

Graduate Programming Project

ROUTE 66 (CAR RENT APPLICATION)

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1. Introduction

The aim of my project is to make an E-Car Rental System which will help customers to view the cars available for rent, the new user can register, view the details of each car and can book a car accordingly. These Application gives users the flexibility of viewing the cars according to their location and book the car accordingly.

2. Technologies Used

Client Side: - HTML5, AngularJS

CSS: - Materialize CSS

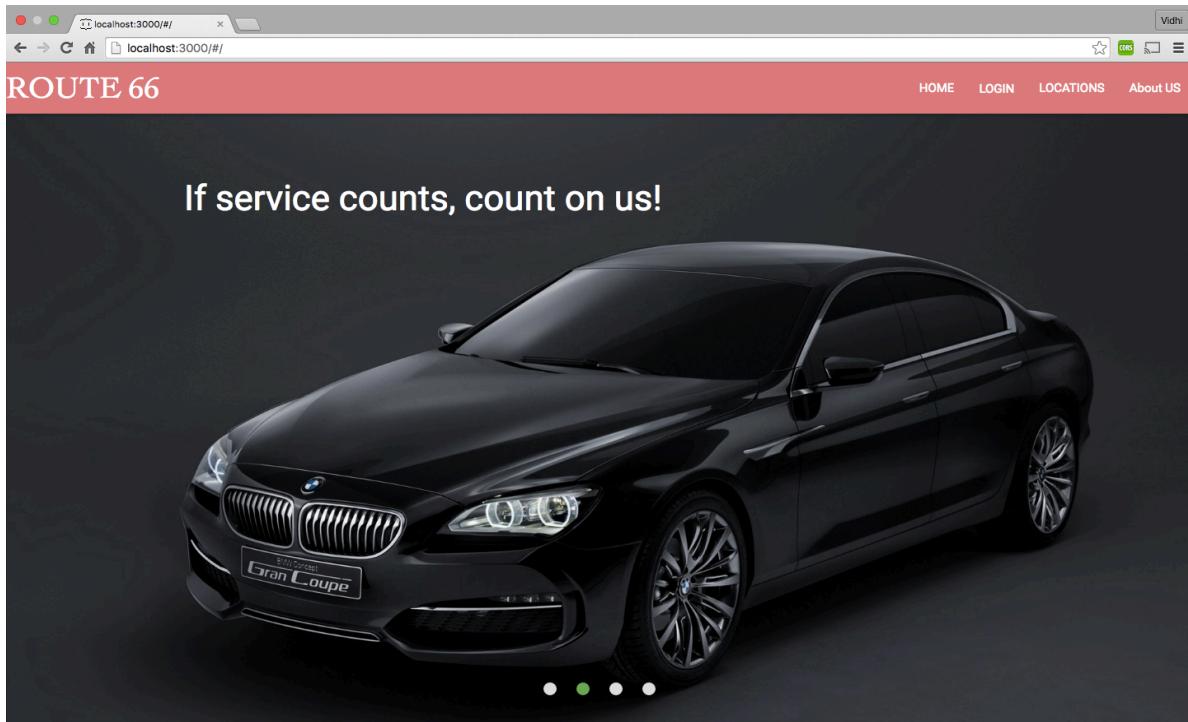
Server Side: - NodeJS

Database: - Mongodb

3. Steps to Install And Run the Application.

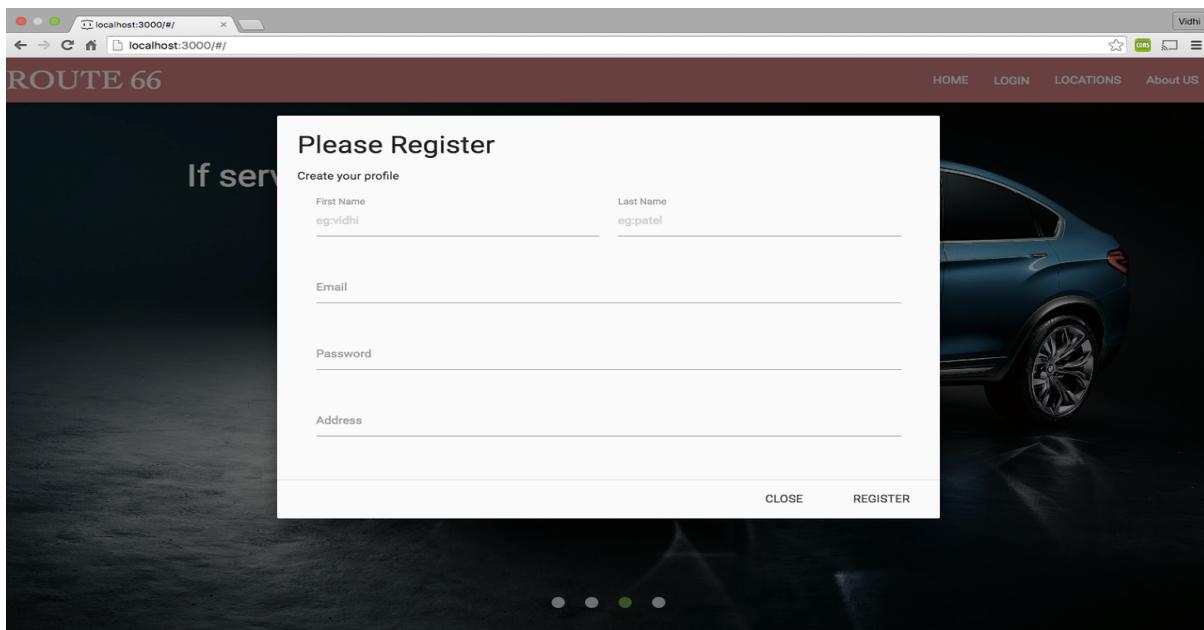
1. Install express by giving a command “npm install express” in your app directory.
2. To work with the database, we first need to create a connection. So, I have used MongoDB’s native Node.js driver to create a connection with the MongoDB server. Therefore use the npm command “npm install mongo” to install the module.
3. body-parser will take the body of your request and parse it to whatever you want your server to receive in POST/PUT requests. To do this we will use the command “npm install body-parser”.
4. To use AngularJS for developing the application, I have used a command “npm install angular” to install angular module and “npm install angular-route” to install the routing module in angular.
5. Install the mongodb server and start the server.
6. Run the server file from your app directory using the command “node server.js” (the file runs at the <http://localhost:3000>)

