Web-Based Project on Car Rental

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This report Presented in partial fulfilment of the requirements for the degree

Of Bachelor of Science in Computer Science and Engineering

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DHAKA, BANGLADESH

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APPROVAL

This Project/internship titled **"MM Car Rental"**, submitted by Minhazur Rahman, ID No: 161-15-7281 and Md. Mahir Shahriyar, ID No: 161-15-7113 to the Department of Computer Science and Engineering, Daffodil International University has been accepted as satisfactory for the partial fulfillment of the requirements for the degree of B.Sc. in Computer Science and Engineering and approved as to its style and contents. The presentation has been held on 06 December 2019.

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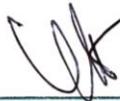
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DECLARATION

We hereby declare that this research has been done by us under the supervision of Ms. Zakia Zaman, Lecturer and co-supervision of Ms. Most. Hasna Hena, Senior lecturer, Department of CSE, Daffodil International University. We also declear that neither this project nor any part of this project has been submitted elsewhere for the award of any degree.

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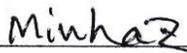
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ABSTRACT

The Car Rental System is for a car rental company. By this system admin can rent a vehicle that can be used by a customer by paying the money for the car and for a specified period of time. Our car rental system titled "MM Car Rental" has a very user friendly interface. Thus the user will feel very easy to work on it. We used CSS as front end and HTML for backend. In our daily life often we need to rent cars, for that we go to the car stands. Our goal is to make the process easy and save time by booking the car online. By using this system admin can manage their rental, booking, customer issues, vehicle etc. They can edit car list or delete too. The customer can rent a car by created new account before login in or he/she can log into the system with his/her created account. The customer also can see the car details from the car list.

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CHAPTER 1

Introduction

1.1 Introduction

"MM car Rental "is a web-based online system. This system is created to make the car rental process easy and time saving. The system has been provided car history details, their engine and parts details, car check in and check out details, payment details etc. This system also has the facility to check their customer details and their payment mode along with date and time. First time a customer will have to create a profile if they are taking a car on rent and select the payment mode. The customer will have the facility to select any type of car. Upon selection of particular type customer will able to get the entire details like rent type, cost, mileage etc. Customer will have to fill the basic information details like name, address, total number of passenger, number of days to service, location etc. The admin will also have his or her own account as administrator. Admin can maintain records of cars and also maintain the bookings.

1.2 Motivation

As our final project, car rental management system is software designed for the car rental service industry. Like a standard service system, car rental management system will help a person capture transactions and manage inventory with accuracy and generally run every day processes more efficiently. We focus on saving time by online booking of cars and payment. In future we want to develop this project as our own business.

1.3 Objective

- To develop a simple and secure system that protect client information.
- To design a user friendly system.
- To save a lot of time.
- To pay rent online.
- To stores bookings, reservation and payment history.
- To calculate monthly cost and revenue.

1.4 Expected Outcome

This software, called "MM Car Rental" will allow for the company to access their database securely and safely in a user friendly online environment. Allowing for them to change car information with ease. The software will be in sync with the both the Web App, allowing for real-time up-to-date services for their customer.

Both registered and non-registered users will be able to search car rental by price, model, seating and any other potential searches. They will also be able to select and pay for the service.

1.5 Layout of the Report

Chapter one have demonstrated an introduction to the project with its motivation and expected outcome.

In chapter two we have discussed about the background of this project and the problem and challenges we faced completing this project.

We have specified the requirement we need for this project in the chapter three.

The topics related design of this project including back-end and front-end design in the chapter four.

Chapter five contains the usage of the client project interaction and UI, execution of specified requirements, testing execution and test reports of the project.

Chapter six we discussed the conclusion and the scope for further developments.

CHAPTER 2

BACKGROUND STUDY

2.1 Introduction

In this section, we will discuss challenges about this research. In related work section, we will discuss other research paper and their work and accuracy which are related to our work. We want to improve our website design from the other site and more user friendly.

2.2 Related Works

We are following this websites

http://garivara.com.bd/

https://nijhoom.com/

https://www.zoomrentacar.com.bd/

This is online car rental website. They receive car bookings via their online website. In order to book a car on online three things are needed:

1. Booking.
2. Delivery.
3. Payment Processing.

2.3 Comparative Studies

We follow some famous online car rental management system website. All the websites have some common parts like booking system, pricing, payment processing etc. Also our websites have in some parts and we can try make something new. We focus on making the website as friendly as possible.

