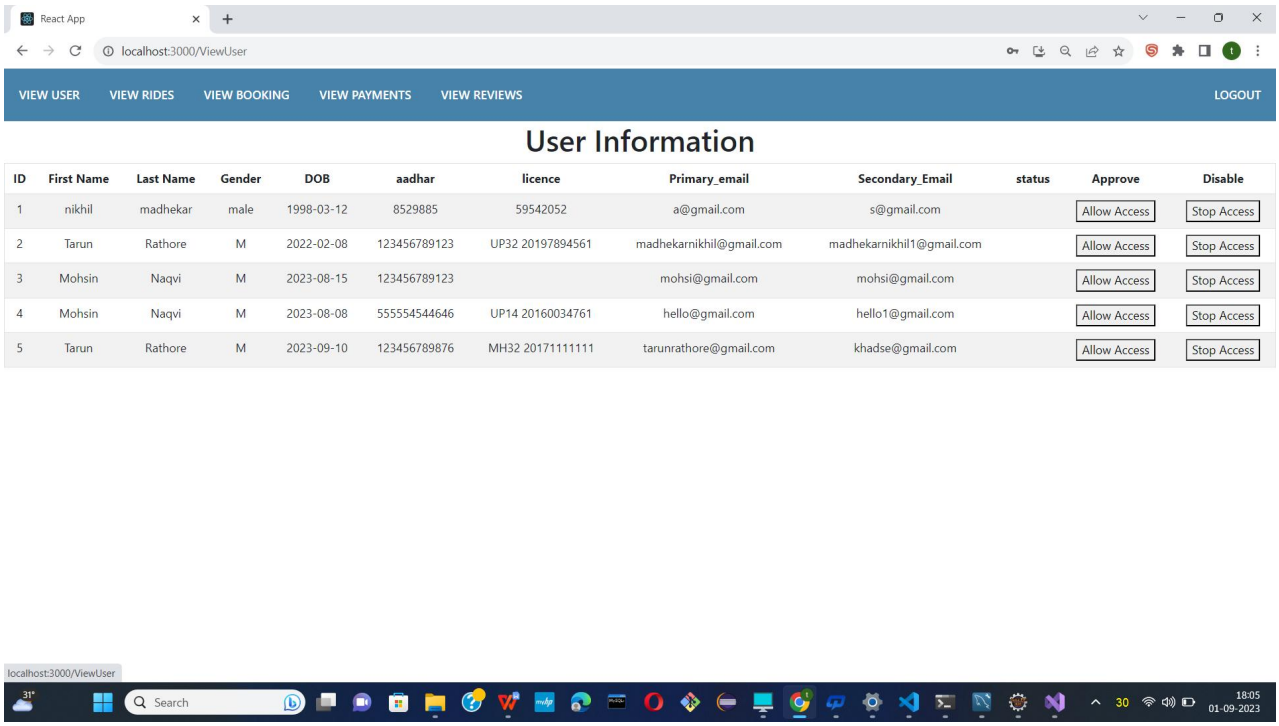
- User can shows his previous ride as as well.



