VEHICLE RENTAL SYSTEM

A MINI-PROJECT REPORT

Submitted by

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IN

COMPUTER SCIENCE AND ENGINEERING

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An AUTONOMOUS Institution
Affiliated to ANNA UNIVERSITY, Chennai

RAJALAKSHMI ENGINEERING COLLEGE

AUTONOMOUS, CHENNAI

NOV-DEC, 2024

BONAFIDE CERTIFICATE

Certified that this mini project **" Vehicle Rental System "** is the bonafide work of **" MITESH KUMAR M (2116220701164)"** who carried out the project work under my supervision.

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Submitted for the End Semester Practical examination to be held on _____

INTERNAL EXAMINER **EXTERNAL EXAMINER**

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ABSTRACT

The vehicle rental market has seen significant growth, with the demand for flexible, affordable, and accessible transportation options increasing rapidly. In response to this demand, businesses and individuals seek solutions to efficiently manage and access rental vehicles. This project addresses these needs by developing a comprehensive, web-based vehicle rental system designed to streamline vehicle rentals, manage inventory, and enhance the rental experience for both administrators and clients.

The core functionality of the platform focuses on an intuitive vehicle management system. By allowing administrators to add, update, and remove vehicles, as well as set rental prices per hour, the platform facilitates seamless inventory control. Additionally, the system enables clients to browse available vehicles, choose rental durations, and view rental costs before confirming bookings. This transparent and user-friendly process allows clients to make informed decisions and administrators to maintain an organized, up-to-date vehicle inventory.

In addition to inventory management, the platform includes essential client management features, such as a sign-up and sign-in system. Clients can securely create accounts, providing details like name, address, phone number, and license number, to facilitate smooth rental transactions. For enhanced customer service, the system provides a checkout page that summarizes rental costs based on the selected duration and includes payment options, ensuring a streamlined and hassle-free rental experience.

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CHAPTER 1
INTRODUCTION

1.1 INTRODUCTION

The vehicle rental industry has become increasingly essential as individuals and businesses seek flexible and cost-effective transportation solutions. With various factors influencing rental needs—such as vehicle type, rental duration, and pricing—it is crucial to have a system that simplifies the process for both providers and clients. This project, AutoRent, introduces a web-based platform that leverages intuitive design and real-time data management to facilitate vehicle rentals efficiently. Built to cater to individual renters and rental administrators, AutoRent enables users to browse available vehicles, select rental durations, and view accurate cost estimates instantly. Additionally, the system streamlines client management and inventory control for administrators, creating a comprehensive rental experience. Through these features, AutoRent empowers users to make informed rental choices and administrators to effectively manage vehicle availability and pricing.

1.2 SCOPE OF WORK

The scope of this project goes beyond merely facilitating vehicle rentals. It aims to build a comprehensive platform that provides both clients and administrators with a suite of tools to streamline the rental experience. By offering features like vehicle inventory management, rental duration selection, and real-time cost calculation, the platform empowers clients to make informed rental decisions and administrators to manage resources effectively. The project’s overarching goal is to deliver a robust, user-friendly system that simplifies the vehicle rental process, ensuring transparency, efficiency, and ease of use.

1.3 AIM AND OBJECTIVES OF THE PROJECT

AutoRent aims to create a streamlined platform that facilitates vehicle rentals by enabling clients to browse available vehicles, calculate rental costs based on duration, and complete bookings with ease. Through an intuitive interface, the platform provides rental administrators with tools to manage inventory, update vehicle details, and set pricing efficiently. By integrating real-time data management and a secure client account system, AutoRent ensures both transparency and convenience in the rental process. Ultimately, the project aims to simplify and enhance the vehicle rental experience for both users and administrators, making it a comprehensive tool for rental management and decision-making..

OBJECTIVES:

1. Allow rental administrators to add, update, and remove vehicles, manage inventory efficiently, and set hourly rental prices.
2. Calculate rental costs based on selected duration, giving clients a clear breakdown of their rental charges.
3. Create a checkout page that displays final rental costs and offers payment options, ensuring a smooth and transparent rental experience.
4. Store and retrieve client and vehicle data in MongoDB, enabling administrators to track inventory status and client interactions for better decision-making.

CHAPTER 2

SYSTEM SPECIFICATIONS

2.1 HARDWARE SPECIFICATIONS

To run the application smoothly, the following hardware is recommended:

- **Processor**: Intel Core i5 or higher (or equivalent AMD Ryzen processors).
- **RAM**: A minimum of 8 GB to handle model inference and web requests efficiently.
- **Storage**: 500 GB hard drive or SSD for storage of required application files and datasets.

