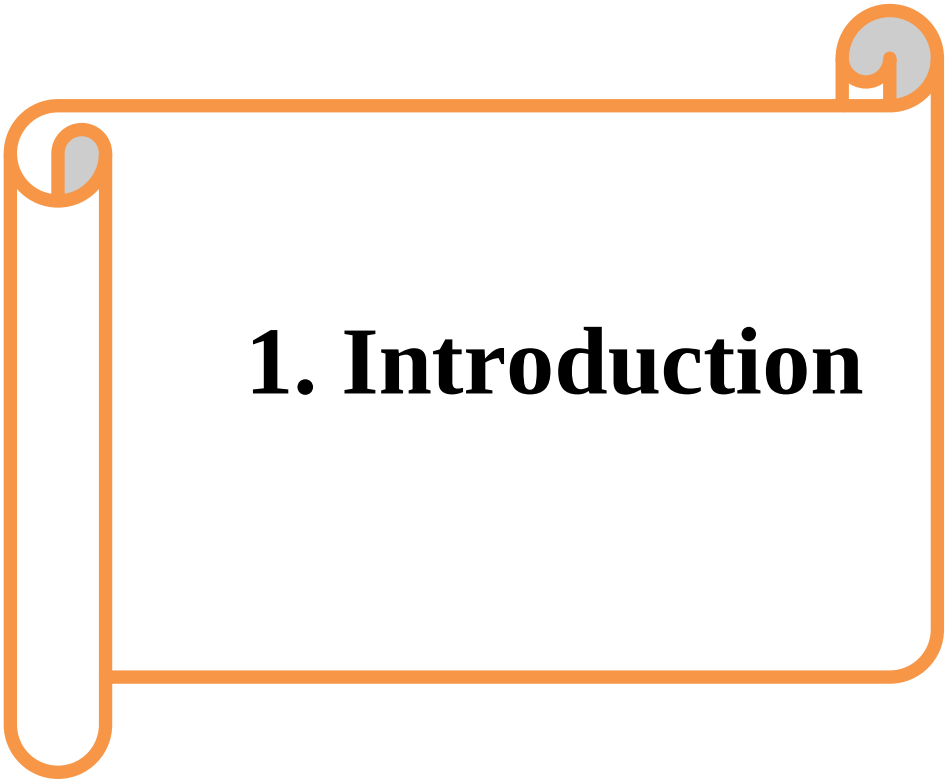
CAR

RENTAL

PROJECT

INDEX



1. Introduction

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1.1 Institute Profile:

Institute of Management and Career Courses (IMCC) is a premier Management Institute, established in 1983 by Maharashtra Education Society (MES) for providing quality education and technical expertise at the Post Graduation Level in the Fields of Computers and Management. The Institute is recognized by SPPU under Section 46 of Pune University Act, 1974 and Section 85 of Maharashtra University Act, 1994 and Approved by AICTE New Delhi to conduct MCA and MBA programmes. The Institute is located at 131, Mayur Colony, Kothrud, Pune-411038 having 30,000 sq. ft-built area & totally independent campus. IMCC is recognized as a Ph.D. Research Centre under the Faculty of Management, SPPU. IMCC has 38 years standing & it is well- known for its conducive educational atmosphere. IMCC focuses on the all-round development of its students. Thus, apart from excellence in academics, students develop their inner potential by way of active participation in co-curricular & extra-curricular activities. IMCC has developed excellent rapport with Industry by way of Guest Lectures, Seminars, Workshops, Industrial Visits & Placements. The main motto of the Institute is to in still the concepts of total personality development in the students. The emphasis is laid on 'Teacher Disciple Relationship' in place of 'Boss Subordinate' relationship

at their assignments. The preamble of IMCC ``FACTA-NON-VERBA" lucidly means that the Institute produces the new breed of professionals, who's deeds will speak and there could be no requirement of pomposity. The zooming enthusiastic, rational, and excellent external endeavors are being imbibed in the students to prove their mettle. The conducive milieu of the Institute melds the budding managers to reveal in managing flexibility, integration, change and transformation. These 'would be' professionals are channelized in such a way to 'orchestrate' and deploy business and technological management skills in a synergistic manner to grab the tangible success. The faculty members put their relentless efforts in educating the students to synthesize business management acumen and technology insights in a creative manner.

1.2Abstract:

Nowadays, there is Online Car Rental which gives much benefit to user. A rental service is a service which customers arrive to request the hire of a rental unit. It is more convenient than carrying the cost of owning and maintain the unit. A car rental is a company that rent automobiles for short period of time for a fee for few hours or a few days or a week.

It helps to book the cars or vehicles online rather than using the traditional manual system of vehicle reservation. This eliminates the risk of erroneous booking and reduce overall lead time and ensures growth in customer satisfaction. They can book any car according to their brands and price.

The Car Rental System is being developed for customers so that they can book their vehicles from any part of the world. This application takes information from the customers through filling their details. A customer being registered in the website has the facility to book a vehicle which he requires. It is an online system through which customers can view available cars, register and book car. We developed this project to book a car on rent at the fare charges. In present system all booking work done manually and it takes very hard work to maintain the information of booking and cars. if you want to find which vehicle is available for booking then it takes a lot of time. It only makes the process more difficult and hard. This aim of the project is to automate the work performed in the car rental management

system like records of cab, cabs available for booking, rental charges for cars, store records of the customer. CAR_HUB is a car booking website that provides a complete solution to all your day-to-day car booking office running needs. This system helps you to keep the information of customer online. You can check your customer information any time by using this system. Online car rental management system is a unique and innovative product. Based on this information you can take decision regarding your business development.

1.3Existing System & Need for System:

Existing System:

The existing manual car rental system relies on paperwork or Excel sheets to manage bookings and vehicle registrations, posing several limitations and challenges. Users are required to physically visit the rental office to book a car, often without the opportunity to inspect the vehicle beforehand, leading to potential discomfort during travel. Additionally, the system lacks a direct feedback mechanism for users to communicate with administrators, resulting in fluctuating service quality.

The absence of automation in the existing system leads to inefficiencies and errors. Maintaining records using manual methods such as Excel sheets or paper books is laborious and prone to mistakes. This lack of automation results in slow processing times and adds complexity to the rental process, diminishing overall user experience.

Key shortcomings of the existing system include:

1. Lack of Vehicle Inspection: Users cannot visually inspect vehicles before booking, potentially compromising travel comfort and satisfaction.

2. Absence of Feedback Mechanism: Users cannot provide direct feedback to administrators, leading to inconsistent service quality.

3. Manual Record-Keeping: Maintenance of records using Excel sheets or paper books is time-consuming and error-prone, hindering operational efficiency.

4. Slow Processing Times: The absence of automation leads to slow processing of bookings, adding to user inconvenience and frustration.

Need For System:

The need for a digital car rental system arises from the limitations and challenges associated with the existing manual rental process. The current system, which relies on paperwork or Excel sheets for managing bookings and vehicle registrations, presents several deficiencies that undermine user experience and operational efficiency.

1. Enhanced User Experience: A digital system would address this by providing features such as vehicle previews, enabling users to make informed decisions and enhance their travel comfort.

2. Improved Feedback Mechanism: In the current system, users have no direct means of providing feedback. A digital platform would facilitate a seamless feedback mechanism, enabling users to communicate their experiences directly, thereby fostering continuous improvement in service delivery.

3. Streamlined Operations: Manual record-keeping using Excel sheets or paper books is laborious and error-prone, resulting in

slow processing times and operational inefficiencies. Transitioning to a digital system would automate record-keeping processes, reducing the likelihood of errors and improving overall operational efficiency.

4. Modernization and Adaptation: In today's digital age, customers expect convenience and efficiency in every service they use. By adopting a digital car rental system, rental agencies can modernize their operations, adapt to evolving customer preferences, and stay competitive in the market.

5. Scalability and Growth: A digital system provides scalability, allowing rental agencies to handle a larger volume of bookings and transactions efficiently. As the business grows, a digital platform can easily accommodate increased demand and expansion into new markets.

In summary, the transition to a digital car rental system is essential to address the shortcomings of the existing manual process and meet the evolving needs and expectations of customers. By enhancing user experience, improving operational efficiency, and facilitating continuous improvement, a digital system enables rental agencies to remain competitive and thrive in the modern marketplace.

1.4 Scope of the system:

In real world, not every person can afford their own personal car. Getting a rental car helps people get around despite the fact they do not have access to their own personal vehicle or don't own a vehicle at all. The individual who needs a car must contact a rental car company and contract out for a vehicle. This system increases customer retention and simplify vehicle and staff management.

The scope of this system is as follows:

- To produce a web-based system that allow customer to register and reserve car online and for the company to effectively manage their car rental business.
- Web-based platform means that the system will be available for access 24/7 except when there is a temporary server issue which is expected to be minimal.
- Car rental industry : This includes study on how the car rental business is being done, process involved and opportunity that exist for improvement..
- The scope of the Customer Web Portal is to rent vehicles to customers online in the absence of an employee.
- The scope of the system is to provide a clear and easy to use layout for employees and customers to follow along with as they work out a rental.
- The system will have two levels of access: Admin , Customer.

1.5OperatingEnvironment-HardwareandSoftware:

Hardware: A Desktop with minimum windows version windows10

Software: Product is developed using PHP, HTML, CSS, Javascript .

Php

Hypertext Preprocessor (or simply PHP) is a server-side scripting language designed for Web development, but also used as a general-purpose programming language. PHP is a server-side scripting language designed for web development but also used as a general-purpose programming language. Originally created by Rasmus Lerdorf in 1995, the reference implementation of PHP is now produced by The PHP Group. While PHP originally stood for Personal Home Page, it now stands for PHP: Hyper Text Preprocess .PHP code is interpreted by a web server with a PHP processor module, which generates the resulting web page PHP commands can be embedded directly into an HTML source document rather than calling an external file to process data. It has also evolved to include a command-line interface capability and can be used in standalone graphical applications. PHP is free software released under the PHP License. PHP can be deployed on most web servers and also as a standalone shell on almost every operating system and platform, free of charge.

Xampp

XAMPP is a free and open source cross-platform web server solution stack package developed by Apache Friends, consisting mainly of the Apache HTTP Server, MariaDB database, and interpreters for scripts written in the PHP and Perl programming languages. XAMPP stands for Cross-Platform (X), Apache (A), MariaDB (M), PHP (P) and Perl (P). It is a simple, lightweight Apache distribution that makes it extremely easy for developers to create a local web server for testing and deployment purposes. Everything needed to set up a web server – server application (Apache). XAMPP is also cross-platform, which means it works equally well on 5 Linux, Mac and Windows. Since most actual web server deployments use the same components as XAMPP, it makes transitioning from a local test server to a live server extremely easy as well.

HTML

Hypertext Markup Language (HTML) is the standard markup language for creating web pages and web applications. With Cascading Style Sheets (CSS) and JavaScript, it forms a triad of cornerstone technologies for the World Wide Web. [4] Web browsers receive HTML documents from a web server or from local storage and render the documents into multimedia web pages. HTML describes the structure of a web page semantically

and originally included cues for the appearance of the document. HTML elements are the building blocks of HTML pages. With HTML constructs, images and other objects such as interactive forms may be embedded into the rendered page. HTML provides a means to create structured documents by denoting structural semantics for text such as headings, paragraphs, lists, links, quotes and other items.

CSS

Cascading Style Sheets (CSS) is a style sheet language used for describing the presentation of a document written in a markup language like HTML. CSS is a cornerstone technology of the World Wide Web, alongside HTML and JavaScript. CSS is designed to enable the separation of presentation and content, including layout, colors, and fonts. This separation can improve content accessibility, provide more flexibility and control in the specification of presentation characteristics, enable multiple web pages to share formatting by specifying the relevant CSS in a separate css file, and reduce complexity and repetition in the structural content.

JavaScript

JavaScript(JS) is a dynamic computer programming language. It is most commonly used as part of web browsers, whose implementations allow client side scripts to interact with the user, control the browser, communicate asynchronously, and alter the document content that is displayed. It is also being used in server-side programming, game development and the creation of desktop and mobile applications. JavaScript is a prototype-based scripting language with dynamic typing and has first-class functions. The key design principles within JavaScript are taken from the Self and Scheme programming languages. It is a multiparadigm language, supporting object-oriented, imperative, and functional programming styles.

Apache Web Server

In this project apache server is used to parse and execute PHP pages, before deploying websites on the server, the website should be tested at the developer side to get a feel of how the website will work on actual server. Therefore apache server is like a local server on the developer side, apache server should be informed about the environment on which it should work. In our project apache server is configured to work with PHP, in this way all the PHP pages are parsed and executed by the server. When apache is installed on the system, then it services is controlled by apache service monitor.

1.6 Brief Description of Technology Used:

1.6.1 **Operating System:** Windows10

1.6.2 **IDE used:** Visual Studio Code

- Visual Studio Code is a free coding editor that helps you start coding quickly. Use it to code in any programming language, without switching editors. Visual Studio Code has support for many languages, including Python, Java, C++, JavaScript, and more..
- As you code, Visual Studio Code gives you suggestions to complete lines of code and quick fixes for common mistakes. You can also use the debugger in VS Code to step through each line of code and understand what is happening.
- Use the built-in source control to save your work over time so

you don't lose progress.

- Visual Studio Code highlights keywords in your code in different colors to help you easily identify coding patterns and learn faster. You can also take advantage of features like IntelliSense and Peek Definition, which help you understand how functions can be used, and how they relate to one another.
- Enable additional languages, themes, debuggers, commands, and more. VS Code's growing community shares their secret sauce to improve your workflow.

1.6.3Database: SQLServer PhpMyAdmin

PHPMyAdmin is a free and open-source web-based application written in PHP that provides a graphical interface for managing MySQL and MariaDB databases. It allows users to perform various database tasks such as creating, modifying, and deleting databases, tables, fields, and rows; executing SQL queries; importing and exporting data; and managing user permissions. PHPMyAdmin is widely used by web developers and administrators to interact with MySQL/MariaDB databases in a convenient and user-friendly manner through a web browser.