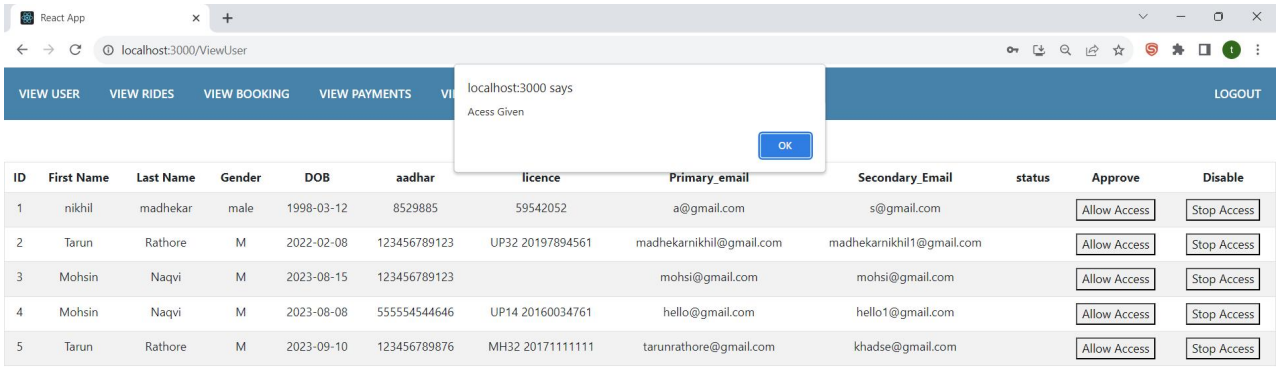
- Now users can add co-passenger as well with his ride .



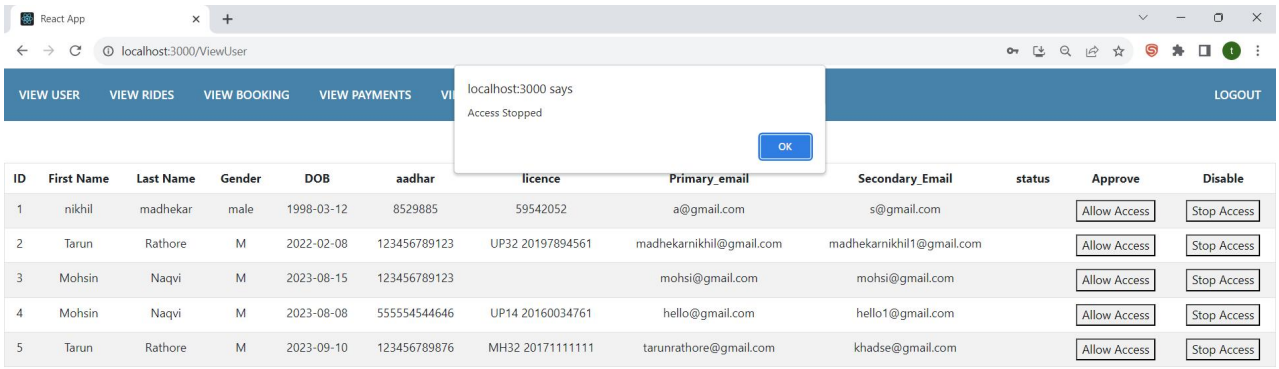
- Now users also shows their prevoius booking as well.