4. Functionalities



1. Sign Up

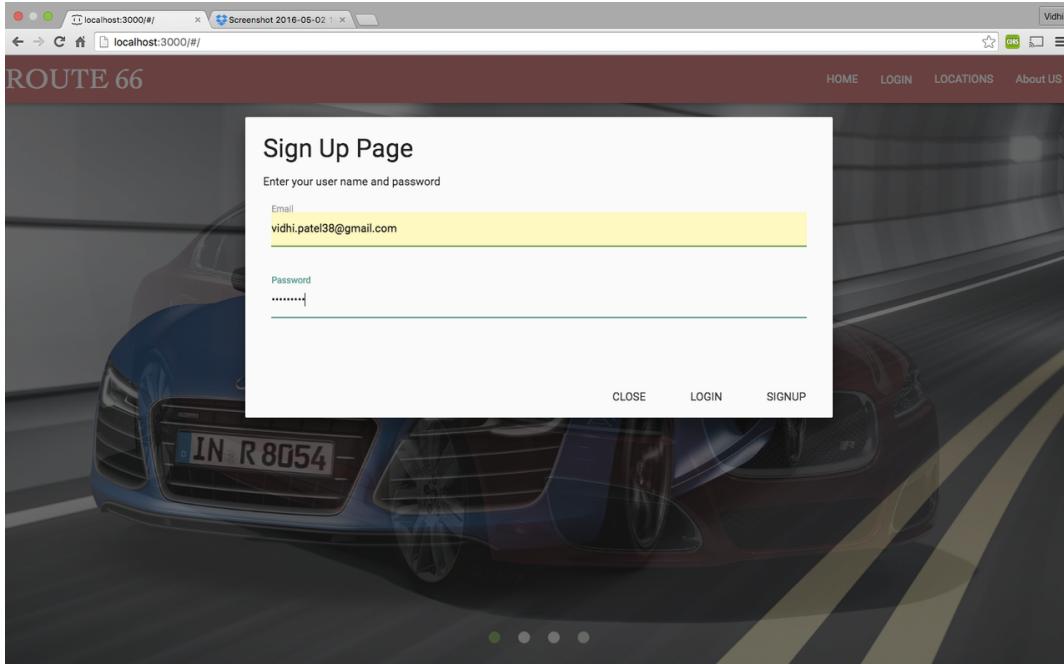
In order to rent a car the user needs an account and hence therefore the new user needs to register and create a new profile. So when the user clicks on the signup tab, a post request will be sent to the server which will create a new user and save the details of the user in the database.



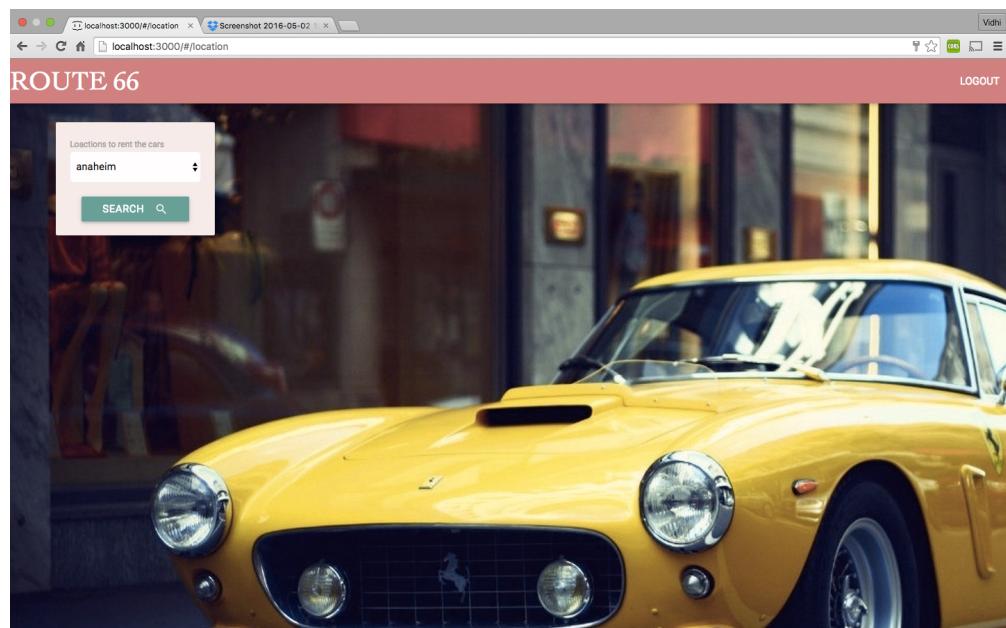
Home Page

4.2 Login

To rent a car, the user need to login. This tab will help the registered user to login. The credentials of the user will be checked by using a GET method which will match the credentials of the user from the database. Once the user has entered the correct credentials, he will be navigated to the page where he can enter the location from where he wants to rent the car.



The Login Page



The search page for the car

4.3 Search: -

The search function allows users to search the car according to the user. The GET request will be send to the server, which will fetch the set of cars according to the location for the database and display it to the user. By clicking on the car, it will its own detail like what is the type of car, Name of the car and what is the rent of the car. It will also have to buttons: - A) Check the Availability – It will allow the user to see the dates on which the cars are booked.