2.1 Study of Similar Systems

In my research, I've looked deeply into systems like the ones used in car rental businesses. These systems help manage important documents, like rental agreements and vehicle records. I've studied how well different document management systems work, comparing their features and benefits. By doing this, I hope to give a clearer picture of how these systems can make renting cars smoother for both the rental company and the customers. Car rental companies often face challenges in organizing and accessing critical documents efficiently. By studying similar systems in other industries, valuable lessons can be learned about best practices and innovative solutions that could be adapted to suit the unique needs of car rental businesses. Additionally, examining real-life examples of document management system implementations provides practical insights into their potential benefits and challenges.

Ultimately, the goal of this research is to provide practical recommendations and guidance for car rental businesses seeking to improve their document management processes. By choosing the right document management system and implementing it effectively, rental companies can boost their operational efficiency, reduce administrative burdens, and ultimately enhance customer satisfaction. Through a comprehensive analysis and exploration of available options, this study aims to empower car rental businesses to make informed decisions that drive success in an increasingly competitive world.

2.2 Feasibility Study:

A feasibility study is an analysis that considers all of a project's relevant factors including economic, technical, legal, and scheduling considerations to certain the likelihood of completing the project successfully.

Operational Feasibility:

Operational feasibility is all about problems that may arise during operations. There are two aspects related with this issue:

- What is the probability that the solution developed may not be put to use or may not work?
- What is the inclination of the management and end users towards the solution? Though, there is very least possibility of management, there is a significant probability that the end users may not be interested due to lack of training, insight etc.

Technical Feasibility:

Technical feasibility is concerned with the availability of hardware and software required for the development of the system, to see compatibility and maturity of the technology proposed to be used. After the study we came to conclusion that we proceed further with the tools and development environment chosen by us. This was important in our case as we were working on two various phases of the department that will need to be integrated in future .

2.3 Objectives of Proposed System

- To produce a web-based system that allow customer to register and reserve car online and for the company to effectively manage their car rental business.
- To ease customer's task whenever they need to rent a car.
- As all the system is computerized, there is no need to fill any application form for renting purpose. So, the paperwork will be very less.
- To make sure a user gets his desire car as early as possible. The car rental system will provide a faster response to complete the process.
- General customers as well as the staff will be able to use the system effectively**.**
- The system will have two levels of access :

- Admin
- Customer

By achieving these objectives, the proposed car rental system aims to optimize operational efficiency, improve customer satisfaction, and position the rental agency for long-term success in a competitive market.

2.4 Users of System

Admin Module :

Login – This module is used for admin login.

Dashboard – Admin dashboard related add cars, manage bookings.

Add Cars- Admin can add and manage cars (add, edit and delete)

Approve Bookings- (View)

Admin Profile

Access log- admin can see registered user details

Logout

User Module :

User login : This module is used for user login.

User Profile – User can see own profile after login

Forgot Password – Allow user to get new password by sending link on registered email.

User can request to update password

Booking details : user can see own booking details

Access log : User can see own login access log

Logout

3. Analysis and Design

3.1 System Requirements (Functional and Non-Functional requirements)

Functional Requirements:

These are statements of services the system should provide, how the system should react to particular inputs and how the system should behave in particular situations. In some cases, the functional requirements may also explicitly state what the system should not do. The functional requirements for a system describe what the system should do. These requirements depend on the type of software being developed, the expected users of the software and the general approach taken by the organization when writing requirements. When expressed as user requirements, the requirements are usually described abstractly. However, functional system requirements describe the system function in detail, its inputs and outputs, exceptions, and so on. Functional requirements for a software system may be expressed in several ways.

The functional requirements of CAR RENTAL SYSTEM is as follow:

Register Module:

- The user needs to provide their first name, last name, email, license number, phone number, password, confirm password, gender for registration.
- These details will be stored in database.

Login Module:

- For login user will input their email and password .
- Admin will provide their admin id and password which will compared with a database content.

Booking Module:

- User can view the list of cars. The booking details of cars are provided by the admin.
- User can select their preferred car and book for the same.

Payment Module:

- User should able to make payment by filling card number, expiry date and CVV .
- After payment user will get the payment successful popup window.

Logout Module:

- The system should allow user to logout .
- The system should also allow admin to logout.

Hardware Requirements

- Processor : Intel i3/i5/1.8GHz machine or above
- Primary memory : 4 GB RAM or above.
- Hard disk drive : 1 TB or greater.

Software Requirements

- Operating System : Windows 7 or higher
- Front End : HTML5,CSS3,JavaScript
- Back End : PHP, SQL
- Frame work : Bootstrap
- Software : Visual Studio Code, XAMPP

Non-Functional Requirements:

Non-functional requirements are requirements that are not directly concerned with the specific functions delivered by the system. They may relate to emergent system properties such as reliability, response time and store occupancy. Alternatively, they may define constraints on the system such as the capabilities of I/O devices and the data representations used in system interfaces. The plan for implementing functional requirements is detailed in the system design. The plan for implementing non-functional requirements is detailed in the system architecture. Non-functional requirements are often called qualities of a system. Other terms for non-functional requirements are "constraints", "quality attributes", "quality goals", "quality of service requirements" and "non-behavioral requirements". Qualities, that are non-functional requirements, can be divided into two main categories: Execution qualities, such as security and usability, which are observable at run time.

1. **Security:**

- The system should provide a high level of security and integrity of the data held by the system , only authorized personnel of the company can gain access to the company’s secured page on the system.
- System provides security for the admin by allowing them to enter into the account with their respective ID and password.

- A user can only enter to their account by using their email and password. Only admin have privileges to update database contents which are used by the user..

2. Performance:

- The system should have high performance rate when executing user's input and should be able to provide feedback or response within a short time span usually 50 seconds for highly complicated task and 20 to 25 seconds for less complicated task.
- The system provides user friendly interface, any common people with little knowledge can use the system.
- System is robust, reliable and fast, provides more efficiency.

3. Reliability :

- It is the probability and percentage of the system performing without any failure for a specific number of uses or amount of time.
- Car rental system provides reliable interface as it provides data security and data safety.
- User can rely on the details present in the system, since it is provided by the admin.

4. **Consistency:**

- The car rental system provides consistency services, by retaining the data present in the database.
- The user gets the details that are only provided by the admin, thus achieving correctness of data in the database.

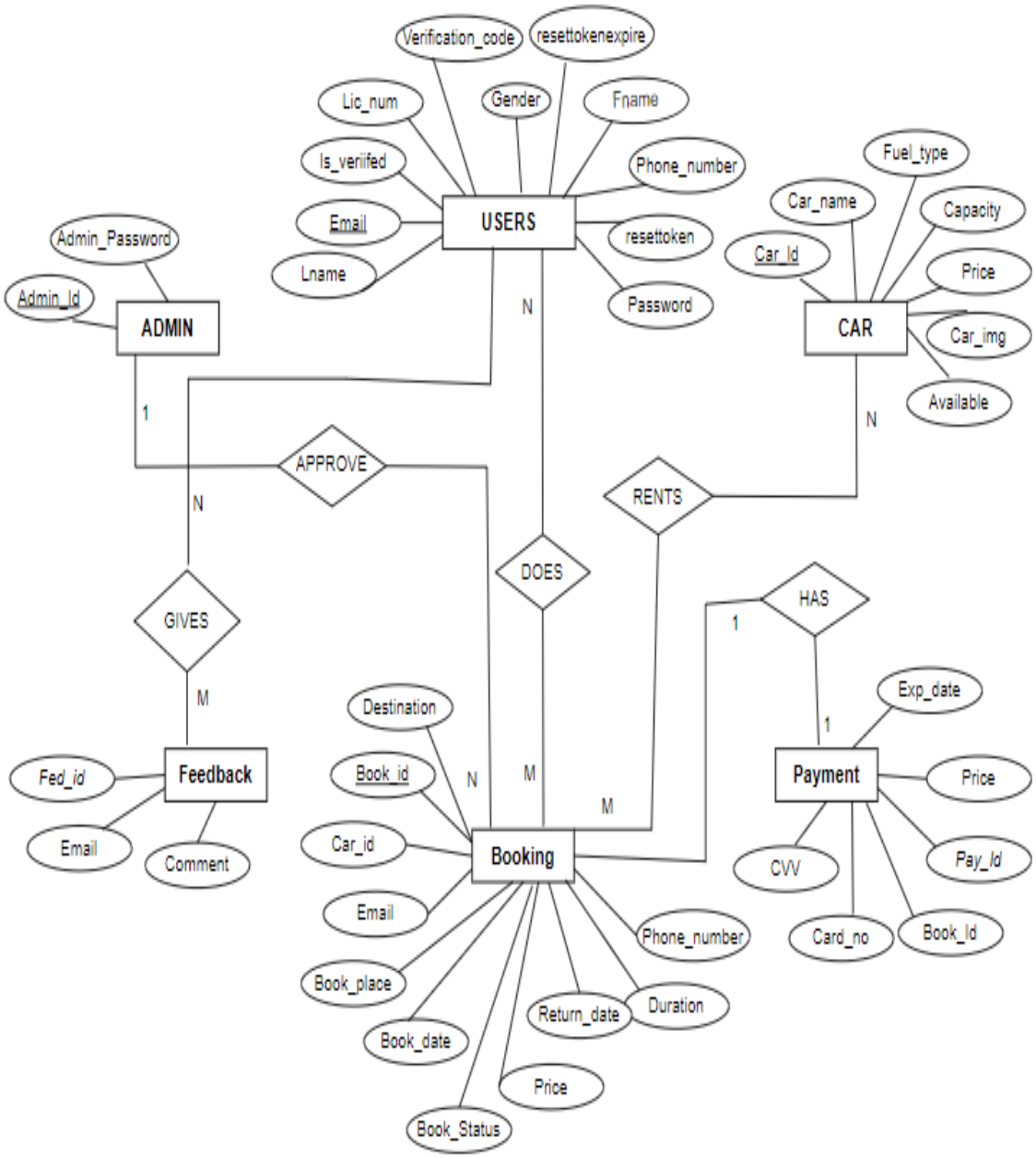
5. **Safety requirements :**

- Database backup will be taken once in week without hampering the system's execution.
- 100% user data confidentiality will be maintained.

6. **Software Quality Attributes :**

- Availability: The products and services listed on the system must be available.
- Correctness: The information which is provided by the system must be correct.
- Maintainability: Thesystem should maintain the accounts of support staff and all the data on the system.
- Usability: The system should be easy to use across all the platforms by the users.

3.2 Entity Relationship Diagram



3.3 Table Structure :

Users:

Sr.no	Field Name	Datatype	Size	Constraint
1	FNAME	varchar	255	Not Null
2	LNAME	varchar	255	Not Null
3	EMAIL	varchar	255	Primary key
4	LIC_NUM	varchar	255	Not Null
5	PHONE_NUMBER	Bigint	11	Not Null
6	PASSWORD	varchar	255	Not Null
7	GENDER	varchar	255	Not Null
8	verification_code	varchar	255	Not Null
9	is_verified	Int	10	Not Null
10	Resettoken	varchar	255	Null
11	Resettokenexpire	Date		Null

Admin :

Sr.no	Field Name	Datatype	Size	Constraint
1	ADMIN_ID	varchar	255	Primary key
2	ADMIN_PASSWORD	varchar	255	Not Null

Feedback :

Sr.no	Field Name	Datatype	Size	Constraint
1	FED_ID	int	11	Primary key
2	EMAIL	varchar	255	Not Null
3	COMMENT	text		Not Null

Booking :

Sr.no	Field Name	Datatype	Size	Constraint
1	BOOK_ID	Int	11	Primary key
2	CAR_ID	int	11	Foreign key
3	EMAIL	Varchar	255	Not Null
4	BOOK_PLACE	varchar	255	Not Null
5	BOOK_DATE	date		Not Null
6	DURATION	int	11	Not Null
7	PHONE_NUMBER	Bigint	20	Not Null
8	DESTINATION	varchar	255	Not Null
9	RETURN_DATE	date		Not Null
10	PRICE	int	11	Not Null
11	BOOK_STATUS	varchar	255	Not Null

Cars :

