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DEPARTMENT OF COMPUTER SCIENCE & ENGINEERING

DATABASE MANAGEMENT SYSTEM LAB WITH MINI PROJECT 18CSL58

"Car Rental Management"

Submitted By

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for the academic year 2022-23

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Department of Computer Science & Engineering

Certificate

This is to certify that the implementation of **DBMS MINI PROJECT** entitled "Car Rental Management" has been successfully completed by

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of V semester B.E. for the partial fulfillment of the requirements for the Bachelor's degree in Computer Science & Engineering of the Visvesvaraya Technological University during the academic year 2022-2023.

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CHAPTER 1 INTRODUCTION

1.1 INTRODUCTION

A car rental website is an online platform where customers can browse and rent vehicles for short-term or long-term use. Users can search for available vehicles based on their location, make and model, and rental dates. They can also view images, read reviews, and compare prices. Once a vehicle is selected, the user can complete the rental process by making a reservation and providing payment information. The website may also include features such as online check-in and check-out, vehicle tracking, and customer support.

1.2 PROBLEM STATEMENT

A car rental company allows customers to rent cars. This system should have an easy-to-use interface for customers to view available cars and make reservations. The system should also have efficient back-end management tools for the car rental company to track inventory and customer information.

CHAPTER 2 BACK END DESIGN

2.1 CONCEPTUAL DATABASE DIAGRAM (ER DIAGRAM)

An Entity-Relationship (ER) diagram is a graphical representation of entities and their relationships to each other. Entities are represented by rectangles, and relationships between entities are represented by lines connecting the rectangles. ER diagrams can be used to design and model a database. An ER diagram can help to visualize and understand the data requirements of a system, and can be used to communicate with stakeholders about the design of the system.

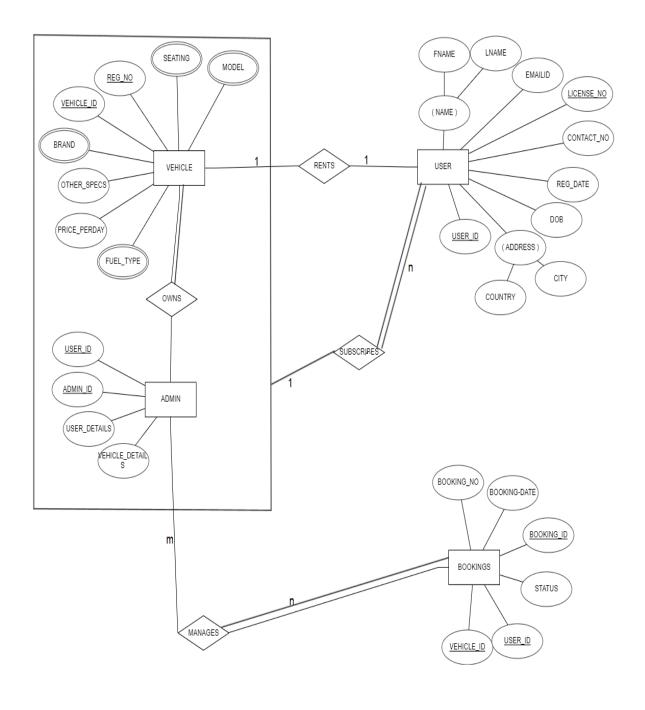


Fig 2.1 ER diagram

2.2 ER Relation Mapping

ER mapping, also known as ER modeling or ERD mapping, is the process of creating an Entity-Relationship (ER) diagram to represent the structure of a database. The ER diagram is used to model the data requirements of a system, and is created by analyzing the data entities and their relationships to each other. The process of ER mapping involves identifying the entities and their attributes, and then determining the relationships between those entities. This information is then used to create a visual representation of the database structure, which can be used to understand and communicate the design of the system. ER mapping is a crucial step in the database design process, as it helps to ensure that the database is well-structured and efficient.

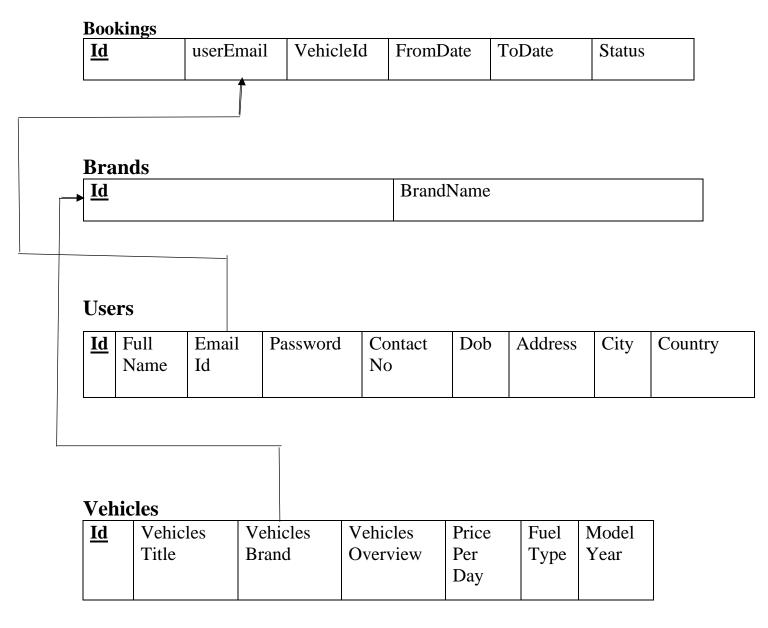


Fig 2.2 ER Relational Mapping

2.3 NORMALIZATION

ADMIN

<u>Id</u>	Username	Password

Functional Dependencies

Id → Username, Password Candidate Key = Id

Justification:

The above-mentioned dependencies one can observe that the ADMIN relation is in 1NF as all the attributes are atomic in nature.

The relation is in 2NF as all the non-Prime attributes are fully functionally dependent on the Prime attribute and there is no partial dependency.

The relation is also in 3NF as there is no Transitive dependency between the Non-Prime attributes and the Prime attribute.

TABLE Booking

<u>Id</u>	userEmail	VehicleId	FromDate	ToDate	Status

Functional Dependencies

Id → userEmail, VehicleId, FromDate, ToDate, Status VehicleId → id Candidate Key = id

Justification

The above-mentioned dependencies one can observe that the TABLE BOOKING relation is in 1NF as all the attributes are atomic in nature.

The relation is in 2NF as all the non-Prime attributes are fully functionally dependent on the Prime attribute and there is no partial dependency.

The relation is also in 3NF as there is no Transitive dependency between the Non-Prime attributes and the Prime attribute.

TABLE BRANDS

<u>Id</u>	BrandName

Functional Dependencies

Id → BrandName Candidate Key = id

Justification

The above-mentioned dependencies one can observe that the TABLE BRANDS relation is in 1NF as all the attributes are atomic in nature.