- Logged in as an Admin

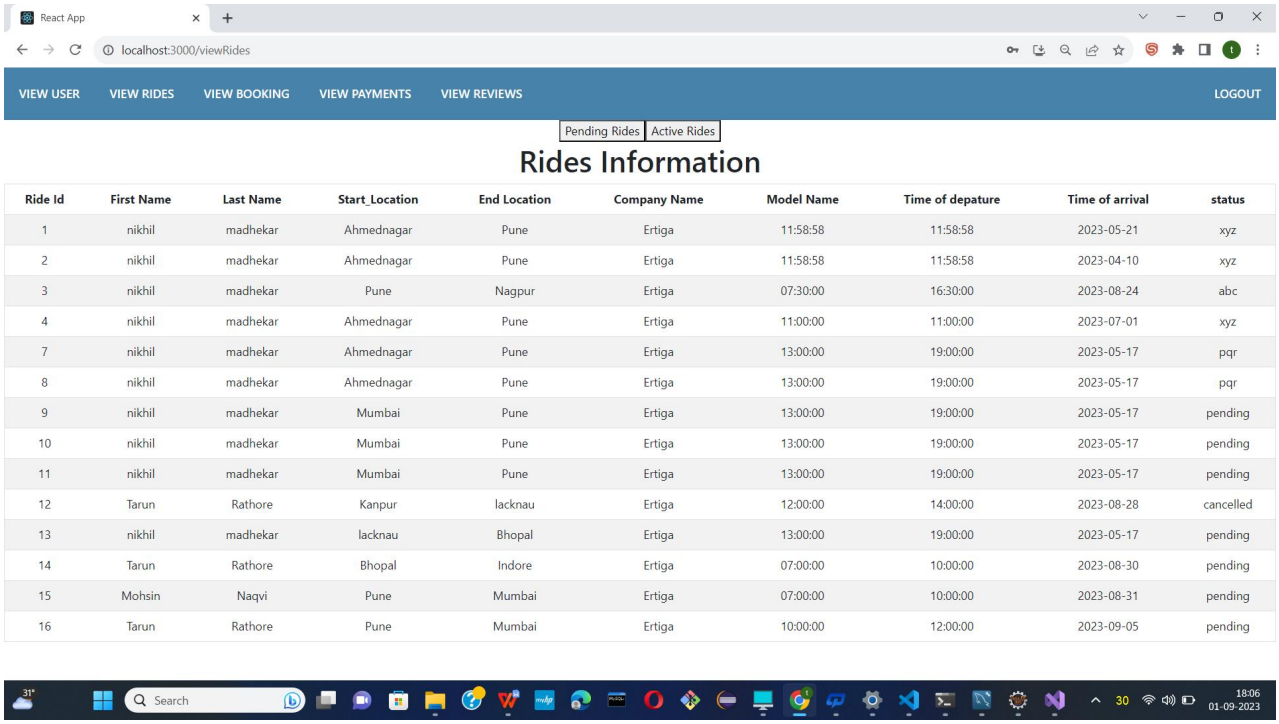


ID	First Name	Last Name	Gender	DOB	aadhar	licence	Primary_email	Secondary_Email	status	Approve	Disable
1	nikhil	madhekar	male	1998-03-12	8529885	59542052	a@gmail.com	s@gmail.com		Allow Access	Stop Access
2	Tarun	Rathore	M	2022-02-08	123456789123	UP32 20197894561	madhekarnikhil@gmail.com	madhekarnikhil1@gmail.com		Allow Access	Stop Access
3	Mohsin	Naqvi	M	2023-08-15	123456789123		mohsi@gmail.com	mohsi@gmail.com		Allow Access	Stop Access
4	Mohsin	Naqvi	M	2023-08-08	555554544646	UP14 20160034761	hello@gmail.com	hello1@gmail.com		Allow Access	Stop Access
5	Tarun	Rathore	M	2023-09-10	123456789876	MH32 20171111111	tarunrathore@gmail.com	khadse@gmail.com		Allow Access	Stop Access