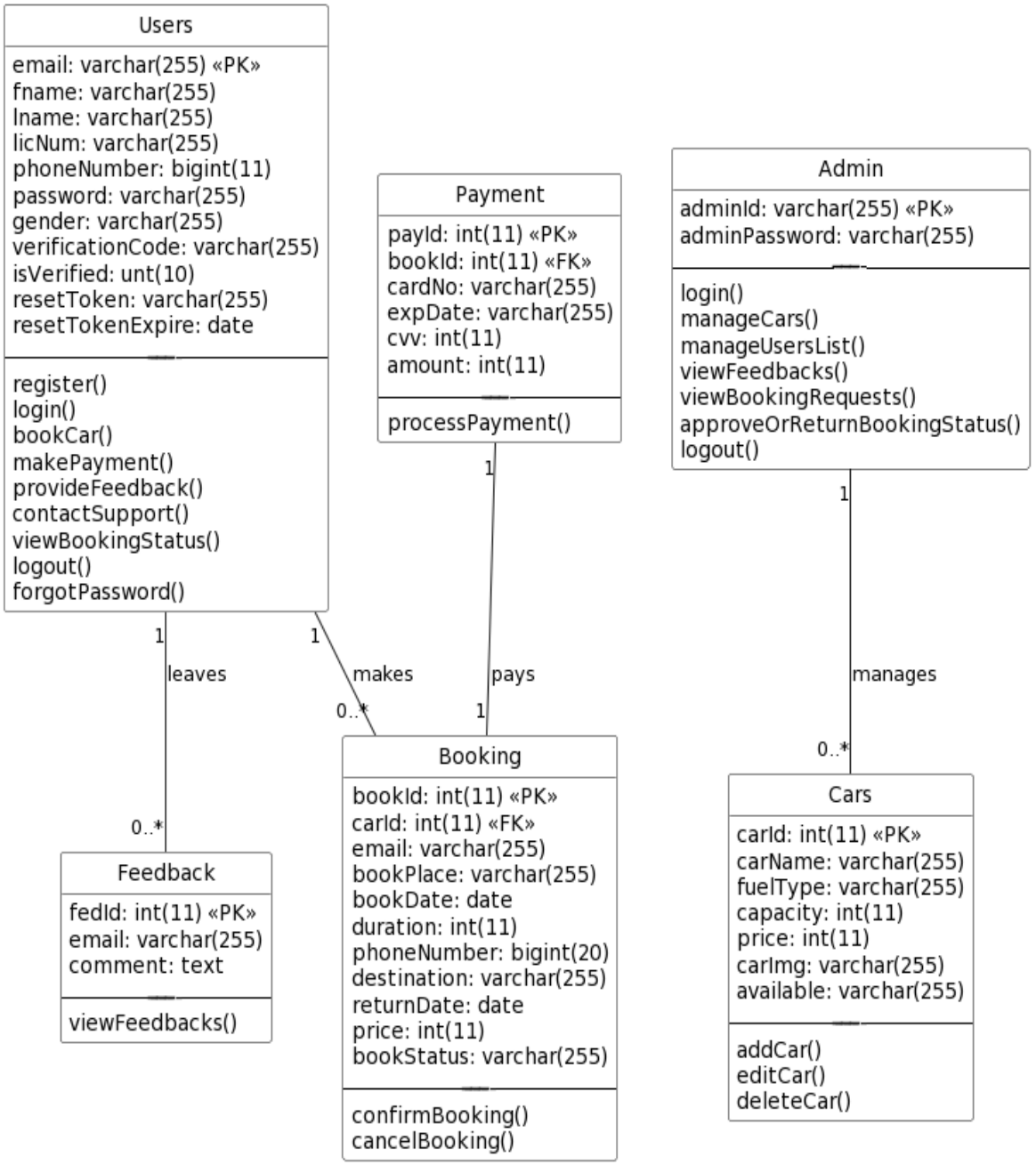
Sr.no	Field Name	Datatype	Size	Constraint
1	CAR_ID	Int	11	Primary key
2	CAR_NAME	Varchar	255	Not Null
3	FUEL_TYPE	Varchar	255	Not Null
4	CAPACITY	Int	11	Not Null
5	PRICE	int	11	Not Null
6	CAR_IMG	Varchar	255	Not Null
7	AVAILABLE	Varchar	255	Not Null

Payment :

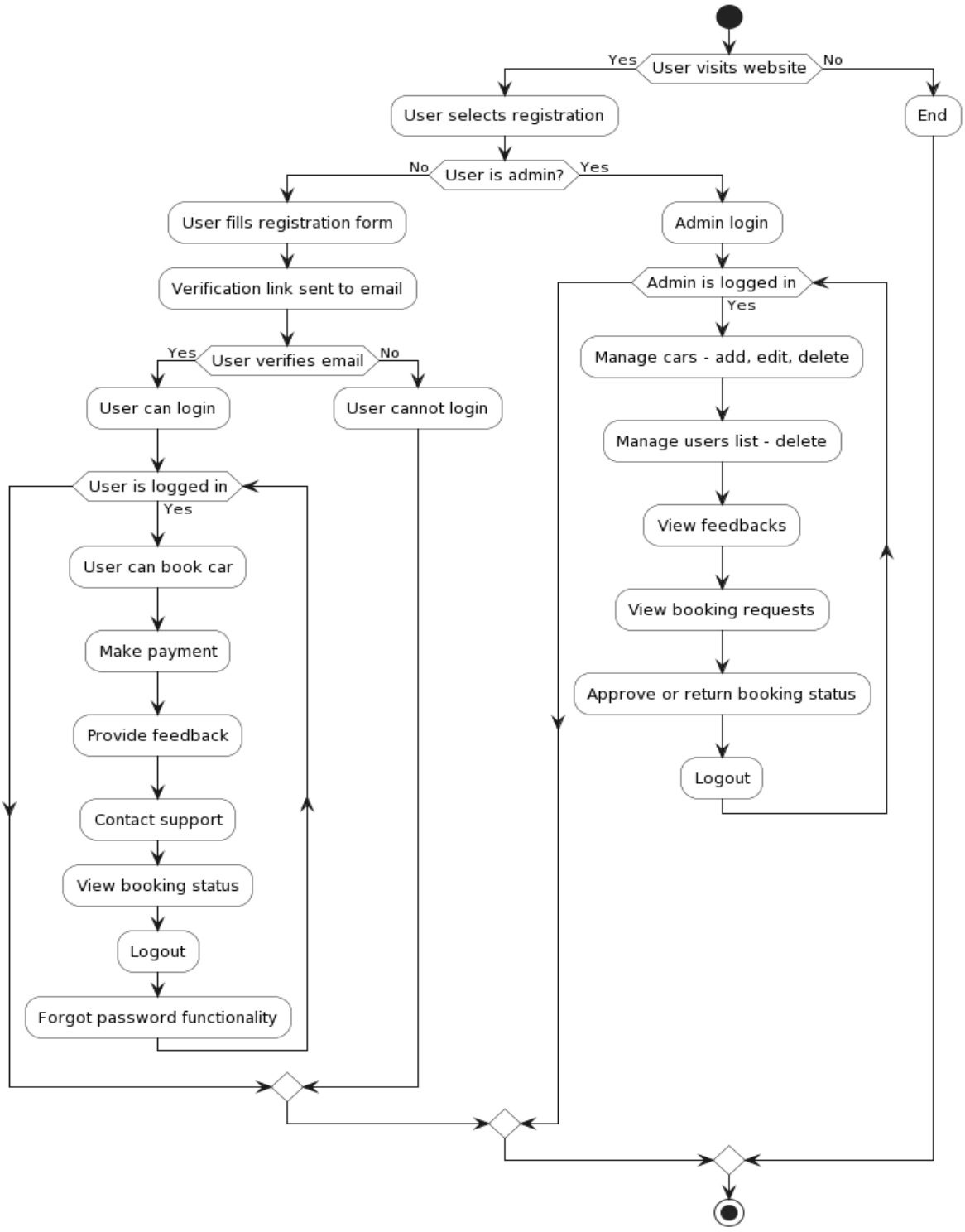
Sr.no	Field Name	Datatype	Size	Constraint
1	PAY_ID	Int	11	Primary key
2	BOOK_ID	Int	11	Foreign key
3	CARD_NO	Varchar	255	Not Null
4	EXP_DATE	Varchar	255	Not Null
5	CVV	int	11	Not Null
6	PRICE	Int	11	Not Null

3.4 Use Case Diagram :

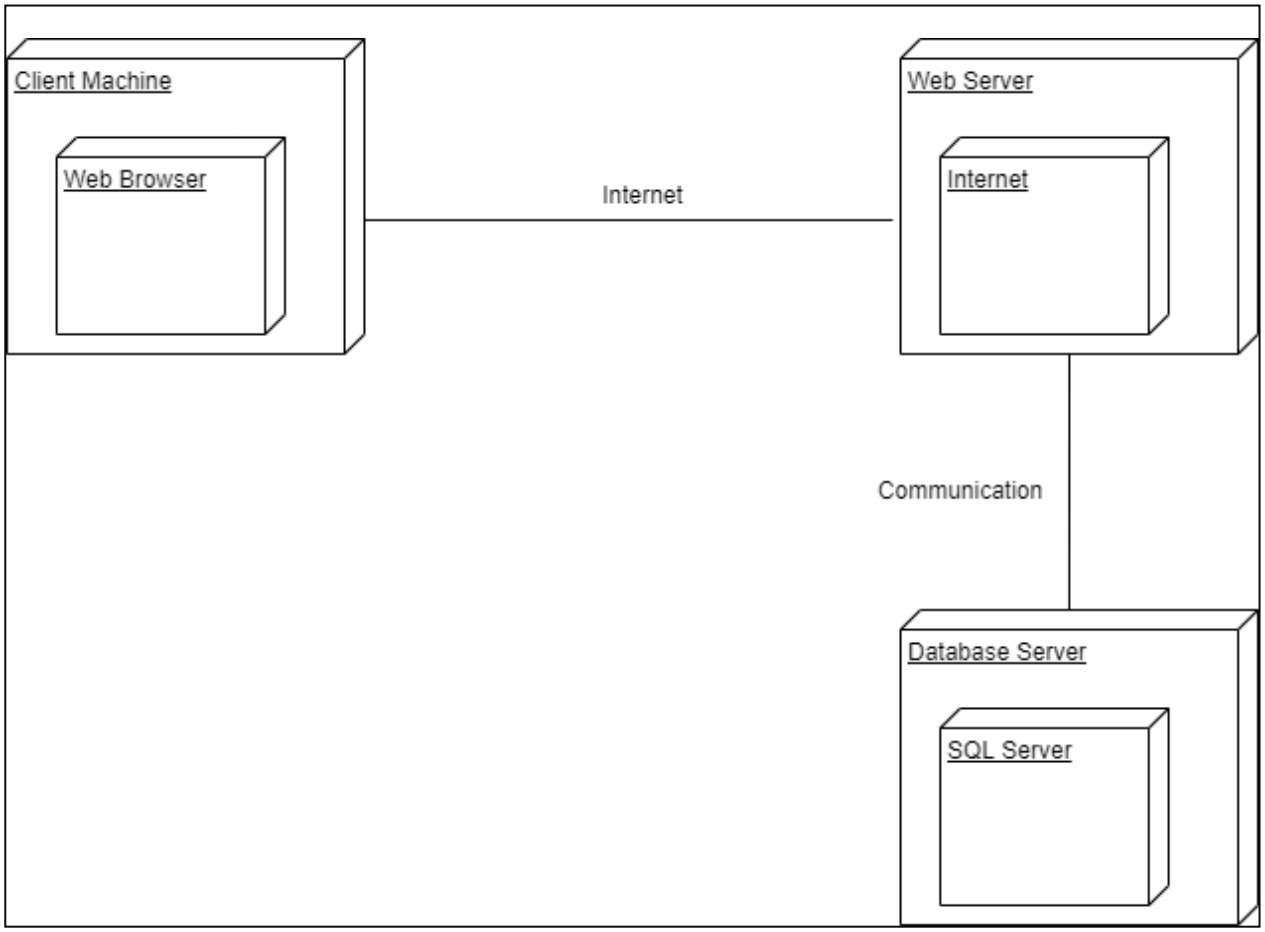
3.5 Class Diagram:



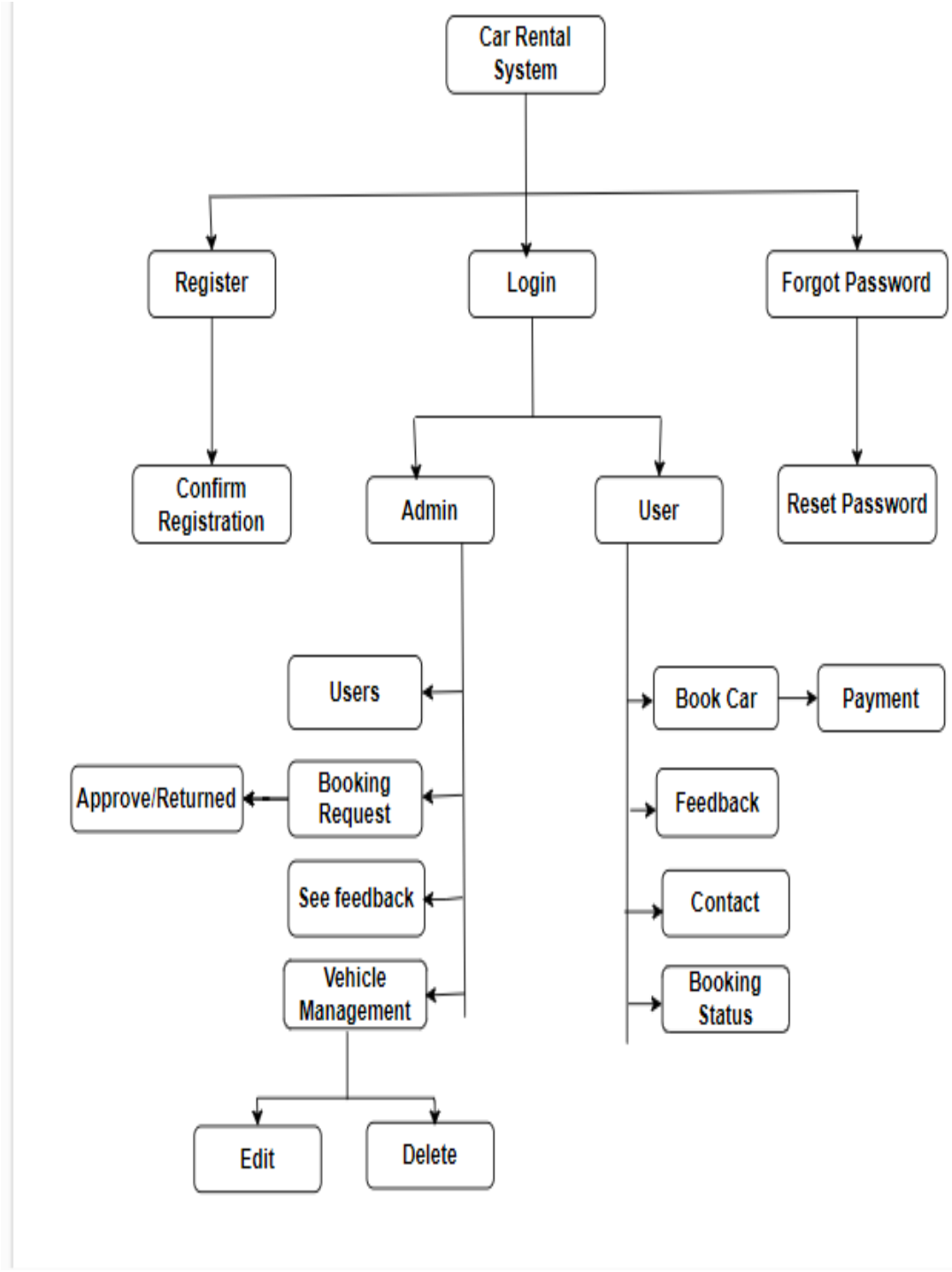
3.6 Activity Diagram :