2.4 Scopes of problem

To specify some certain requirements and features their come some none required arrangements which hinders the ease of interaction with the system. Developing the system we have to look after these features. The system should be simply operated by clients in such a manner that there should be a client-system trust ability and understandability

2.5 Challenges

One big issue in challenging terms we faced on this project is the data protection of user. In our system the user needs to login for using some certain features. As a prerequisite of login process there should be an account against that login credentials. These consist of private info of user. That user should never be harmed in any way through the use of those info. Data encryption on passwords and sensitive info is an issue to think.

CHAPTER 3

REQUIREMENT SPECIFICATION

3.1 Customer

The first requirement for a customer for using the website to have an account. Without the account customer can't rent any car. But who does not any account he can also see the car list.

For registration user have to give Full name, Mobile number, Email address and Password. You have to be agree with the terms and conditions of the website. This user details will be saved in our database.

For login user have to type his email and the password and click in the Login button.

The user also have the option to update his account. And if anyone forgot his password he has the option to make a new one.

3.2 Administrator

Director or administrator can deal with the total framework. The main requirement for administrator is to have the access to the database. Director can enroll new customer. Administrator can register new server and register new car information. Administrator also have to have an account. He can also update his account.

3.3 Customer Registration Module

Client enrollment module contains customer's data like client individual data and distinctive data related with that client. At that point, the majority of the data recorded into data. Clients are given with an office to modify his current parole.

3.4 Customer Online Booking and Reservation Module

Client online requesting and reservation module gives a thought that they must satisfy in term of renting cars on the web.

3.5 Feedback Module

Feedback module will contain the thoughts of the customers on the website after using the system. Users will give their thoughts on this website. They can give suggestions about the website which will help us to improve customer service.

CHAPTER 4

DESIGN SPECIFICATION

4.1 Font-end design:

The front-end is everything included with the client sees, including plan and a few dialects like HTML and CSS. A user Interface (UI) designer is commonly a visual planner and is commonly centered on structure.

This is the home page of our website. This is the first look for the customer of our website.

Fig 4.1: Home Page

This page contain the car list and their details. Customer will chose car from this page.
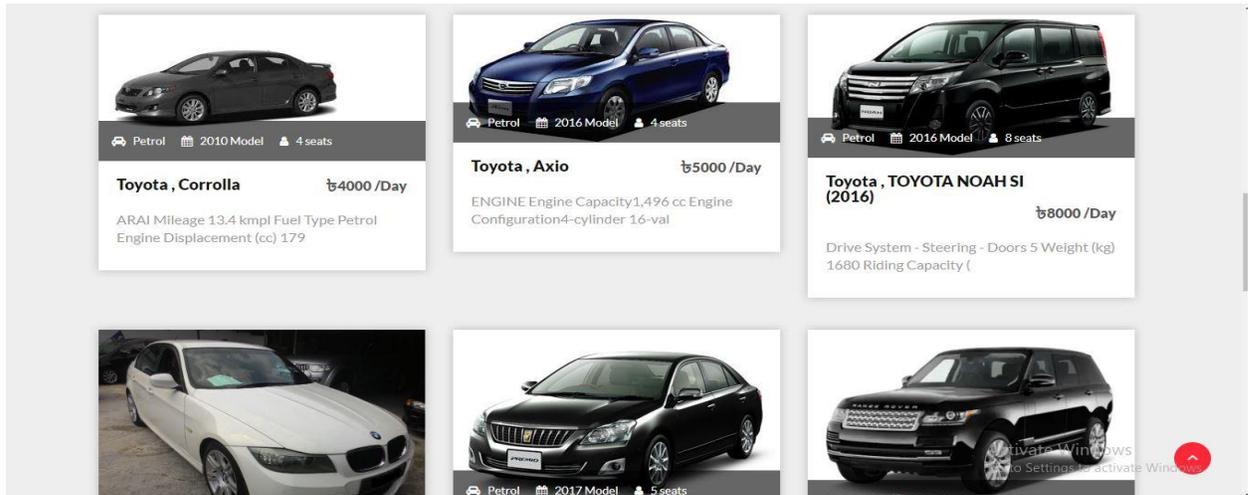

Fig 4.2: Car List

For booking cars customer will come to this page. He/she need to give the booking date. And also can give massage.

