INDEX

ABSTRACT

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.

CHAPTER 1

INTRODUCTION

A car rental management system is an autonomous system that will preserve the records of all the cars available, cars rented, etc. The user can rent a car based on its efficiency, performance, effort, or cost. The dealer can make a lot of use of this system by providing the cars.

A project-based on Car Rental System which uses PHP Language. this car rental project system project in PHP focuses mainly on dealing with customers regarding their car rental hours and certain transactions. Also, it displays all the available cars on the home page whereas the users cannot view unavailable cars until and unless the user returns the rental car. The project is divided into two categories: Customer Login and Employee Login. In an overview of this web app, the employee has full control of the system. Talking about the project, a customer can simply log in or register their accounts. He/she can view available cars, select any one and proceed for rental after selecting various conditions, dates, etc. After all, the customer can rent a car by filling up the given forms.

The customer can view all his rental records and history once after logging onto the system. In addition, the customer needs to return the cars using the system because all the records are carried throughout the system. At last, the system prints an invoice stating all the information with total costs.

Employee Panel

Similarly, an employee plays the main role in implementing the system. An employee has the right to view all bookings, drivers, cars. In order to add a car for rental purposes, an employee must provide a car name with its number plate, fare-related information, and car image too. Also, for adding driver records, he/she must provide his/her name with driving license number, contact information, and gender. Last but not the least, an admin can view all the system data such as bookings, car details, availability, driver information. For its UI elements, a free open-source CSS framework; Bootstrap is on board. Presenting a new car rental system project in PHP MySQL which includes an employee panel that contains all essential features to follow, and a knowledgeable resource for learning purposes.

There are three phases to this car rental system.

1) The first phase entails organising car rental locations into pools and allowing pooled car rental outlets to share a fleet of automobiles.

2) The second phase for each pool determines the types and quantities of cars to be acquired and delivered to the auto manufacturer, as well as the geographic redistribution of automobiles among pools across the long-term planning horizon.

3) The third phase entails day-to-day operations, during which the fleet's deployment within each pool and among its locations is determined.

1.1 Need for Car Rental System

Nowadays, there is Online Car Rental, which benefits users greatly. A rental service is one where customers come to seek the rental of a rental unit. It is more convenient than paying for the unit's ownership and maintenance. A car rental company lends autos for a price for a few hours, a few days, or a week or more.

1.2 Objective of Car Rental System

The project's goal is to automate vehicle rental and reservation so that clients don't have to waste time calling and waiting for a vehicle. To convert the manual car rental procedure into a digital method. A customer satisfaction test was used to validate the rental automobile system. As a system development reference, create documents such as Software Requirement Specification (SRS) and Software Design Description.

1.3 Data and Information

Data gathering plays a vital function in a project's succession and also it plays an unavoidable role in the timely completion of the project. The project's data comprises the clients' contact information as well as their feedback/complaints, which are saved in a database. Only the admin has access to the information given by the clients in order to ensure security.

1.4 Available Features:

Customer Login/Register

Employee Login/Register

Display all available cars

Various price range

Rent cars

View rental history

Return cars

Total amount calculations according to days

Add and view rental cars

Add and list driver records

View overall bookings

Addition of extra charges (for crossing due dates).

1.5 Software Required

Software used : XAMPP/WAMP

PHP version : 5.6.3 and 7.4.12

Language/s Used: PHP, JavaScript

Database: MySQL

Type: Web Application

CHAPTER 2

PROBLEM STATEMENT

A car rental is a vehicle that may be rented for a price and utilised for a specific length of time. Getting a rental automobile makes it easier for people to travel around when they don't have access to their own vehicle or don't own one at all. A person who needs transportation must call a rental car company and sign a contract. This method improves client retention while also making car and employee management more straightforward.

CHAPTER 3

LITERATURE SURVEY

3.1 System analysis

System analysis is a thorough examination of a system's different processes and their interrelationships both within and outside the system. The key question here is – why are there so many flaws in the current system? What measures should be taken to address the problem? When a user or management begins a study of the software utilising the current system, analysis begins. Data was collected on numerous files, decision points, and transactions handled by the current system during the analysis. For example Data Flow Diagrams, etc. are widely utilised in the system. For the collection of important information needed to create the system, training, experience, and common sense are necessary. The system's success is primarily determined by how well the problem is identified, fully studied, and appropriately implemented via the selection of a solution. A good analytical model should include not just methods for comprehending the problem, but also the framework for solving it. As a result, it should be extensively investigated by gathering data about the system. The suggested system should next be extensively examined in light of the requirements. System analysis is divided into four sections.

1) Initial research and system architecture.
2) Using analytic tools to do structured analysis.
3) Feasibility study.
4) Analyze the cost and benefits.

3.2 Problem Analysis

We are currently creating a new system because there is no existing system at this time. There is currently no system on the market with these features and capabilities. This system is designed for a wide range of users, with a highly adaptable and adjustable solution that will ensure worldwide marketing.

3.3 Software Analysis

1) When developing web apps, it takes a long time.

2) The expense of research and analysis to establish the real-world requirement.

3) Implementation of the programme on the server, as well as the expense of web servers.

CHAPTER 4

SYSTEM REQUIREMNET SPECIFICATION

4.1 Functional Requirements

Requirement analysis is a software engineering approach that consists of a series of activities that establish the demands or conditions that must be satisfied for a new or updated product while taking into account the potential for competing requirements from different users. Functional requirements are those that are used to demonstrate the system's internal functioning nature, as well as the system's description and explanation of each subsystem. It comprises the task that the system should accomplish, the processes involved, the data that the system should contain, and the user interfaces.

The functional requirements discovered are as follows:

- Log in with admin account
- Customer registration, skip if customer already registered
- Search for available vehicle
- View vehicle with details
- Calculate cost
- Reserve car for renting
- Collect feedback from customer

4.2 Non-functional Requirements

It describes system elements that are concerned with how the system fulfils functional requirements. They are as follows:

1) Security – Only authorised corporate workers may get access to the firm's secured page on the systems, and only users with proper passwords and usernames can log in to see the users page.

2) Performance and Response Time – The system should have a high-performance rate while executing user input and should be able to offer feedback or a response in a short amount of

time, often 50 seconds for extremely difficult activities and 20 to 25 seconds for less sophisticated jobs.

3) Error Handling – Errors should be avoided as much as possible, and a suitable error message should be supplied to help the user through the recovery process. The importance of validating user input cannot be overstated. In addition, the time it takes to recover from a mistake should be between 15 and 20 seconds.

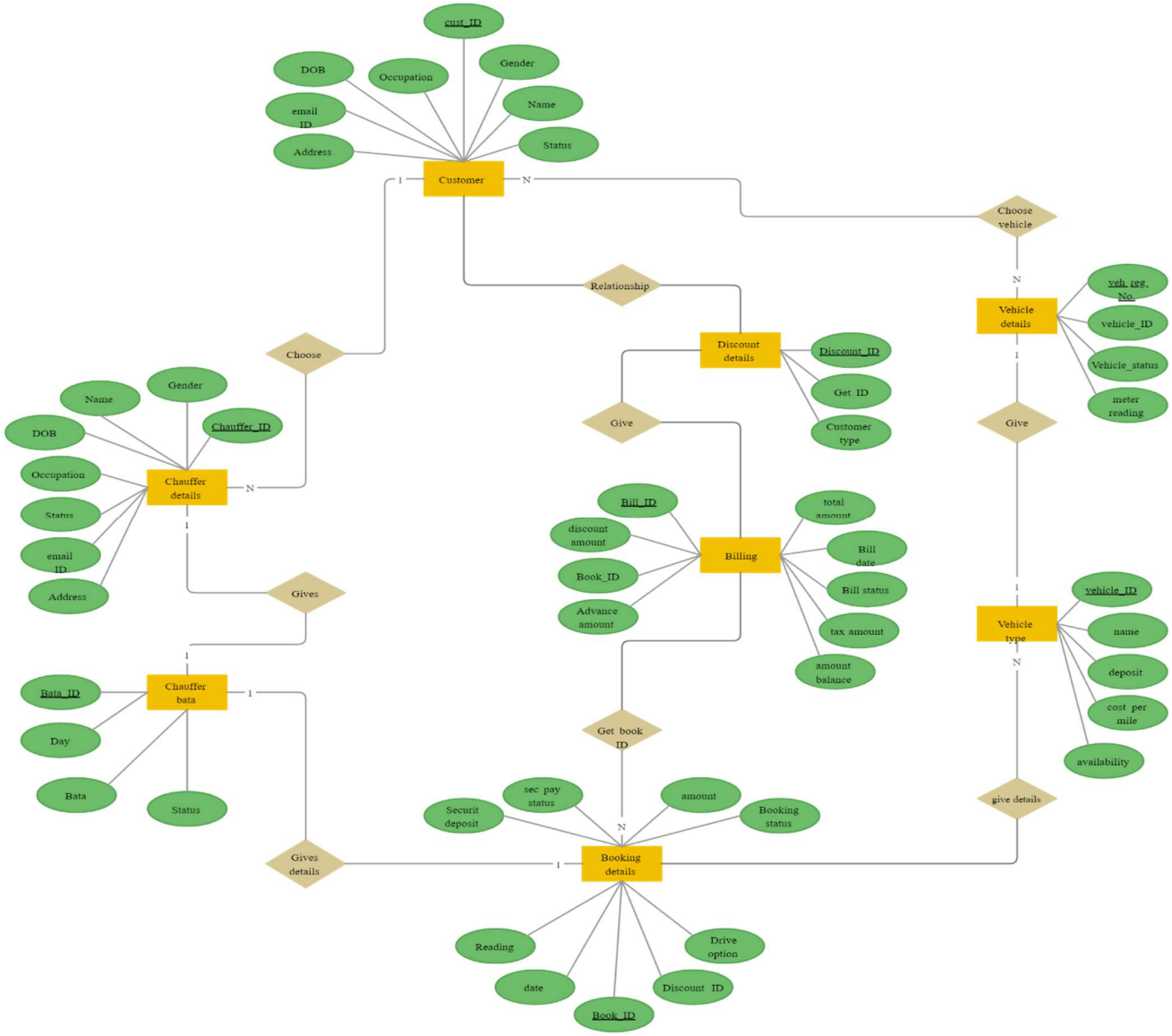
4) Availability – This system must be accessible at all times, 24 hours a day, seven days a week. In the event of a catastrophic system failure, the system should be back up and running within 1 to 2 business days, ensuring that the business process is not disrupted.

5) Ease of Use – Given the consumers' level of understanding, a basic yet high-quality user interface should be created to make it simple to comprehend and need minimal training.

CHAPTER 5
CONCEPTUAL DESIGN

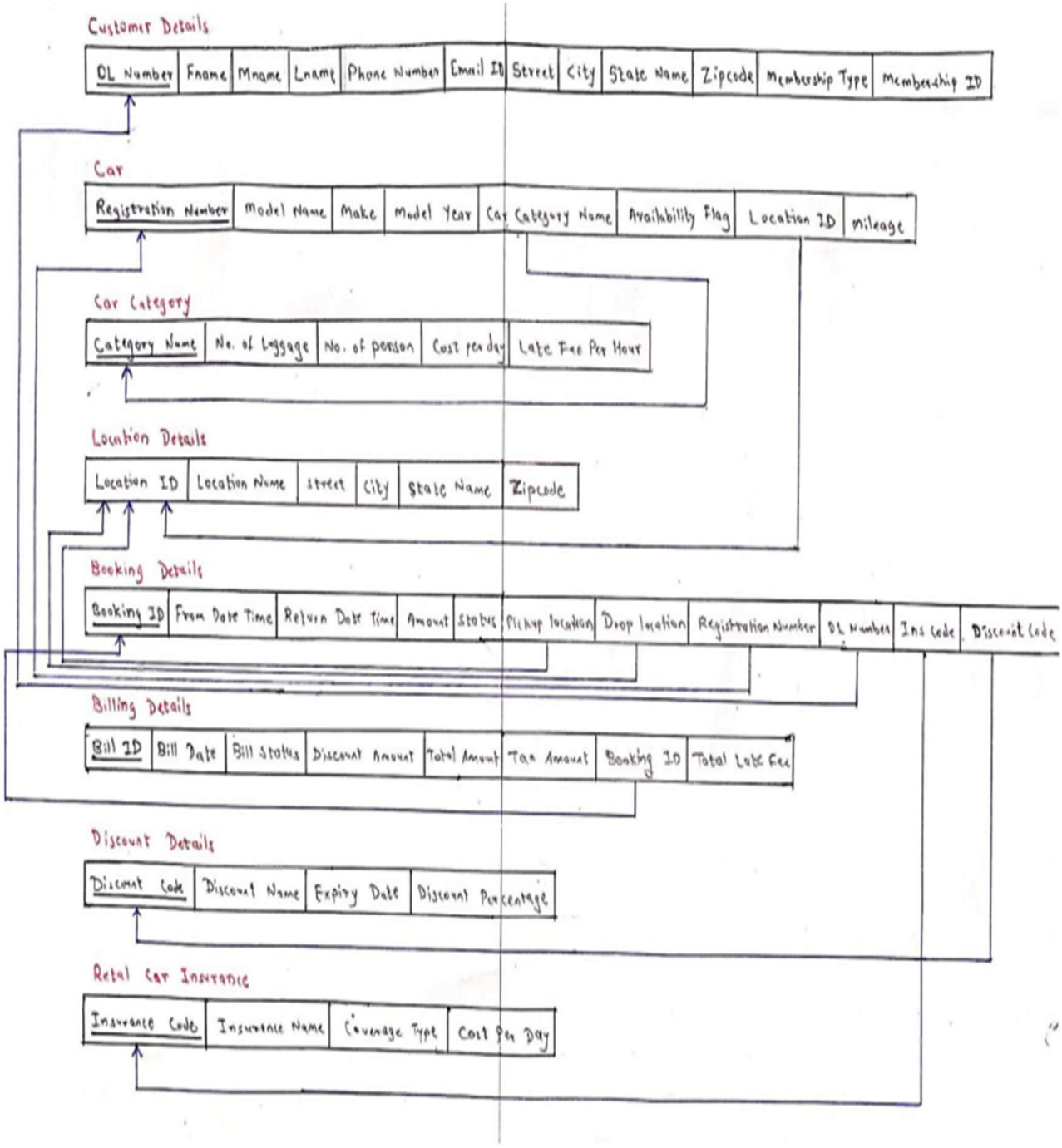
5.1 ER/EER Diagram

The ER diagram depicts all of the relationships between entity sets in the database. It demonstrates the database's logical structure.