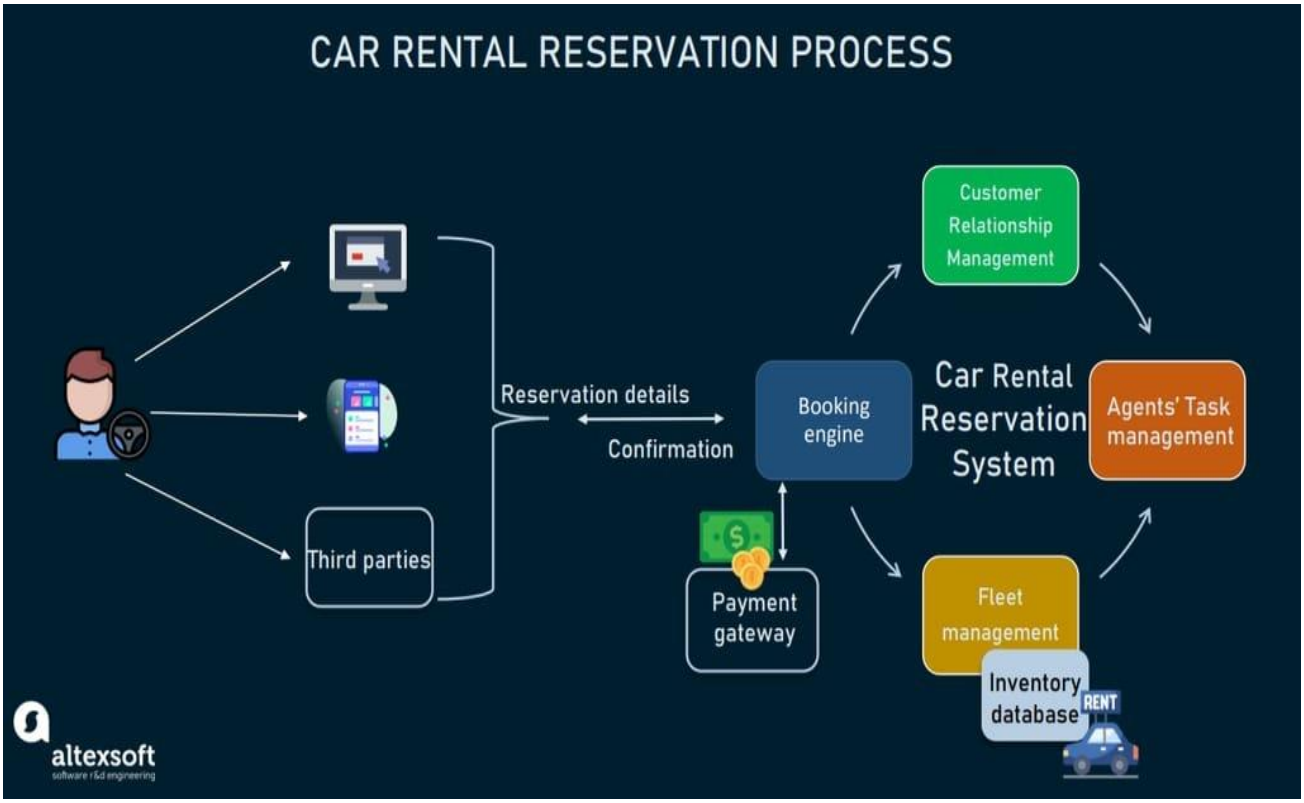
2.2 SOFTWARE SPECIFICATIONS

The project relies on a set of modern software tools and technologies to build, test, and deploy the system:

- **Front-End:** HTML, CSS, Bootstrap, and JavaScript.
- **Backend:** PHP, MYSQL, and XAMPP Server.

CHAPTER 3

ARCHITECTURE DIAGRAM



CHAPTER 4
MODULE DESCRIPTION

4.1 LOGIN MODULE

The Login Page serves as the user's secure entry point to the vehicle rental platform, providing an intuitive interface with straightforward access. It allows users to enter their credentials to log in or navigate to the sign-up page if they do not have an account. Additionally, an "Admin Login" button at the top enables administrators to access the backend features, ensuring a streamlined experience for both clients and administrators.

4.2 CAR CATALOGUE MODULE

The Car Catalogue Page serves as the main browsing section for clients, offering a straightforward interface for exploring available vehicles. It displays each car's key details, including fuel type, seating capacity, and daily rental rate, alongside high-quality images. Clients can easily select a vehicle and proceed with booking by clicking the "book" button, making the rental process convenient and transparent. This page guides users through the available options, helping them make informed choices based on their preferences and budget.

4.3 BOOKING MODULE

The Booking Page serves as the primary interface for finalizing rental details, offering users an organized and straightforward layout to input their booking information. It allows clients to specify their booking location, desired rental duration, contact number, and destination. The page also auto-generates a return date based on the rental period, enhancing convenience and accuracy.

4.4 PAYMENT MODULE

The Payment Page serves as the final step in the booking process, providing a secure and user-friendly interface for clients to complete their transactions. It displays the total rental cost and offers fields to enter payment details, including card number, expiry date, and CVV. With clear “Pay Now” and “Cancel” options, users can confidently finalize their bookings or return to modify their choices. This page ensures a smooth and transparent payment experience, guiding users through the platform’s checkout process efficiently.