B) Book – It will help to book the car.

The screenshot shows a web application interface for car rental. At the top, a red header bar displays the title 'ROUTE 66'. On the right side of the header are 'BACK' and 'LOGOUT' buttons. The main content area has a light beige background. It displays several car listings. The first listing, for a 'sedan', is highlighted with a light green box. Inside this box, the car image is shown, followed by the text 'Car Details', 'car id: s11', 'Car name: mazda', 'Car rate: 5', a 'BOOK' button, and a 'CHECK THE BOOKED' button. Below this listing are three more car images: a silver SUV, a dark SUV, and a red SUV. Each car image is accompanied by the word 'sedan' or 'SUV' and a three-dot menu icon. At the bottom center of the page, the text 'Details of the car' is displayed.

ROUTE 66

BACK LOGOUT

Car Details

car id: s11

Car name: mazda

Car rate: 5

BOOK

CHECK THE BOOKED

sedan

sedan

SUV

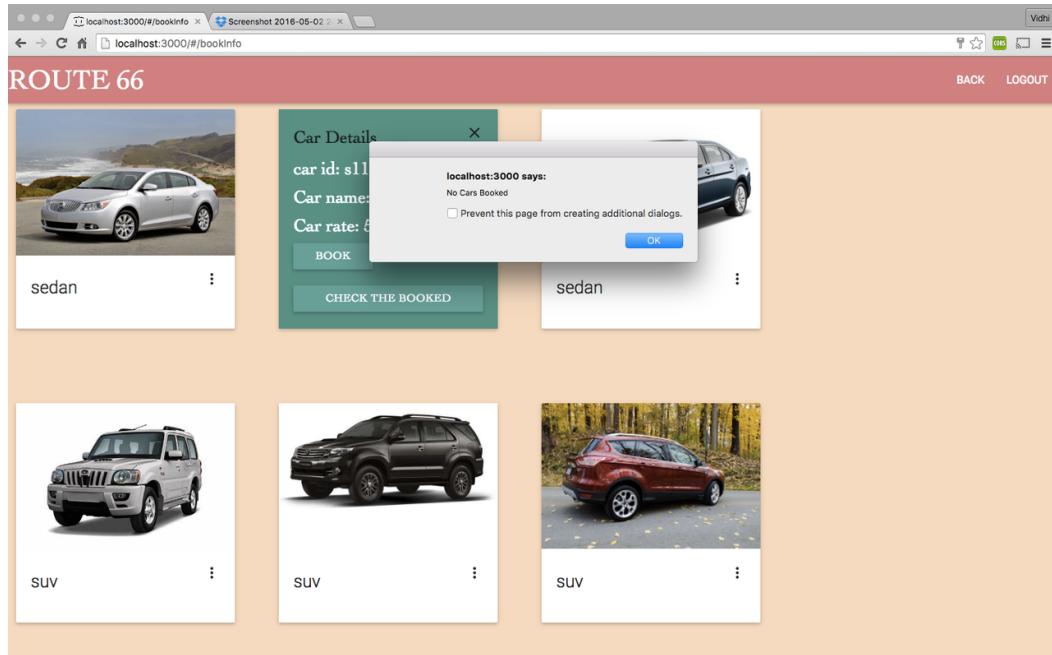
SUV

SUV

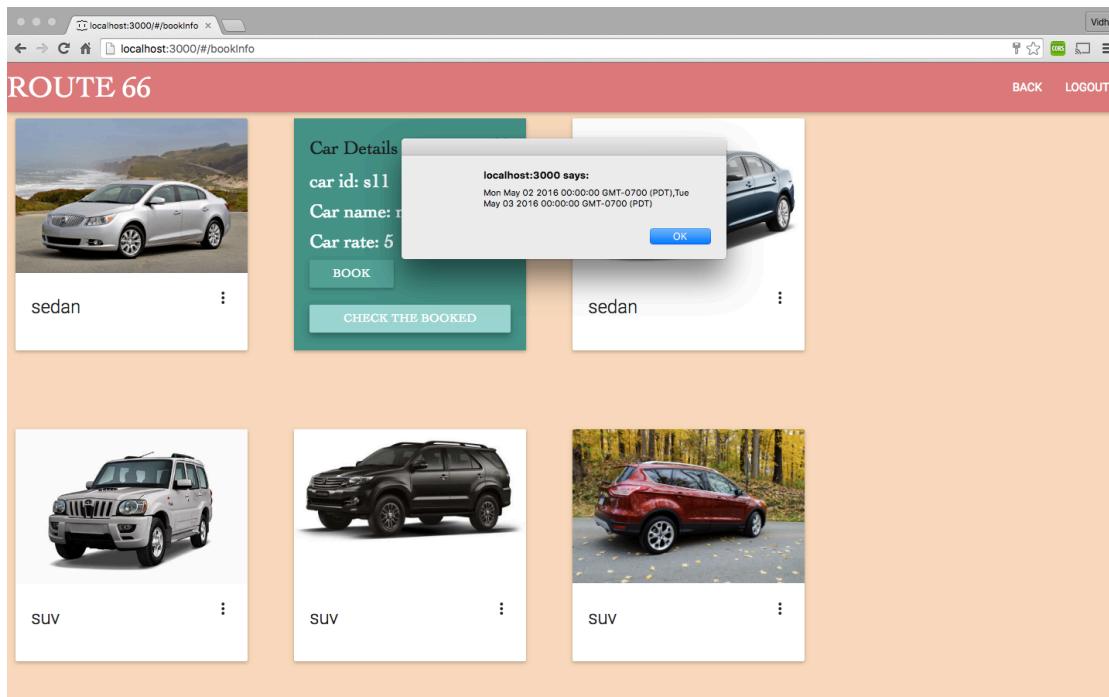
Details of the car

A) Check the Booked Car: -

By clicking on this button a GET request will be sent to the server which will get the dates on which the car is particularly booked. So that the user will come to know the dates on which the car is booked.