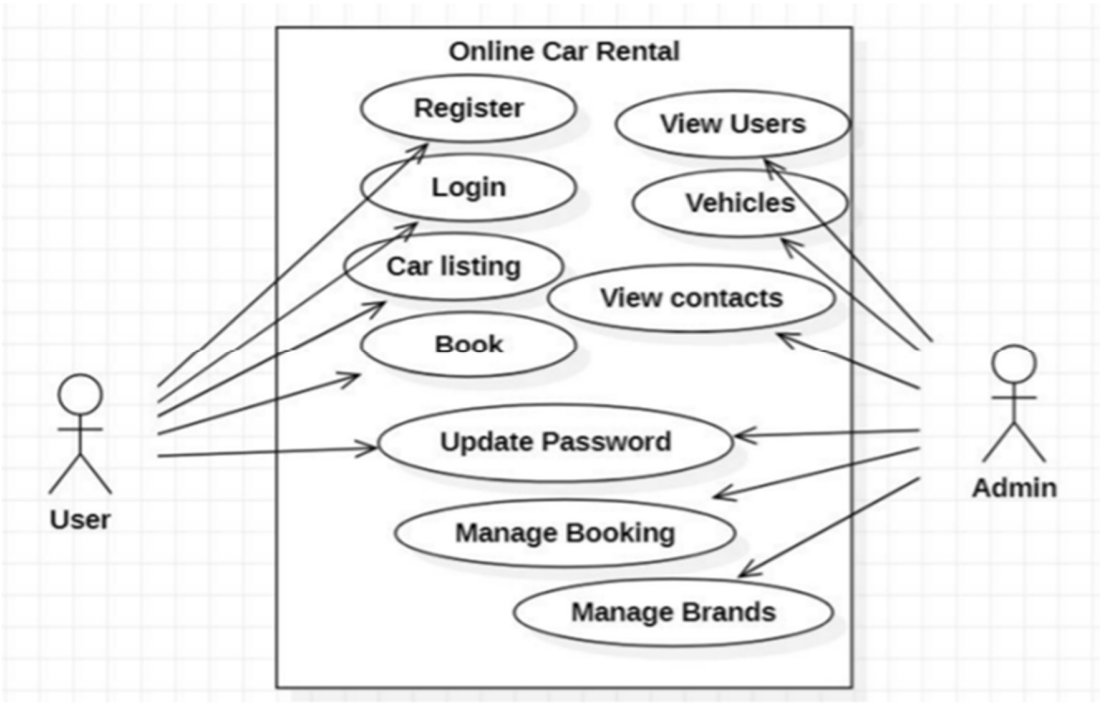


5.2 Relationship Model

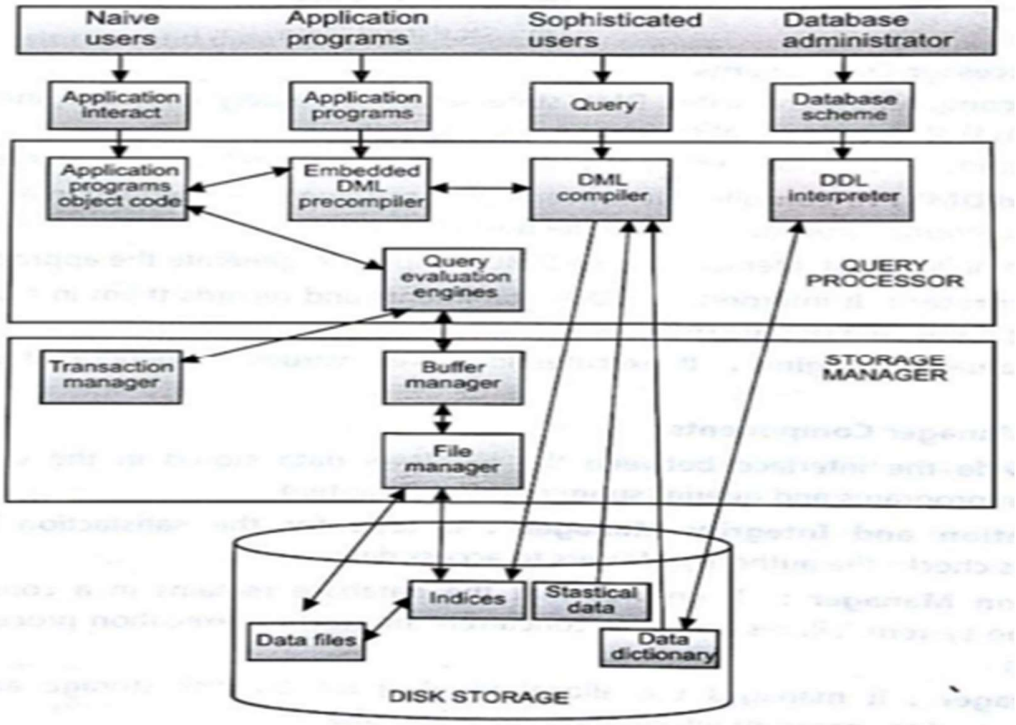
It aids in visualising how data is linked in general.



5.3 User Case Diagram



5.4 DATABASE MANAGEMENT STRUCTURE

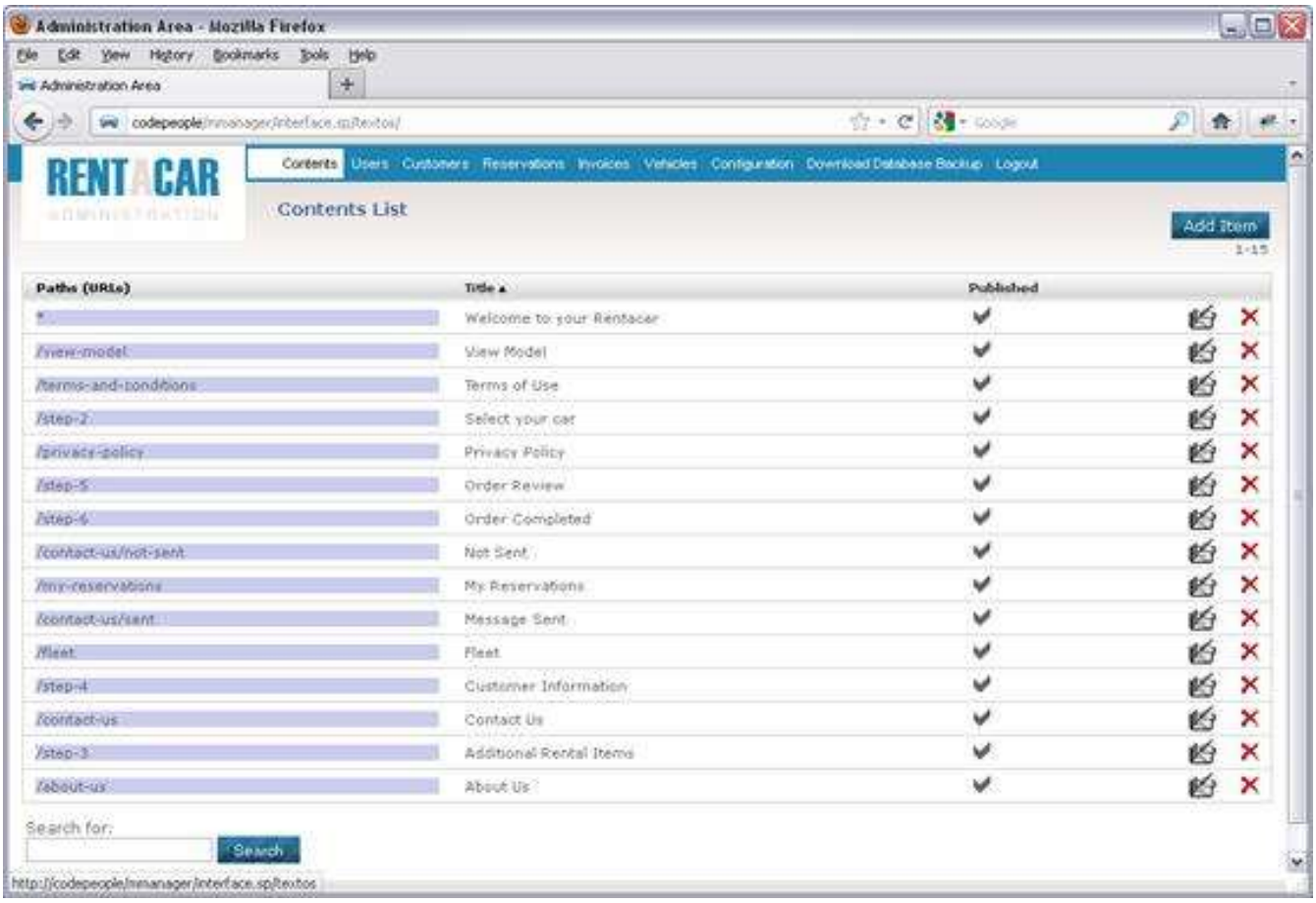


CHAPTER 6

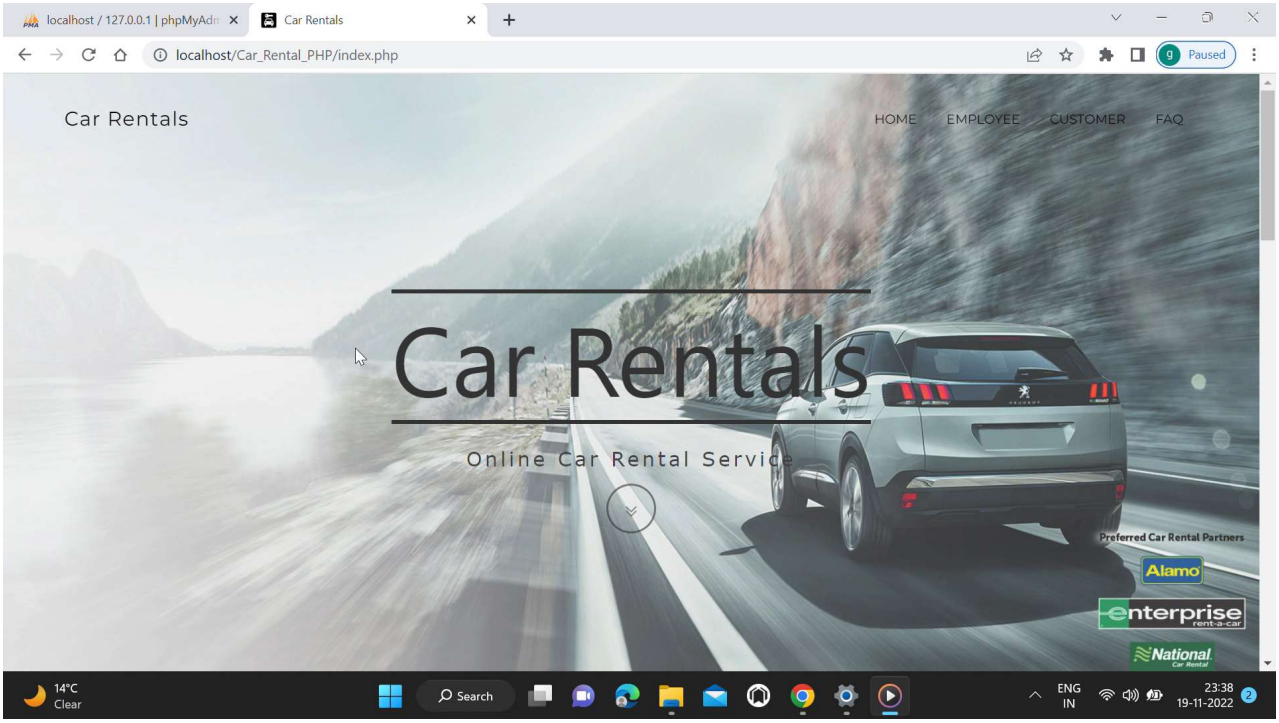
GRAPHICAL USER INTERFACE

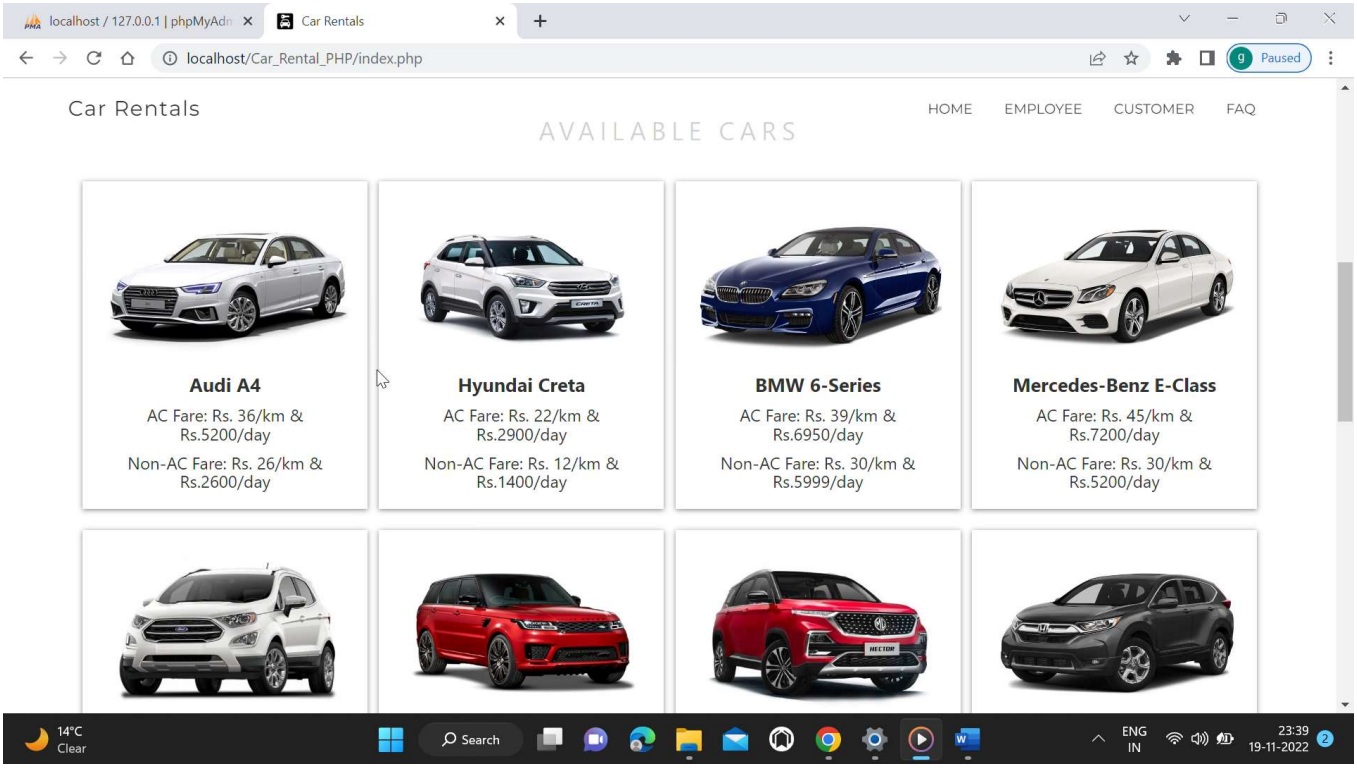
Graphical user interface (GUI) allows the user to communicate with an electronic device through visual components.