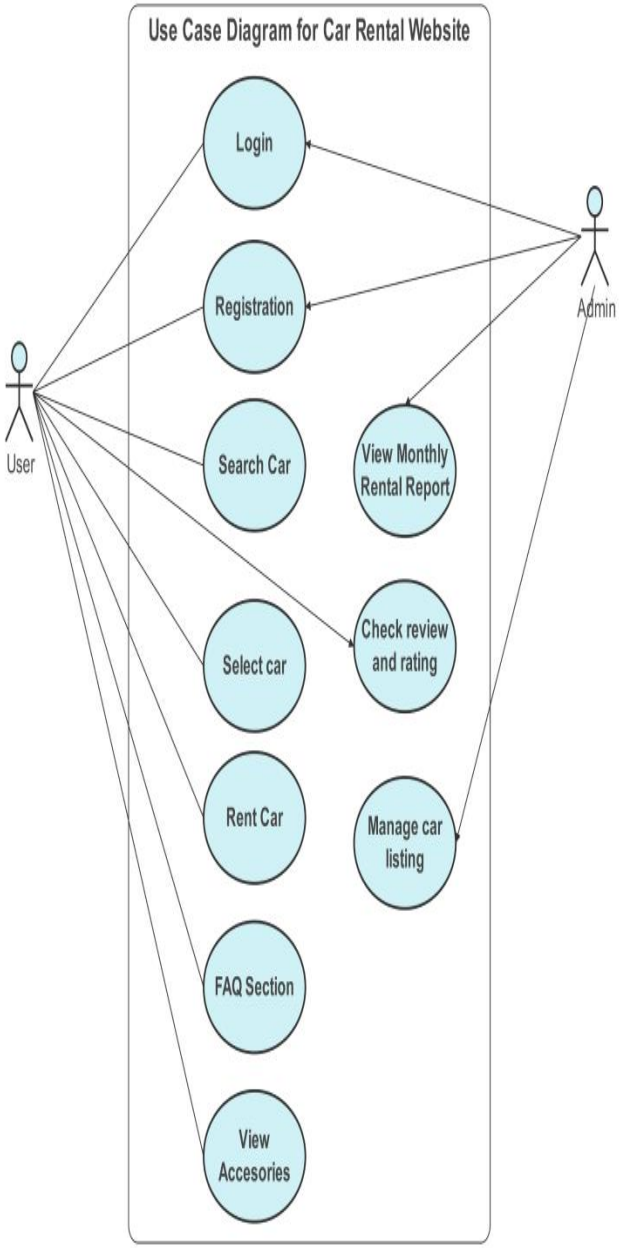
4.5 ADMIN MODULE

The Admin Page serves as the control center for managing the vehicle rental platform, offering administrators a structured interface with essential tools for overseeing vehicle inventory, bookings, and client information. It provides options to add, update, or remove vehicles, set rental prices, and view booking histories. Additionally, the page enables administrators to monitor and manage user accounts, ensuring smooth platform operations and efficient resource allocation. This centralized dashboard guides administrators in maintaining an organized and up-to-date rental service.