3.7 Deployment Diagram:



3.8 Module Hierarchy Diagram:

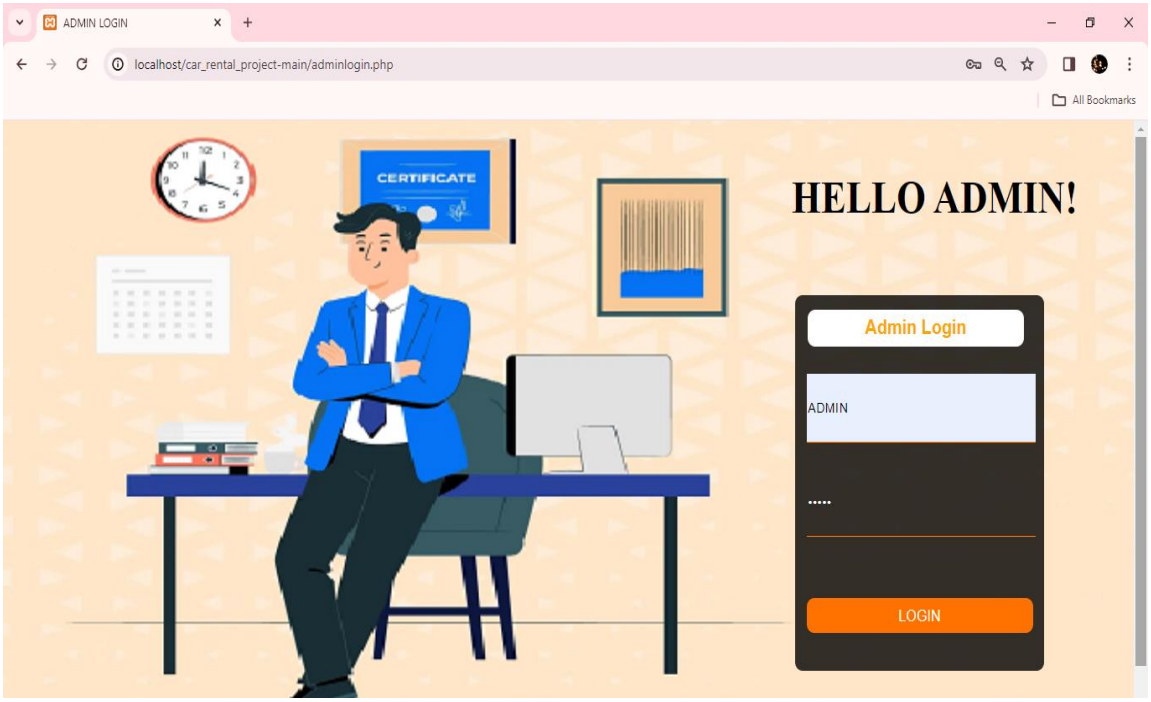


3.9 Sample Input Output Screen :

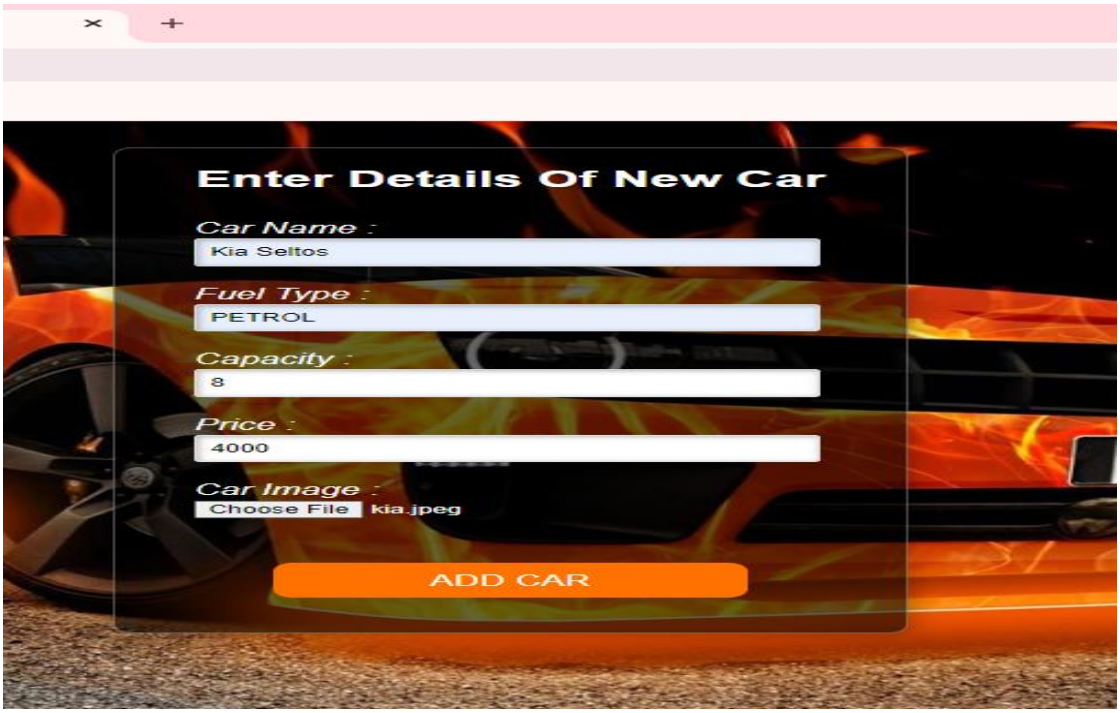
3.9.1 Input design

ADMIN –

- Firstly admin have to login with username and password



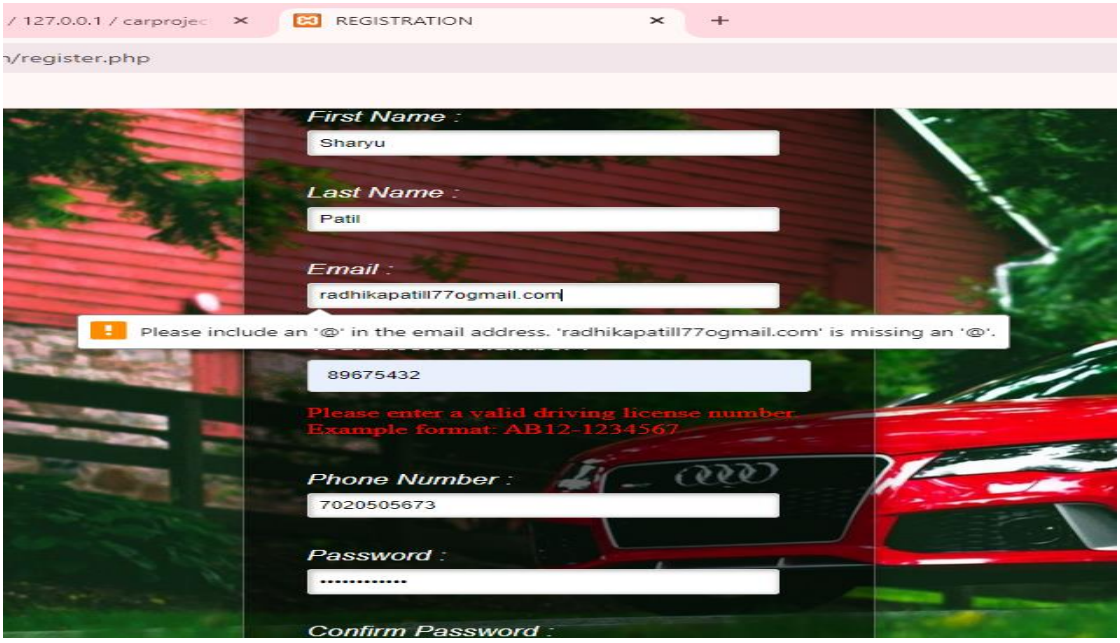
Add Car :

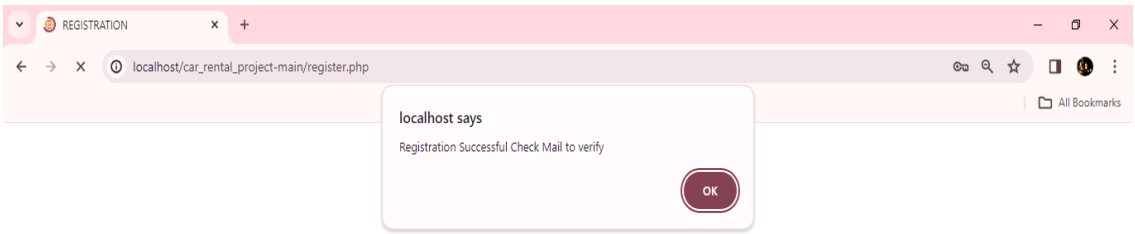


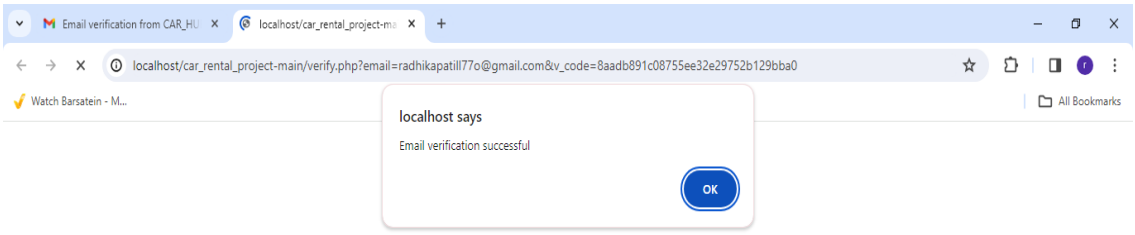
USER -

Registration Form :

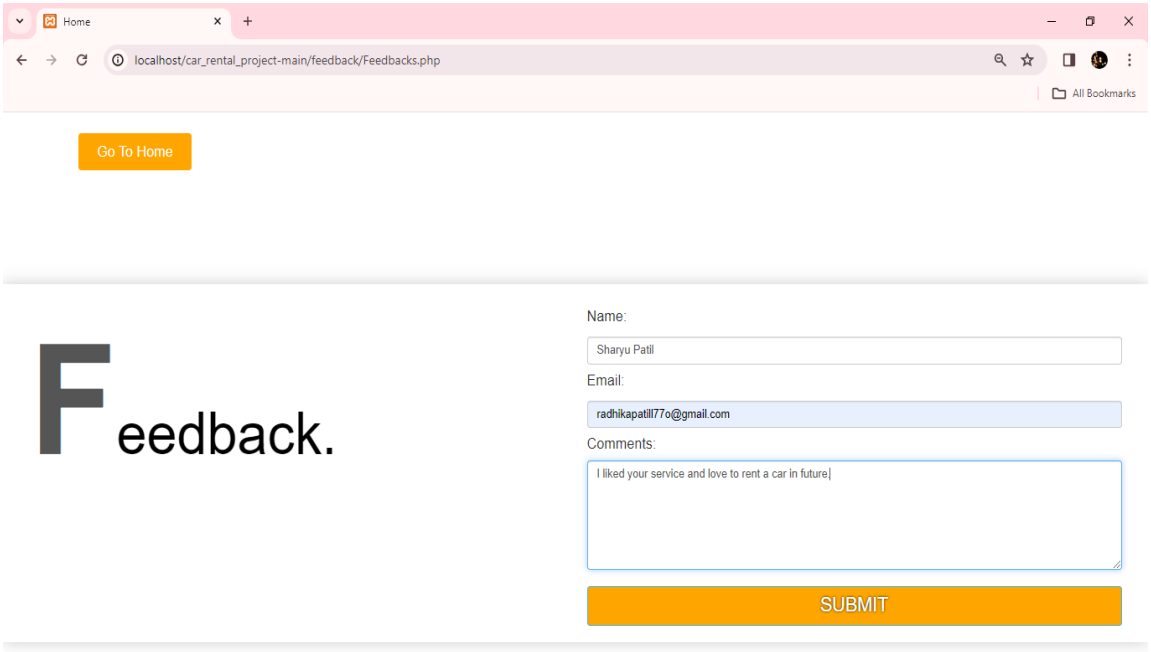
If any field is filled incorrect it shows error message