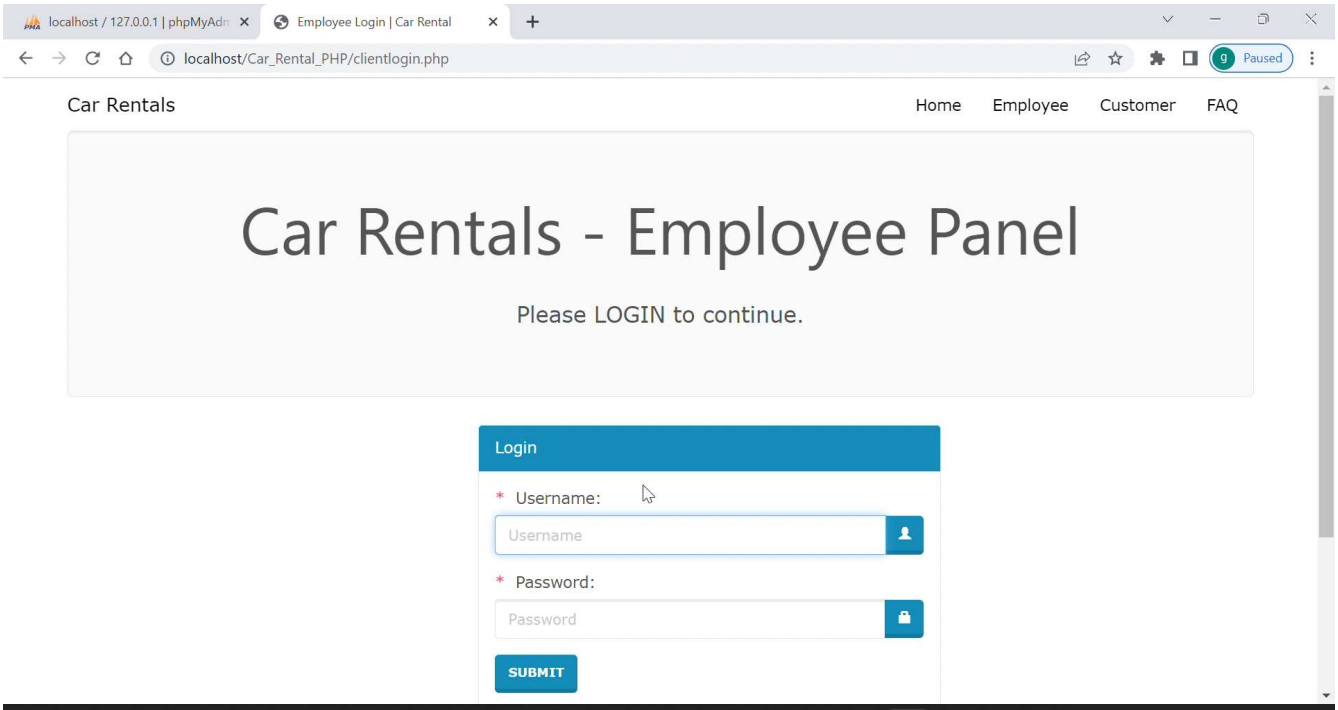
6.1 Backend



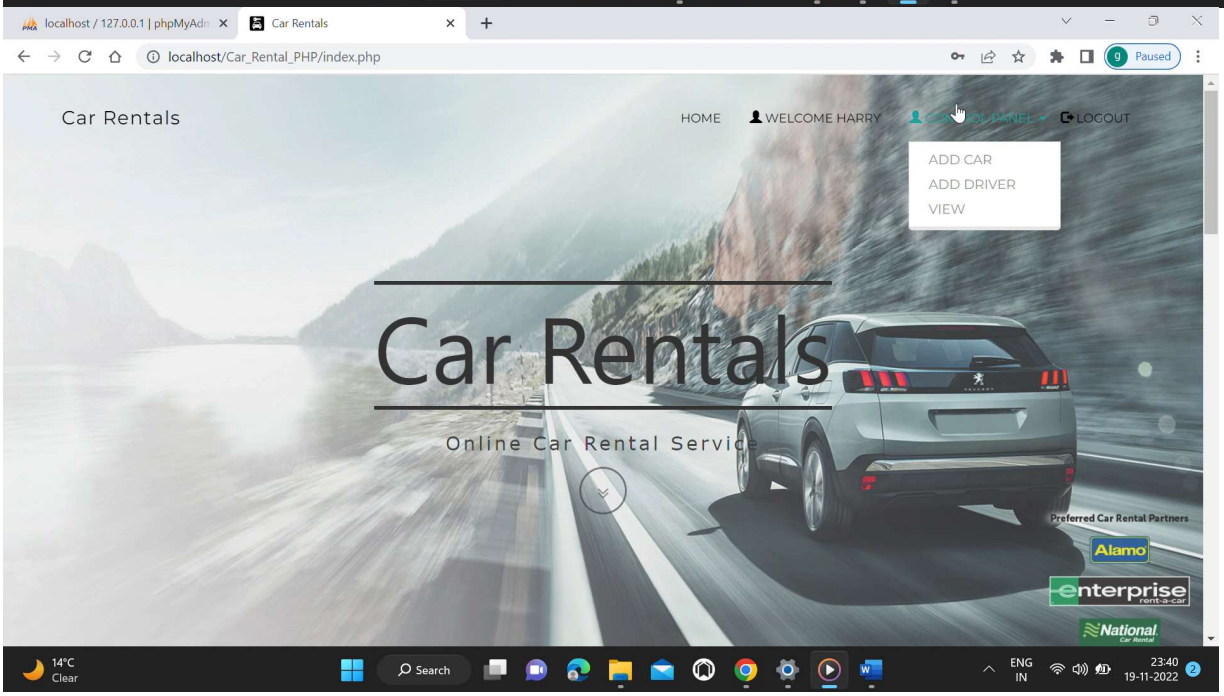
6.2 Frontend


localhost / 127.0.0.1 | phpMyAdm
Car Rentals
localhost/Car_Rental_PHP/index.php
Paused
Car Rentals
HOME
EMPLOYEE
CUSTOMER
FAQ
Car Rentals
Online Car Rental Service
Preferred Car Rental Partners
Alamo
enterprise
rent-a-car
National
Car Rental
14°C
Clear
Search
ENG
IN
23:38
19-11-2022

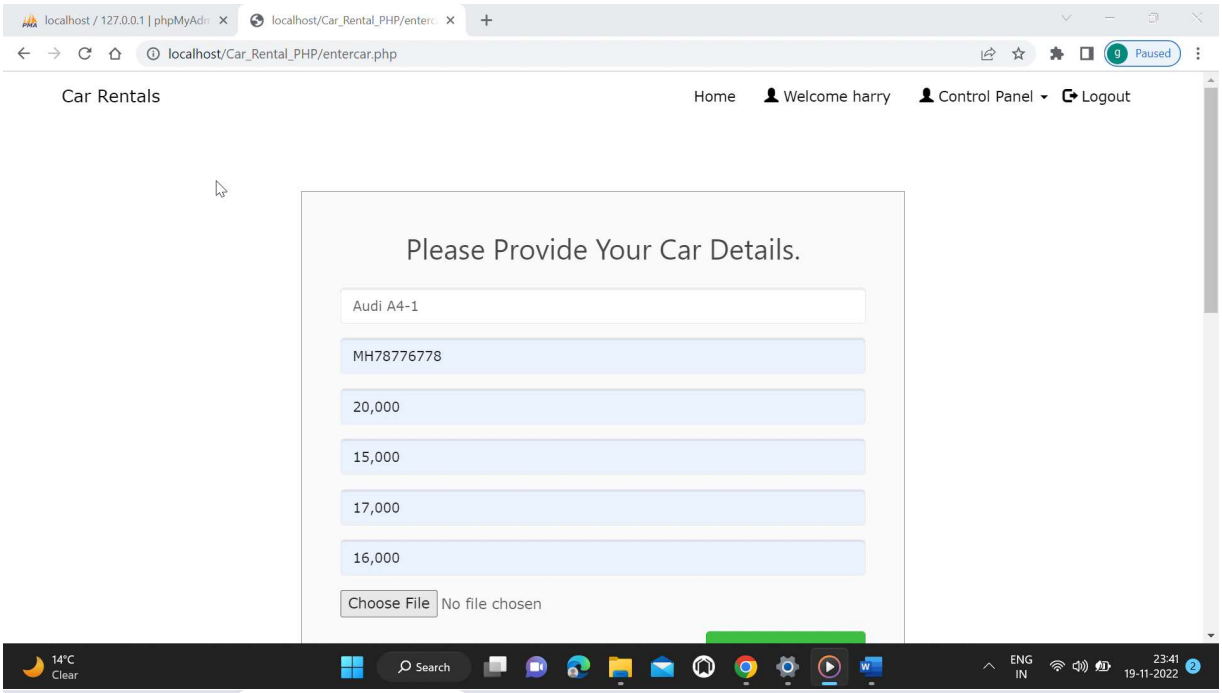

localhost / 127.0.0.1 | phpMyAdm
Car Rentals
localhost/Car_Rental_PHP/index.php
Paused
Car Rentals
HOME
EMPLOYEE
CUSTOMER
FAQ
AVAILABLE CARS
Audi A4
AC Fare: Rs. 36/km & Rs.5200/day
Non-AC Fare: Rs. 26/km & Rs.2600/day
Hyundai Creta
AC Fare: Rs. 22/km & Rs.2900/day
Non-AC Fare: Rs. 12/km & Rs.1400/day
BMW 6-Series
AC Fare: Rs. 39/km & Rs.6950/day
Non-AC Fare: Rs. 30/km & Rs.5999/day
Mercedes-Benz E-Class
AC Fare: Rs. 45/km & Rs.7200/day
Non-AC Fare: Rs. 30/km & Rs.5200/day
14°C
Clear
Search
ENG
IN
23:39
19-11-2022

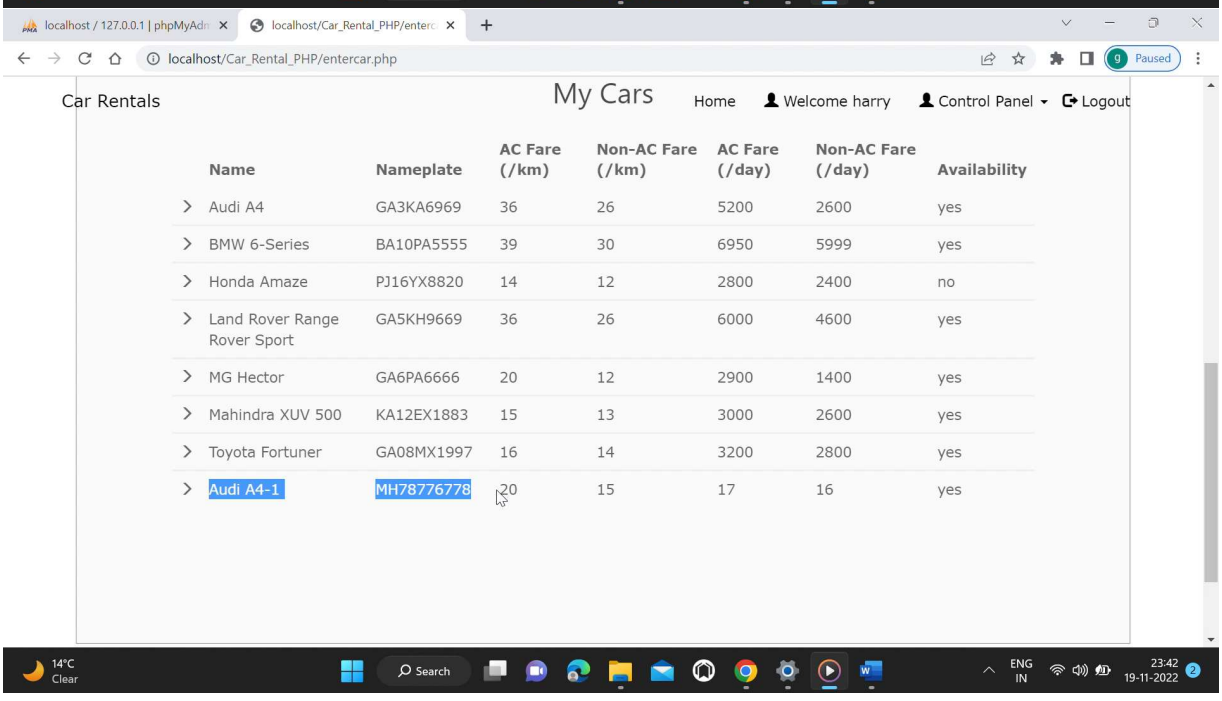

localhost / 127.0.0.1 | phpMyAdn
Employee Login | Car Rental
localhost/Car_Rental_PHP/clientlogin.php
Paused
Car Rentals
Home
Employee
Customer
FAQ
Car Rentals - Employee Panel
Please LOGIN to continue.
Login
* Username:
Username
* Password:
Password
SUBMIT