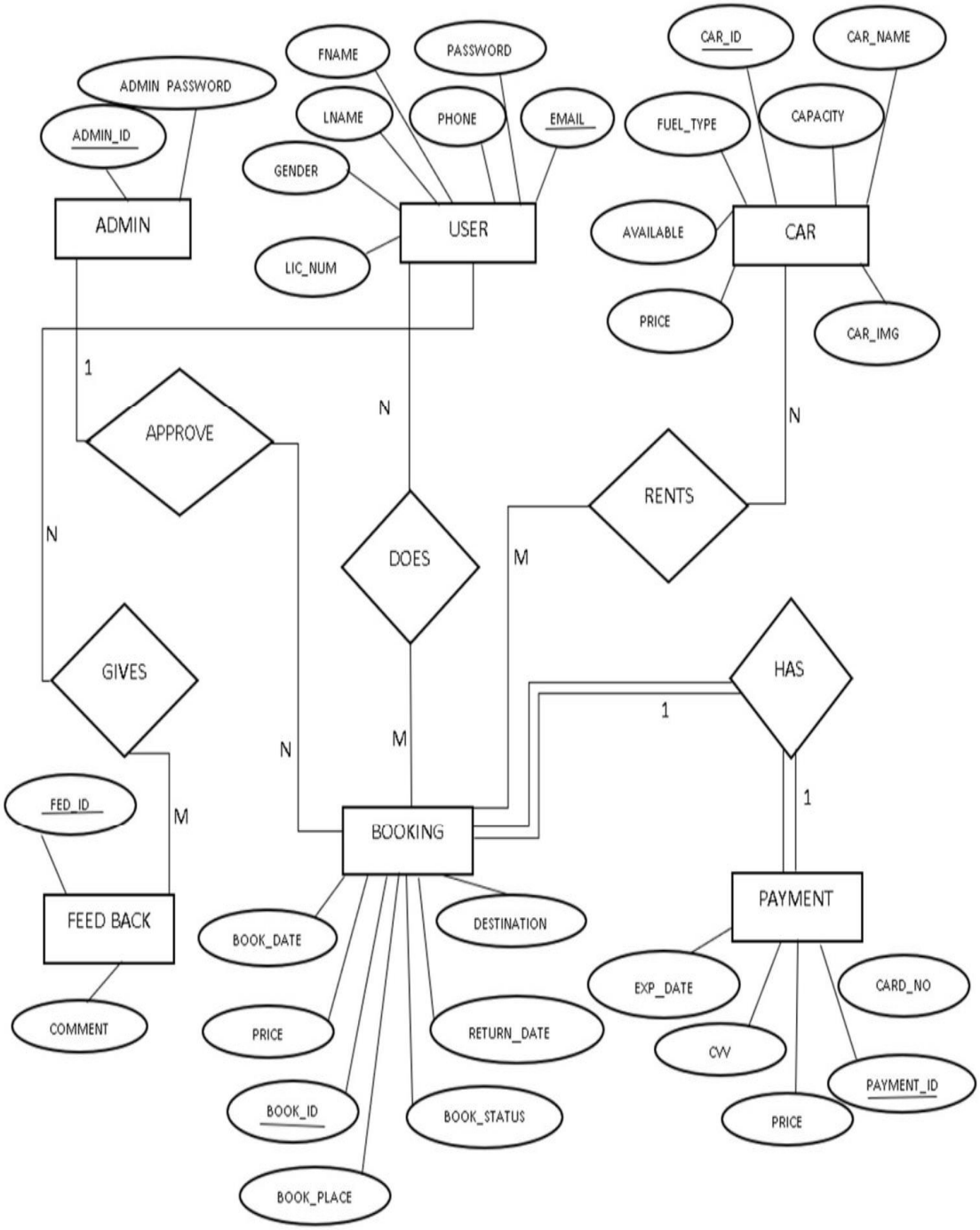
CHAPTER 5

SYSTEM DESIGN

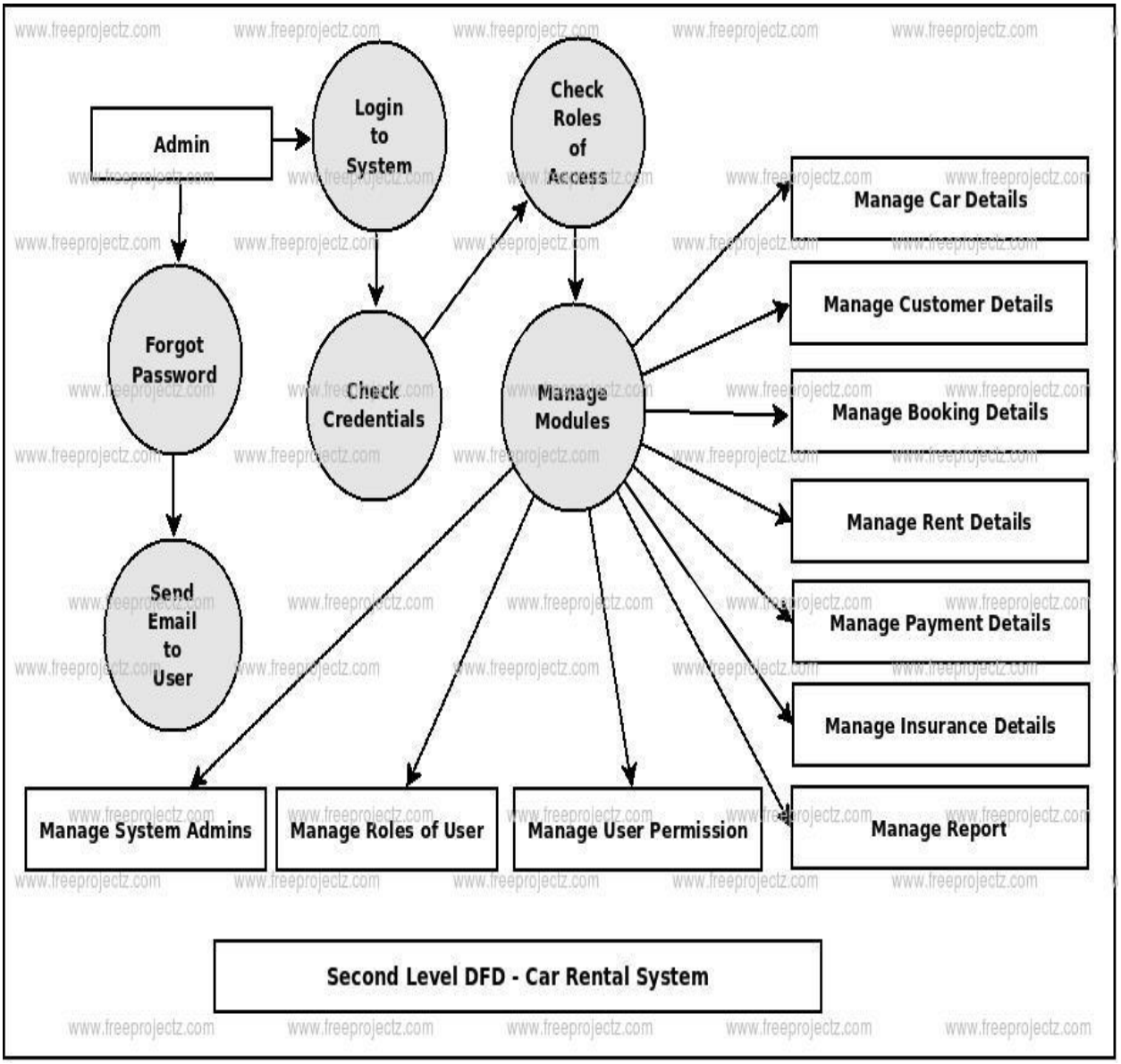
5.1 USE CASE DIAGRAM



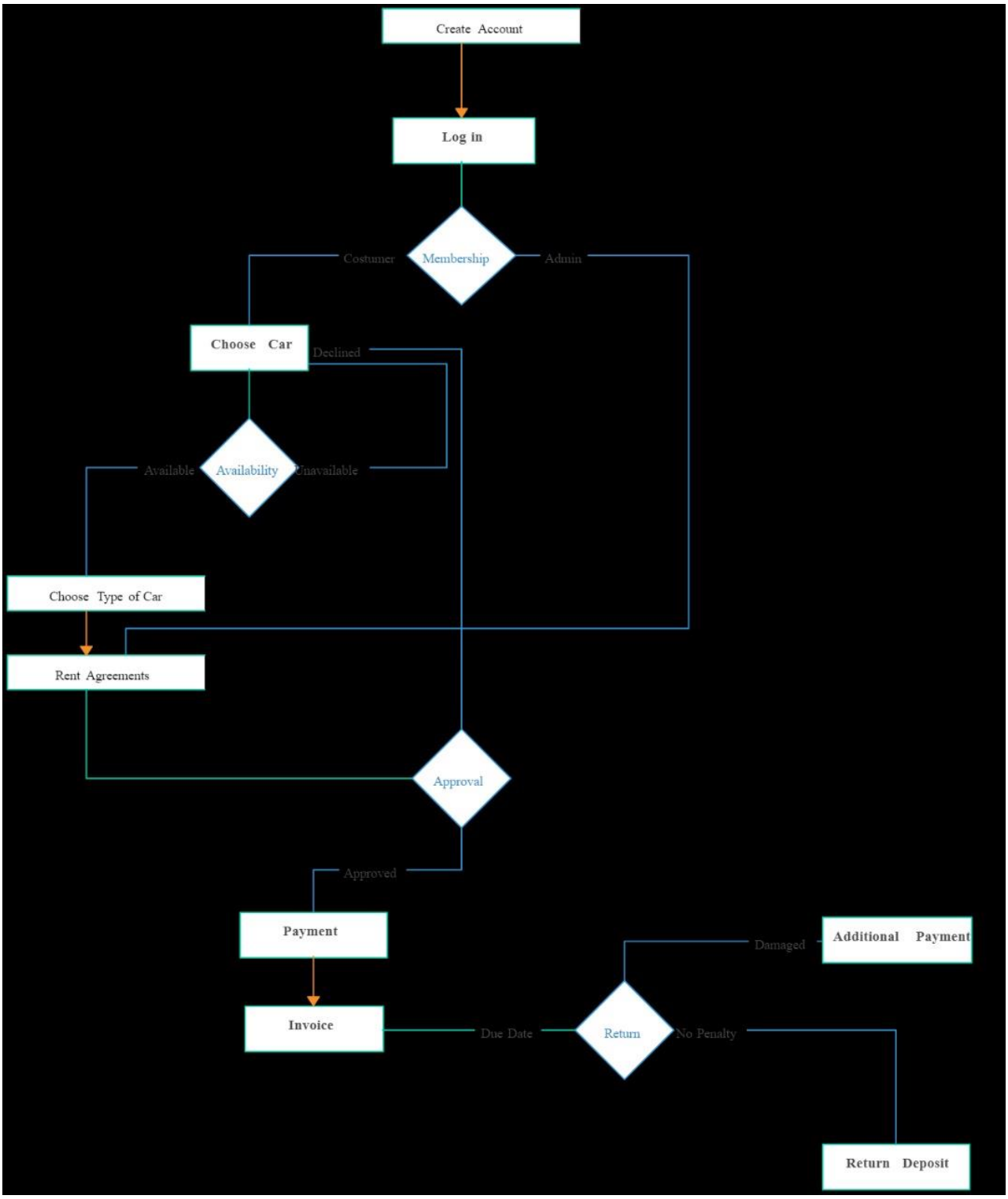
5.2 ER DIAGRAM



5.3 DATA FLOW DIAGRAM



5.4 ACTIVITY DIAGRAM



CHAPTER 6

SAMPLE CODING

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

    <title>CAR RENTAL</title>
    <script type="text/javascript">
        window.history.forward();
        function noBack() {
            window.history.forward();
        }
    </script>
    <link  rel="stylesheet" href="css/style.css">
    <script type="text/javascript">
        function preventBack() {
            window.history.forward();
        }

        setTimeout("preventBack()", 0);

        window.onunload = function () { null };
    </script>
</head>
<body>



<?php
require_once('connection.php');
    if(isset($_POST['login']))
```

```
{
   $email=$_POST['email'];
   $pass=$_POST['pass'];


   if(empty($email)|| empty($pass))
   {
      echo '<script>alert("please fill the blanks")</script>';
   }

   else{
      $query="select *from users where EMAIL='$email'";
      $res=mysqli_query($con,$query);
      if($row=mysqli_fetch_assoc($res)){
         $db_password = $row['PASSWORD'];
         if(md5($pass)  == $db_password)
         {
            header("location: cardetails.php");
            session_start();
            $_SESSION['email'] = $email;

         }
         else{
            echo '<script>alert("Enter a proper password")</script>';
         }
```

```
            }
            else{
                echo '<script>alert("enter a proper email")</script>';
            }
        }
    }
```

```
?>
    <div class="hai">
        <div class="navbar">
            <div class="icon">
                <h2 class="logo">CaRs</h2>
            </div>
            <div class="menu">
                <ul>
                    <li><a href="#">HOME</a></li>