The relation is in 2NF as all the non-Prime attributes are fully functionally dependent on the Prime attribute and there is no partial dependency.

The relation is also in 3NF as there is no Transitive dependency between the Non-Prime attributes and the Prime attribute.

TABLE USERS

<u>Id</u>	Full	Email	Password	Contact	Dob	Address	City	Country
	Name	Id		No				

Functional Dependencies

Id → FullName, EmailId, Password, ContactNo, Dob, Address, City, Country Candidate Key = id

Justification

The above-mentioned dependencies one can observe that the TABLE USERS relation is in 1NF as all the attributes are atomic in nature.

The relation is in 2NF as all the non-Prime attributes are fully functionally dependent on the Prime attribute and there is no partial dependency.

The relation is also in 3NF as there is no Transitive dependency between the Non-Prime attributes and the Prime attribute.

TABLE VEHICLES

<u>Id</u>	Vehicles	Vehicles	Vehicles	Price	Fuel	Model
	Title	Brand	Overview	Per	Type	Year
				Day		

Functional Dependencies

Id → VehiclesTitle, VehiclesBrand, VehiclesOverview, PricePerDay, FuelType, ModelYear

Candidate Key = id

Justification

The above-mentioned dependencies one can observe that the TABLE VEHICLES relation is in 1NF as all the attributes are atomic in nature.

The relation is in 2NF as all the non-Prime attributes are fully functionally dependent on the Prime attribute and there is no partial dependency.

The relation is also in 3NF as there is no Transitive dependency between the non-Prime attributes and the Prime attribute.

CHAPTER 3 FRONT END DESIGN

3.1 HTML

HTML (Hypertext Markup Language) is the standard markup language used to create web pages. It is used to create the structure and layout of a webpage by using a series of elements represented by tags. These tags are used to define the structure and content of the page, such as headings, paragraphs, images, and links. HTML allows developers to organize and format text, images, and other media on a webpage. HTML is essential for creating the front-end of a website, as it determines the layout, structure, and overall design of the page.

3.2 CSS

CSS (Cascading Style Sheets) is a styling language used to control the layout and presentation of webpages. It allows developers to separate the presentation of a webpage from its structure, defined by HTML. Using CSS, developers can apply styles such as colors, fonts, and spacing to HTML elements on a webpage. This allows for a consistent look and feel across multiple pages, and makes it easy to make global changes to the layout and design of a website. CSS also allows for responsive design, where the layout of a webpage can adapt to different screen sizes and resolutions. It is used in conjunction with HTML to create the overall visual design of a website.

3.3 MySQL

MySQL is a popular open-source relational database management system (RDBMS) used to store, organize, and retrieve data. It is based on the Structured Query Language (SQL), which is used to communicate with the database. MySQL is widely used for web-based applications and for managing large, complex databases. It allows for data to be stored in tables and can handle a large number of concurrent users and transactions. It also supports various features like data encryption, backup, disaster recovery and many more. MySQL is known for its reliability, performance and ease of use, making it a popular choice among developers and organizations. It can run on various operating systems including Windows, Linux, and macOS.

3.4 Front End and Back End Connectivity using Flask-Python

For the front end we have used HTML,CSS,JAVA SCRIPT. For the Back end we have used Xampp Server for the database management The front end and backend are connected using a flask module of Python.

```
app.config['MYSQL_HOST'] = 'localhost' app.config['MYSQL_USER'] = 'root' app.config['MYSQL_PASSWORD'] = " app.config['MYSQL_DB'] = 'car_rent'
```

3.5 Software Requirements Specifications

Software requirements

Minimum software requirements are:

- Operating System: Windows 8, 10, 11
- Front End HTML, CSS
- Back End: My SQL Script Language: PHP
- Tool: XAMPP

Hardware requirements

Minimum hardware requirements are

- Processor: Intel Pentium V Clock speed: 500MHZ
- System bus: 64bits RAM: 4GB of RAM
- HDD: 40 GB or higherMonitor: SVGA COLOR
- Triomtor. By Gri COL
- Keyboard: 108 keys
- Mouse: compatible mouse

CHAPTER 4 MAJOR MODULES

4.1 ADMIN MODULE

This module is only available for the Admin. This module is used to keep the track of the Bookings, Subscribers, webpage, and Contact Query. The admin can also add, modify, or delete Vehicle Brands, Bookings.

Admin must first login to the account. Admin login has 2 fields, Name, and password. The admin uses the submit button to log in if authorized. After logging in, the admin can view an admin dashboard where he can view Bookings, post vehicles, manage testimonials, manage contact query, manage pages, manage subscribers and contact info, display register users. All these buttons can be classified as sub-modules of the Admin Module.

- 1. **Login**: Admin uses this option to login.
- 2. **Change password**: Admin can change his password.
- 3. **Create brands** and **Mange Brands**: Admin can create new brands or delete the existing brands.
- 4. **Post Vehicle** and **Mange Vehicle**: Admin can post the vehicle or delete the existing vehicle.
- 5. **Manage Bookings**: Admin can confirm or cancel bookings.
- 6. **Mange Testimonials**: Admin can view, mark read the user testimonials.
- 7. **Manage Contact Query**: Admin can even manage contact query.
- 8. **Mange Pages**: Admin edit the home page details.
- 9. **Mange Subscribers**: Admin can even view or delete his subscribes from the web page.
- 10. Update contact info: Admin can update his contact info.
- 11. **Displays Register Users**: Admin can view the registered users.
- 12.**Logout**: Admin can use this module logout from the webpage.

4.2 USER MODULE

- 1. **Signup**: User can use this module to provide his information and signup for the car rental website.
- 2.**Login**: User can use this module to login the page by providing authorized details.
- 3.**Booking**: User can use this module to book the cars.
- 4.**Subscribe**: User can subscribe to the newsletter.
- **5.Paymet**: User can use this module for payment of his bookings

CHAPTER 5 IMPLEMENTATION

5.1 Implementation using SQL

Creating Tables

```
Admin
CREATE TABLE `admin`
 'id' int(11) NOT NULL,
 'UserName' varchar(100) NOT NULL,
 `Password` varchar(100) NOT NULL
Booking
CREATE TABLE `tblbooking`
 `id` int(11) NOT NULL,
 `userEmail` varchar(100) DEFAULT NULL,
 `VehicleId` varchar(11) DEFAULT NULL,
 `FromDate` varchar(20) DEFAULT NULL,
 `ToDate` varchar(20) DEFAULT NULL,
 `Status` varchar(11) DEFAULT NULL
Brands
CREATE TABLE `tblbrands`
 'id' int(11) NOT NULL,
 `BrandName` varchar(120) NOT NULL
Users
CREATE TABLE `tblusers`
 `id` int(11) NOT NULL,
 `FullName` varchar(120) DEFAULT NULL,
 `EmailId` varchar(100) DEFAULT NULL,
 'Password' varchar(100) DEFAULT NULL,
 `ContactNo` char(11) DEFAULT NULL,
 'dob' varchar(100) DEFAULT NULL,
 `Address` varchar(255) DEFAULT NULL,
 `City` varchar(100) DEFAULT NULL,
 `Country` varchar(100) DEFAULT NULL)
```