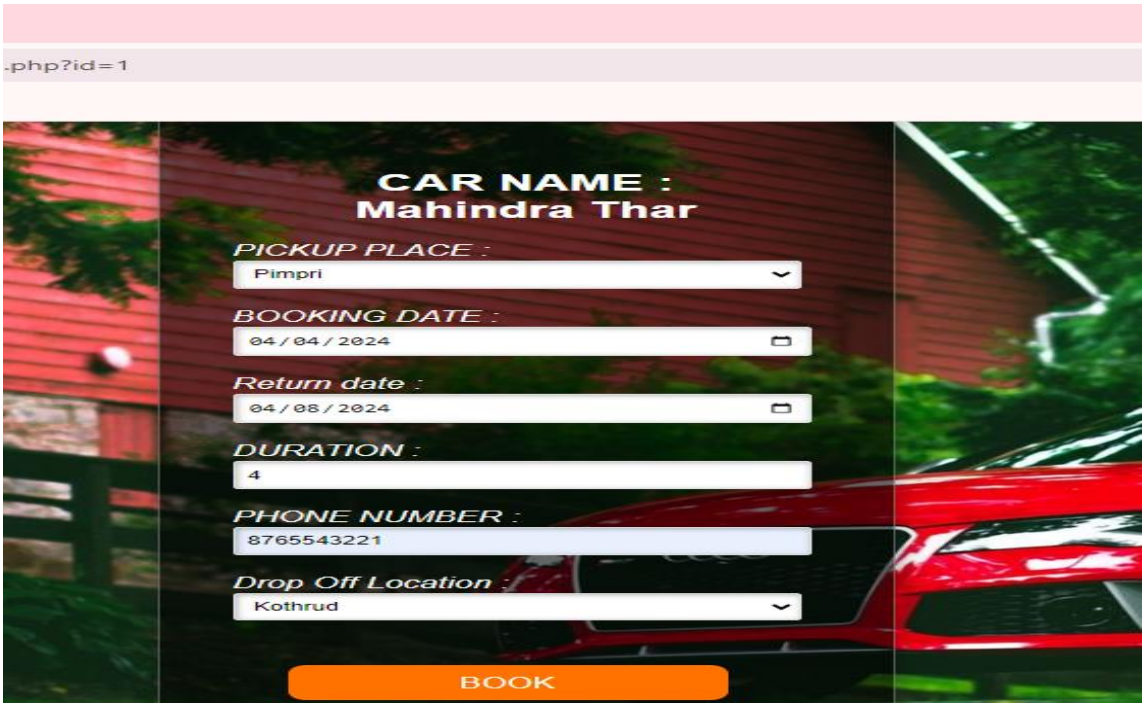




Feedback Form



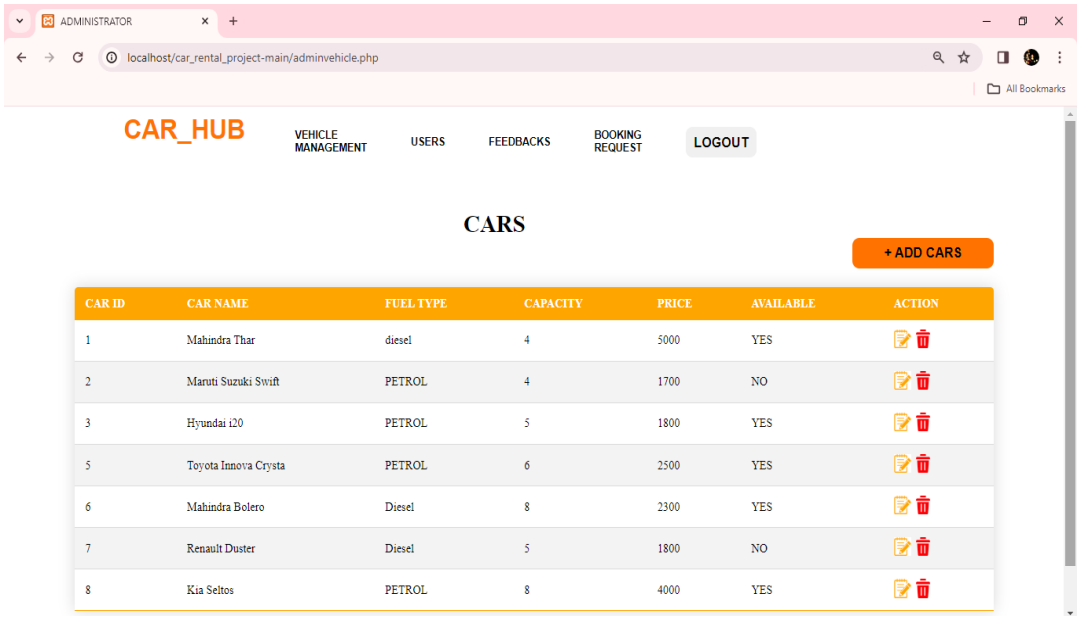
Booking Form :



3.9.2 Output design :

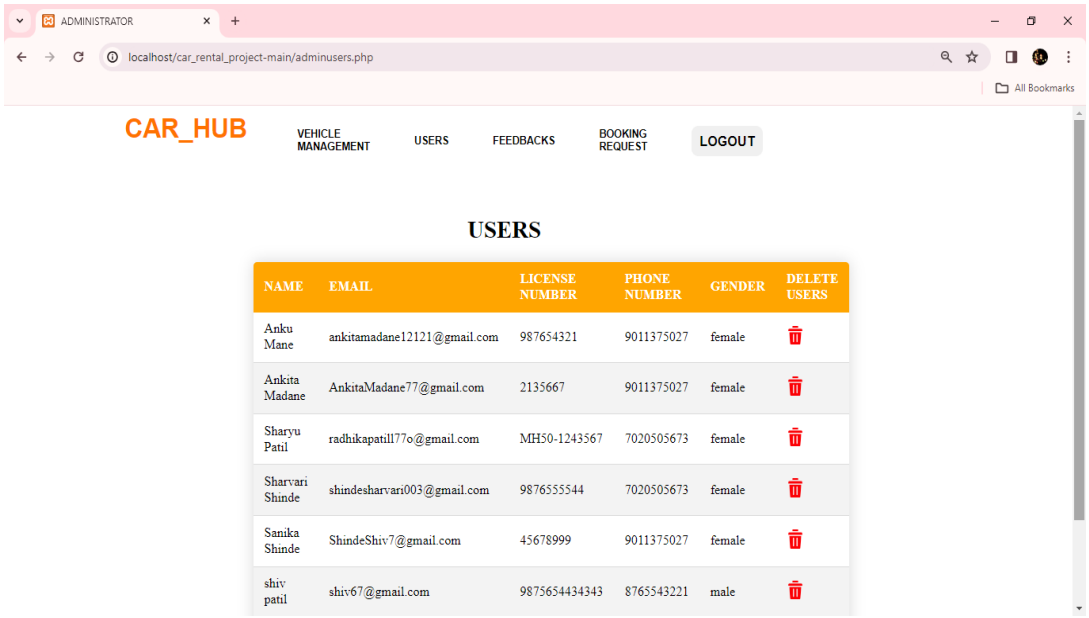
ADMIN –

Vehicle Management :Here admin can add cars, edit or delete .



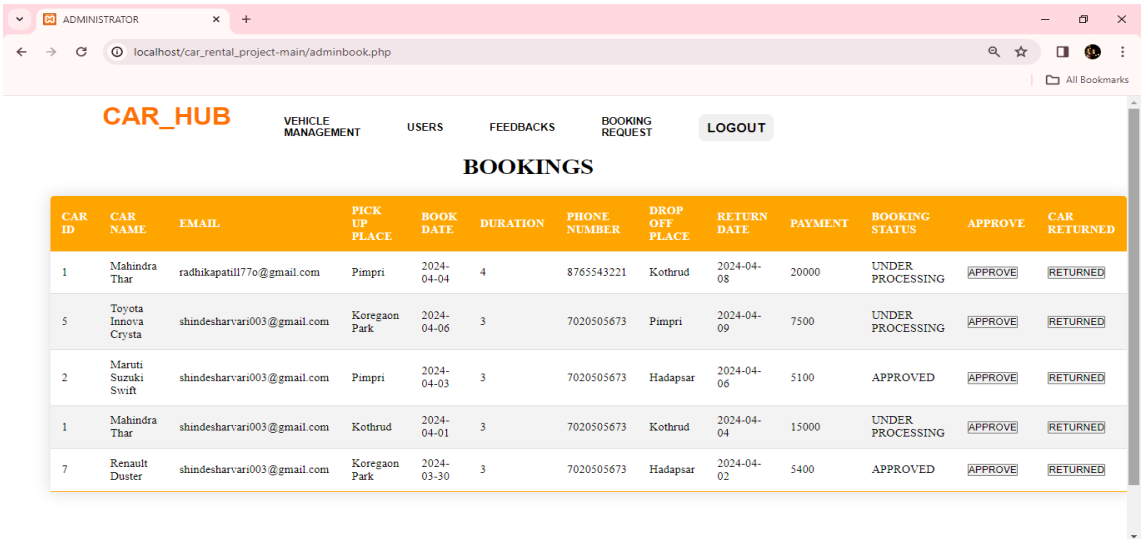
Users :

If admin wants to see registered users list , need to click usersHere admin can delete any user.



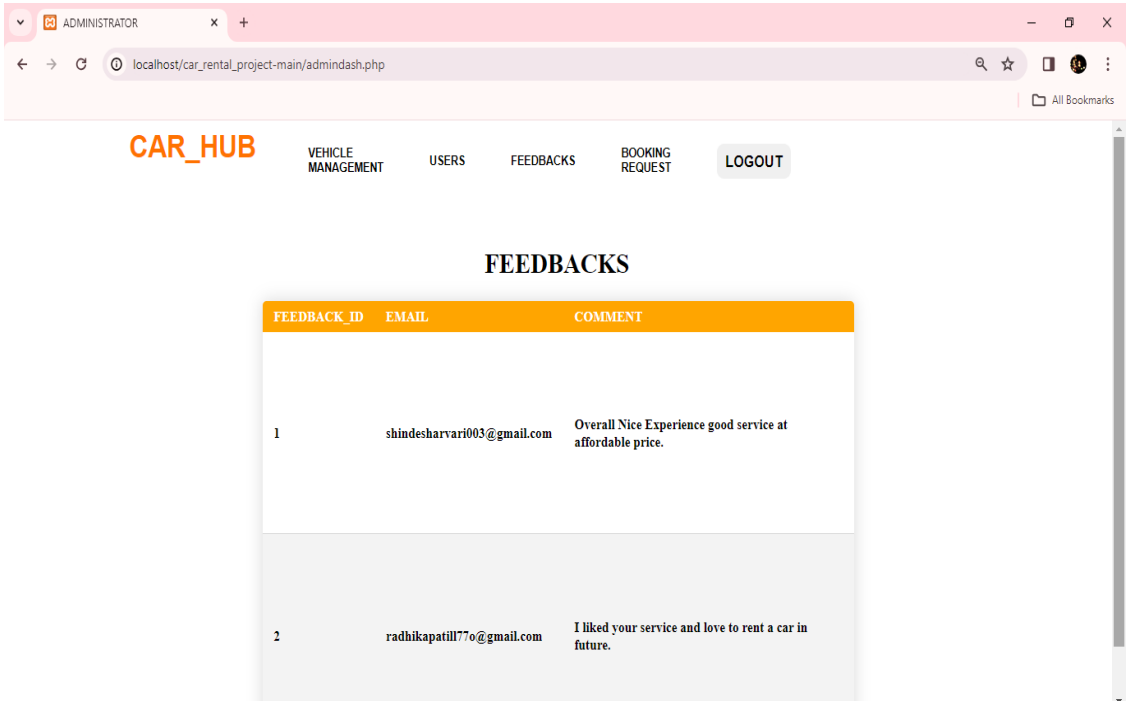
Booking Request :

If admin want to see booking request click on booking request, here admin can see all booking details and approve it and also mention if car is returned.



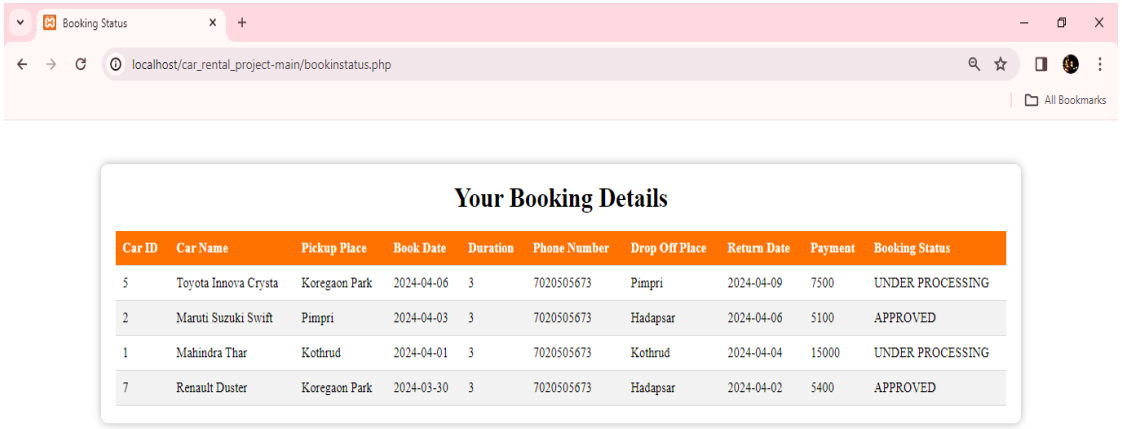
Feedbacks :

If admin clicks feedback , all feedbacks will be shown.



USER –

- If user want to see booking details and status, he/she need to click booking status then they can see all details and status as below



4.1 Algorithms

Signup

Step 1-Start

Step 2 Input First name, Last name, Email, License number,Phone number, Password, Confirm Password and select gender.

Step 3 Click on register.

Step 4 If all input fields are filled then pop box will show User registered successfully. Go to login page to log in! otherwise go to step 2

Step 5 Go back to Login.

Step 6-Stop

Login

Step 1-Start

Step 2- Input email and Password.

Step 3- If all the input fields are valid successfully login into the system. Go to dashboard otherwise go to step 2.

Step 4- Click on book to book cars, fill the details to book , do payment.

Step 5- Click on booking status to see booking approved or not .

Step 6- Click on feedback to give feedback.

Step 7- Click on contact to contact admin.

Step 8- Stop

Admin Login

Step 1-Start

Step 2-Login into system by entering valid credentials

Step 3-Click on User list to get list of users in the system

Step 4- Click on Booking request to view all the booking details, approved it or reject by checking availability.

Step 5- Click to vehicle management to add cars, edit, delete.