                    <li><a href="aboutus.html">ABOUT</a></li>
                    <li><a href="#">SERVICES</a></li>

                    <li><a href="contactus.html">CONTACT</a></li>
                  <li> <button class="adminbtn"><a
href="adminlogin.php">ADMIN LOGIN</a></button></li>
                </ul>
            </div>
```

```
    </div>
    <div class="content">
        <h1>Rent Your <br><span>Dream Car</span></h1>
        <p class="par">Live the life of Luxury.<br>
            Just rent a car of your wish from our vast collection.<br>Enjoy every moment with your family<br>
             Join us to make this family vast.  </p>
        <button class="cn"><a href="register.php">JOIN US</a></button>
        <div class="form">
            <h2>Login Here</h2>
            <form method="POST">
            <input type="email" name="email" placeholder="Enter Email Here">
            <input type="password" name="pass" placeholder="Enter Password Here">
            <input class="btnn" type="submit" value="Login" name="login"></input>
            </form>
            <p class="link">Don't have an account?<br>
            <a href="register.php">Sign up</a> here</a></p>
            <!-- <p class="liw">or<br>Log in with</p>
            <div class="icon">
                    <a href="https://www.facebook.com/"><ion-icon name="logo-facebook"></ion-icon> </a>  
                <a href="https://www.instagram.com/"><ion-icon name="logo-instagram"></ion-icon> </a> 
                <a href="https://myaccount.google.com/"><ion-icon name="logo-google"></ion-icon> </a> 

            </div> -->
        </div>
```

```
        </div>
    </div>
    <script src="https://unpkg.com/ionicons@5.4.0/dist/ionicons.js"></script>
</body>
</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>ADMINISTRATOR</title>
</head>
<body>
<style>
*{
    margin: 0;
    padding: 0;