Vehicles

```
CREATE TABLE `tblvehicles`

(
    `id` int(11) NOT NULL,
    `VehiclesTitle` varchar(150) DEFAULT NULL,
    `VehiclesBrand` varchar(11) DEFAULT NULL,
    `VehiclesOverview` longtext DEFAULT NULL,
    `PricePerDay` varchar(11) DEFAULT NULL,
    `FuelType` varchar(100) DEFAULT NULL,
    `ModelYear` varchar(6) DEFAULT NULL
)
```

5.2 Using HTML

Index.html

```
<!DOCTYPE html>
<html lang="en">
<head>
  <meta charset="UTF-8">
  <meta http-equiv="X-UA-Compatible" content="IE=edge">
  <meta name="viewport" content="width=device-width, initial-scale=1.0">
  <title>Car Rental</title>
  k rel="icon" href="../static/images/fav icon.png" type="image/x-icon">
  <!-- link css -->
  <link rel="stylesheet" href="../static/styles.css">
  link rel="stylesheet" href="../bootstrap-4.3.1-dist/css/bootstrap.min.css">
  <!-- java script -->
  k rel="stylesheet" href="../bootstrap-4.3.1-dist/js/bootstrap.bundle.min.js">
  <!-- is bootstrap -->
  <script src="https://code.jquery.com/jquery-3.2.1.slim.min.js" integrity="sha384-</pre>
KJ3o2DKtlkvYIK3UENzmM7KCkRr/rE9/Qpg6aAZGJwFDMVNA/GpGFF93hXpG5KkN"
crossorigin="anonymous"></script>
<script src="https://cdn.jsdelivr.net/npm/popper.js@1.12.9/dist/umd/popper.min.js"</pre>
integrity="sha384-
ApNbgh9B+Y1QKtv3Rn7W3mgPxhU9K/ScQsAP7hUibX39j7fakFPskvXusvfa0b4Q"
crossorigin="anonymous"></script>
<script src="https://cdn.jsdelivr.net/npm/bootstrap@4.0.0/dist/js/bootstrap.min.js"</pre>
integrity="sha384-
JZR6Spejh4U02d8jOt6vLEHfe/JQGiRRSQQxSfFWpi1MquVdAyjUar5+76PVCmYl"
crossorigin="anonymous"></script>
  <!-- css bootstrap -->
  k rel="stylesheet"
href="https://cdn.jsdelivr.net/npm/bootstrap@4.0.0/dist/css/bootstrap.min.css"
integrity="sha384-
```

```
Gn5384xqQ1aoWXA+058RXPxPg6fy4IWvTNh0E263XmFcJlSAwiGgFAW/dAiS6JXm"
crossorigin="anonymous">
  <!-- awesome fonts icons bootstrap -->
  <script src="https://kit.fontawesome.com/5bbc39a795.js"</pre>
crossorigin="anonymous"></script>
</head>
<!-- body -->
<body>
 <!-- navbar -->
  <nav class="navbar navbar-expand-lg navbar-light navigation navbar sticky-top">
    <a class="navbar-brand navifont" href="#" style="margin-right: 1000px; font-size:
30px;"><i class="fa-solid fa-car"></i> Car Rental </a>
    <button class="navbar-toggler" type="button" data-toggle="collapse" data-
target="#navbarSupportedContent" aria-controls="navbarSupportedContent" aria-
expanded="false" aria-label="Toggle navigation">
     <span class="navbar-toggler-icon"></span>
    </button>
    <div class="collapse navbar-collapse" id="navbarSupportedContent">
     <a class="nav-link" href="#">Home <span class="sr-only">(current)</span></a>
      cli class="nav-item">
       <a class="nav-link " href="#">Contact us</a>
      cli class="nav-item">
       <a class="nav-link" href="#">About us</a>
      <a class="nav-link dropdown-toggle" href="#" id="navbarDropdown" role="button"
data-toggle="dropdown" aria-haspopup="true" aria-expanded="false">
        <i class="fa-regular fa-user"></i> { {username } }
       </a>
       <div class="dropdown-menu" aria-labelledby="navbarDropdown">
        <a class="dropdown-item" > Welcome, { {username} } </a>
        <a class="dropdown-item" href="{{url_for('logoutuser')}}"> Logout </a>
      </div>
   </nav>
```

```
<!-- navbar end -->
   <div id="carouselExampleIndicators" class="carousel slide" data-ride="carousel" data-</p>
interval:="1000" >

    class="carousel-indicators">

     data-target="#carouselExampleIndicators" data-slide-to="0" class="active">
     data-target="#carouselExampleIndicators" data-slide-to="1">
     data-target="#carouselExampleIndicators" data-slide-to="2">
    <div class="carousel-inner slider-img">
     <div class="carousel-item active">
      <img class="d-block w-100" src="../static/images/bg1.jpeg" alt="First slide">
     </div>
     <div class="carousel-item">
      <img class="d-block w-100" src="../static/images/bg2.jpeg" alt="Second slide">
     <div class="carousel-item">
      <img class="d-block w-100" src="../static/images/bg3.jpeg" alt="Third slide">
    </div>
    <a class="carousel-control-prev" href="#carouselExampleIndicators" role="button"
data-slide="prev">
     <span class="carousel-control-prev-icon" aria-hidden="true"></span>
     <span class="sr-only">Previous</span>
    </a>
    <a class="carousel-control-next" href="#carouselExampleIndicators" role="button"
data-slide="next">
     <span class="carousel-control-next-icon" aria-hidden="true"></span>
     <span class="sr-only">Next</span>
    </a>
   </div>
   <section class="section-padding gray-bg">
    <div class="container" method="POST" action="">
     <div class="section-header text-center">
      <h2 style="font-size: 60px;font-family: fantasy; margin-top: 5%;">Find the Best Car
For You</h2>
      There are many variations of passages of Lorem Ipsum available,
but the majority have suffered alteration in some form, by injected humour, or randomised
words which don't look even slightly believable. If you are going to use a passage of Lorem
Ipsum, you need to be sure there isn't anything embarrassing hidden in the middle of
text.
     <div class="row" style="padding: 5%;">
      <div class="col-lg-4" >
        <img src="../static/images/Chiron/chiron(4).jpg" class="img-fluid img-thumbnail</pre>
rounded mx-auto d-block" alt="Responsive image">
         <h3 style="text-align: center;">Car Name</h3>
         <i class="fa fa-calendar" aria-hidden="true"></i> Model : 
         <i class="fa-solid fa-indian-rupee-sign"></i> Price :
```

```
<i class="fa fa-user" aria-hidden="true"></i> Seats : 
        <i class="fa-solid fa-gas-pump"></i> Fuel Type : 
        style="text-align: center; margin: 5%;"><a href="{{url for('booking')}}"</pre>
class="btn btn-primary">Book Now</a>
       </div>
      <div class="col-lg-4" >
       <img src="../static/images/bmw x7/x7(1).jpeg" class="img-fluid img-thumbnail</pre>
rounded mx-auto d-block" alt="Responsive image">
        <h3 style="text-align: center;">Car Name</h3>
        <i class="fa fa-calendar" aria-hidden="true"></i> Model : 
        <i class="fa-solid fa-indian-rupee-sign"></i> Price : 
        <i class="fa fa-user" aria-hidden="true"></i> Seats : 
        <i class="fa-solid fa-gas-pump"></i> Fuel Type : 
        style="text-align: center; margin: 5%;"><a href="carbookin2.html" class="btn"</pre>
btn-primary" >Book Now</a>
       </div>
      <div class="col-lg-4" >
       <img src="../static/images/r8/r8(1).jpg" class="img-fluid img-thumbnail rounded
mx-auto d-block" alt="Responsive image">
        <h3 style="text-align: center;">Car Name</h3>
        <i class="fa fa-calendar" aria-hidden="true"></i> Model : 
        <i class="fa-solid fa-indian-rupee-sign"></i> Price : 
        <i class="fa fa-user" aria-hidden="true"></i> Seats : 
        <i class="fa-solid fa-gas-pump"></i> Fuel Type : 
        style="text-align: center; margin:5%;"><a href="carbooking3.html" class="btn"</pre>
btn-primary">Book Now</a>
       </div>
      </div>
      </div>
      </section>
</body>
<!-- footer -->
<footer id="foot">
 <div class="footer-top" >
  <div class="container">
   <div class="row">
    <div class="col-md-6">
     <h6>About Us</h6>
     \langle ul \rangle
```

```
<a href="#">About Us</a>
      <a href="#">FAQs</a>
      <a href="#">Privacy</a>
     <a href="#">Terms of use</a>
        <a href="admin/">Admin Login</a>
     </div>
    <div class="col-md-3 col-sm-6">
     <h6>Subscribe Newsletter</h6>
     <div class="newsletter-form">
      <form method="post">
       <div class="form-group">
        <input type="email" name="subscriberemail" class="form-control newsletter-
input" required placeholder="Enter Email Address" />
       </div>
       <button type="submit" name="emailsubscibe" class="btn btn-primary"><i
class="fa fa-angle-right" aria-hidden="true"></i> Subscribe </button>
      *We send great deals and latest auto news to our
subscribed users very week.
     </div>
    </div>
   </div>
  </div>
 </div>
 <div class="footer-bottom">
  <div class="container">
   <div class="row">
    <div class="col-md-6" style="text-align: left;">
     <div class="footer widget">
      Connect with Us:
      style="display: inline;"><a href="https://www.facebook.com/"><i class="fa fa-</pre>
facebook-square fa-2x" aria-hidden="true"></i></i>
       <a</pre>
href="https://twitter.com/i/flow/login?input_flow_data=%7B%22requested_variant%22%3A"
%22evJsYW5nIjoiZW4ifQ%3D%3D%22%7D"><i class="fa fa-twitter-square fa-2x" aria-
hidden="true"></i></a>
       style="display: inline;"><a href="https://in.linkedin.com/"><i class="fa fa-</li>
linkedin-square fa-2x" aria-hidden="true"></i></a>
       style="display: inline;"><a href="https://accounts.google.com/"><i class="fa fa-</pre>
google-plus-square fa-2x" aria-hidden="true"></i></i>
       style="display: inline;"><a href="https://www.instagram.com/"><i class="fa fa-</pre>
instagram fa-2x" aria-hidden="true"></i></i>
      </div>
    </div>
```