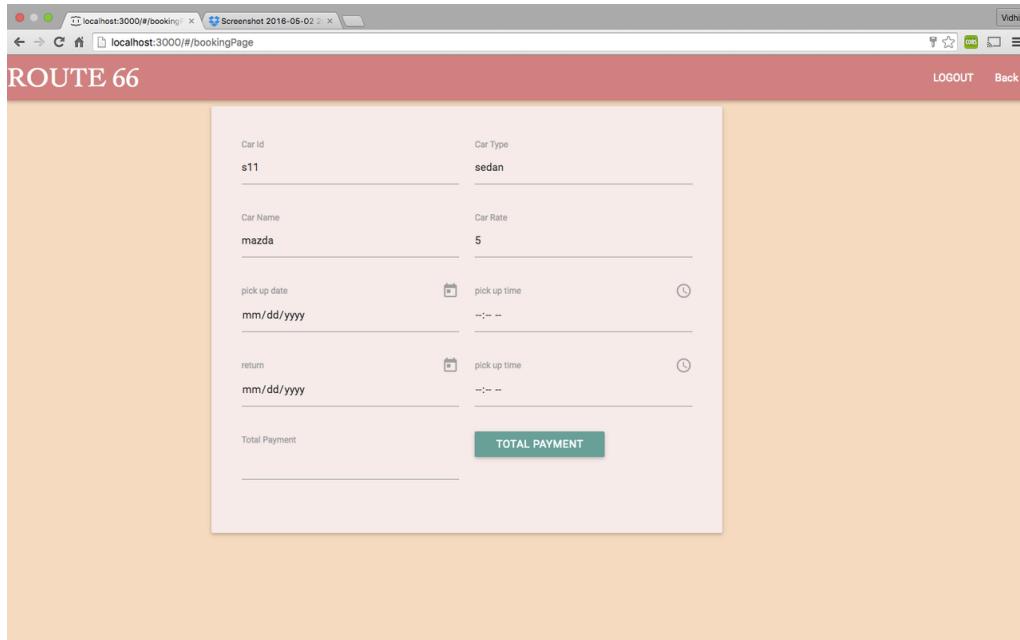


Displays the availability of the car by clicking on the check the booked



4.4 Book

The book button helps user to book a car by navigating to the page which asks the details from the user like on which date and time user wants to book a car.



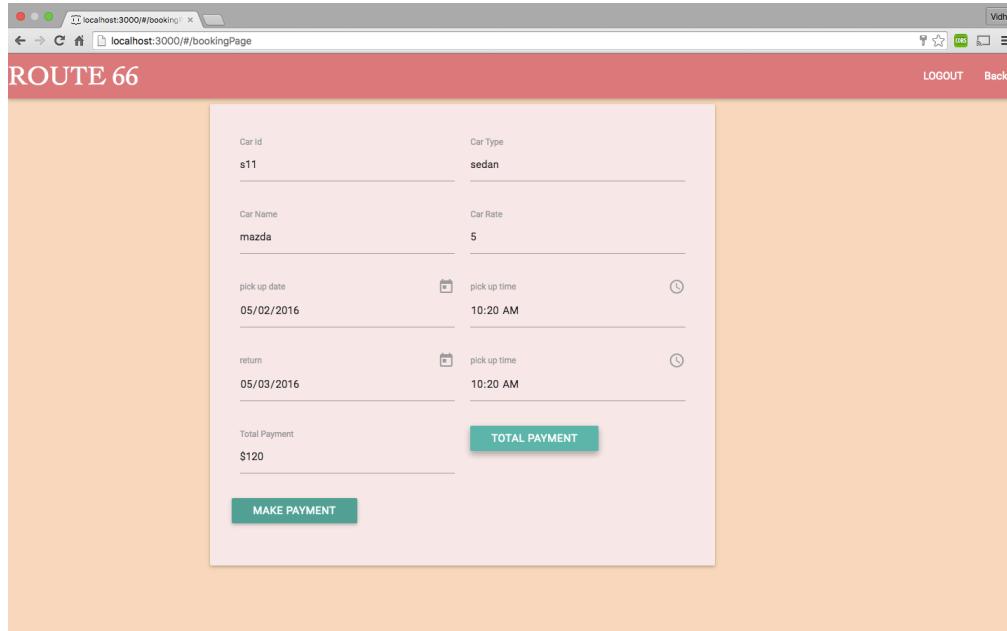
A screenshot of a web browser showing a booking form. The title bar says 'localhost:3000/#/booking'. The page has a header 'ROUTE 66' and a user 'Vidhi'. On the right are 'LOGOUT' and 'Back' buttons. The form fields are as follows:

Car Id	s11	Car Type	sedan
Car Name	mazda	Car Rate	5
pick up date	mm/dd/yyyy	pick up time	10:20 AM
return	mm/dd/yyyy	pick up time	10:20 AM
Total Payment	TOTAL PAYMENT		