}
.hai{
    width: 100%;
    background: linear-gradient(to top, rgba(0,0,0,0)50%,
rgba(0,0,0,0)50%),url("../images/carbg2.jpg");
    background-position: center;
    background-size: cover;
    height: 109vh;
    animation: infiniteScrollBg 50s linear infinite;
}
.main{
    width: 100%;
    background: linear-gradient(to top, rgba(0,0,0,0)50%, rgba(0,0,0,0)50%);
    background-position: center;
```

```
    background-size: cover;
    height: 109vh;
    animation: infiniteScrollBg 50s linear infinite;
}
.navbar{
    width: 1200px;
    height: 75px;
    margin: auto;
}

.icon{
    width:200px;
    float: left;
    height : 70px;
}

.logo{
    color: #ff7200;
    font-size: 35px;
    font-family: Arial;
    padding-left: 20px;
    float:left;
    padding-top: 10px;

}
.menu{
    width: 400px;
    float: left;
    height: 70px;

}

ul{
    float: left;
    display: flex;
```

```
    justify-content: center;
    align-items: center;
}

ul li{
    list-style: none;
    margin-left: 62px;
    margin-top: 27px;
    font-size: 14px;

}

ul li a{
    text-decoration: none;
    color: black;
    font-family: Arial;
    font-weight: bold;
    transition: 0.4s ease-in-out;

}

.content-table{
   border-collapse: collapse;

    font-size: 0.9em;
    min-width: 400px;
    border-radius: 5px 5px 0 0;
    overflow: hidden;
    box-shadow:0 0  20px rgba(0,0,0,0.15);
    margin-left : 350px ;
    margin-top: 25px;
    width: 800px;
    height: 500px;
}
.content-table thead tr{
```

```
    background-color: orange;
    color: white;
    text-align: left;
}

.content-table th,
.content-table td{
    padding: 12px 15px;


}

.content-table tbody tr{
    border-bottom: 1px solid #dddddd;
}
.content-table tbody tr:nth-of-type(even){
    background-color: #f3f3f3;

}
.content-table tbody tr:last-of-type{
    border-bottom: 2px solid orange;
}

.content-table thead .active-row{
    font-weight:  bold;
    color: orange;
}


.header{
    margin-top: 70px;
    margin-left: 650px;
}
```

```
.nn{
    width:100px;
    /* background: #ff7200; */
    border:none;
    height: 40px;
    font-size: 18px;
    border-radius: 10px;
    cursor: pointer;
    color:white;
    transition: 0.4s ease;

}


.nn a{
    text-decoration: none;
    color: black;
    font-weight: bold;

}

.but a{
    text-decoration: none;
    color: black;
}
</style>
<?php

require_once('connection.php');
$query="select *from users";
$queryy=mysqli_query($con,$query);
$num=mysqli_num_rows($queryy);
```

```
?>
<div class="hai">
      <div class="navbar">
         <div class="icon">
            <h2 class="logo">CaRs</h2>
         </div>
         <div class="menu">
            <ul>
               <li><a href="adminvehicle.php">VEHICLE
MANAGEMENT</a></li>
               <li><a href="adminusers.php">USERS</a></li>
               <li><a href="admindash.php">FEEDBACKS</a></li>

               <li><a href="adminbook.php">BOOKING REQUEST</a></li>
              <li> <button class="nn"><a
href="index.php">LOGOUT</a></button></li>
            </ul>
         </div>


      </div>
      <div>
         <h1 class="header">USERS</h1>
         <div>
            <div>
               <table class="content-table">
            <thead>
               <tr>
                  <th>NAME</th>
                  <th>EMAIL</th>
                  <th>LICENSE NUMBER</th>
                  <th>PHONE NUMBER</th>
                  <th>GENDER</th>
                  <th>DELETE USERS</th>
               </tr>
```