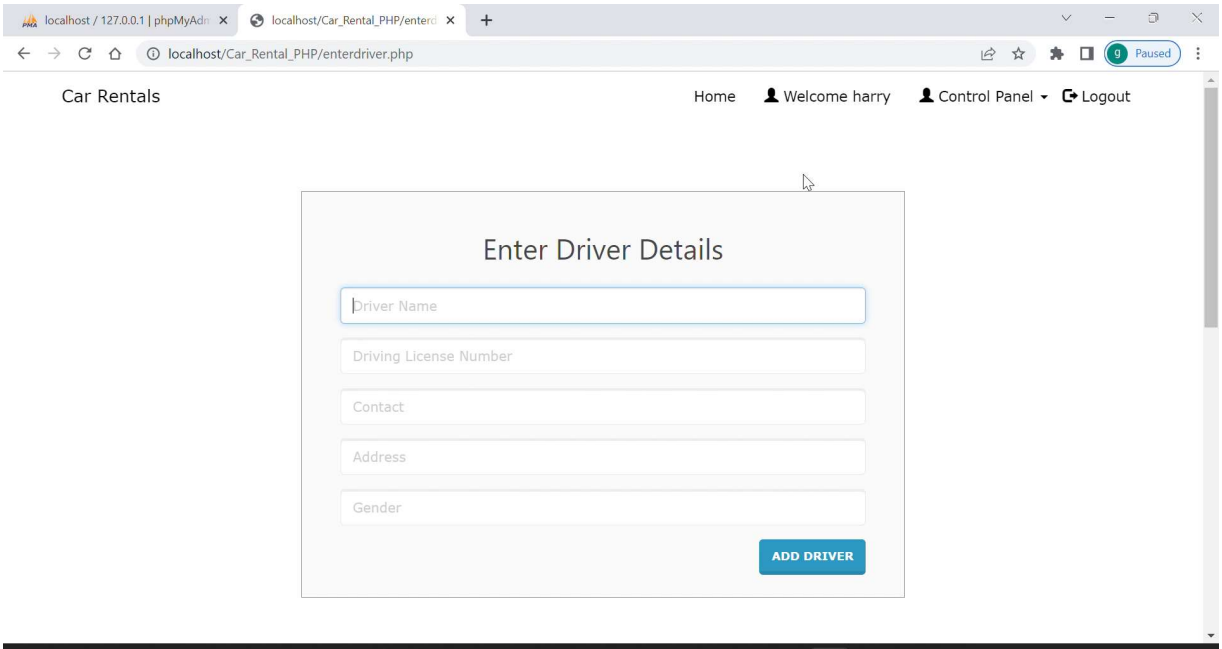

14°C
Clear
Search
ENG
IN
23:40
19-11-2022


localhost / 127.0.0.1 | phpMyAdn
Car Rentals
localhost/Car_Rental_PHP/index.php
Paused
Car Rentals
HOME
WELCOME HARRY
LOGOUT
ADD CAR
ADD DRIVER
VIEW
Car Rentals
Online Car Rental Service
Preferred Car Rental Partners
Alamo
enterprise
rent-a-car
National
Car Rental

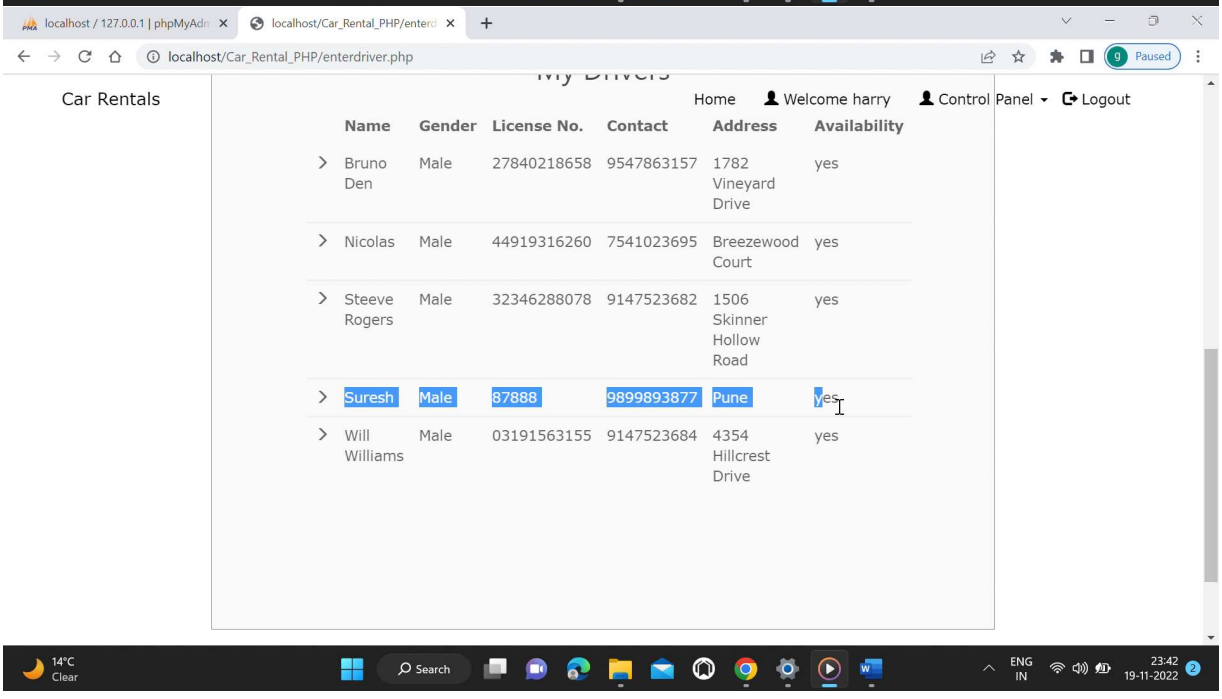
14°C
Clear
Search
ENG
IN
23:40
19-11-2022


localhost/Car_Rental_PHP/entercar.php
Car Rentals
Home
Welcome harry
Control Panel
Logout
Please Provide Your Car Details.
Audi A4-1
MH78776778
20,000
15,000
17,000
16,000
Choose File
No file chosen

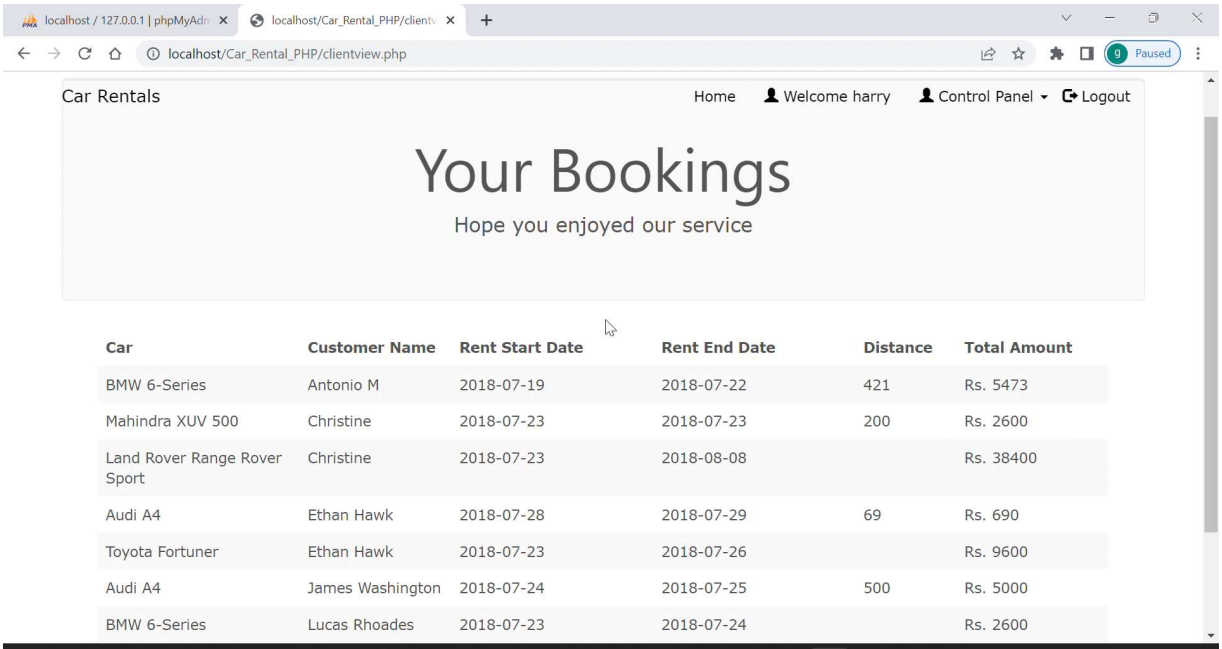

localhost/Car_Rental_PHP/entercar.php
Car Rentals
My Cars
Home
Welcome harry
Control Panel
Logout
Name
Nameplate
AC Fare (/km)
Non-AC Fare (/km)
AC Fare (/day)
Non-AC Fare (/day)
Availability
Audi A4 GA3KA6969 36 26 5200 2600 yes
BMW 6-Series BA10PA5555 39 30 6950 5999 yes
Honda Amaze PJ16YX8820 14 12 2800 2400 no
Land Rover Range Rover Sport GA5KH9669 36 26 6000 4600 yes
MG Hector GA6PA6666 20 12 2900 1400 yes
Mahindra XUV 500 KA12EX1883 15 13 3000 2600 yes
Toyota Fortuner GA08MX1997 16 14 3200 2800 yes
Audi A4-1 MH78776778 20 15 17 16 yes

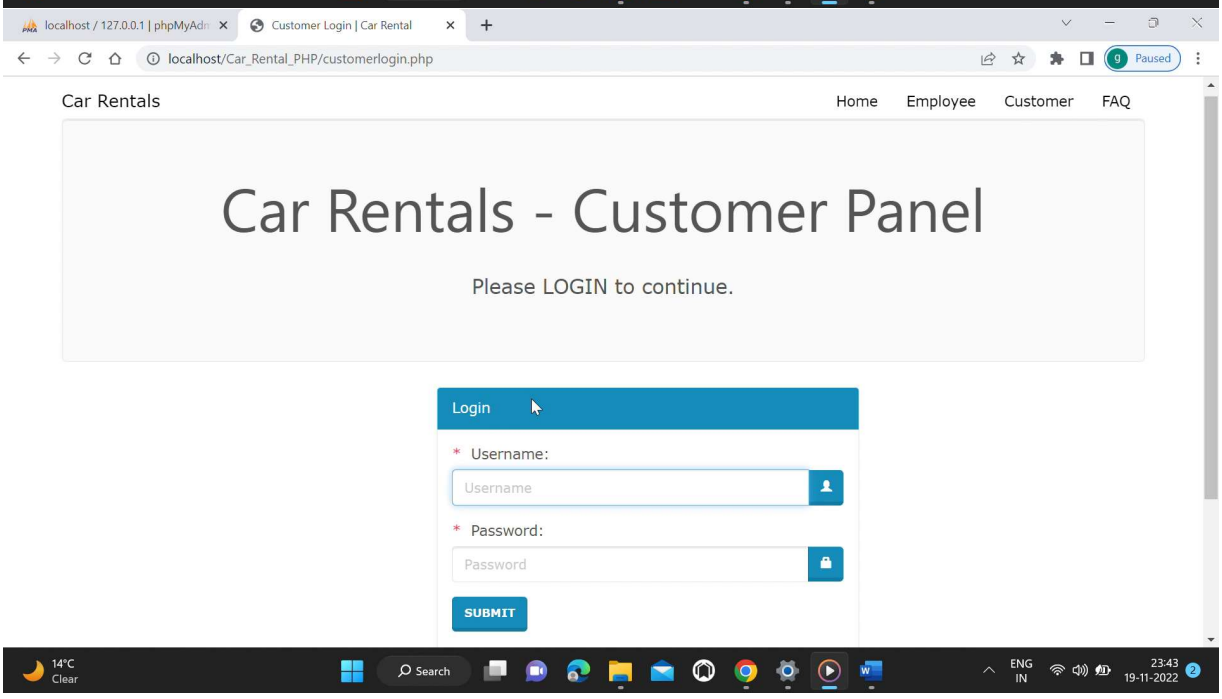

localhost / 127.0.0.1 | phpMyAdm
localhost/Car_Rental_PHP/enterd
localhost/Car_Rental_PHP/enterdriver.php
Paused
Car Rentals
Home
Welcome harry
Control Panel
Logout
Enter Driver Details
Driver Name
Driving License Number
Contact
Address
Gender
ADD DRIVER