Step 6- Click on feedback to see users feedback

Step 7- Stop

4.2 Code snippets:

Index.php :

```
<!DOCTYPE html>
<html lang="en">
<head>
<linkrel="stylesheet"href="https://cdnjs.cloudflare.com/ajax/libs/
font-awesome/5.15.4/css/all.min.css">
   <title>CAR RENTAL</title>
   <script type="text/javascript">
   window.addEventListener("load", function() {
      function preventBack() {
         window.history.forward();
      }
      setTimeout("preventBack()", 0);
      window.onunload = function () { null };
   });
</script>
   <link  rel="stylesheet" href="css/style.css">
</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 in both email and password")</script>';
    } else {
        $query = "SELECT * FROM users WHERE EMAIL='$email' AND is_verified=1"; // Only select verified email addresses
        $res = mysqli_query($con, $query);
        if($res && $row = mysqli_fetch_assoc($res)) {
            $db_password = $row['PASSWORD'];
            if(password_verify($pass, $db_password)) {
                // Start session and redirect to cardetails.php
                session_start();
                $_SESSION['email'] = $email;
                header("location: cardetails.php");
                exit(); // Ensure no further code execution after redirection
            } else {
        echo '<script>alert("Invalid password")</script>';
```

```
            }
        } else {
            echo '<script>alert("Invalid email or email not
verified")</script>';
        }
    }
}
?>
    <div class="hai">
        <div class="navbar">
            <div class="icon">
                <h2 class="logo">CAR_HUB</h2>
            </div>
            <div class="menu">
            <ul>
             <li><a href="#">HOME</a></li>
             <li><a href="aboutus.html">ABOUT</a></li>
             <li><a
                    href="services.html">SERVICES</a></li>
            <li><a
href="contactus.html">CONTACT</a></li>
                </ul>
            </div>
```

```
</div>
<div class="content">
    <h1>Rent Your Car <br><span>Your journey starts here!</span></h1>
    <p class="par">Rent a smile with us<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">
<div class="password-wrapper">
        <input type="password" name="pass" id="password" placeholder="Enter Password Here" style="padding-right: 20px;"> <!-- Adjust padding-right value according to icon width -->
        <span class="toggle-password" onclick="togglePasswordVisibility()" style="position: absolute; right: 20px; top: 40%; transform: translateY(-50%); cursor: pointer;font-size: 20px;"><i class="fa fa-eye" aria-hidden="true"></i></span>
```

```
        </div>
        <input class="btnn" type="submit" value="Login"
name="login"></input>
          <!--  This is for same page popup box But it not working
           <div class="forgot-btn">
              <button type="button" style="background-color:
transparent; color: orange; border: none; padding: 10px 20px;
cursor: pointer; border-radius: 5px; font-size: 16px;"
onclick="document.getElementById('forgot-
popup').style.display='block'">Forgot password?</button>
          </div> -->
          <div class="forgot-btn">
            <button type="button" style="background-color:
transparent; color: orange; border: none; padding: 10px 20px;
cursor: pointer; border-radius: 5px; font-size: 16px;"
onclick="window.location.href='forgotpassword.php'">Forgot
password?</button>
          </div>
          <p class="link">Don't have an account?<br>
          <a href="register.php">Sign up</a> here</a></p>
        </div>
      </div>
</div>
<!--    This is not working when time gets I will check it
```

```
<div class="popup-container" id="forgot-popup"
style="display: none; position: fixed; top: 50%; left: 50%;
transform: translate(-50%, -50%); width: 10cm; height: 5cm;
background-color: rgba(0, 0, 0, 0.5); border-radius: 10px; box-
shadow: 0 0 10px rgba(0, 0, 0, 0.5); z-index: 9999;">
<div class="forgot popup" style="padding: 40px;">
<span class="popup-close"
onclick="closeForgotPasswordPopup()" style="position:
absolute; top: 10px; right: 10px; cursor: pointer; font-weight:
bold; font-size:30px ;color: white;">&times;</span>
<form method="POST" action="forgotpassword.php">
<h2 style="color: orange; text-align: left; margin-bottom:
20px;">Reset Password</h2>
<input type="email" placeholder="Enter Email Address"
name="email" style="width: 100%; padding: 10px; margin-
bottom: 20px; border: 1px solid #ccc; border-radius: 5px; box-
sizing: border-box; font-size: 16px; color: black; background-
color: rgba(255, 255, 255, 0.5);" required>
<button type="submit" name="send-reset-link"
style="display: block; margin: 0 auto; background-color: orange;
color: white; border: none; padding: 10px 20px; border-radius:
5px; cursor: pointer; font-size: 16px;">SEND RESET
LINK</button>
</form>
</div>
```

```
</div>

<script>
    function openForgotPasswordPopup() {
        document.getElementById("forgot-popup").style.display =
"block";
    }

    function closeForgotPasswordPopup() {
        document.getElementById("forgot-popup").style.display =
"none";
    }
</script> -->
<script>
    function togglePasswordVisibility() {
        var passwordField =
document.getElementById("password");
  var toggleIcon = document.querySelector(".toggle-password i");
        if (passwordField.type === "password") {
            passwordField.type = "text";
            toggleIcon.classList.remove("fa-eye");
            toggleIcon.classList.add("fa-eye-slash");
        } else {
```

```
            passwordField.type = "password";
            toggleIcon.classList.remove("fa-eye-slash");
            toggleIcon.classList.add("fa-eye");
        }
    }
</script>
</body>
</html>
```

Verify.php

```
<?php
require("Connection.php");

if (isset($_GET['email']) && isset($_GET['v_code'])) {
    $email = $_GET['email'];
    $v_code = $_GET['v_code'];

    // Prepare the SELECT query with placeholders
    $query = "SELECT * FROM `users` WHERE `email`=? AND
`verification_code`=?";
    $stmt = mysqli_prepare($con, $query);

    // Bind the parameters
```

```
    mysqli_stmt_bind_param($stmt, "ss", $email, $v_code);

    // Execute the query
    mysqli_stmt_execute($stmt);

    // Get the result
    $result = mysqli_stmt_get_result($stmt);

    if ($result) {
        if (mysqli_num_rows($result) == 1) {
            $row = mysqli_fetch_assoc($result);
            if ($row['is_verified'] == 0) {
                // Prepare the UPDATE query with placeholders
                $update = "UPDATE `users` SET `is_verified`=1
WHERE `email`=?";
                $stmt_update = mysqli_prepare($con, $update);

                // Bind the parameter
                mysqli_stmt_bind_param($stmt_update, "s", $email);

                // Execute the UPDATE query
                if (mysqli_stmt_execute($stmt_update)) {
```

```
                echo "<script>alert('Email verification successful');
window.location.href='index.php';</script>";
            } else {
                echo "<script>alert('Oops, something went wrong
while updating'); window.location.href='index.php';</script>";
            }
        } else {
            echo "<script>alert('Email already registered');
window.location.href='index.php';</script>";
        }
    } else {
        echo "<script>alert('Cannot find the user with provided
email and verification code');
window.location.href='index.php';</script>";
    }
} else {
    echo "<script>alert('Cannot run query');
window.location.href='index.php';</script>";
}
}
?>
```

Upload.php

```
<?php
if(isset($_POST['addcar']) ){
    require_once('connection.php');
   echo "<prev>";
   print_r($_FILES['image']);
   echo "</prev>";
   $img_name= $_FILES['image']['name'];
   $tmp_name= $_FILES['image']['tmp_name'];
   $error= $_FILES['image']['error'];
    if($error === 0){
        $img_ex =
pathinfo($img_name,PATHINFO_EXTENSION);
        $img_ex_lc= strtolower($img_ex);

        $allowed_exs = array("jpg","jpeg","png","webp","svg");
        if(in_array($img_ex_lc,$allowed_exs)){
            $new_img_name=uniqid("IMG-",true).'.'.$img_ex_lc;
            $img_upload_path='images/'.$new_img_name;
            move_uploaded_file($tmp_name,$img_upload_path);
$carname=mysqli_real_escape_string($con,$_POST['carname']);
```

```
$ftype=mysqli_real_escape_string($con,$_POST['ftype']);

$capacity=mysqli_real_escape_string($con,$_POST['capacity']);

$price=mysqli_real_escape_string($con,$_POST['price']);
            $available="Y";
            $query="INSERT INTO
cars(CAR_NAME,FUEL_TYPE,CAPACITY,PRICE,CAR_IMG
,AVAILABLE)
values('$carname','$ftype',$capacity,$price,'$new_img_name','$a
vailable')";
            $res=mysqli_query($con,$query);
            if($res){
                echo '<script>alert("New Car Added
Successfully!!")</script>';
                echo '<script> window.location.href =
"adminvehicle.php";</script>';              }

      }else{
          echo '<script>alert("Cant upload this type of
image")</script>';
          echo '<script> window.location.href =
"addcar.php";</script>';
      }
```

```
    }
    else{
        $em="unknown error occured";
        header("Location: addcar.php?error=$em");
    }
}
else{
    echo "false";
}
?>
```

5.1 Test Strategy

Software testing is the process of used to identify the correctness, security, completeness and quality of developed computer software. This includes the process of executing the program or applications with the intent of finding errors. An individual unit, functions or procedures of developed project is verified and validated and these units are fit for use.

Testing process :

Best testing process is to test each subsystem separately, as we have done in project. Best done during implementation. Best done after small sub-steps of the implementation rather than large chunks. Once each lowest level unit has been tested, units are combined with related units and retested in combination. This proceeds hierarchically bottom-up until the entire system is tested as a whole. Typical levels of testing: Module- package, abstract data type, class.

- Sub-system- collection of related modules, cluster of classes, method-message paths

.- Acceptance testing- whole system with real data (involve customer, user)

- Alpha testing is acceptance testing with a single client (common for bespoke systems). Beta testing involves distributing system to potential customers to use and provide feedback. In this project, beta testing has been followed. This exposes system to situations and errors that might not be anticipated by us.

5.2 Unit Test Plan

1. Introduction:

- The unit test plan outlines the strategy and approach for testing individual components of the car rental website to ensure functionality, reliability, and security.

2. Objectives:

- Verify the functionality of user registration, email verification, and authentication processes.

- Test the booking system, including reservation, payment processing, and viewing booking status.

- Validate feedback submission, contact form functionality, and admin features such as booking management and car management.

3. Scope:

- This unit test plan covers the registration system, email verification, user authentication, booking process, payment integration, feedback, contact forms, and admin functionalities.

4. Testing Strategy:

- Test cases will be designed based on requirements and user stories, covering both positive and negative scenarios.

- Unit tests will be conducted using a combination of manual testing and automated testing frameworks.

5. Test Environment:

- The testing environment will consist of a local development server or testing environment that mirrors the production environment.

- Testing tools may include testing frameworks like Selenium for automated browser testing and unit testing frameworks such as JUnit or PHPUnit.

6. Test Cases:

- User Registration and Authentication:

- Verify user registration with valid information.

- Test email verification process: ensure users receive the verification email and can verify their accounts.

- Validate user authentication: confirm that only verified users can log in.

- Booking Process:

- Test booking form submission: ensure users can select a car, enter booking details, and submit the form.

- Test payment processing: verify that payments are processed securely using the integrated payment gateway.

- Confirm viewing booking status: verify that users can view their booking status after completing a reservation.

- Feedback and Contact Forms:

- Test feedback form submission: ensure users can provide feedback on their rental experience.

- Validate contact form submission: verify that messages sent through the contact form reach the appropriate recipient.

- Admin Functionality:

- Test admin login: ensure only authorized admins can access the admin dashboard.

- Verify booking management: test the ability to accept, approve, or return bookings.

- Test car management: verify the ability to add, edit, or delete cars from the inventory.

7. Test Execution:

- Tests will be executed manually by testers and automated using testing frameworks.

- Test cases will be run multiple times to ensure consistency and reliability of results.

- Test results will be recorded and documented for analysis and review.

8. Reporting :

- Test results will be documented in a test report, including details of test cases, execution status, and any issues or defects found.

- Reports will be shared with the development team for review and resolution of any identified issues.

9. Risks and Mitigations:

- Risks include potential integration issues with third-party services (e.g., payment gateway) and security vulnerabilities.

- Mitigation strategies include thorough testing of integration points and regular security audits.

10. Schedule and Resources:

- Testing activities will be scheduled in alignment with the development timeline, with resources allocated for both manual and automated testing efforts.

11. Conclusion:

- The unit test plan outlines the approach for systematically testing the car rental website's functionalities to ensure a reliable and user-friendly experience for customers and administrators.

12. Appendices:

-Include additional documentation, such as test case templates, testing guidelines, and references to relevant documentation and standards.

By following this unit test plan, the car rental website can undergo comprehensive testing to identify and address any issues before deployment, ensuring a high-quality and robust system for users and administrators.

5.3 Acceptance Test Plan

Objectives: Validate that the car rental system meets specified requirements and user expectations.

Scope: Covers end-to-end testing of user registration, booking, payment, feedback, contact, and admin functionalities.

Testing Strategy: Conduct tests based on user stories and requirements. Use real-world scenarios to simulate user interactions.

Test Environment: Utilize a testing environment that mirrors the production environment, including the website, database, and integrated services.

Test Cases:

1. User Registration:

- Verify that users can register with valid information.
- Test email verification process: ensure users receive verification email and can verify their accounts.
- Confirm that only verified users can log in.

2. Booking Process:

- Test booking form submission: ensure users can select a car, enter booking details, and submit the form.

- Validate payment processing: verify that payments are processed securely using the integrated payment gateway.

- Confirm viewing booking status: ensure users can view their booking status after completing a reservation.

3. Feedback and Contact Forms:

- Test feedback form submission: ensure users can provide feedback on their rental experience.

- Validate contact form submission: verify that messages sent through the contact form reach the appropriate recipient.

4. Admin Functionality:

- Test admin login: ensure only authorized admins can access the admin dashboard.

- Verify booking management: test the ability to accept, approve, or return bookings.