Booking Page

```
<!DOCTYPE html>
<html lang="en">
<head>
  <meta charset="UTF-8">
  <meta http-equiv="X-UA-Compatible" content="IE=edge">
  <meta name="viewport" content="width=device-width, initial-scale=1.0">
  <title>Booking</title>
  k rel="icon" href="../static/images/fav icon.png" type="image/x-icon">
  <!-- link css -->
  <link rel="stylesheet" href="../static/styles.css">
  link rel="stylesheet" href="../bootstrap-4.3.1-dist/css/bootstrap.min.css">
  <!-- java script -->
  <!-- is bootstrap -->
  <script src="https://code.jquery.com/jquery-3.2.1.slim.min.js" integrity="sha384-</pre>
KJ3o2DKtlkvYIK3UENzmM7KCkRr/rE9/Qpg6aAZGJwFDMVNA/GpGFF93hXpG5KkN"
crossorigin="anonymous"></script>
  <script src="https://cdn.jsdelivr.net/npm/popper.js@1.12.9/dist/umd/popper.min.js"</pre>
integrity="sha384-
ApNbgh9B+Y1QKtv3Rn7W3mgPxhU9K/ScQsAP7hUibX39j7fakFPskvXusvfa0b4Q"
crossorigin="anonymous"></script>
  <script src="https://cdn.jsdelivr.net/npm/bootstrap@4.0.0/dist/js/bootstrap.min.js"</pre>
integrity="sha384-
JZR6Spejh4U02d8jOt6vLEHfe/JQGiRRSQQxSfFWpi1MquVdAyjUar5+76PVCmYl"
crossorigin="anonymous"></script>
  <script src="https://cdn.jsdelivr.net/npm/@popperjs/core@2.9.2/dist/umd/popper.min.js"</pre>
integrity="sha384-
IQsoLXI5PILFhosVNubq5LC7Qb9DXgDA9i+tQ8Zj3iwWAwPtgFTxbJ8NT4GN1R8p"\\
crossorigin="anonymous"></script>
```

```
<script src="https://cdn.jsdelivr.net/npm/bootstrap@5.0.2/dist/js/bootstrap.min.js"</pre>
integrity="sha384-
cVKIPhGWiC2Al4u+LWgxfKTRIcfu0JTxR+EQDz/bgldoEyl4H0zUF0QKbrJ0EcQF"
crossorigin="anonymous"></script>
  <!-- css bootstrap -->
  <link rel="stylesheet"</pre>
href="https://cdn.jsdelivr.net/npm/bootstrap@4.0.0/dist/css/bootstrap.min.css"
integrity="sha384-
Gn5384xqQ1aoWXA+058RXPxPg6fy4IWvTNh0E263XmFcJlSAwiGgFAW/dAiS6JXm"
crossorigin="anonymous">
  <!-- awesome fonts icons bootstrap -->
  <script src="https://kit.fontawesome.com/5bbc39a795.js"</pre>
crossorigin="anonymous"></script>
  <link rel="stylesheet" type="text/css"</pre>
href="https://cdn.jsdelivr.net/gh/kenwheeler/slick@1.8.1/slick/slick-theme.css"/>
   k rel="stylesheet" type="text/css" href="https://cdn.jsdelivr.net/npm/slick-
carousel@1.8.1/slick/slick.css"/>
   <script type="text/javascript" src="https://cdn.jsdelivr.net/npm/slick-</pre>
carousel@1.8.1/slick/slick.min.js"></script>
   <!--Bootstrap -->
k rel="stylesheet" href="assets/css/bootstrap.min.css" type="text/css">
<!--Custome Style -->
k rel="stylesheet" href="assets/css/style.css" type="text/css">
<!--OWL Carousel slider-->
k rel="stylesheet" href="assets/css/owl.carousel.css" type="text/css">
k rel="stylesheet" href="assets/css/owl.transitions.css" type="text/css">
<!--slick-slider -->
<link href="assets/css/slick.css" rel="stylesheet">
<!--bootstrap-slider -->
k href="assets/css/bootstrap-slider.min.css" rel="stylesheet">
<!--FontAwesome Font Style -->
k href="assets/css/font-awesome.min.css" rel="stylesheet">
<!-- SWITCHER -->
<link rel="stylesheet" id="switcher-css" type="text/css"</pre>
href="assets/switcher/css/switcher.css" media="all" />
link rel="alternate stylesheet" type="text/css" href="assets/switcher/css/red.css" title="red"
media="all" data-default-color="true" />
link rel="alternate stylesheet" type="text/css" href="assets/switcher/css/orange.css"
title="orange" media="all" />
link rel="alternate stylesheet" type="text/css" href="assets/switcher/css/blue.css"
title="blue" media="all" />
link rel="alternate stylesheet" type="text/css" href="assets/switcher/css/pink.css"
title="pink" media="all" />
link rel="alternate stylesheet" type="text/css" href="assets/switcher/css/green.css"
title="green" media="all" />
link rel="alternate stylesheet" type="text/css" href="assets/switcher/css/purple.css"
title="purple" media="all" />
link rel="apple-touch-icon-precomposed" sizes="144x144" href="assets/images/favicon-
icon/apple-touch-icon-144-precomposed.png">
```

```
k rel="apple-touch-icon-precomposed" sizes="114x114" href="assets/images/favicon-precomposed" sizes="114x114" href="assets/images/favicon-precomposed"
icon/apple-touch-icon-114-precomposed.html">
link rel="apple-touch-icon-precomposed" sizes="72x72" href="assets/images/favicon-
icon/apple-touch-icon-72-precomposed.png">
icon-57-precomposed.png">
k rel="shortcut icon" href="assets/images/favicon-icon/favicon.png">
link href="https://fonts.googleapis.com/css?family=Lato:300,400,700,900"
rel="stylesheet">
</head>
<body>
  <!-- navbar -->
  <nav class="navbar navbar-expand-lg navbar-light navigation navbar sticky-top">
   <a class="navbar-brand navifont" href="#" style="margin-right: 1000px; font-size:</p>
30px;"><i class="fa-solid fa-car"></i> Car Rental </a>
   <button class="navbar-toggler" type="button" data-toggle="collapse" data-
target="#navbarSupportedContent" aria-controls="navbarSupportedContent" aria-
expanded="false" aria-label="Toggle navigation">
    <span class="navbar-toggler-icon"></span>
   </button>
   <div class="collapse navbar-collapse" id="navbarSupportedContent">
    <a class="nav-link" href="#">Home <span class="sr-only">(current)</span></a>
     cli class="nav-item">
      <a class="nav-link " href="#">Contact us</a>
     cli class="nav-item">
      <a class="nav-link" href="#">About us</a>
     <a class="nav-link dropdown-toggle" href="#" id="navbarDropdown" role="button"
data-toggle="dropdown" aria-haspopup="true" aria-expanded="false">
       <i class="fa-regular fa-user"></i> { {username } }
      <div class="dropdown-menu" aria-labelledby="navbarDropdown">
       <a class="dropdown-item" > Welcome {{username}}</a>
       <a class="dropdown-item" href="{{url_for('logoutuser')}}}"> Logout </a>
     </div>
```

```
</nav>
   <div id="carouselExampleIndicators" class="carousel slide" data-ride="carousel"</pre>
style="padding-bottom: 5%s;">

    class="carousel-indicators">

     data-target="#carouselExampleIndicators" data-slide-to="0" class="active">
     <div class="carousel-inner slider-img" >
     <div class="carousel-item active" >
      <img class="d-block w-100" src="../static/images/Chiron/chiron(1).jpg" alt="First</pre>
slide">
     </div>
     <div class="carousel-item">
      <img class="d-block w-100" src="../static/images/Chiron/chiron(2).jpeg" alt="Second
slide">
     </div>
     <div class="carousel-item">
      <img class="d-block w-100" src="../static/images/Chiron/chiron(3).jpg" alt="Third</pre>
slide">
     </div>
     <div class="carousel-item">
      <img class="d-block w-100" src="../static/images/Chiron/chiron(4).jpg" alt="Fourth"</pre>
slide">
     </div>
    </div>
    <a class="carousel-control-prev" href="#carouselExampleIndicators" role="button"
data-slide="prev">
     <span class="carousel-control-prev-icon" aria-hidden="true"></span>
     <span class="sr-only">Previous</span>
    </a>
    <a class="carousel-control-next" href="#carouselExampleIndicators" role="button"
data-slide="next">
     <span class="carousel-control-next-icon" aria-hidden="true"></span>
     <span class="sr-only">Next</span>
    </a>
   </div>
   <div class="row" style=" margin: 5%;padding-right: 30px;">
    <div class="col-6">
     <h1>BUGATTI</h1>
     style="padding: 5px;"><h4>Model</h4> 
      <h4>Seats</h4>
```

```
style="padding: 5px;"><h4>Petrol Type</h4>style="padding: 5px;"><h4>Cost</h4>style="padding: 5px;"><h4>Description</h4>
```