Fig 4.3: Booking

This is the login page. For login user need a gmail and need to give his password.
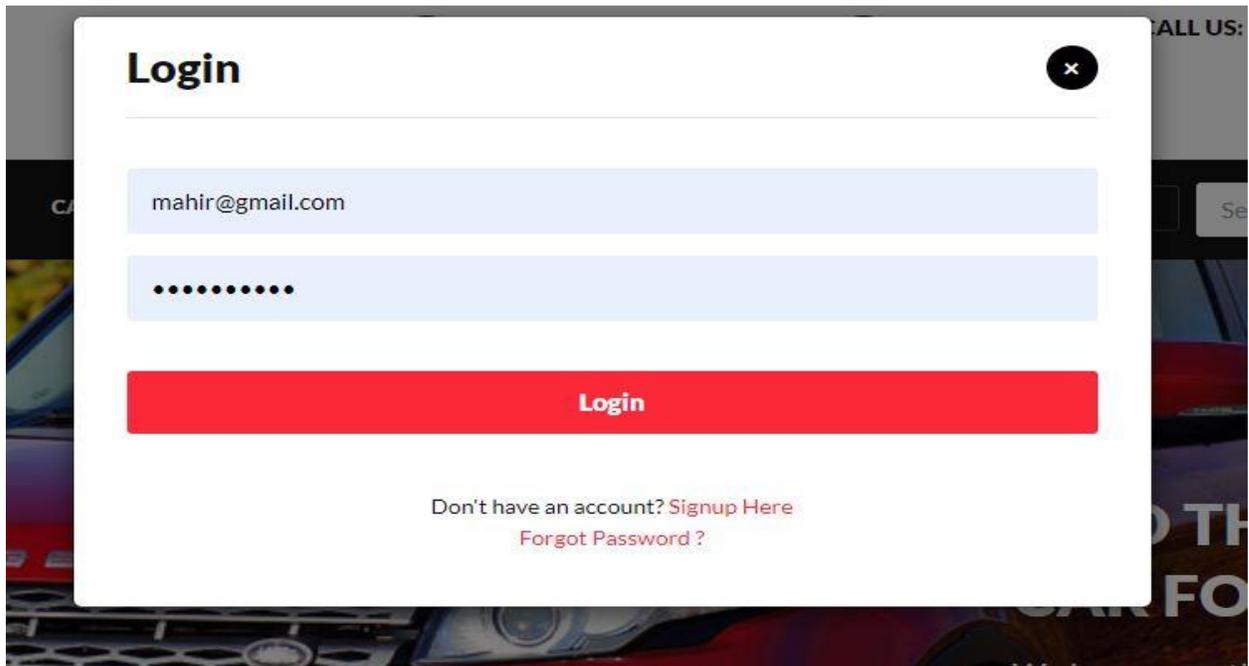
Fig 4.4: Login

In Sign Up page user have to give their full name, mobile number, email address and a password.

Fig 4.5: Sign Up

4.2 Back-end Design

All the pages of our website is connected to our database. We used MySQL for our database design. We created some table such as admin, booking, brand, contact us info, contact us query, subscribers, testimonials, users and vehicles. The admin table is connected with the admin page. Booking table is connected with the booking page. Contact us query table is connected with the message page. The feedback page is connected with the testimonial table.

4.3 Users:

This table keeps record of the client's data. Email ID is essential key in this table so we can perceive every part's email ID particularly as it is utilized as their client id too. Other data incorporates client Name, password, contact no, address and status, the later informs him concerning whether the part is boycotted or not.

4.4 Vehicles:

It contains the car data and its related issue, each car is particularly distinguished by its ID. Customers can see the car list. And in the car details customer will see the information for example Description of the car, category, cost etc.

4.5 Booking:

This table contain the information of when the customer need the car, which car he/she needed, message of the customers.

CHAPTER 5

TESTING & IMPLEMENTATION

Testing is Associate in Nursing integral a part of the system development method. The most normal for software system testing is contained within the ANSI/IEEE, normal for software system testing documentation.