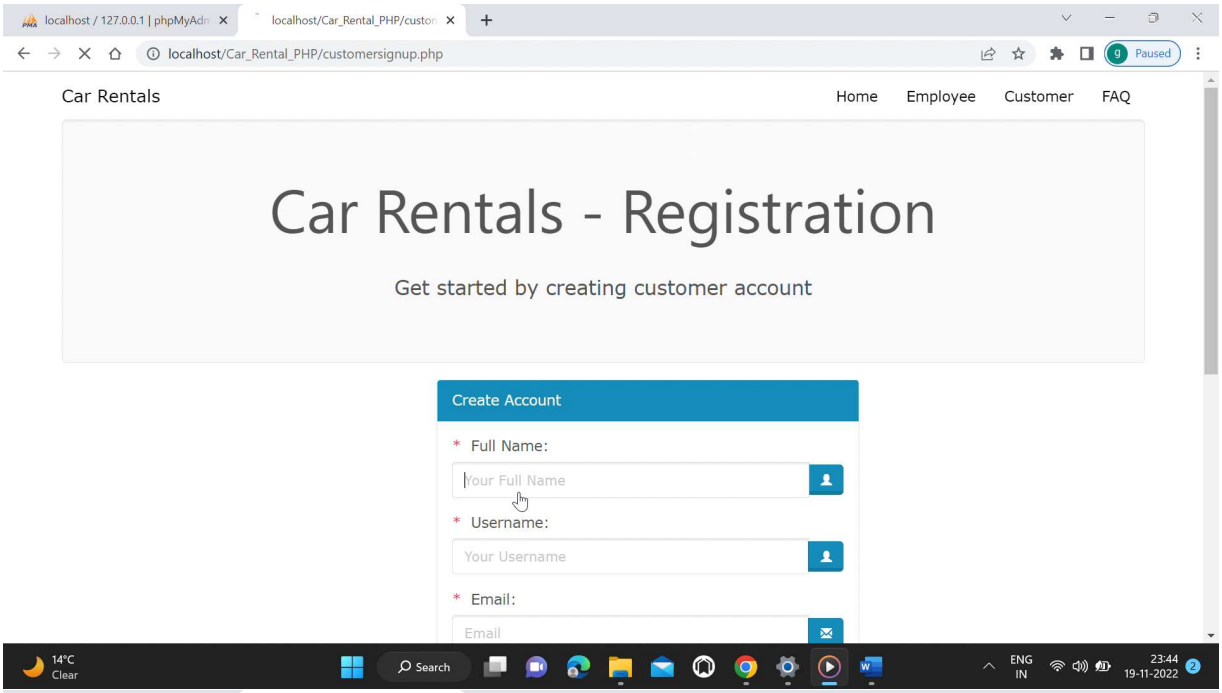

14°C
Clear
Search
ENG
IN
23:42
19-11-2022

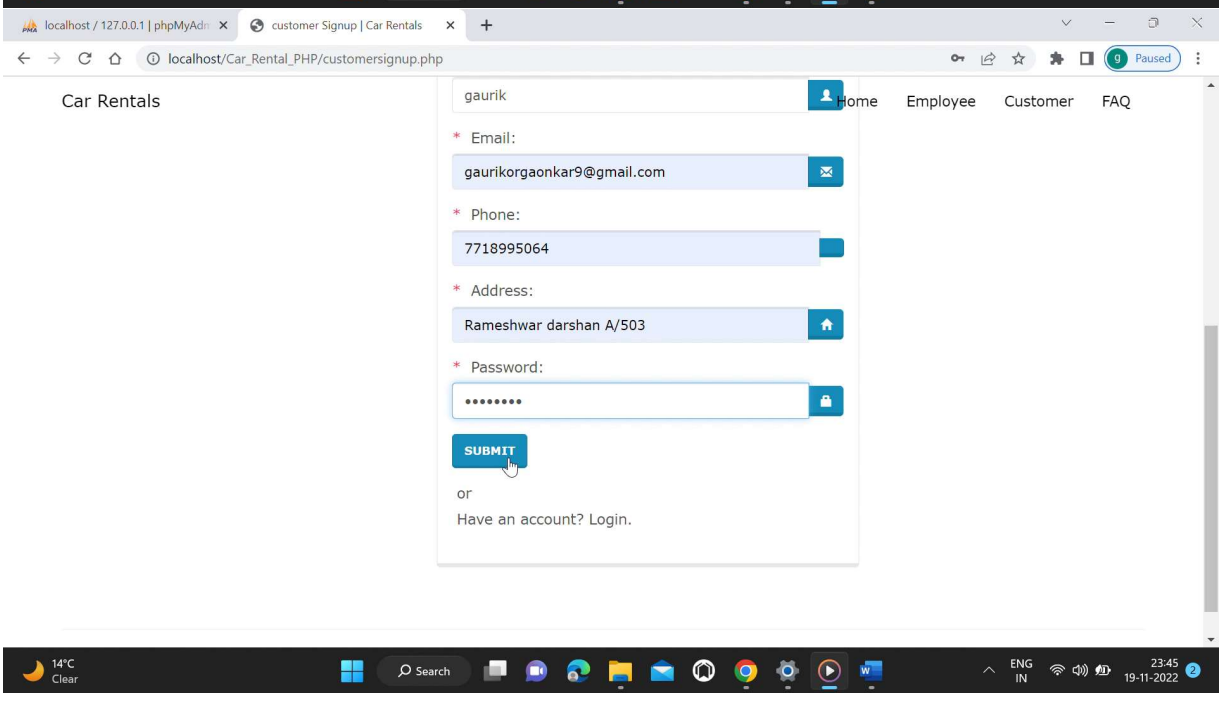

localhost / 127.0.0.1 | phpMyAdm
localhost/Car_Rental_PHP/enterd
localhost/Car_Rental_PHP/enterdriver.php
Paused
Car Rentals
Home
Welcome harry
Control Panel
Logout
Name
Gender
License No.
Contact
Address
Availability
Bruno Den
Male
27840218658
9547863157
1782 Vineyard Drive
yes
Nicolas
Male
44919316260
7541023695
Breezewood Court
yes
Steeve Rogers
Male
32346288078
9147523682
1506 Skinner Hollow Road
yes
Suresh
Male
87888
9899893877
Pune
yes
Will Williams
Male
03191563155
9147523684
4354 Hillcrest Drive
yes

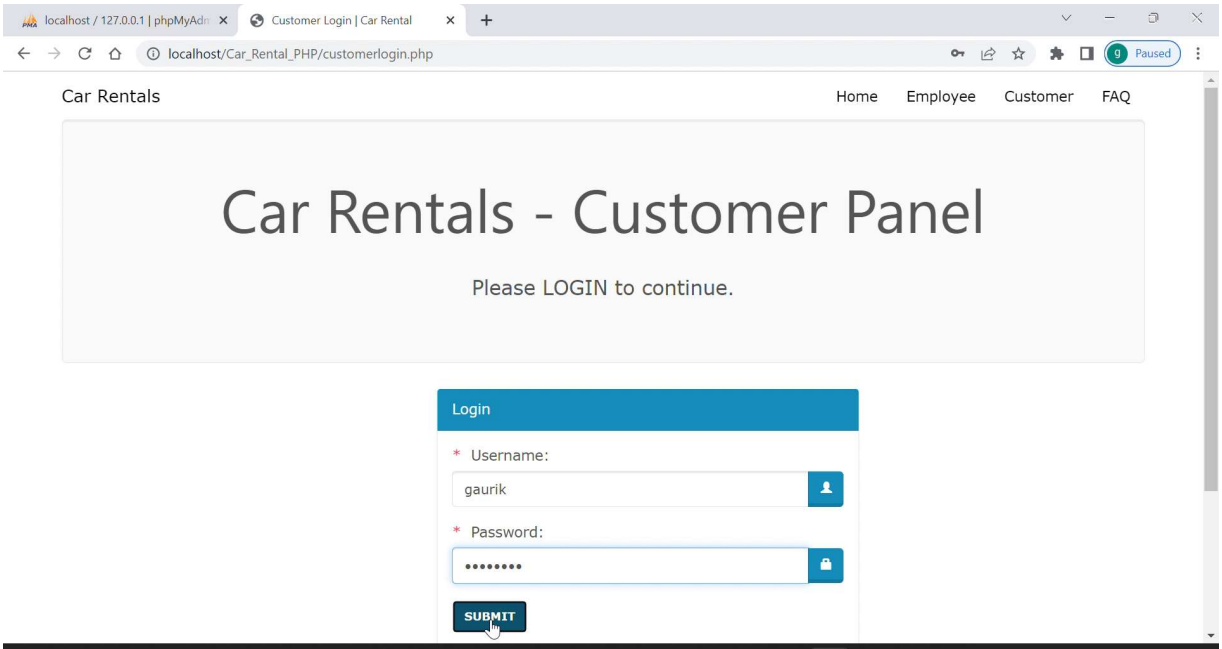
14°C
Clear
Search
ENG
IN
23:42
19-11-2022

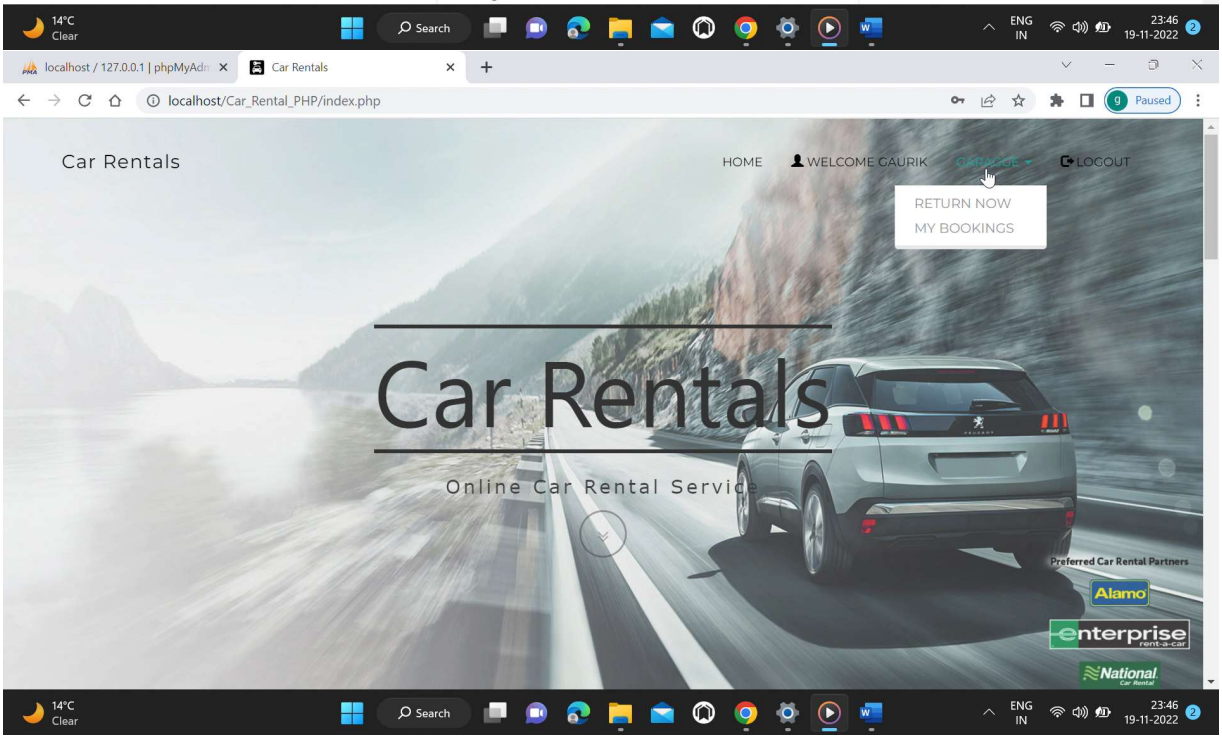

localhost / 127.0.0.1 | phpMyAdm
localhost/Car_Rental_PHP/clientv
localhost/Car_Rental_PHP/clientview.php
Paused
Car Rentals
Home
Welcome harry
Control Panel
Logout
Your Bookings
Hope you enjoyed our service
Car
Customer Name
Rent Start Date
Rent End Date
Distance
Total Amount
BMW 6-Series
Antonio M
2018-07-19
2018-07-22
421
Rs. 5473
Mahindra XUV 500
Christine
2018-07-23
2018-07-23
200
Rs. 2600
Land Rover Range Rover Sport
Christine
2018-07-23
2018-08-08
Rs. 38400
Audi A4
Ethan Hawk
2018-07-28
2018-07-29
69
Rs. 690
Toyota Fortuner
Ethan Hawk
2018-07-23
2018-07-26
Rs. 9600
Audi A4
James Washington
2018-07-24
2018-07-25
500
Rs. 5000
BMW 6-Series
Lucas Rhoades
2018-07-23
2018-07-24
Rs. 2600
14°C
Clear
Search
ENG
IN
23:42
19-11-2022

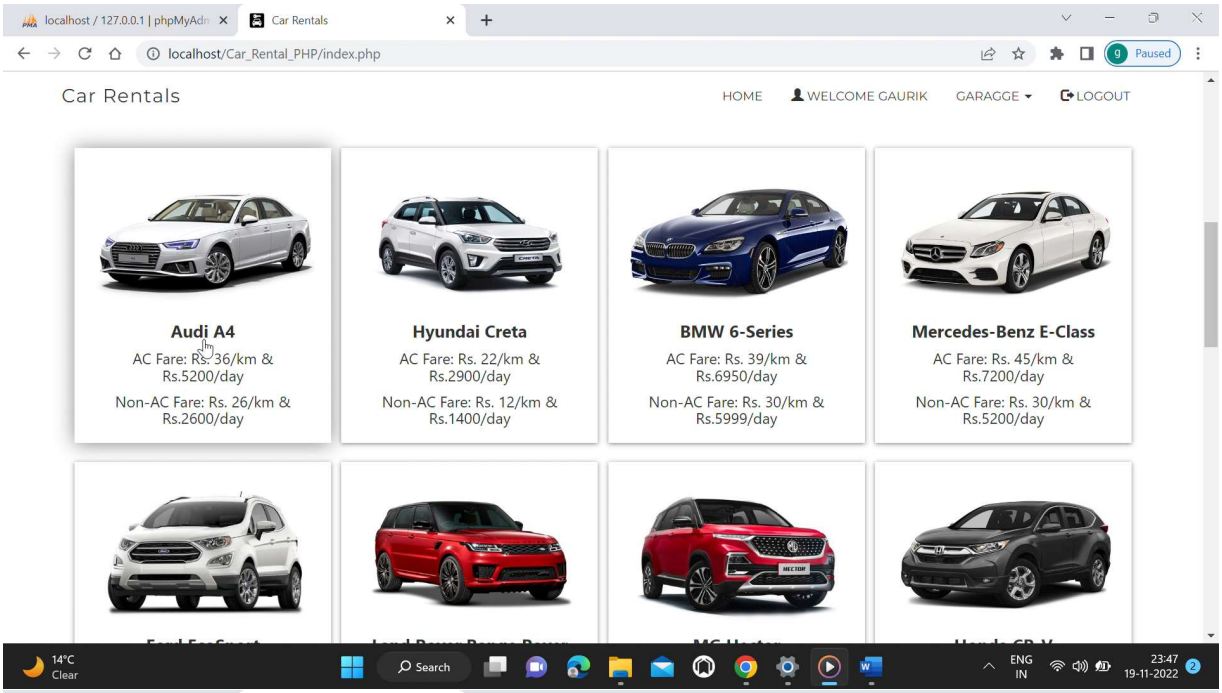

localhost / 127.0.0.1 | phpMyAdm
Customer Login | Car Rental
localhost/Car_Rental_PHP/customerlogin.php
Paused
Car Rentals
Home
Employee
Customer
FAQ
Car Rentals - Customer Panel
Please LOGIN to continue.
Login
* Username:
Username
* Password:
Password
SUBMIT
14°C
Clear
Search
ENG
IN
23:43
19-11-2022