Lorem ipsum dolor sit amet, consectetur adipiscing elit. Duis vel pretium urna. Vestibulum fringilla lorem quis tortor pulvinar facilisis. Duis egestas maximus ipsum non rhoncus. Fusce eros purus, porttitor vel mauris eu, pretium volutpat nibh. Curabitur sit amet auctor justo, non sodales tortor. Proin gravida dolor justo, quis mattis lacus dapibus a. Phasellus luctus malesuada arcu at finibus. Aliquam bibendum quam vel arcu malesuada tempus eget ut nibh. Vestibulum aliquet dui id convallis tristique. Nunc eu nisl egestas, feugiat nunc in, pulvinar turpis. Morbi non blandit felis.

```
</div>
    <div class="col-6" style="width: 500px; margin: 0 auto;padding: 50px; font-weight:</pre>
bold:">
     <form action="#" method="POST">
     <div class="form-group col-3" style="font-weight: bolder;">
       <label for="birthday"> From Date:</label>
       <input type="date" id="birthday" name="strtdate">
     </div>
     <div class="form-group col-3" style="font-weight: bolder;" >
       <label for="birthday">To Date:</label>
       <input type="date" id="birthday" name="enddate">
      </div>
      <div style="padding: 10%;">
       <input type="submit" style="background-color: #2d57b1;</pre>
       border: none:
       color: white;
       padding: 8px 16px;
       text-decoration: none;
       border: 0.899px;
       cursor: pointer;
       height: 46px;
       width: -webkit-fill-available;
       margin: 2px;
       font-size: large;" value="Book Now">
       <button type="button" class="btn btn-dark btn-lg btn-block"
href="https://paytm.com/login" >Pay Now</button>
       <div class="form-group" style="padding-top: 25px;">
  <label for="exampleFormControlTextarea1">Any Message?</label>
  <textarea class="form-control" id="exampleFormControlTextarea1"
rows="3"></textarea>
 </div>
     </div>
    </form>
```