- Test car management: verify the ability to add, edit, or delete cars from the inventory.

Criteria for Acceptance: The car rental system will be considered acceptable if it meets all specified requirements and acceptance criteria.

Schedule and Resources: Align acceptance testing activities with the development timeline, allocate resources accordingly.

Conclusion: Ensure the car rental system meets user needs, functions correctly, and provides a satisfactory user experience before deployment.

Appendices: Include acceptance criteria, user personas, and references to relevant documentation and standards.

.

5.4 Test Case

Test Case ID	**Test Case Description**	**Input Data**	**Expected Result**	**Actual Result**	**Pass / Fail**
TC001	User Registration - Valid Information	User details (fname , lname, email ,mobile ,license, password, gender)	User is successfully registered	User is successfully registered	Pass
TC002	User Registration - Invalid Email	Invalid email address	Error message displayed indicating invalid email	Error message displayed indicating invalid email	Pass
TC003	Email Verification - Valid Email	Verification link received in email	User account is verified	User account is verified	Pass
TC004	Email Verification - Expired Link	Expired verification link	Error message displayed indicating expired link	Don’t Show error, it shows email all ready verified if it is verified previously	Fail
TC005	User Login with verified email	Login with verified email	User is successfully logged in	User is succe-ssfully logged	Pass

TC006	User Login – with email not verified	Login with not verified email	Show message email not verified.	Show message email not verified.	Pass
TC007	User Login - Valid Credentials	Email and password	User successfully logged in	User successfully logged in	Pass
TC009	Booking Process - Select Car	Choose car from available options	Selected car is displayed in booking form	Selected car is displayed in booking form	Pass
TC010	Booking Process - Enter Booking Details	Provide required booking details	Details are correctly entered in booking form	Details are correctly entered in booking form	Pass
TC011	Booking Process - Enter Booking Date and return date to auto calculate duration	Booking date and return date	Duration should be calculated correctly	Duration calculated correctly	Pass
TC012	While booking user should not be able to select past booking date and return date should not	Select date of booking and return date	User not able to select past date for booking and for return date no past date before before booking should be	User is not able to select past date for both booking abd return date	Pass

	be before booking		selected		
TC013	Payment Processing - Valid Payment	Payment information (credit card)	Payment is successfully processed	Payment is successfully processed	Pass
TC014	Payment Processing - Invalid Payment	Incorrect payment information	Error message displayed indicating invalid payment details	Error message displayed indicating invalid payment details	Pass
TC015	View Booking Status - Successful Reservation	View booking status after successful reservation	Booking status is displayed as confirmed by admin	Booking status is displayed as confirmed by admin	Pass
TC016	View Booking Status - Unsuccessful Reservation	View booking status after unsuccessful reservation	Booking status is displayed as pending or declined	Booking status is displayed as pending or declined	Pass
TC017	Feedback Submission - Valid Feedback	Provide feedback on rental experience	Feedback is successfully submitted	Feedback is successfully submitted	Pass
TC018	Feedback	Submit feedback	Error message	Error message	Pass

	Submission - Empty Feedback	without entering any text	displayed indicating feedback field is required	displayed indicating feedback field is required	
TC019	Admin Login - Valid Credentials	Admin username and password	Admin is successfully logged in	Admin is successfully logged in	Pass
TC020	Admin Login - Invalid Credentials	Incorrect admin username or password	Error message displayed indicating invalid credentials	Error message displayed indicating invalid credentials	Pass
TC021	Booking Management - Accept Booking	Accept booking request from user	Booking status is updated to approved	Booking status is updated to approved	Pass
TC022	Booking Management - Return Booking	Return booking request from user	Booking status is updated to returned	Booking status is updated to returned	Pass
TC023	Vehicle Management - Add Car	Add new car to the inventory	Car is successfully added	Car is successfully added	Pass
TC024	Vehicle Management - Edit Car	Modify details of existing car	Car details are successfully updated	Car details are successfully updated	Pass

TC025	Vehicle Management – Delete Car	Remove car from the inventory	Car is successfully deleted	Car is successfully deleted	Pass
TC026	User Management- Delete user	Remove user from the user list	User is successfully deleted	User is successfully deleted	Pass

5.5 Defect report

Defect ID	Test Case ID	Description	Severity	Status	Assigned To	Date Reported	Date Resolved	Comments
D001	**TC020**	Admin does not have "Forgot Password" option	**Major**	**Open**	**Developer**	**1/4/2024**	**-**	Admin users are unable to reset their password if forgotten, impacting usability and security.

6 Limitations of Proposed System

- The system relies heavily on technology infrastructure, including internet connectivity, servers, and software applications. Any disruptions or technical issues with these components could affect the system's availability and performance.
- The car rental service is only available in specific locations or regions, limiting access for users outside those areas.
- The system may have a restricted number of vehicles available for rental, potentially leading to unavailability during peak periods or for specific vehicle types.
- The website may only accept certain payment methods, such as credit cards, which could exclude users who prefer alternative payment options like digital wallets or bank transfers.
- Users may have concerns about the privacy and security of their personal and financial data stored on the website, especially if robust security measures are not implemented.

7 Proposed Enhancements

Today, the market place is flooded with several car rental options for shoppers to choose from. A variety of innovative products and services are being offered spoiling customers for choice. Online car rental system is no more a privilege enjoyed by your friends and family. Today, it is a reality in India. In the last couple of years, the growth of car rental system industry in India has been phenomenal as more shoppers have started discovering the benefits of using this platform. There is enough scope for online businesses in the future if they understand the Indian shoppers psyche and cater to their needs.

- Developing a dedicated mobile application for the car rental service, providing users with convenient access to rental bookings, vehicle tracking, and support services on their smart phones..
- Adding a UPI options for customer ease.
- Extend the coverage area of the car rental service to additional locations or regions, allowing users to rent vehicles in more areas.
- Introducing flexible rental options such as hourly rentals, one-way rentals, and long-term leasing, catering to diverse user needs and preferences.
- Developing a comprehensive FAQ (Frequently Asked Questions) section addressing common queries, concerns, and troubleshooting tips related to the car rental service

8 Conclusion

Online Car Rental Management System is user-friendly and customized software for car renting company. Online Car Rental Management System has been developed to manage and automate the overall processing of any large car renting company. Online Car Rental Management System project is capable of managing cars, booking, feedbacks, payment etc. It is a user friendly and customized software for providing support for company admin. This project is a very flexible software and it can be upgraded according to the individual needs.

Car rental business has emerged with a new goodies compared to the past experience where every activity concerning car rental business is limited to a physical location only. Even though the physical location has not been totally eradicated; the nature of functions and how these functions are achieved has been reshaped by the power of internet. Nowadays, customers can reserve cars online, rent car online, and have the car brought to their door step once the customer is a registered member or go to the office to pick the car.

The web based car rental system has offered an advantage to both customers as well as Car Rental Company to efficiently and effectively manage the business and satisfies customers' need at the click of a button.

9 Bibliography

Books Used :

- ✓ The joy of PHP Programming: A Beginners Guide :

  Author : Alan Forbes

- ✓ PHP For Dummies
- ✓ PHP Begineers Guide By MCGrawhill Publication
- ✓ Javascript ByMCGrawhill Publication

[1]Fundament also database system, Remez elmarsri Shamkanth b 7th edition,2017, Pearson.

[2]The Joy of PHP Programming, Alan Forbes 5th edition, Plum Island. [3]http://www.carrentingsolutions.com/

[4] https://youtu.be/SFTrVfd4omQ?si=vVPbsfgx-iiPr-yu For Email Functionality

[5] https://www.w3schools.com/php

[6] https://www.tutorialspoint.com/javascript/index.htm/

10 User Manual

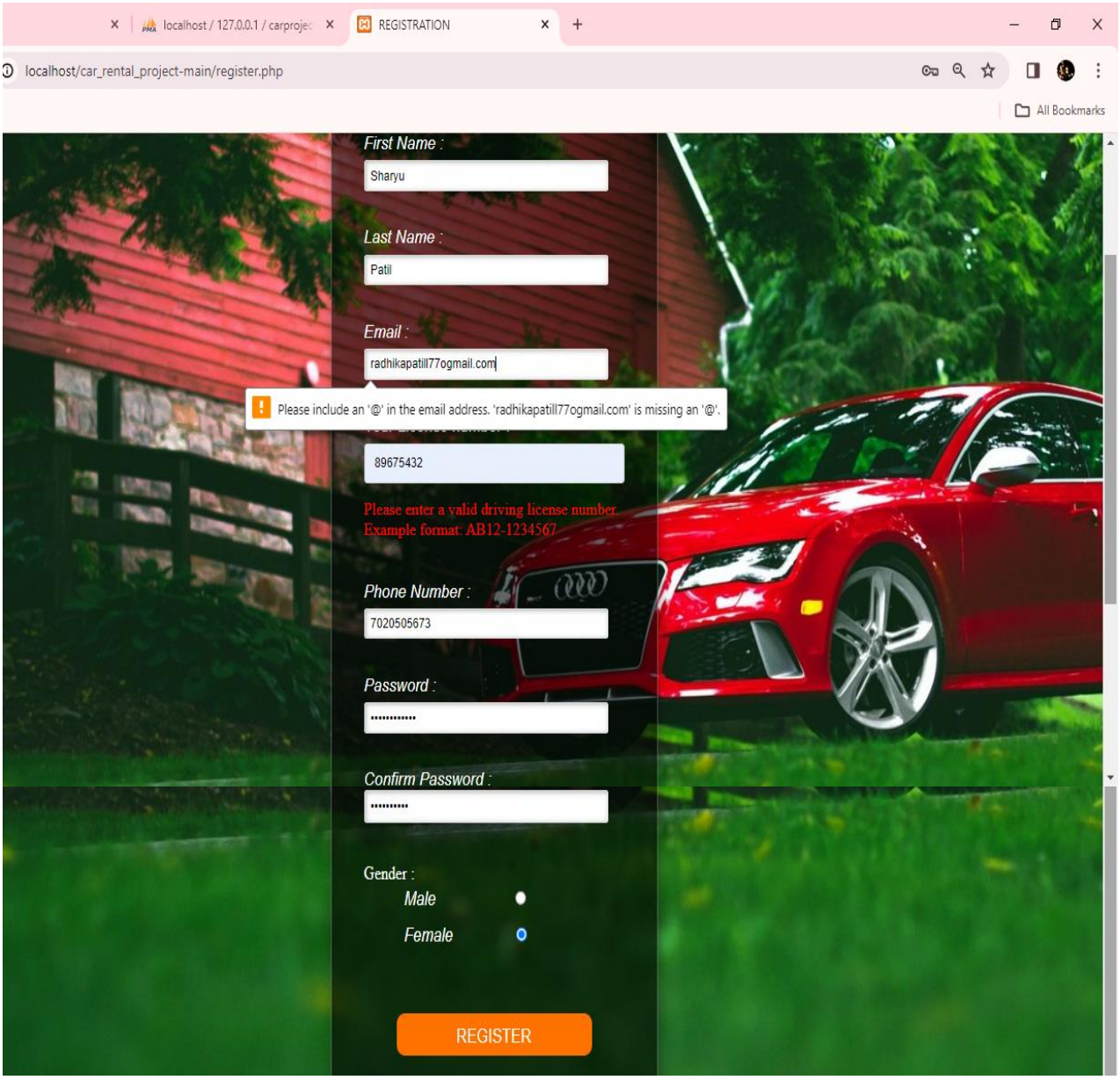
For any system to be successful it is important that the intended user find the system easy to operate. The purpose of the user manual is to make users acquainted with the system and help users understand the system and operate it conveniently. The User Manual is prepared reflexively because it is an item that must accompany every system.

The manual contains several screenshots that describe how to use the entire system. This Manual helps users to navigate efficiently through the system and helps users to solve issues wherever they occur.

Information about the system.