Booking Details page while clicking on the book button

4.5 Total Payment

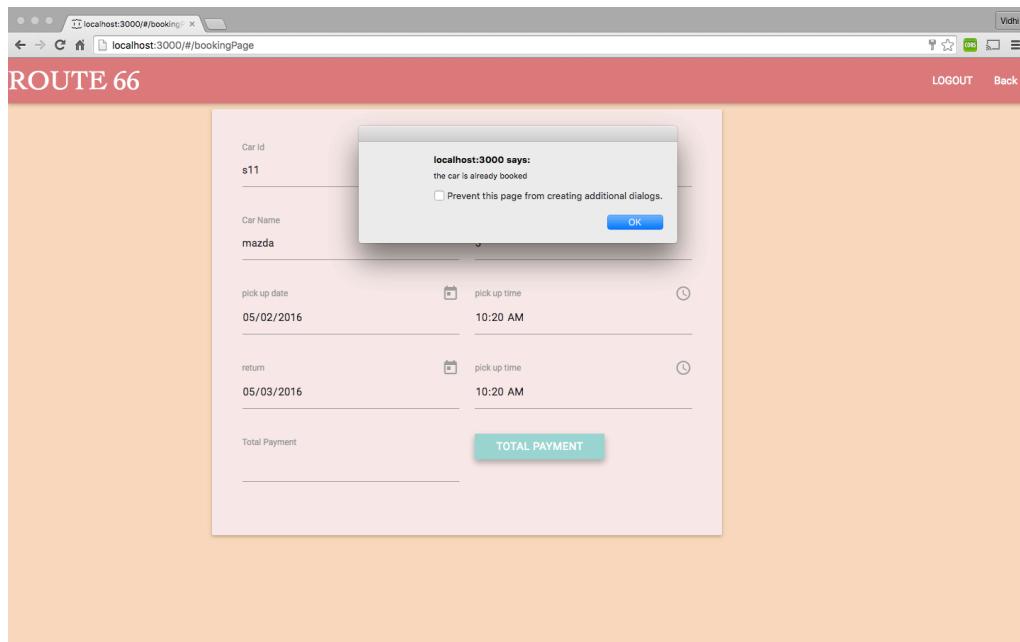
Once the user enters the details, he will click on the payment button, to generate the total payment according to the number of days the user has booked the car. On clicking the total payment button a GET request will be sent to the server, will will check whether that car is booked on that particular day, and if not it will display the total payment the user has to pay and will enable the payment button.



A screenshot of a web browser showing the same booking form as the previous image, but with different data. The title bar says 'localhost:3000/#/booking'. The page has a header 'ROUTE 66' and a user 'Vidhi'. On the right are 'LOGOUT' and 'Back' buttons. The form fields are as follows:

Car Id	s11	Car Type	sedan
Car Name	mazda	Car Rate	5
pick up date	05/02/2016	pick up time	10:20 AM
return	05/03/2016	pick up time	10:20 AM
Total Payment	\$120		
MAKE PAYMENT			

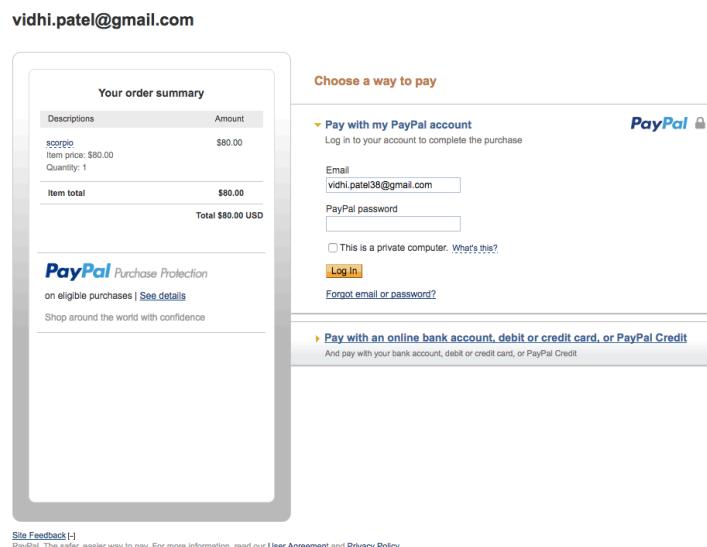
On clicking the Total Payment Button when car is available