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```
</div>
   </div>
<!-- footer -->
<footer id="foot" style=" background-color: #bef9f9; padding: 5%;">
  <div class="footer-top">
   <div class="container">
    <div class="row">
     <div class="col-md-6">
      <h6>About Us</h6>
      <111>
      <a href="page.php?type=aboutus">About Us</a>
       <a href="page.php?type=fags">FAQs</a>
       <a href="page.php?type=privacy">Privacy</a>
      <a href="page.php?type=terms">Terms of use</a>
         <a href="admin/">Admin Login</a>
      </div>
     <div class="col-md-3 col-sm-6">
      <h6>Subscribe Newsletter</h6>
      <div class="newsletter-form">
       <form method="post">
        <div class="form-group">
         <input type="email" name="subscriberemail" class="form-control newsletter-
input" required placeholder="Enter Email Address" />
        </div>
        <button type="submit" name="emailsubscibe" class="btn btn-primary"><i
class="fa fa-angle-right" aria-hidden="true"></i> Subscribe </button>
       *We send great deals and latest auto news to our
subscribed users very week.
      </div>
     </div>
    </div>
   </div>
  </div>
  <div class="footer-bottom">
   <div class="container">
```

```
<div class="row">
     <div class="col-md-6" style="text-align: left;">
      <div class="footer widget">
       Connect with Us:
       style="display: inline;"><a href="https://www.facebook.com/"><i class="fa fa-</pre>
facebook-square fa-2x" aria-hidden="true"></i></i>
        <a</pre>
href="https://twitter.com/i/flow/login?input_flow_data=%7B%22requested_variant%22%3A
%22eyJsYW5nIjoiZW4ifQ%3D%3D%22%7D"><i class="fa fa-twitter-square fa-2x" aria-
hidden="true"></i></a>
        style="display: inline;"><a href="https://in.linkedin.com/"><i class="fa fa-</pre>
linkedin-square fa-2x" aria-hidden="true"></i></a>
        style="display: inline;"><a href="https://accounts.google.com/"><i class="fa">
fa-google-plus-square fa-2x" aria-hidden="true"></i></i></a>
        style="display: inline;"><a href="https://www.instagram.com/"><i class="fa fa-</pre>
instagram fa-2x" aria-hidden="true"></i></i></a>
       </div>
     </div>
     <div class="col-md-6" style="padding-top: 25px;">
      <button type="button" class="btn btn-dark btn-lg button-s"><i class="fa-brands fa-
google-play"></i> Download </button>
      <button type="button" class="btn btn-light btn-lg"><i class="fa-brands fa-
apple"></i> Download</button>
     </div>
    </div>
   </div>
  </div>
 </footer>
 <i class="fa-solid fa-copyright"></i> Project done by<a</pre>
href="mailto:dhanush12232002@gmail.com"> Dhanush C</a> and <a
href="mailto:chirayugangadkar@gmail.com">Chirayu V</a> 
</body>
</html>
```

Admin Page For User Details

```
<!doctype html>
<html lang="en">
<head>

<title>Admin</title>
kitle>Admin</title>
kitle>Admin</title>
kitle>Admin</title>
<meta charset="images/fav icon.png" type="image/x-icon">

<meta charset="utf-8">
<meta name="viewport" content="width=device-width, initial-scale=1, shrink-to-fit=no">
```

```
link
href="https://fonts.googleapis.com/css?family=Poppins:300,400,500,600,700,800,900"
rel="stylesheet">
                                                    k rel="stylesheet"
href="https://stackpath.bootstrapcdn.com/font-awesome/4.7.0/css/font-awesome.min.css">
                                                    k rel="stylesheet"
href="../static/css/style.css">
  <script src="https://kit.fontawesome.com/5bbc39a795.js"</pre>
crossorigin="anonymous"></script>
 </head>
 <body>
                                                    <div class="wrapper d-flex align-
items-stretch">
                                                          <nav id="sidebar">
                                                                 <div
class="custom-menu">
                                                                        <but
type="button" id="sidebarCollapse" class="btn btn-primary">
                                                   <i class="fa fa-bars"></i>
                                                   <span class="sr-only">Toggle
Menu</span>
                                                  </button>
    </div>
                                                          <h1><a
href="index.html" class="logo">Car Rental</a></h1>
    <a href="{{url_for('dash')}}"><span class="fa fa-home mr-3"></span>
Homepage</a>
     <
       <a href="#"><span class="fa fa-user mr-3"></span> Users</a>
     <
      <a href="{{url_for('vehicledetails')}}"><span class="fa-solid fa-car mr-3"></span>
Vehicles</a>
     <
      <a href="{{url_for('bookingdetails')}}"><span class="fa-solid fa-clipboard mr-
3"></span> Bookings</a>
     </nav>
    <!-- Page Content -->
```

```
<div id="content" class="p-4 p-md-5 pt-5" action="" method="GET">
   <h2 class="mb-4" style="text-align:center">Details of Customers</h2>
    <thead>
     ID
      Name
      Email
      Contact
      Address
      city
      Country
      </thead>
     {% for row in value %}
      \{ \{ row[0] \} \} 
      {td>{{row[1]}}}
      {\{row[2]\}}
      {\{row[3]\}}
      {\{row[4]\}}
      {\{row[5]\}}
      {(row[6])}
     {% endfor %}
     </div>
                                         </div>
 <script src="../static/js/jquery.min.js"></script>
 <script src="../static/js/popper.js"></script>
 <script src="../static/js/bootstrap.min.js"></script>
 <script src="../static/js/main.js"></script>
</body>
</html>
```

5.3 Python File

Main.py