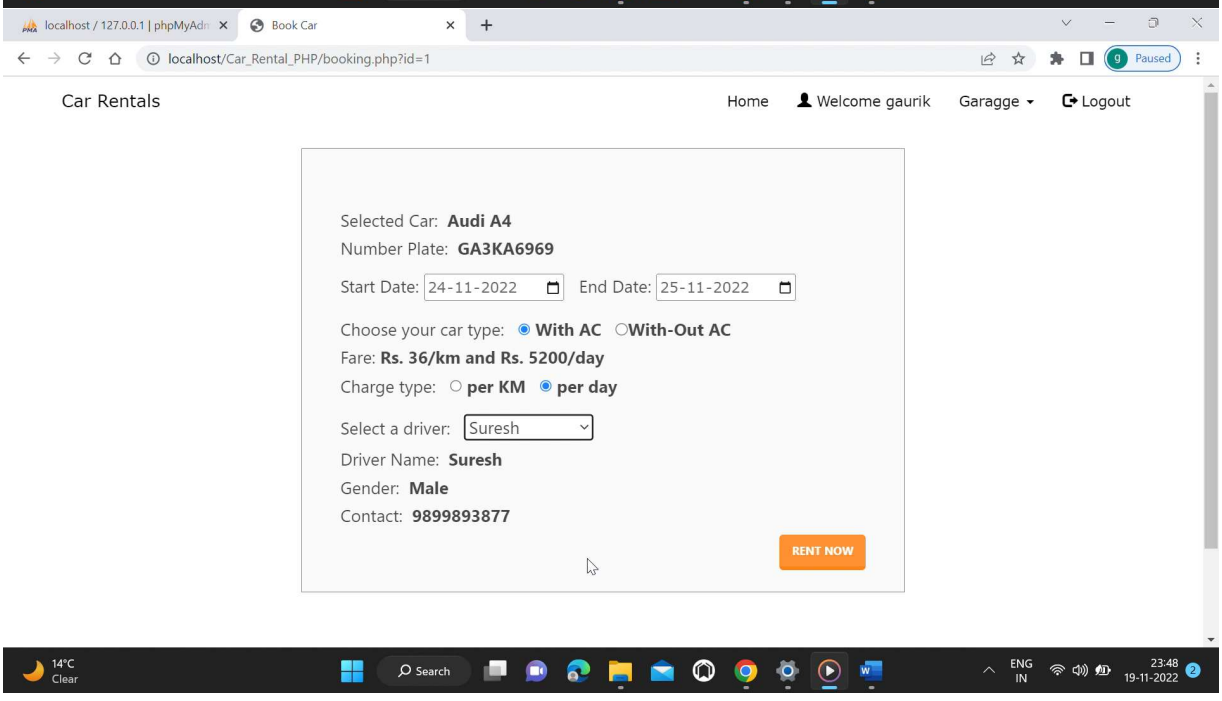

localhost / 127.0.0.1 | phpMyAdm
localhost/Car_Rental_PHP/custom
localhost/Car_Rental_PHP/customersignup.php
Paused
Car Rentals
Home
Employee
Customer
FAQ
Car Rentals - Registration
Get started by creating customer account
Create Account
* Full Name:
Your Full Name
* Username:
Your Username
* Email:
Email
14°C
Clear
Search
ENG
IN
23:44
19-11-2022

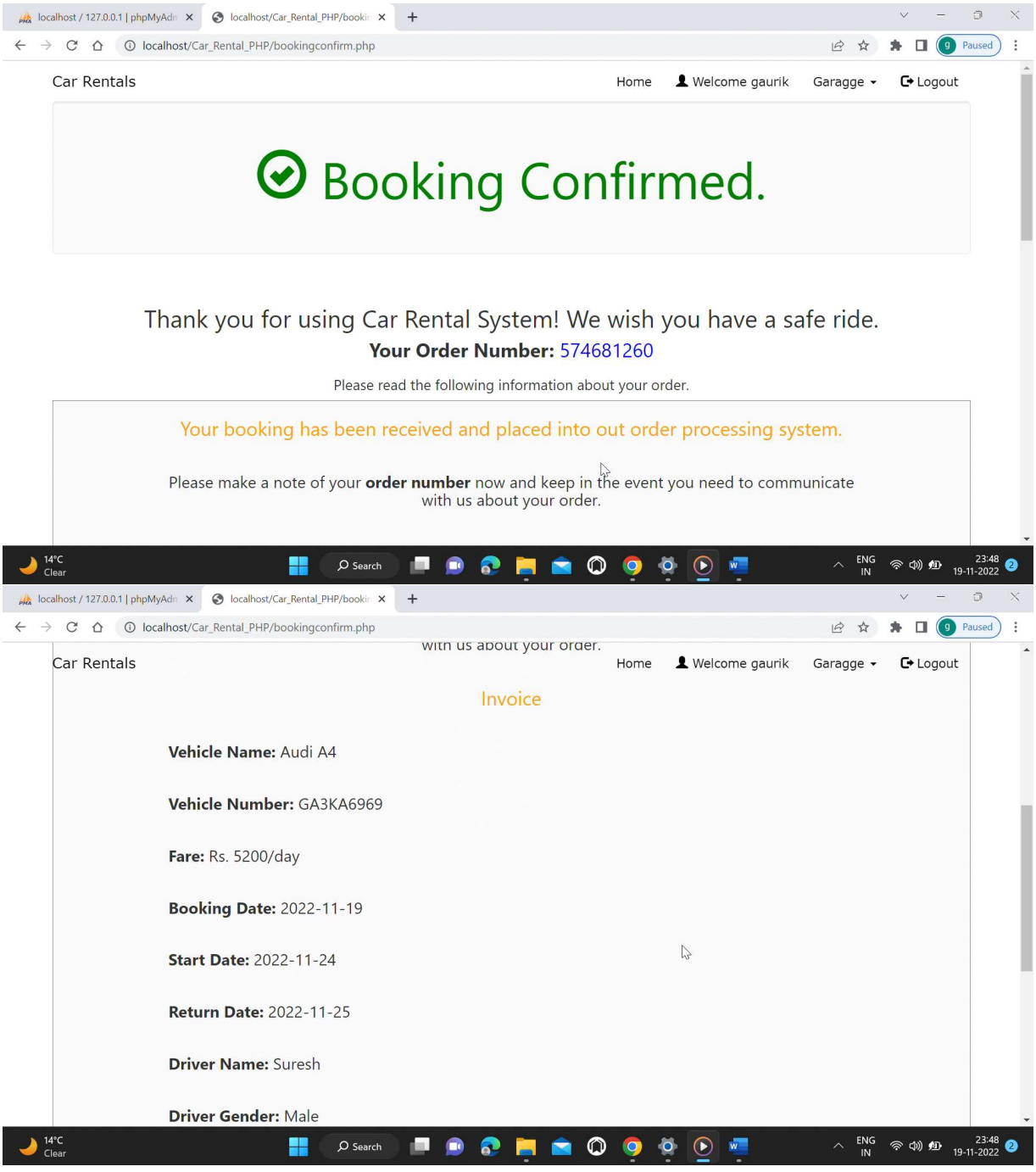

localhost / 127.0.0.1 | phpMyAdm
customer Signup | Car Rentals
localhost/Car_Rental_PHP/customersignup.php
Paused
Car Rentals
Home
Employee
Customer
FAQ
gaurik
* Email:
gaurikorgaonkar9@gmail.com
* Phone:
7718995064
* Address:
Rameshwar darshan A/503
* Password:
••••••••
SUBMIT
or
Have an account? Login.
14°C
Clear
Search
ENG
IN
23:45
19-11-2022

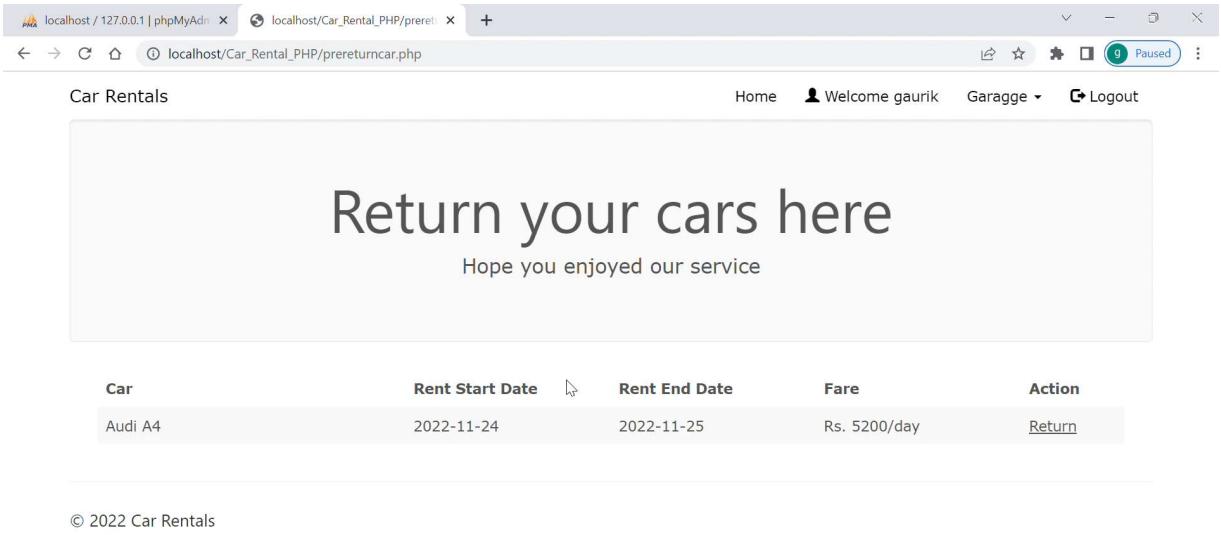

localhost / 127.0.0.1 | phpMyAdn
Customer Login | Car Rental
localhost/Car_Rental_PHP/customerlogin.php
Paused
Car Rentals
Home
Employee
Customer
FAQ
Car Rentals - Customer Panel
Please LOGIN to continue.
Login
* Username:
gaurik
* Password:
SUBMIT

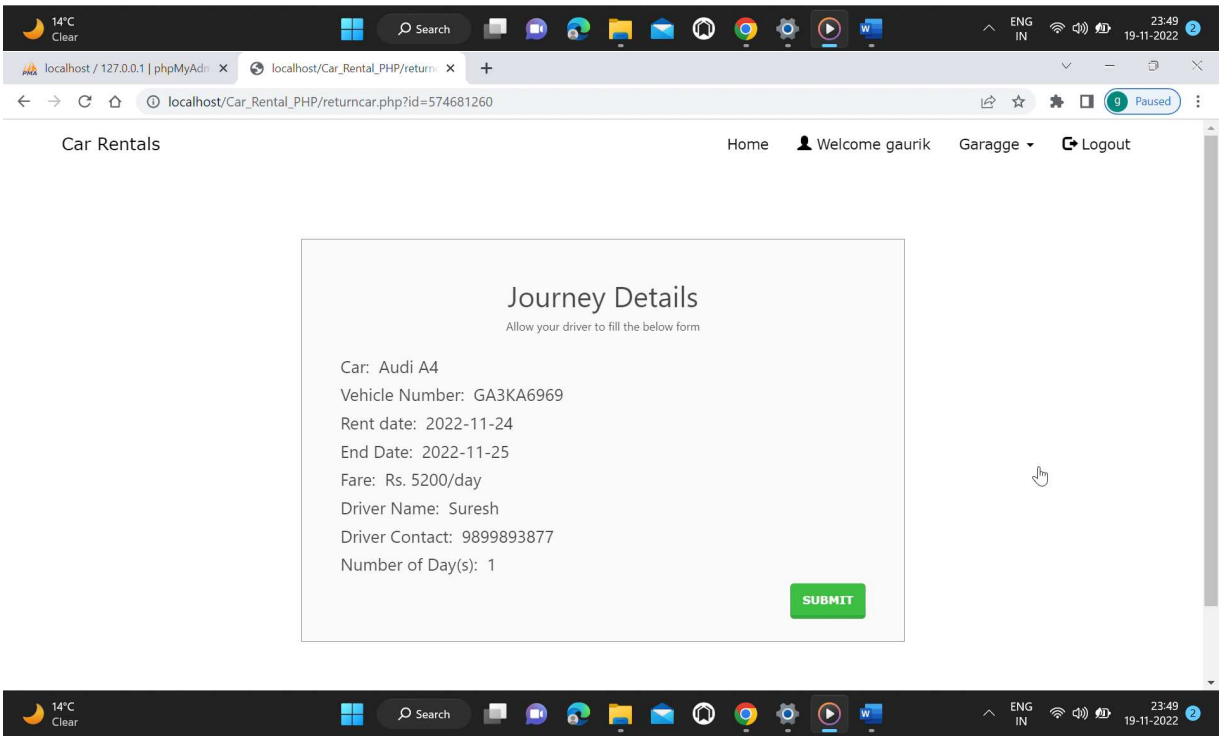

localhost / 127.0.0.1 | phpMyAdn
Car Rentals
localhost/Car_Rental_PHP/index.php
Paused
Car Rentals
HOME
WELCOME GAURIK
GARAGE
LOGOUT
RETURN NOW
MY BOOKINGS
Car Rentals
Online Car Rental Service
Preferred Car Rental Partners
Alamo
enterprise
National