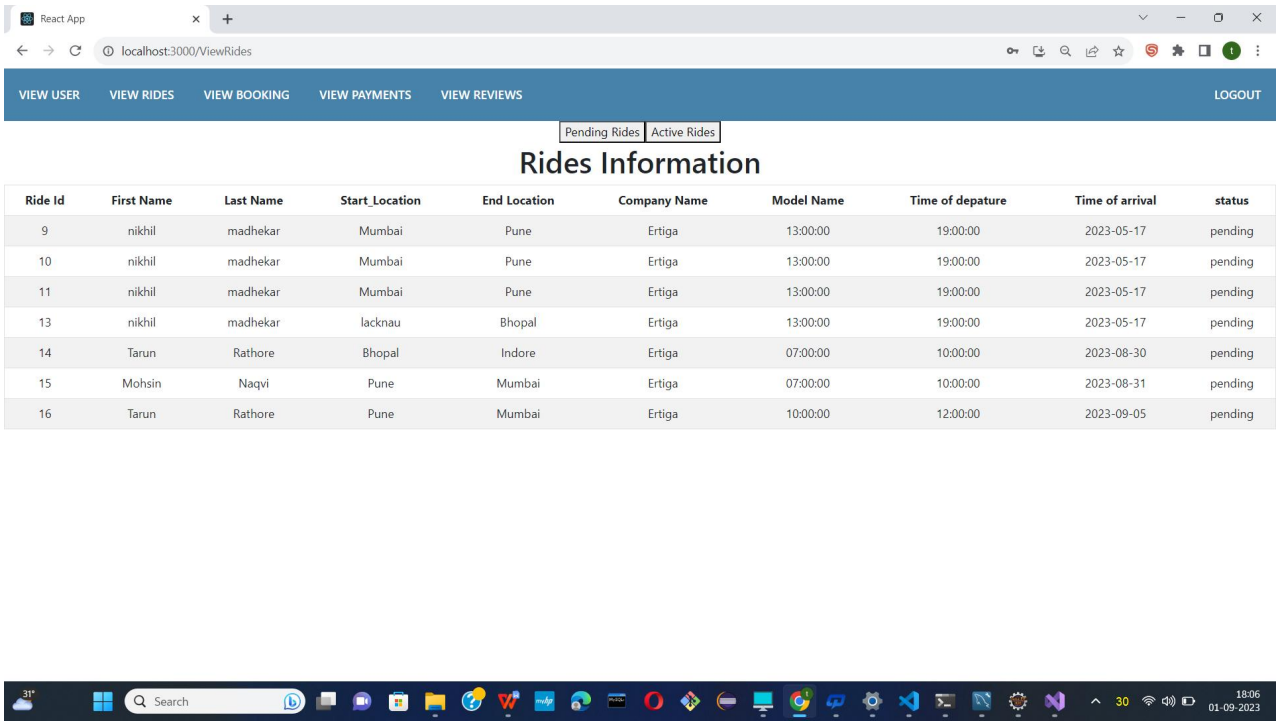


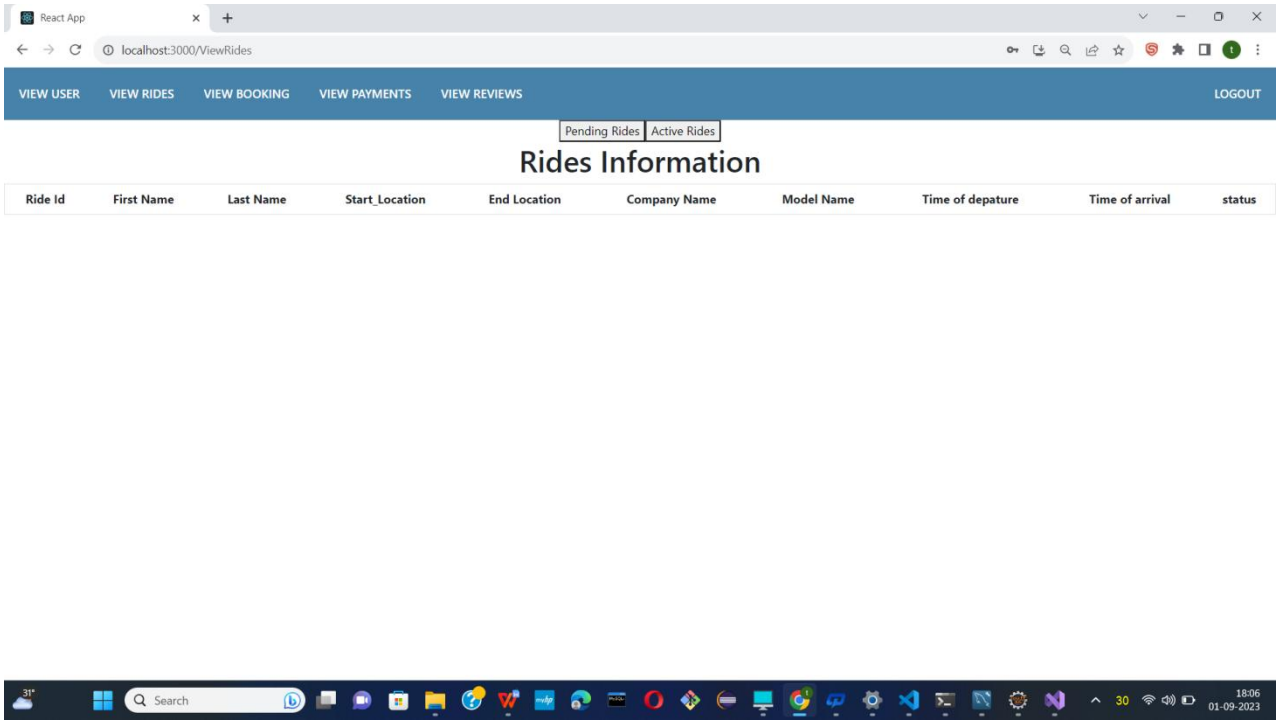
ID	First Name	Last Name	Gender	DOB	aadhar	licence	Primary_email	Secondary_Email	status	Approve	Disable
1	nikhil	madhekar	male	1998-03-12	8529885	59542052	a@gmail.com	s@gmail.com		Allow Access	Stop Access
2	Tarun	Rathore	M	2022-02-08	123456789123	UP32 20197894561	madhekarnikhil@gmail.com	madhekarnikhil1@gmail.com		Allow Access	Stop Access
3	Mohsin	Naqvi	M	2023-08-15	123456789123		mohsi@gmail.com	mohsi@gmail.com		Allow Access	Stop Access
4	Mohsin	Naqvi	M	2023-08-08	555554544646	UP14 20160034761	hello@gmail.com	hello1@gmail.com		Allow Access	Stop Access
5	Tarun	Rathore	M	2023-09-10	123456789876	MH32 20171111111	tarunrathore@gmail.com	khadse@gmail.com		Allow Access	Stop Access