```
from flask import Flask, render_template, request, redirect, url_for, session, flash
import mysql.connector
from flask mysqldb import MySQL
import MySQLdb.cursors
import re
app = Flask(__name__)
app.secret_key = "super secret key"
app.config['MYSQL_HOST'] = 'localhost'
app.config['MYSQL USER'] = 'root'
app.config['MYSQL_PASSWORD'] = "
app.config['MYSQL_DB'] = 'car_rent'
mysql = MySQL(app)
# start page route
@app.route('/')
def index():
  return render_template('UserLogin.html')
#home page route
@app.route('/home')
def home():
  return render_template('rental.html',username=session['username'])
#User Sign up route
@app.route('/signup',methods=['GET','POST'])
def signup():
  if request.method == 'POST':
    userdetails = request.form
    txt = userdetails['name']
    email = userdetails['email']
    pswd = userdetails['password']
    number = userdetails['number']
    address = userdetails['address']
    country = userdetails['country']
    city = userdetails['city']
    dob = userdetails['dob']
    cur = mysql.connection.cursor()
    cur.execute("INSERT INTO tblusers(FullName, EmailId, Password, ContactNo, dob,
Address, City, Country) VALUES(%s,%s,%s,%s,%s,%s,%s,%s,%s)",
(txt,email,pswd,number,dob,address,city,country))
    mysql.connection.commit()
    cur.close()
    return redirect('/')
  return render_template('signup.html')
```

```
#User login Route
@app.route('/userlogin',methods=['GET','POST'])
def userlogin():
  msg="
  if request.method == 'POST':
    username = request.form['username']
    password = request.form['pswd']
    cur = mysql.connection.cursor()
    cur.execute('SELECT * FROM tblusers WHERE EmailId=%s AND
Password=%s',(username,password))
    record=cur.fetchone()
    if record:
       session['loggedin'] = True
       session['username'] = record[2]
       flash('logged in successfully')
       return redirect(url_for('home'))
    else:
       flash('Incorrect username or password')
  return render_template('UserLogin.html',msg=msg)
#User logout Route
@app.route('/logout')
def logoutuser():
  session.pop('loggedin',None)
  session.pop('username',None)
  return redirect(url for('userlogin'))
#Vehicle Booking Routes
@app.route('/booking',methods=['GET','POST'])
def booking():
  if request.method == 'POST':
    vehidetails = request.form
    strtdate = vehidetails['strtdate']
    enddate = vehidetails['enddate']
    mail=session['username']
    cur = mysql.connection.cursor()
    cur.execute("INSERT INTO tblbooking(userEmail, VehicleId, FromDate, ToDate, Status)
values(%s,%s,%s,%s,%s)", (mail,"1",strtdate,enddate,"CONFIRMED",))
    mysql.connection.commit()
    cur.close()
    return redirect(url_for('home'))
  return render_template('carbook1.html')
#Admin login Route
@app.route('/adminlogin',methods=['GET','POST'])
def adminlogin():
  msg1="
  if request.method == 'POST':
```

```
username1 = request.form['ausername']
    password1 = request.form['apswd']
    cur = mysql.connection.cursor()
    cur.execute('SELECT * FROM admin WHERE UserName=%s AND
Password=%s',(username1,password1))
    record=cur.fetchone()
    if record:
       session['loggedin'] = True
       session['username'] = record[2]
       flash('logged in successfully')
       return redirect(url for('users'))
    else:
       flash('Incorrect username or password')
  return render_template('Admin login.html',msg=msg1)
#Admin Logout Route
@app.route('/logouta')
def logoutadmin():
  session.pop('loggedin',None)
  session.pop('username',None)
  return redirect(url_for('adminlogin'))
#User details in dashboard
@app.route('/users',methods=['GET','POST'])
def users():
  cur = mysql.connection.cursor()
  cur.execute('Select id,FullName,EmailId,ContactNo,dob,Address,City,Country from
tblusers ')
  data = cur.fetchall()
  return render_template("indexusers.html",value=data)
#Vehicle details in dashboard
@app.route('/vehicledetails',methods=['GET','POST'])
def vehicledetails():
  cur = mysql.connection.cursor()
  cur.execute('Select * from tblvehicles')
  data = cur.fetchall()
  if request.method == 'POST':
    vehicledetails = request.form
    name1 = vehicledetails['vname']
    brand = vehicledetails['vbrand']
    overview = vehicledetails['voverview']
    price = vehicledetails['vprice']
    fuel = vehicledetails['vfueltype']
    model = vehicledetails['vmodelyear']
    cur.execute("INSERT INTO tblvehicles(VehiclesTitle, Vehiclesbrand,
VehiclesOverview, PricePerDay, FuelType, ModelYear) VALUES(%s,%s,%s,%s,%s,%s,%s)",
(name1,brand,overview,price,fuel,model))
    mysql.connection.commit()
    cur.close()
    return redirect(url_for('dash'))
```