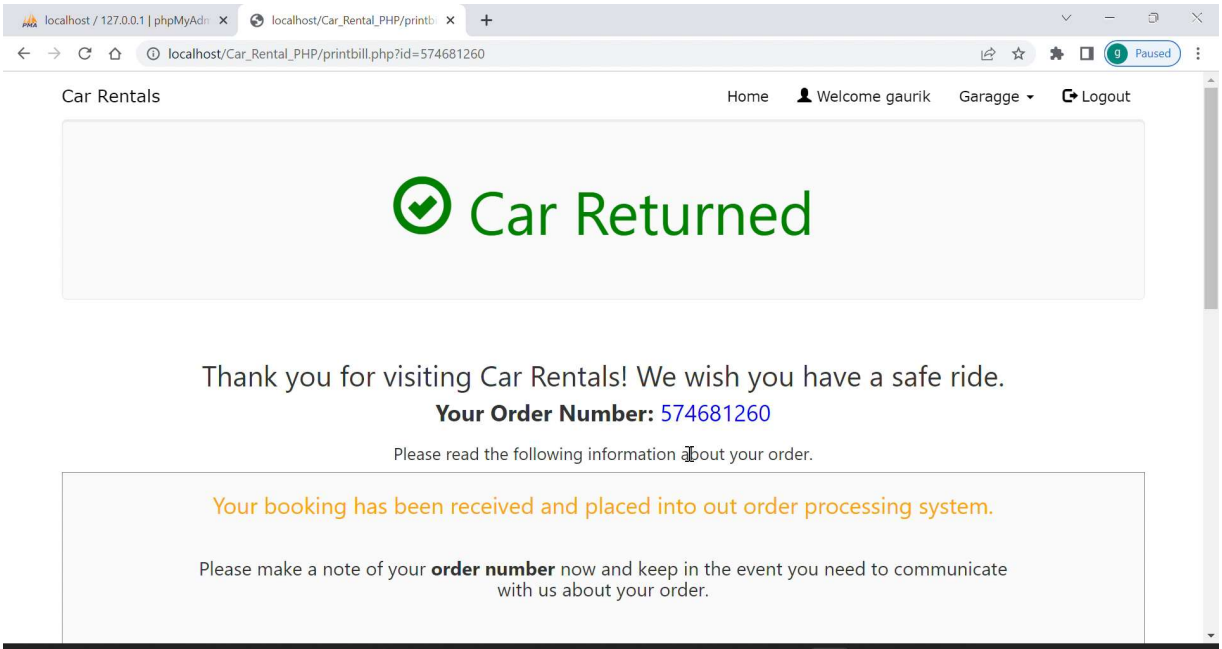

localhost / 127.0.0.1 | phpMyAdn
Car Rentals
localhost/Car_Rental_PHP/index.php
Paused
Car Rentals
HOME
WELCOME GAURIK
GARAGGE
LOGOUT
Audi A4
AC Fare: Rs. 36/km & Rs.5200/day
Non-AC Fare: Rs. 26/km & Rs.2600/day
Hyundai Creta
AC Fare: Rs. 22/km & Rs.2900/day
Non-AC Fare: Rs. 12/km & Rs.1400/day
BMW 6-Series
AC Fare: Rs. 39/km & Rs.6950/day
Non-AC Fare: Rs. 30/km & Rs.5999/day
Mercedes-Benz E-Class
AC Fare: Rs. 45/km & Rs.7200/day
Non-AC Fare: Rs. 30/km & Rs.5200/day
14°C
Clear
Search
ENG
IN
23:47
19-11-2022

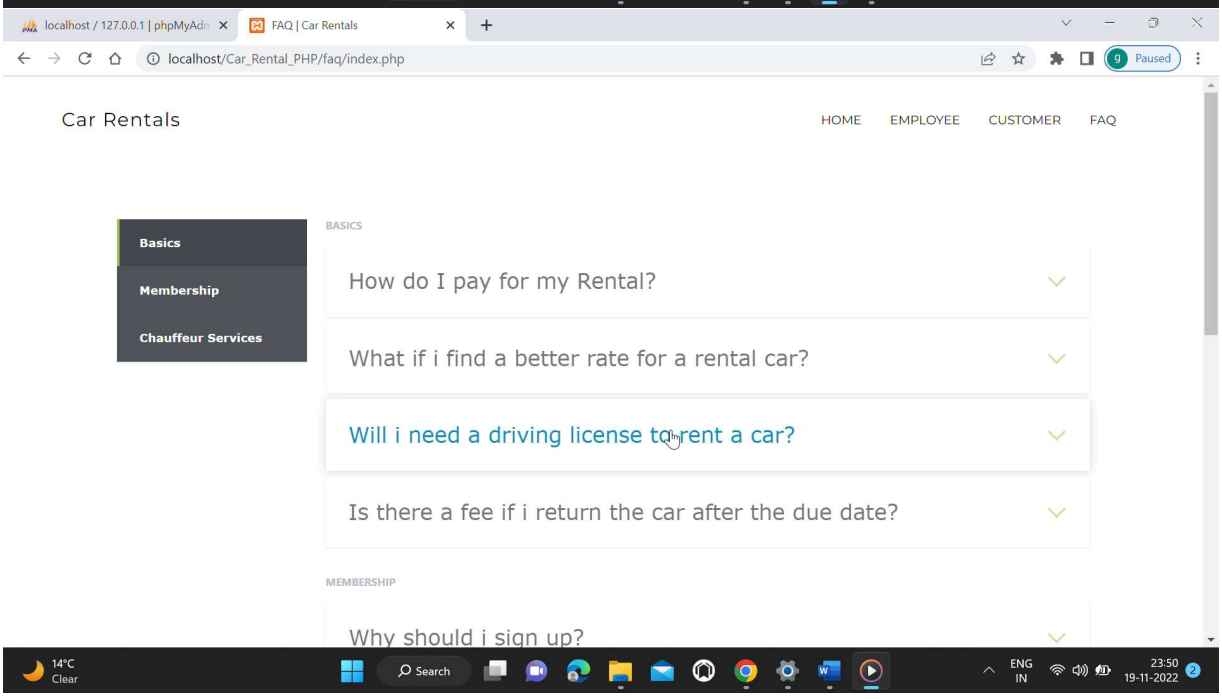

localhost / 127.0.0.1 | phpMyAdn
Book Car
localhost/Car_Rental_PHP/booking.php?id=1
Paused
Car Rentals
Home
Welcome gaurik
Garagge
Logout
Selected Car: Audi A4
Number Plate: GA3KA6969
Start Date: 24-11-2022
End Date: 25-11-2022
Choose your car type: With AC With-Out AC
Fare: Rs. 36/km and Rs. 5200/day
Charge type: per KM per day
Select a driver: Suresh
Driver Name: Suresh
Gender: Male
Contact: 9899893877
RENT NOW
14°C
Clear
Search
ENG
IN
23:48
19-11-2022


localhost / 127.0.0.1 | phpMyAdm
localhost/Car_Rental_PHP/bookin
localhost/Car_Rental_PHP/bookingconfirm.php
Paused
Car Rentals
Home
Welcome gaurik
Garagge
Logout
Booking Confirmed.
Thank you for using Car Rental System! We wish you have a safe ride.
Your Order Number: 574681260
Please read the following information about your order.
Your booking has been received and placed into out order processing system.
Please make a note of your order number now and keep in the event you need to communicate with us about your order.
14°C
Clear
Search
ENG
IN
23:48
19-11-2022
localhost / 127.0.0.1 | phpMyAdm
localhost/Car_Rental_PHP/bookin
localhost/Car_Rental_PHP/bookingconfirm.php
Paused
with us about your order.
Car Rentals
Home
Welcome gaurik
Garagge
Logout
Invoice
Vehicle Name: Audi A4
Vehicle Number: GA3KA6969
Fare: Rs. 5200/day
Booking Date: 2022-11-19
Start Date: 2022-11-24
Return Date: 2022-11-25
Driver Name: Suresh
Driver Gender: Male
14°C
Clear
Search
ENG
IN
23:48
19-11-2022


localhost / 127.0.0.1 | phpMyAdm
localhost/Car_Rental_PHP/prere
localhost/Car_Rental_PHP/prereturncar.php
Paused
Car Rentals
Home
Welcome gaurik
Garagge
Logout
Return your cars here
Hope you enjoyed our service
Car
Rent Start Date
Rent End Date
Fare
Action
Audi A4
2022-11-24
2022-11-25
Rs. 5200/day
Return
© 2022 Car Rentals


14°C
Clear
Search
ENG
IN
23:49
19-11-2022
localhost / 127.0.0.1 | phpMyAdm
localhost/Car_Rental_PHP/return
localhost/Car_Rental_PHP/returncar.php?id=574681260
Paused
Car Rentals
Home
Welcome gaurik
Garagge
Logout
Journey Details
Allow your driver to fill the below form
Car: Audi A4
Vehicle Number: GA3KA6969
Rent date: 2022-11-24
End Date: 2022-11-25
Fare: Rs. 5200/day
Driver Name: Suresh
Driver Contact: 9899893877
Number of Day(s): 1
SUBMIT


localhost / 127.0.0.1 | phpMyAdm
localhost/Car_Rental_PHP/printbi
localhost/Car_Rental_PHP/printbill.php?id=574681260
Paused
Car Rentals
Home
Welcome gaurik
Garagge
Logout
Car Returned
Thank you for visiting Car Rentals! We wish you have a safe ride.
Your Order Number: 574681260
Please read the following information about your order.
Your booking has been received and placed into out order processing system.
Please make a note of your order number now and keep in the event you need to communicate with us about your order.
14°C
Clear
Search
ENG
IN
23:49
19-11-2022


localhost / 127.0.0.1 | phpMyAdm
FAQ | Car Rentals
localhost/Car_Rental_PHP/faq/index.php
Paused
Car Rentals
HOME
EMPLOYEE
CUSTOMER
FAQ
Basics
Membership
Chauffeur Services
BASICS
How do I pay for my Rental?
What if i find a better rate for a rental car?
Will i need a driving license to rent a car?
Is there a fee if i return the car after the due date?
MEMBERSHIP
Why should i sign up?
14°C
Clear
Search
ENG
IN
23:50
19-11-2022