- Now admin had to Allow access and stop access to users.

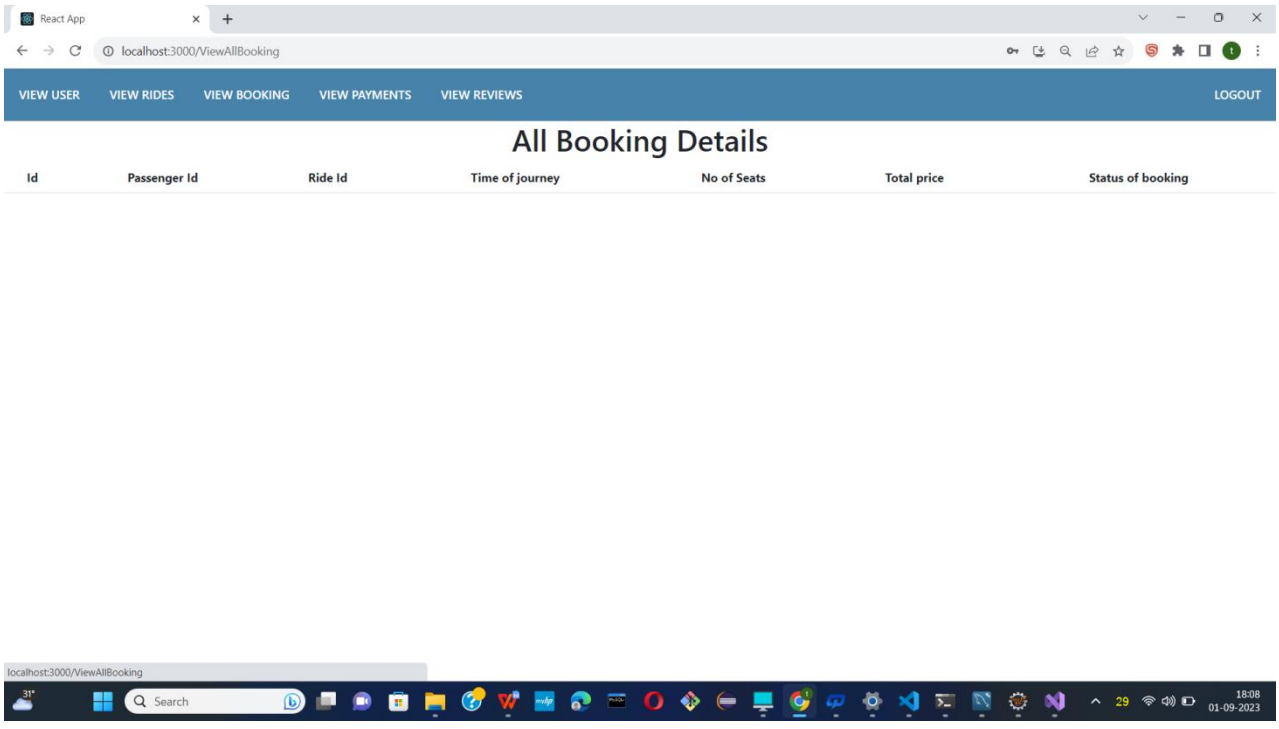


- Show all rides information.