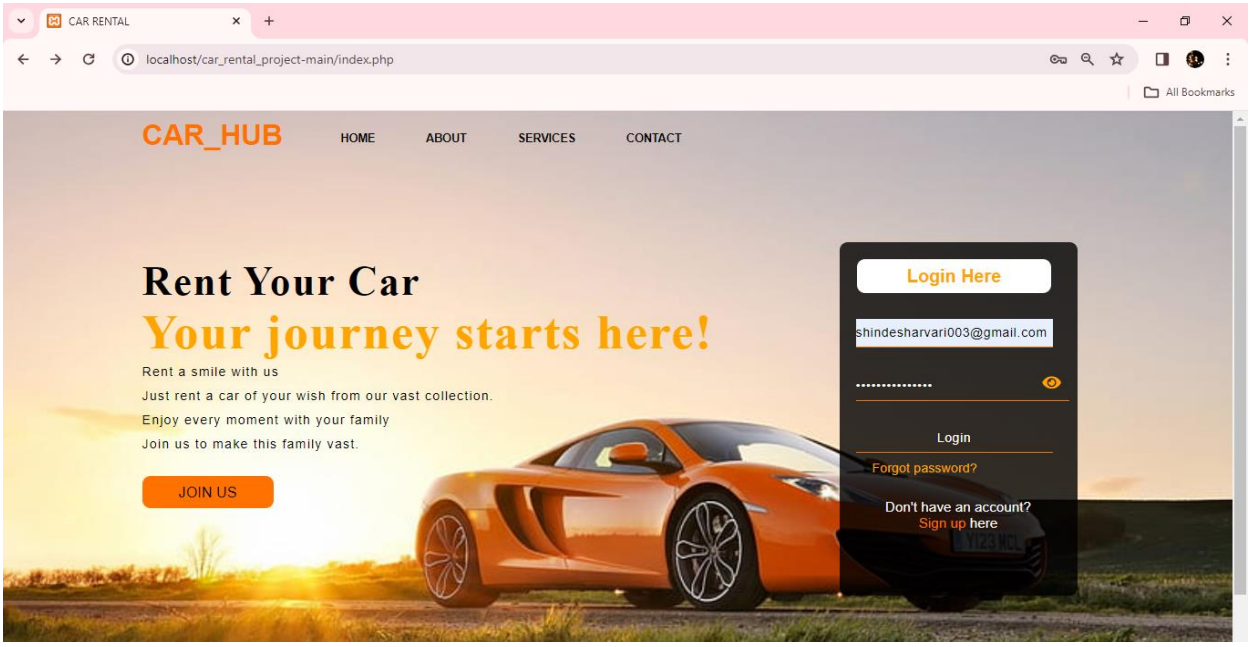
User Manual

- Firstly new user have to register and verify email



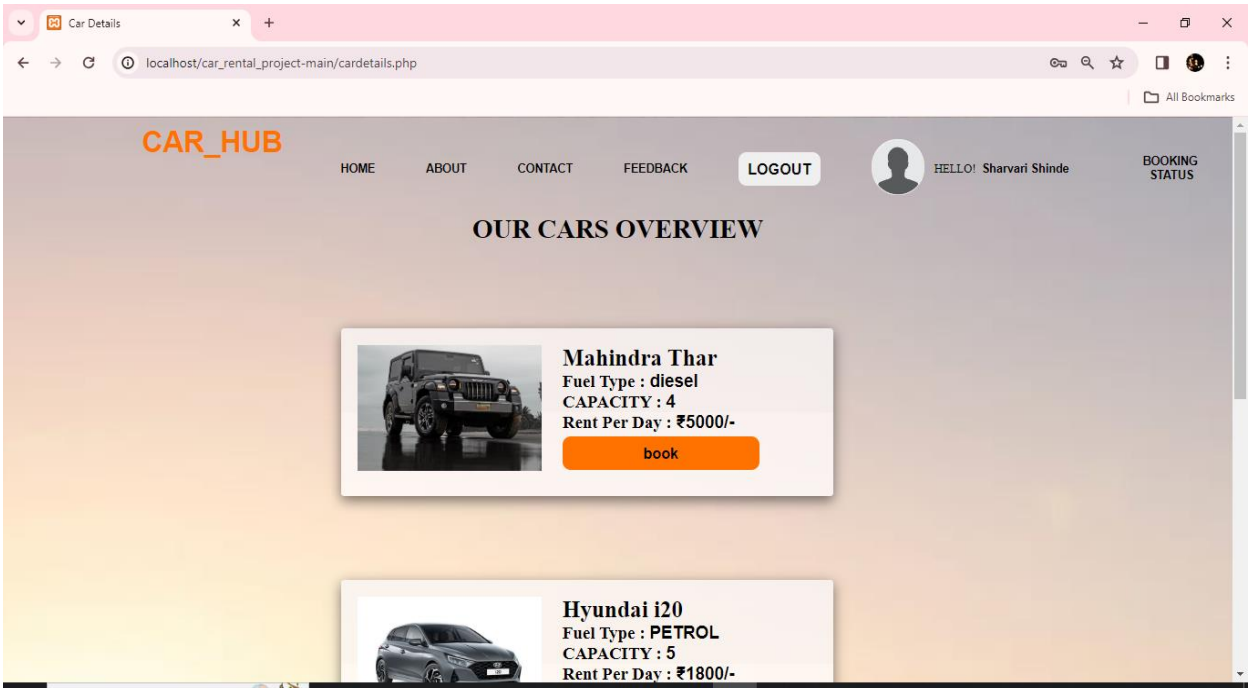
After registration a verify link will be send to email which is used while filling registration form , user have to click that link and verify their email .

- After registration and email verification only verified user can login with valid email and password



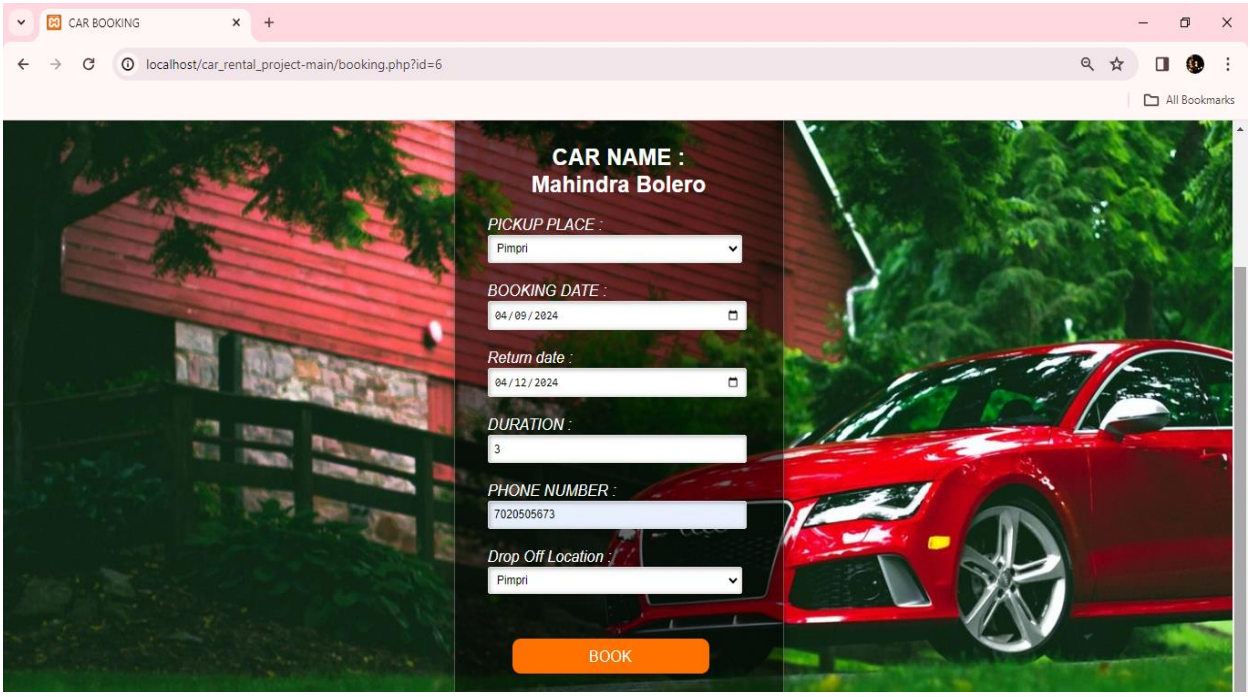
- Once user logged in – dashboard will be shown as below

  Here user can book car by clicking on book button

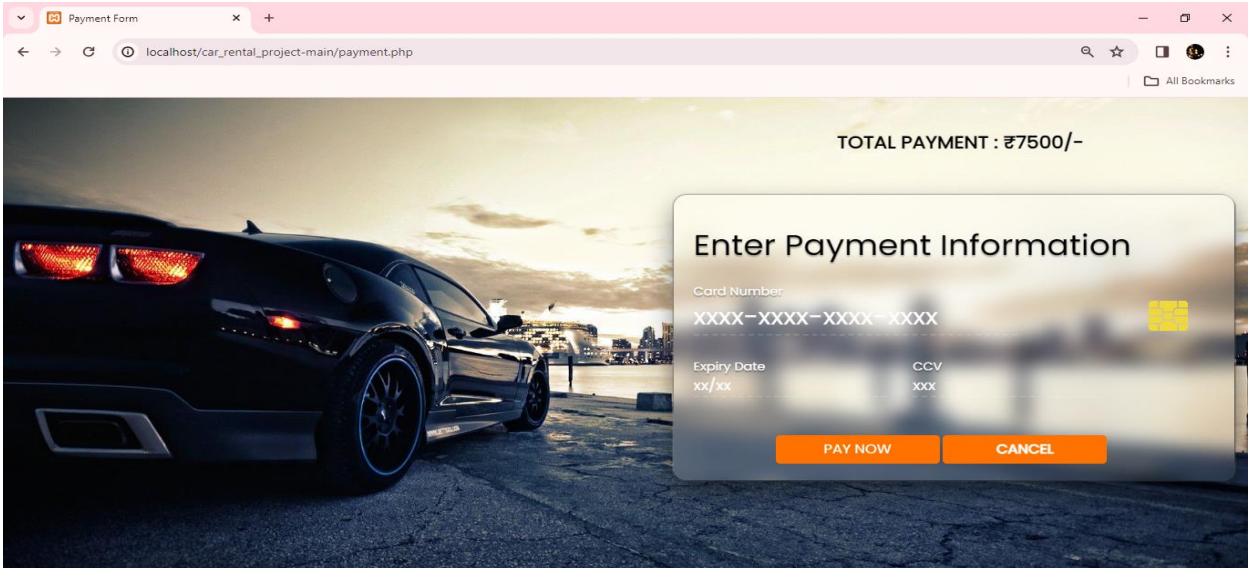


- After clicking on book button page will redirect to booking page

  User have to fill details and click book

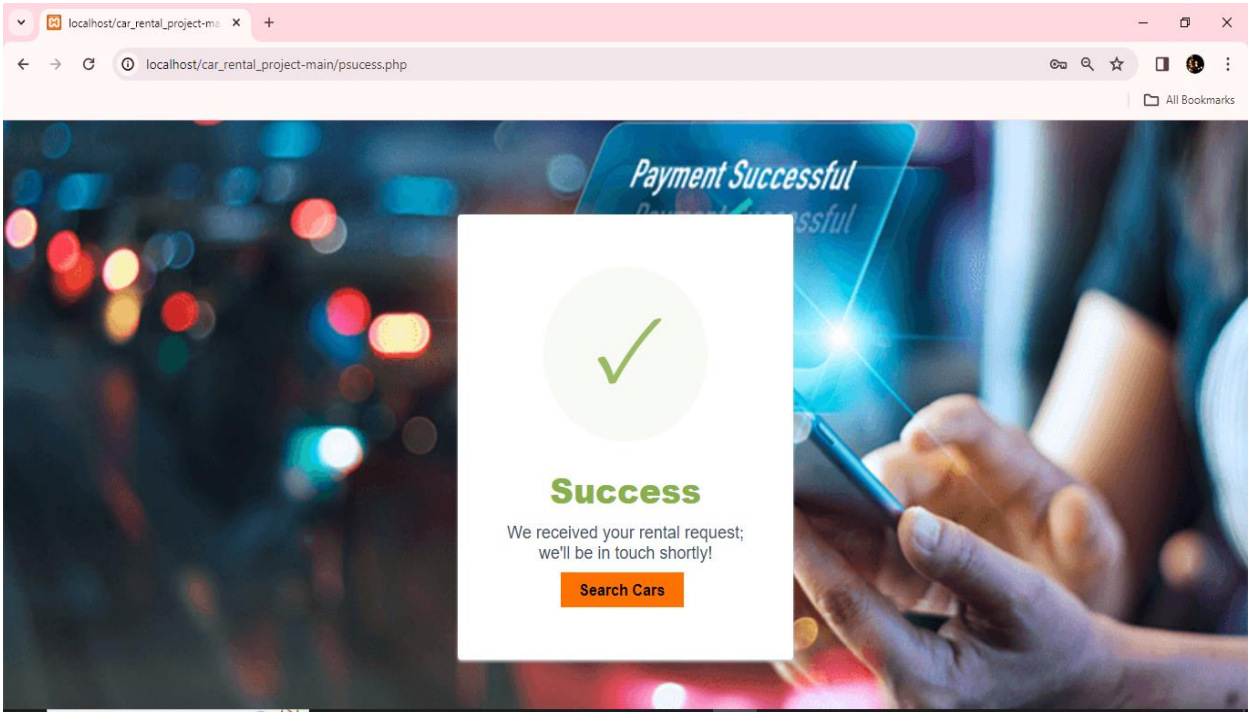


- After filling all details user is redirect to payment page with bill to pay , user need to provide card details to make payment , once all details filled correctly click pay now.

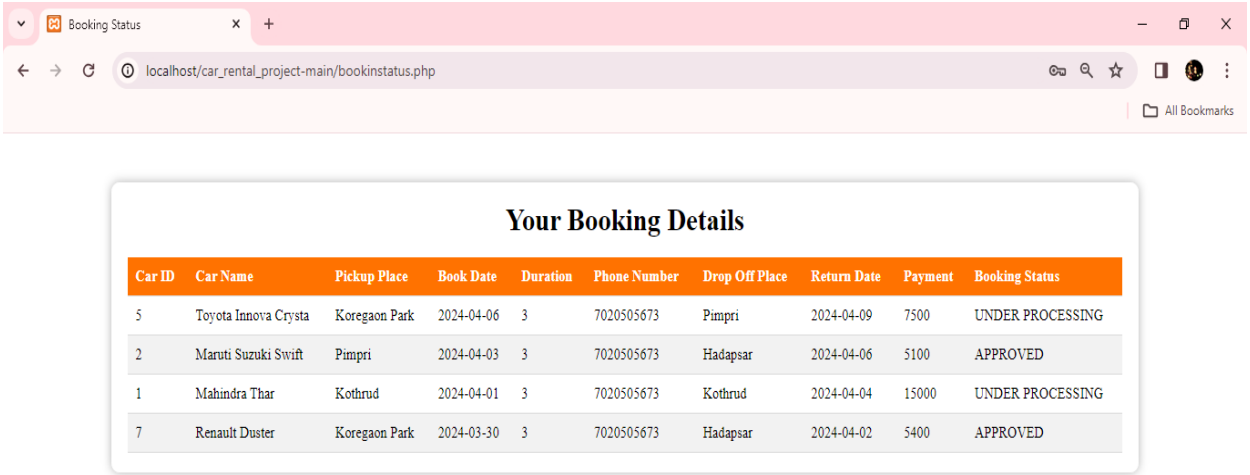


- After payment user will get success payment message

  From here user can go back to home page



- If user want to see booking details and status, he/she need to click booking status then they can see all details and status as below



- User can give feedback , contact admin by clicking options on dashboard and filling details.