CHAPTER 7

SOURCE CODE

```
Database: `carrentalp`
-- Table structure for table `cars`
CREATE TABLE IF NOT EXISTS `cars` (
`car_id` int(20) NOT NULL,
  `car_name` varchar(50) NOT NULL,
  `car_nameplate` varchar(50) NOT NULL,
  `car_img` varchar(50) DEFAULT 'NA',
  `ac_price` float NOT NULL,
  `non_ac_price` float NOT NULL,
  `ac_price_per_day` float NOT NULL,
  `non_ac_price_per_day` float NOT NULL,
  `car_availability` varchar(10) NOT NULL)
 ENGINE=InnoDB AUTO_INCREMENT=15 DEFAULT CHARSET=utf8;
-- Dumping data for table `cars`
INSERT INTO `cars` (`car_id`, `car_name`, `car_nameplate`, `car_img`, `ac_price`, `non_ac_price`, `ac_price_per_day`, `non_ac_price_per_day`, `car_availability`) VALUES
(1, 'Audi A4', 'GA3KA6969', 'assets/img/cars/audi-a4.jpg', 36, 26, 5200, 2600, 'yes'),
(2, 'Hyundai Creta', 'BA2CH2020', 'assets/img/cars/creta.jpg', 22, 12, 2900, 1400, 'yes'),
(3, 'BMW 6-Series', 'BA10PA5555', 'assets/img/cars/bmw6.jpg', 39, 30, 6950, 5999, 'yes'),
(4, 'Mercedes-Benz E-Class', 'BA10CH6009', 'assets/img/cars/mcec.jpg', 45, 30, 7200, 5200, 'yes'),
(6, 'Ford EcoSport', 'GA4PA2587', 'assets/img/cars/ecosport.png', 21, 13, 3890, 2600, 'yes'),
(7, 'Honda Amaze', 'PJ16YX8820', 'assets/img/cars/amaze.png', 14, 12, 2800, 2400, 'no'),
(8, 'Land Rover Range Rover Sport', 'GA5KH9669', 'assets/img/cars/rangero.jpg', 36, 26, 6000, 4600, 'yes'),
(9, 'MG Hector', 'GA6PA6666', 'assets/img/cars/mghector.jpg', 20, 12, 2900, 1400, 'yes'),
(10, 'Honda CR-V', 'TN17MS1997', 'assets/img/cars/hondacr.jpg', 22, 15, 2850, 1400, 'yes'),
(11, 'Mahindra XUV 500', 'KA12EX1883', 'assets/img/cars/Mahindra XUV.jpg', 15, 13, 3000, 2600, 'yes'),
(12, 'Toyota Fortuner', 'GA08MX1997', 'assets/img/cars/Fortuner.png', 16, 14, 3200, 2800, 'yes'),
(13, 'Hyundai Veloster', 'BA20PA5685', 'assets/img/cars/hyundai0.png', 23, 15, 4500, 3500, 'yes'),
(14, 'Jaguar XF', 'GA8KH8866', 'assets/img/cars/jaguarxf.jpg', 39, 29, 6100, 4380, 'yes');
 --------------------------------------------------------
-- Table structure for table `clientcars`
CREATE TABLE IF NOT EXISTS `clientcars` (
  `car_id` int(20) NOT NULL,
```

```
  `client_username` varchar(50) NOT NULL)
 ENGINE=InnoDB DEFAULT CHARSET=utf8;
-- Dumping data for table `clientcars`
INSERT INTO `clientcars` (`car_id`, `client_username`) VALUES
(1, 'harry'),
(3, 'harry'),
(7, 'harry'),
(8, 'harry'),
(9, 'harry'),
(11, 'harry'),
(12, 'harry'),
(2, 'jenny'),
(4, 'jenny'),
(6, 'jenny'),
(10, 'jenny'),
(13, 'jenny'),
(14, 'jenny');
-- --------------------------------------------------------
-- Table structure for table `clients`
CREATE TABLE IF NOT EXISTS `clients` (
  `client_username` varchar(50) NOT NULL,
  `client_name` varchar(50) NOT NULL,
  `client_phone` varchar(15) NOT NULL,
  `client_email` varchar(25) NOT NULL,
  `client_address` varchar(50) CHARACTER SET utf8 COLLATE utf8_estonian_ci NOT NULL,
  `client_password` varchar(20) NOT NULL
) ENGINE=InnoDB DEFAULT CHARSET=utf8;
-- Dumping data for table `clients`
INSERT INTO `clients` (`client_username`, `client_name`, `client_phone`, `client_email`, `client_address`, `client_password`) VALUES
('harry', 'Harry Den', '9876543210', 'harryden@gmail.com', '2477  Harley Vincent Drive', 'password'),
('jenny', 'Jeniffer Washington', '7850000069', 'washjeni@gmail.com', '4139  Mesa Drive', 'jenny'),
('tom', 'Tommy Doee', '900696969', 'tom@gmail.com', '4645  Dawson Drive', 'password');
--------------------------------------------------------
-- Table structure for table `customers`
CREATE TABLE IF NOT EXISTS `customers` (
  `customer_username` varchar(50) NOT NULL,
```

```
  `customer_name` varchar(50) NOT NULL,
  `customer_phone` varchar(15) NOT NULL,
  `customer_email` varchar(25) NOT NULL,
  `customer_address` varchar(50) NOT NULL,
  `customer_password` varchar(20) NOT NULL
) ENGINE=InnoDB DEFAULT CHARSET=utf8;
-- Dumping data for table `customers`
INSERT INTO `customers` (`customer_username`, `customer_name`, `customer_phone`,
`customer_email`, `customer_address`, `customer_password`) VALUES
('antonio', 'Antonio M', '0785556580', 'antony@gmail.com', '2677  Burton Avenue', 'password'),
('christine', 'Christine', '8544444444', 'chr@gmail.com', '3701  Fairway Drive', 'password'),
('ethan', 'Ethan Hawk', '69741111110', 'thisisethan@gmail.com', '4554  Rowes Lane', 'password'),
('james', 'James Washington', '0258786969', 'james@gmail.com', '2316  Mayo Street',
'password'),
('lucas', 'Lucas Rhoades', '7003658500', 'lucas@gmail.com', '2737  Fowler Avenue', 'password');
--------------------------------------------------------
-- Table structure for table `driver`
CREATE TABLE IF NOT EXISTS `driver` (
`driver_id` int(20) NOT NULL,
  `driver_name` varchar(50) NOT NULL,
  `dl_number` varchar(50) NOT NULL,
  `driver_phone` varchar(15) NOT NULL,
  `driver_address` varchar(50) NOT NULL,
  `driver_gender` varchar(10) NOT NULL,
  `client_username` varchar(50) NOT NULL,
  `driver_availability` varchar(10) NOT NULL)
 ENGINE=InnoDB AUTO_INCREMENT=9 DEFAULT CHARSET=utf8;
-- Dumping data for table `driver`
INSERT INTO `driver` (`driver_id`, `driver_name`, `dl_number`, `driver_phone`,
`driver_address`, `driver_gender`, `client_username`, `driver_availability`) VALUES
(1, 'Bruno Den', '27840218658 ', '9547863157', '1782  Vineyard Drive', 'Male', 'harry', 'yes'),
(2, 'Will Williams', '03191563155 ', '9147523684', '4354  Hillcrest Drive', 'Male', 'harry', 'yes'),
(3, 'Steeve Rogers', '32346288078 ', '9147523682', '1506  Skinner Hollow Road', 'Male', 'harry',
'yes'),
(4, 'Ivy', '04316015965 ', '9187563240', '4680  Wayside Lane', 'Female', 'jenny', 'no'),
(5, 'Pamela C Benson', '68799466631 ', '7584960123', 'Urkey Pen Road', 'Female', 'jenny', 'yes'),
(6, 'Billy Williams', '36740186040 ', '8421025476', '2898  Oxford Court', 'Male', 'tom', 'yes'),
(7, 'Nicolas', '44919316260 ', '7541023695', 'Breezewood Court', 'Male', 'harry', 'yes'),
(8, 'Stephen Strange', '94592817723', '5215557850', 'Fairview Street12', 'Male', 'jenny', 'yes');
--------------------------------------------------------
```

```
-- Table structure for table `feedback`
CREATE TABLE IF NOT EXISTS `feedback` (
  `name` varchar(20) NOT NULL,
  `e_mail` varchar(30) NOT NULL,
  `message` varchar(150) NOT NULL
) ENGINE=InnoDB DEFAULT CHARSET=utf8;
-- Dumping data for table `feedback`
INSERT INTO `feedback` (`name`, `e_mail`, `message`) VALUES
('Nikhil', 'nikhil@gmail.com', 'Hope this works.');
--------------------------------------------------------
-- Table structure for table `rentedcars`
CREATE TABLE IF NOT EXISTS `rentedcars` (
`id` int(100) NOT NULL,
  `customer_username` varchar(50) NOT NULL,
  `car_id` int(20) NOT NULL,
  `driver_id` int(20) NOT NULL,
  `booking_date` date NOT NULL,
  `rent_start_date` date NOT NULL,
  `rent_end_date` date NOT NULL,
  `car_return_date` date DEFAULT NULL,
  `fare` double NOT NULL,
  `charge_type` varchar(25) NOT NULL DEFAULT 'days',
  `distance` double DEFAULT NULL,
  `no_of_days` int(50) DEFAULT NULL,
  `total_amount` double DEFAULT NULL,
  `return_status` varchar(10) NOT NULL
) ENGINE=InnoDB AUTO_INCREMENT=574681260 DEFAULT CHARSET=utf8;
-- Dumping data for table `rentedcars`
INSERT INTO `rentedcars` (`id`, `customer_username`, `car_id`, `driver_id`, `booking_date`, `rent_start_date`, `rent_end_date`, `car_return_date`, `fare`, `charge_type`, `distance`, `no_of_days`, `total_amount`, `return_status`) VALUES
(574681245, 'ethan', 4, 2, '2018-07-18', '2018-07-01', '2018-07-02', '2018-07-18', 11, 'km', 244, 1, 5884, 'R'),
(574681246, 'james', 6, 6, '2018-07-18', '2018-06-01', '2018-06-28', '2018-07-18', 15, 'km', 69, 27, 5035, 'R'),
(574681247, 'antonio', 3, 1, '2018-07-18', '2018-07-19', '2018-07-22', '2018-07-20', 13, 'km', 421, 3, 5473, 'R'),
(574681248, 'ethan', 1, 2, '2018-07-20', '2018-07-28', '2018-07-29', '2018-07-20', 10, 'km', 69, 1, 690, 'R'),
```

```
(574681249, 'james', 1, 2, '2018-07-23', '2018-07-24', '2018-07-25', '2018-07-23', 10, 'km', 500, 1, 5000, 'R'),
(574681250, 'lucas', 3, 2, '2018-07-23', '2018-07-23', '2018-07-24', '2018-07-23', 2600, 'days', NULL, 1, 2600, 'R'),
(574681251, 'james', 10, 1, '2018-07-23', '2018-07-25', '2018-07-30', '2018-07-23', 10, 'km', 60, 2, 600, 'R'),
(574681252, 'christine', 11, 2, '2018-07-23', '2018-07-23', '2018-07-23', '2018-07-23', 13, 'km', 200, 0, 2600, 'R'),
(574681253, 'christine', 6, 7, '2018-07-23', '2018-07-23', '2018-08-03', '2018-07-23', 2600, 'days', NULL, 11, 28600, 'R'),
(574681254, 'ethan', 12, 5, '2018-07-23', '2018-07-23', '2018-07-26', '2018-07-23', 3200, 'days', NULL, 3, 9600, 'R'),
(574681255, 'christine', 8, 5, '2018-07-23', '2018-07-23', '2018-08-08', '2018-07-23', 2400, 'days', NULL, 16, 38400, 'R'),
(574681257, 'james', 7, 4, '2018-08-11', '2018-08-13', '2018-08-17', NULL, 14, 'km', NULL, NULL, NULL, 'NR'),
(574681258, 'lucas', 3, 1, '2021-03-24', '2021-03-24', '2021-03-25', '2021-03-24', 2600, 'days', NULL, 1, 2600, 'R'),
(574681259, 'lucas', 14, 8, '2021-03-24', '2021-03-24', '2021-03-26', '2021-03-24', 6100, 'days', NULL, 2, 12200, 'R');
-- Indexes for dumped tables
-- Indexes for table `cars`
ALTER TABLE `cars`
 ADD PRIMARY KEY (`car_id`), ADD UNIQUE KEY `car_nameplate` (`car_nameplate`);
-- Indexes for table `clientcars`
ALTER TABLE `clientcars`
 ADD PRIMARY KEY (`car_id`), ADD KEY `client_username` (`client_username`);
-- Indexes for table `clients`
--
ALTER TABLE `clients`
 ADD PRIMARY KEY (`client_username`);
-- Indexes for table `customers`
ALTER TABLE `customers`
 ADD PRIMARY KEY (`customer_username`);
-- Indexes for table `driver`
ALTER TABLE `driver`
 ADD PRIMARY KEY (`driver_id`), ADD UNIQUE KEY `dl_number` (`dl_number`), ADD KEY `client_username` (`client_username`);
-- Indexes for table `rentedcars`
ALTER TABLE `rentedcars`
```

```
 ADD PRIMARY KEY (`id`), ADD KEY `customer_username` (`customer_username`), ADD KEY `car_id` (`car_id`), ADD KEY `driver_id` (`driver_id`);
-- AUTO_INCREMENT for dumped tables
-- AUTO_INCREMENT for table `cars`
ALTER TABLE `cars`
MODIFY `car_id` int(20) NOT NULL AUTO_INCREMENT,AUTO_INCREMENT=15;
-- AUTO_INCREMENT for table `driver`
ALTER TABLE `driver`
MODIFY `driver_id` int(20) NOT NULL AUTO_INCREMENT,AUTO_INCREMENT=9;
-- AUTO_INCREMENT for table `rentedcars`
ALTER TABLE `rentedcars`
MODIFY `id` int(100) NOT NULL AUTO_INCREMENT,AUTO_INCREMENT=574681260;
-- Constraints for dumped tables
-- Constraints for table `clientcars`
ALTER TABLE `clientcars`
ADD CONSTRAINT `clientcars_ibfk_1` FOREIGN KEY (`client_username`) REFERENCES `clients` (`client_username`),
ADD CONSTRAINT `clientcars_ibfk_2` FOREIGN KEY (`car_id`) REFERENCES `cars` (`car_id`);
-- Constraints for table `driver`
ALTER TABLE `driver`
ADD CONSTRAINT `driver_ibfk_1` FOREIGN KEY (`client_username`) REFERENCES `clients` (`client_username`);
-- Constraints for table `rentedcars`
ALTER TABLE `rentedcars`
ADD CONSTRAINT `rentedcars_ibfk_1` FOREIGN KEY (`customer_username`) REFERENCES `customers` (`customer_username`),
ADD CONSTRAINT `rentedcars_ibfk_2` FOREIGN KEY (`car_id`) REFERENCES `cars` (`car_id`),
ADD CONSTRAINT `rentedcars_ibfk_3` FOREIGN KEY (`driver_id`) REFERENCES `driver` (`driver_id`);
```

CHAPTER 8
SOFTWARE TESTING

Testing is the process of evaluating a system or its components with the motive to find whether it meets the required specification or not. It is done for finding the errors, mistakes, identifying any gaps or missing requirements with respect to actual requirements. To get a good quality software we perform testing.

8.1 Test Cases

Admin test cases

Test Case Id	Purpose	Input	Output	Result
Tc-01	To login with verified/valid credentials for admin.	Email:admin@gmail.com Password:admin	Show the admin page.	Pass
Tc-02	To login with Invalid mail id for admin.	Email:admi@gmail.com Password:Admin	Invalid mail address .	Pass
Tc-03	To view the listed vehichles in admin page.	Click on Listed vehichle in dashboard.	Show the listed vehichles .	Pass
Tc-04	To view the total bookings in admin page	Click on Total booking in dashboard .	Show the Total bookings.	Pass
Tc-05	To confirm booking	First click on manage booking and then click on confirm for confirming the booking.	Booking Confirmed.	Pass
Tc-06	To decline booking	Click on decline instead of confirm for decline the booking.	Booking declined	Pass

User Test case

Test Case Id	Purpose	Input	Output	Result
Tc-07	To give valid details for Registrations	Name:- abin jain Email:- abin@gmail.com Phone number:- 1234567890 Password:- abin123 Confirm Password:- abin123	Registration Successful	Pass
Tc-08	To Login with valid credentials	Email ID:- abin@gmail.com Password:- abin123	abin123 Login Successful & show welcome message in home page	Pass
Tc-09	To login with invalid mail id	Email ID:- ab@gmail.com Password:- abin123	abin123 Invalid mail id	Pass
Tc-10	To view car details	Click on car details in car listing page	Show the car details & booking button	Pass
Tc-11	To select Book now Click on book now button Show the booking page Pass	Click on book now butto	Show the booking page	Pass
Tc-12	To logout	Click on logout in user settings	Go to the login page	Pass

CHAPTER 9

FUTURE ENHANCEMENT

- In the future the application can be occupied with the payment option within the application and the user may get a billing receipt.
- The application can contain the SMS alert to notify the user. The user can be notified with the messages.
- Vehicle tracking system can be implemented to trace the location of given cars.
- Online Car Rental can provide on road assistance for the users.
- The application can assist with customer helpline for any queries.
- The application can provide Online cancellation.
- Multi-language support can set to the application for better experience.

CHAPTER 10

CONCLUSION

The world has become a place where there is a lot of technological development; where every single thing done physically has been transformed into computerized form. Nowadays, people's activities have been transformed into work done by computerized systems. One of which is the main target of this project which is about Car Rental System. The system of renting cars exist back in the previous years, were people rent cars for their personal reasons. Car renting is essential to many peoples' plan to travel or move from one place to another for business purposes, tour, and visit or holidays. Some car rental companies still use desktop application for their car rental services and thus making it to be limited to so many important feature that are not available unlike in the web based application where there are so many feature available.

In our application we have simplified the booking procedures and the customer can easily perform the booking and there is a collection of cars where the customer can select according to their wish. the customer can book their vehicles according to their particular date. In admin side the booking information will be saved to the database, the admin can add new vehicles to the database and manage the booking .

REFERENCES

[1] Thakur, A., & Dhiman, K. (2021). Chat Room Using HTML, PHP, CSS, JS, AJAX. International Research https://doi.org/https://doi.org/10.6084/m9.figshare.14869167

[2] Thakur, Amey HTML, PHP, CSS, JS, AJAX." ArXiv abs/2106.14704 (2021):.

[3] Waspodo, Bayu and Syamsuri Nur. "Development of car rental management information system." In Proceeding International Conference on Information Systems For Business Competitiveness (ICISBC), pp. 101-105. 2011.

[4] Osman, Mohd Nizam "Online Car Rental System Using Web-Based and SMS Technology." Computing Research & Innovation (CRINN) 2 (2017): 277.

[5] Fink, Andreas, and Torsten Reiners. "Modeling and solving the short-term car rental logistics problem." Transportation Research Part E: Logistics and Transportation Review 42, no. 4 (2006): 272-292.

[6] Soares, Hécio A., and Raimundo S. Moura. "A methodology to guide writing Software Requirements Specification document." In 2015 Latin American Computing Conference (CLEI), pp. 1-11. IEEE, 2015.