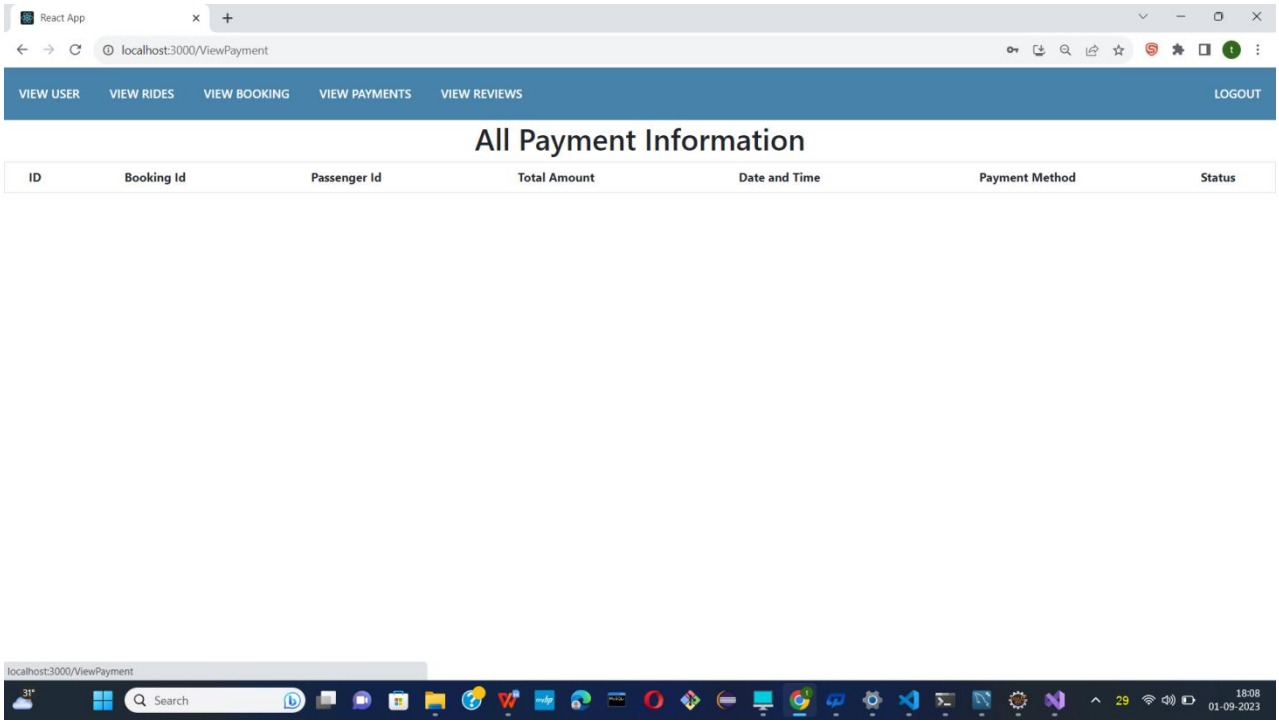




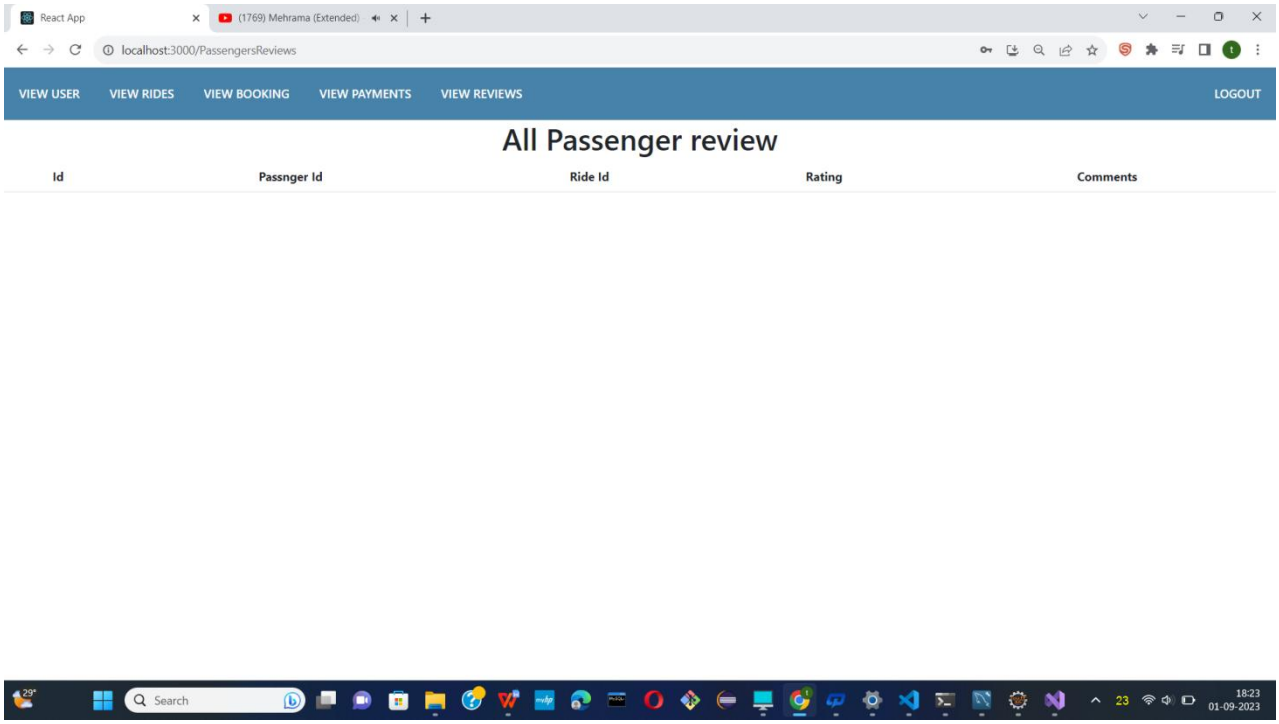
- Show all pending rides and active rides.



- Show all booking information.



- Show all payment information.



- Show all pasenger review.

9.CONCLUSION AND FUTURE SCOPE

Carpooling is the sharing of car journeys so that more than one person travels in a car, and prevents the need for others to have to drive to a location themselves with own car.

Reduce traffic congestion – The benefits of carpooling on a large scale are huge.

The software is flexible enough to be modified and implemented as per future requirements.

We have tried our best to present this free and user–friendly website to Society.