```
            </thead>
            <tbody>
            <?php


            while($res=mysqli_fetch_array($queryy)){


            ?>
            <tr  class="active-row">
               <td><?php echo $res['FNAME']."  ".$res['LNAME'];?></php></td>
               <td><?php echo $res['EMAIL'];?></php></td>
               <td><?php echo $res['LIC_NUM'];?></php></td>
               <td><?php echo $res['PHONE_NUMBER'];?></php></td>
               <td><?php echo $res['GENDER'];?></php></td>
               <td><button type="submit" class="but" name="approve"><a
href="deleteuser.php?id=<?php echo $res['EMAIL']?>">DELETE
USER</a></button></td>
            </tr>
           <?php } ?>
            </tbody>
            </table>
            </div>
         </div>
      </div>
</body>
</html>
```

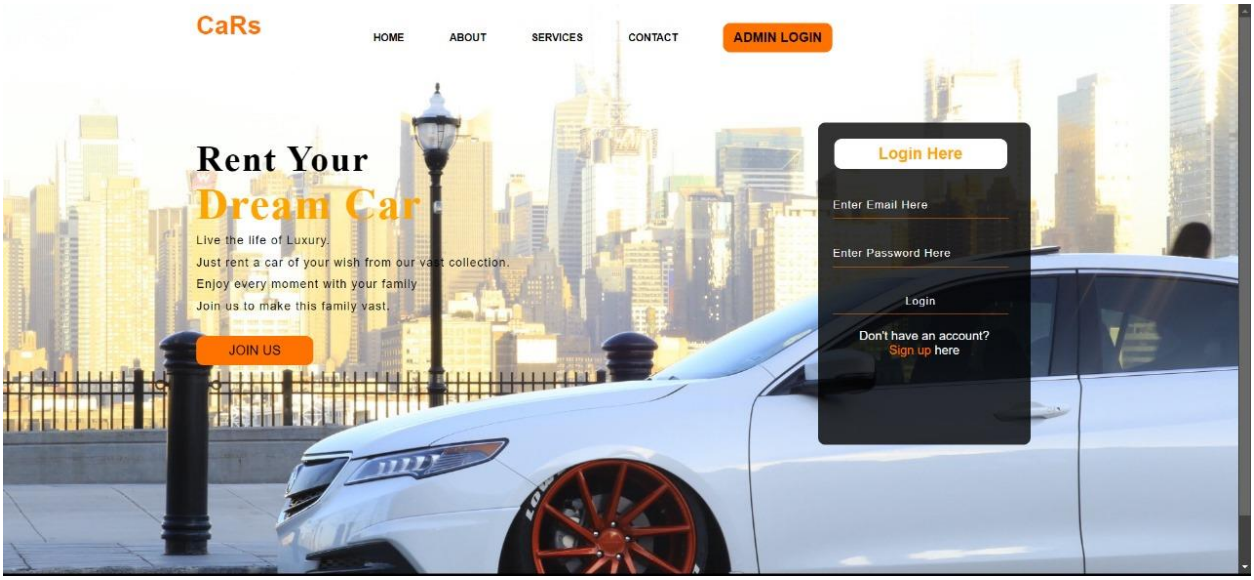
```
onst cleaveCC = new Cleave("#cardNumber", {
    creditCard: true,
    delimiter: "-",
    onCreditCardTypeChanged: function (type) {
      const cardBrand = document.getElementById("cardBrand"),
        visa = "fab fa-cc-visa",
        mastercard = "fab fa-cc-mastercard",
        amex = "fab fa-cc-amex",
        diners = "fab fa-cc-diners-club",
        jcb = "fab fa-cc-jcb",
        discover = "fab fa-cc-discover";

      switch (type) {
        case "visa":
          cardBrand.setAttribute("class", visa);
          break;
        case "mastercard":
          cardBrand.setAttribute("class", mastercard);
          break;
```

```
      case "amex":
        cardBrand.setAttribute("class", amex);
        break;
      case "diners":
        cardBrand.setAttribute("class", diners);
        break;
      case "jcb":
        cardBrand.setAttribute("class", jcb);
        break;
      case "discover":
        cardBrand.setAttribute("class", discover);
        break;
      default:
        cardBrand.setAttribute("class", "");
        break;
    }
  },
});

const cleaveDate = new Cleave("#cardExpiry", {
```

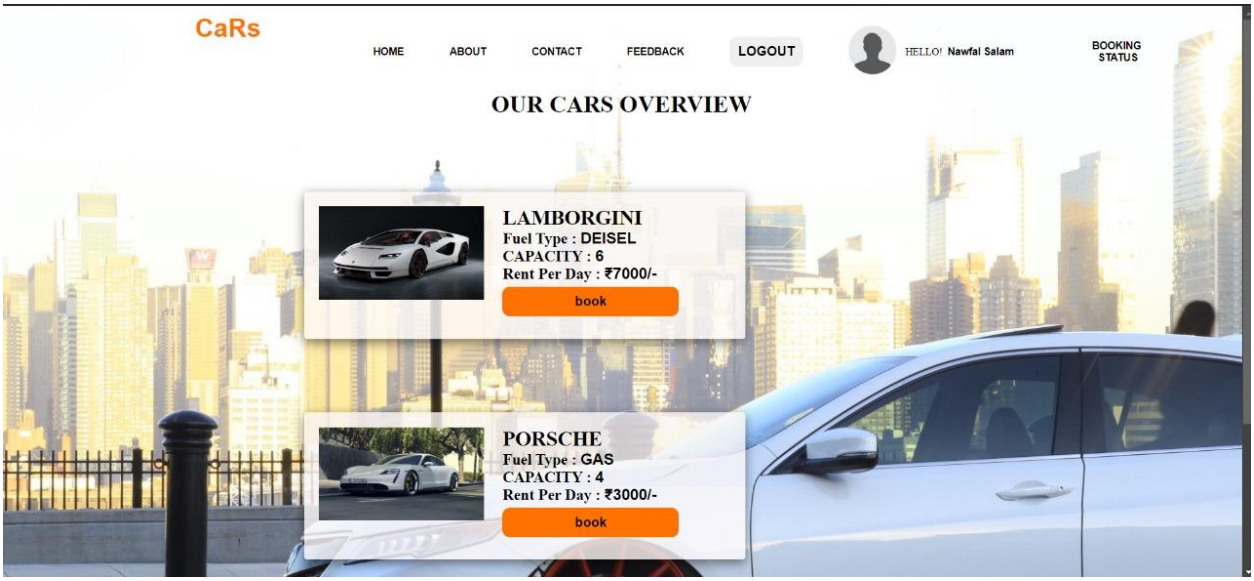
```
  date: true,
  datePattern: ["m", "y"],
});