When the car is already booked on that day

Payment: -

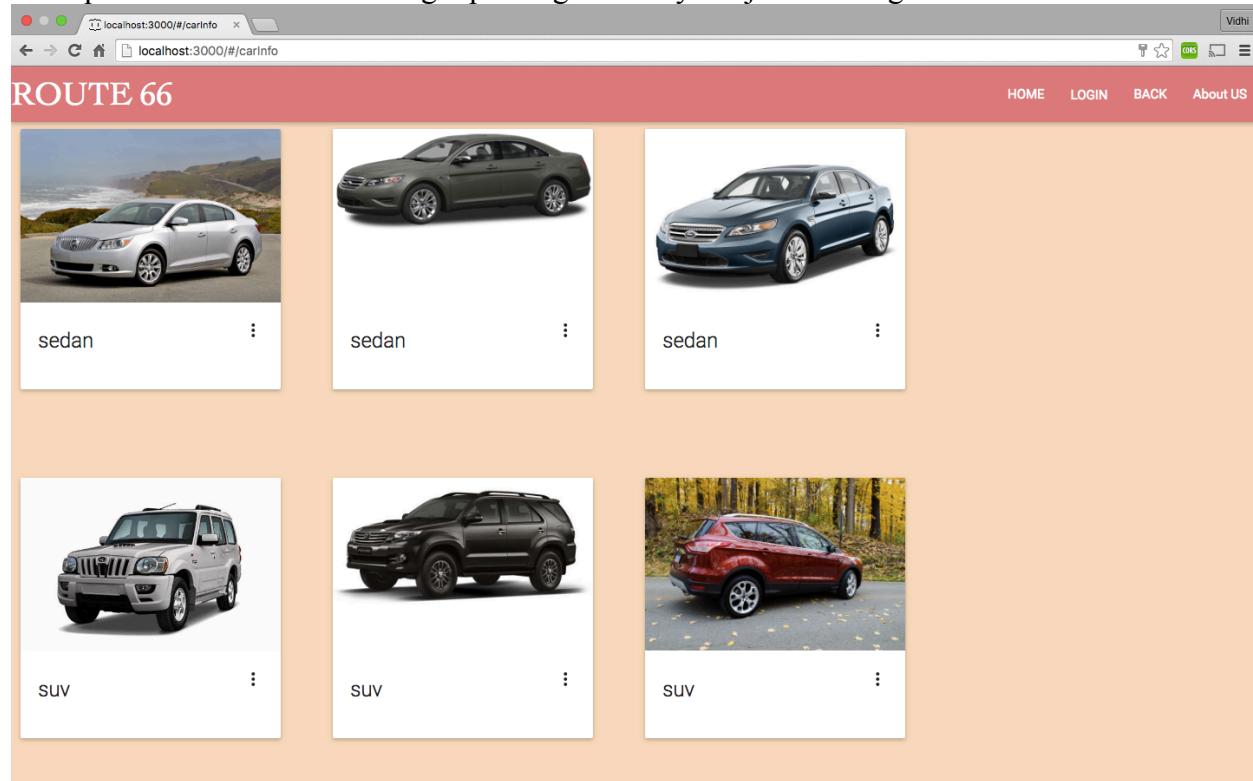
The payment button navigates the user to the paypal payment module. By clicking on the payment button a post request will send to the server which will a) update the user details as on what date the user has booked a car and b) will update the car records by adding that date on which car is booked.



Navigated to the Payment for the user

4.6 Location: -

This button allows user to see different types of cars available on different locations. And there is no requirement for the user to signup or login as they are just viewing the details of the car.



Details of the car

5. REFERENCES

1. <https://docs.angularjs.org/tutorial>
2. <https://scotch.io/tutorials/creating-a-single-page-todo-app-with-node-and-angular>
3. <https://docs.mongodb.org/getting-started/node/>
4. <http://materializecss.com/navbar.html>
5. <http://www.zoomcar.com/>