```
return render_template("indexvehicles.html",value=data)
#user view bookings
@app.route('/uservehidetails',methods=['GET','POST'])
def uservehidetails():
     cur = mysql.connection.cursor()
     cur.execute('Select
b.id, b. user Email, v. Vehicles Title, v. Vehicles Brand, v. Price Per Day, b. From Date, b. To Date, b. Statter, b. Statter, b. To Date, b. Statter, b. Statte
us from tblbooking b, tblvehicles v where v.Id=1 ')
     data = cur.fetchall()
     return render_template("uservehicledetails.html",value=data)
#cancel booking
@app.route('/cancel/<string:id_data>',methods=['GET'])
def cancel(id_data):
     flash("Record Has Been Deleted Successfully")
     cur = mysql.connection.cursor()
     cur.execute('Delete from tblbooking where userEmail=%s',(id data,))
     mysql.connection.commit()
     return redirect(url_for('booking'))
#delete vehicles
@app.route('/delete/<string:idata>',methods=['GET'])
def delete(idata):
     flash("Record Has Been Deleted Successfully")
     cur = mysql.connection.cursor()
     cur.execute('Delete from tblvehicles where VehiclesTitle=%s',(idata,))
     mysql.connection.commit()
     return redirect(url for('dash'))
#Booking details
@app.route('/bookingdetails',methods=['GET','POST'])
def bookingdetails():
     cur = mysql.connection.cursor()
     cur.execute('Select * from tblbooking')
     data = cur.fetchall()
     return render_template("indexbookings.html",value=data)
#Dashboard homepage
@app.route('/dash',methods=['GET','POST'])
def dash():
      return render_template('indexDashboard.html')
if __name__ == '__main__':
     app.run(debug=True)
```

Chapter 6
SNAPSHOTS

1] Login Page

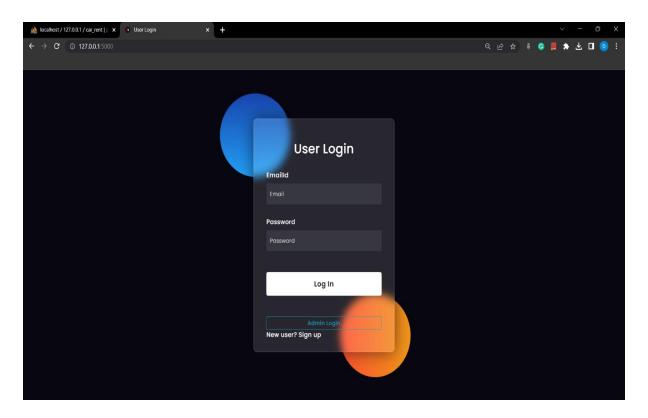


Fig 6.1 Login Page

2] Main Page



Fig 6.2 Main Page

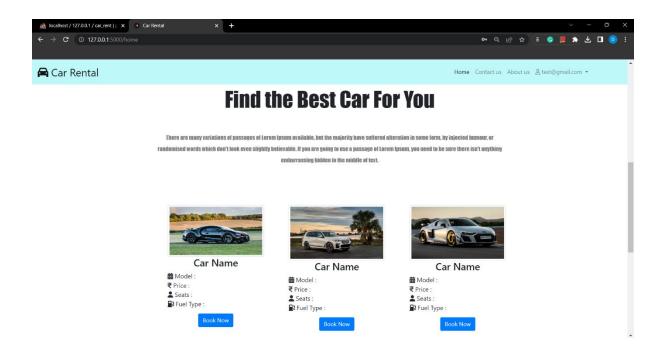


Fig 6.3 Main Page

3] Booking Page

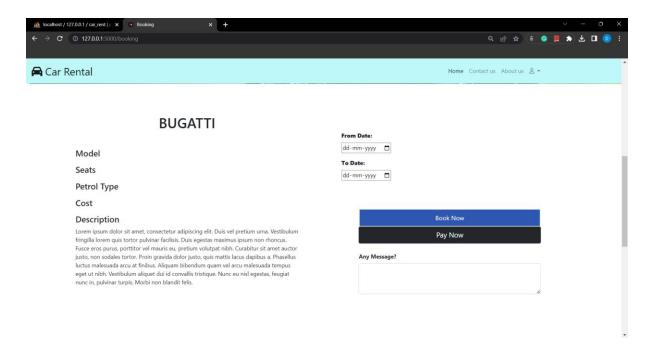


Fig 6.4 Booking Page

4] Admin Page(Details of customer / Users)

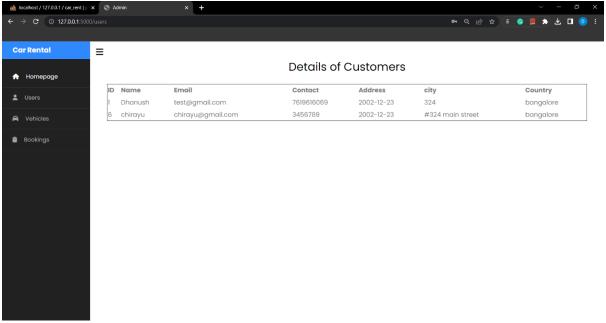


Fig 6.5 Admin page(customer details)

5] Vehicle Details

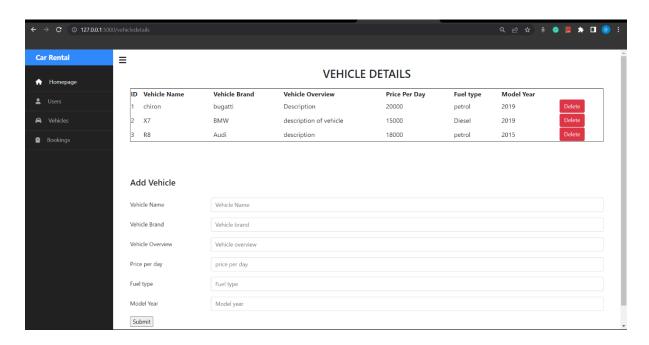


Fig 6.6 Vehicle Details

6] User Details

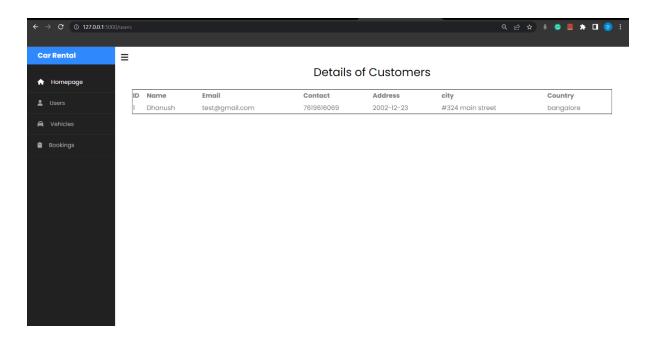


Fig 6.7 User Details

7] New User SignUp

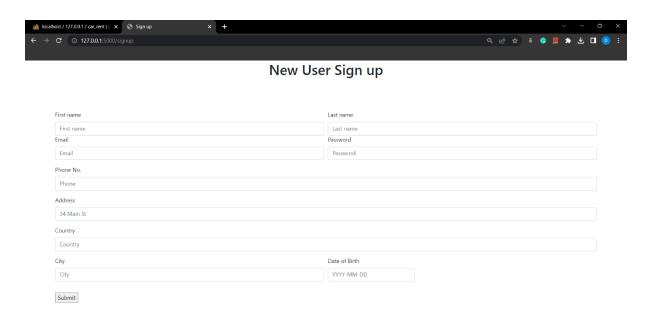


Fig 6.8 New User SignUp page

CHAPTER 7 APPLICATION

APPLICATION

An application built using the above-described car rental website database would allow customers to easily browse and rent vehicles from their computer or mobile device. The main features of the application would include:

Vehicle search: Customers can search for available vehicles by location, make and model, and rental dates.

Vehicle details: Customers can view images, read reviews, and compare prices of the vehicles.

Reservation: Customers can select a vehicle and complete the reservation process by providing their personal and payment information.

User account: Customers can create an account to save their rental history, preferences, and payment information for faster future bookings.

Reservation management: Customers can view, modify, and cancel their reservations.

Rating and review system: Customers can rate and review the vehicles they have rented.

Mobile-friendly: Application will be designed to be mobile-friendly, so that customers can browse and rent vehicles on the go.

The application would also provide a user-friendly interface for the admin to manage the website, vehicles, reservations, customers, and pricing. The application would be designed to be scalable, secure, and able to handle a large number of concurrent users. This will provide a seamless experience for both customers and the car rental company, making it easy for the customers to rent a vehicle and for the company to manage their fleet and customers efficiently.

CHAPTER 8 CONCLUSION

CONCLUSION

In conclusion, a car rental website database is a powerful tool that can streamline the car rental process and improve the customer experience. The database would include important information about the vehicles, customers, and reservations, as well as advanced features such as user accounts, reservation management, promotions and discounts, and rating and review system. An application built using this database would allow customers to easily browse and rent vehicles from their computer or mobile device, and provide an easy-to-use interface for the admin to manage the website and its data. Overall, the car rental website database and application would provide a convenient and efficient solution for both customers and the car rental company, making it easy for customers to rent vehicle and for the company to manage their fleet and customers efficiently.