const cleaveCCV = new Cleave("#cardCcv", {
  blocks: [3],
});
```

CHAPTER 7

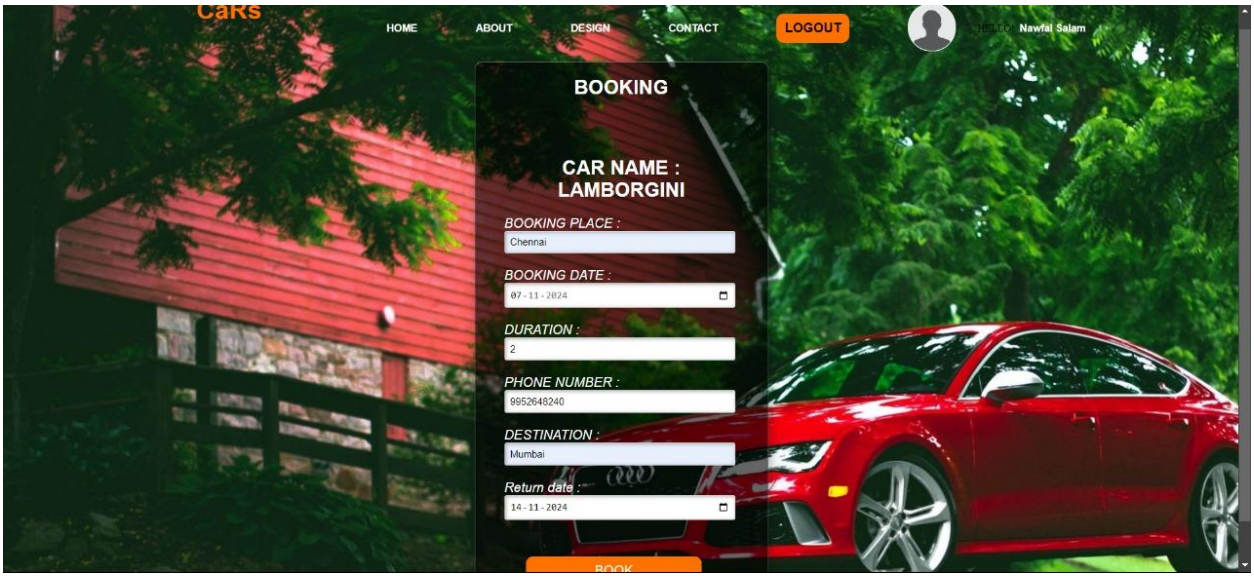
SCREENSHOTS



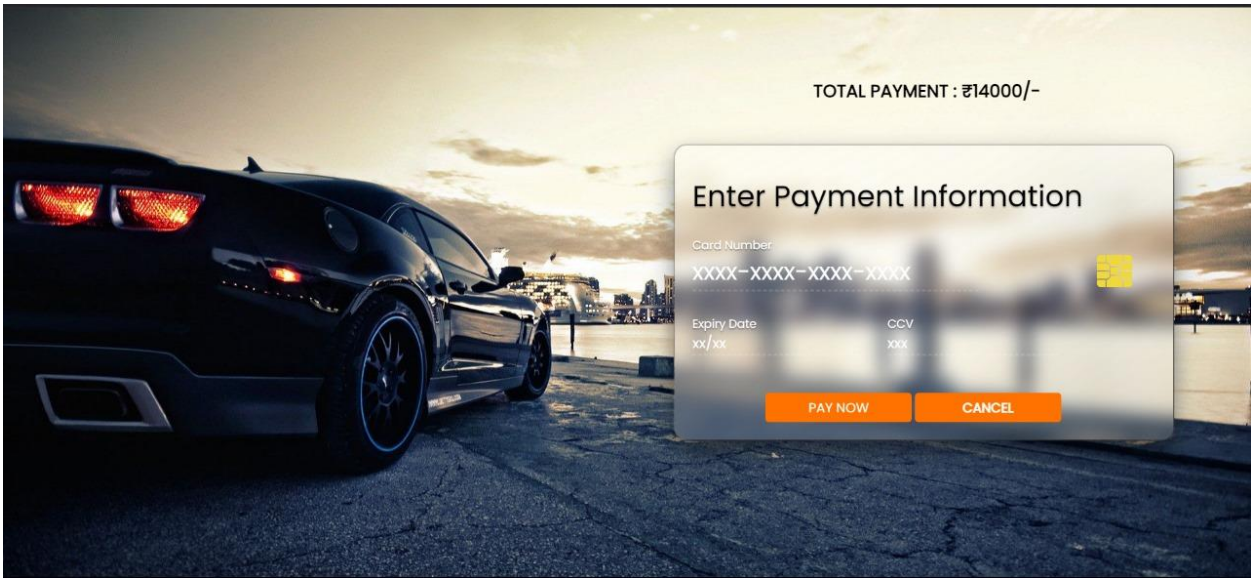
7.1 LOGIN PAGE



7.2 CATALOGUE PAGE



7.3 BOOKING PAGE



7.4 PAYMENT PAGE

CHAPTER 8
CONCLUSION

In conclusion, We offers a comprehensive and user-friendly platform for managing vehicle rentals with ease. By providing clients with a straightforward process to browse, select, and book vehicles while allowing administrators to efficiently manage inventory and pricing, the platform enhances the overall rental experience. Clients benefit from transparent rental cost calculations and a seamless checkout process, while administrators have a centralized control centre for overseeing vehicle availability and user interactions.

Beyond facilitating rentals, our secure client management system and real-time data storage ensure a smooth and reliable operation. This data-driven approach supports informed decision-making for both clients and administrators. With its scalable and modular design, it is well-prepared for future expansions, making it a valuable tool in the growing vehicle rental market

.

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[1] Thakur, A., & Dhiman, K. (2021). Chat Room Using HTML, PHP, CSS, JS, AJAX. International Research Journal of Engineering and Technology (IRJET), 08(June), 1948– 1951.https://doi.org/https://doi.org/10.6084/m9.figshare.14869167.

[2] N. Jeba; N. Harishkumar; M. Yogeshwaran; Murugan Ajith Kumar, "**Online Vehicle Rental System to Enhance Commutation". 2021 International Conference on Advancements in Electrical, Electronics, Communication, Computing and Automation (ICAECA)**