5.1 Implementation of Database

A database is an integration collection of logically related records of files consolidate into a common pool that provides data for or more multiple uses. The MySQL database stores logically in the form of table spaces and physically in the form of data files.

Fig 5.1: Database

5.2 Unit Test

We tested individual units of source code such as individual program, function, procedure tec. And the test was successful, all the units are running as it is supposed to.

5.3 Link Test

We do the link testing to see if the modules operate correctly or not. And it was running successfully.

5.4 Integration Test

We combined all the individual units to run integration testing. Our purpose was to expose faults in the interaction between integrated units. It was working properly.

5.5 System Test

Framework testing has been completed preceding establishment and it saw that the framework works as per prerequisites and there is no issue.

5.6 Usability Test

Our selected clients run the usability test as the end-users of the software. And it was totally perfect.

5.7 Implementation Test

We run implementation testing to see the cases and specification, is it implemented or have limitations.

Test Case	Test Inputs	Expected Outcome	Obtained Outcome	Pass/Fail	Tested On
1. Login	Login via any devices	Successfully login	Successfully login	pass	10-10-2019
2. Password	Incorrect Password or empty filed	Warn the incorrect Password or field is empty	Show warring	pass	10-10-2019
3.Change setting	View profile. Update profile	Show update profile information	Show and update information successfully	pass	10-10-2019

CHAPTER 6

Conclusion and Future works

6.1 Conclusion

At the end of this project we gather a lot of experience which will help us for our future. During this time we learned a lot about web design. We used CSS, HTML and MySQL for our website. We try to reduce the wasting of time and we try to make the website as friendly as possible. During this time there was a lot of challenges which need to be solved.

6.2 Future Work

A website can be good or bad. It depends on the development and the language of the website can be changed. The language of the website that we developed is HTML, CSS and MySQL. We will think about the feature of the website according to the user demand. There are two feature in our mind which we will try to insert in our website. We are trying to add booking cancellation option for the customer. At this stage there is no payment system in our website. And we are working on it now.

REFERENCES

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<< http://garivara.com.bd/>>, last access on Oct 17 2019 at 3.00 pm.

[2] Award Winning Local Tour Operator in Bangladesh.

<< https://nijhoom.com/>>, last access on Oct 20 2019 at 2.30 pm.

[3] Zoom Rent A Car in Dhaka.

<< https://www.zoomrentacar.com.bd/>>, last access on Oct 15 2019 at 2.00 pm.

[4] W3Schools Online Web Tutorials

<<https://www.w3schools.com/?fbclid=IwAR00lbCTVbL4-_v6Cwp7jvXzYJrIn9fGIW94dwM_nRlPBjE251dLTXIhn9c>>, last access on Sep 10 2019 at 9.00 pm.

[5] Web design bangla tutorial A to Z

<<https://www.youtube.com/playlist?list=PLw9LWB3zBwEhog_L9AAuDF32lv7zTKzPM&fbclid=IwAR2YXXlUW913nx2CnjKEED_TXdEeaFNv5pU6aEIsX0ORT4gMYeurHLR2KcA >>, last access on Sep 7 2019 at 11.00 am.

[6] Web Engineering - YouTube

<<https://www.youtube.com/playlist?list=PLV8vIYTIdSnbwIFENjqBK7yyAkSVSoLBC&fbclid=IwAR05Y0jRT9GMaLLwaigA95xzOzsF6J8C92HT726YaTG9dzoOjGUQye5NlLI >>, last access on Sep 2 2019 at 12.00 pm.

APPENDICES

APPENDIX A: DATABASE TABLES

Table 1: admin

Description: - This table is used to store username and Password of Admin and also store there some personal information.

Table 2: booking

Description: - This table is used to store booking information like the date of rental.

Table 3: brands

Description: - This table is used to store car brand information.

Table 4: contact us info

Description: - This table is used to store contact information of admin.

Table 5: contact us query

Description: - This table is used to store the massage of customer.

Table 6: subscribers

Description: - This table is used to store the information of subscribed customers like username their password.

Table 7: testimonial

Description: - This table is used to store the testimonial info.

Table 8: users

Description: - This table is used to store the customer's username and password.

Table 9: vehicles

Description: - This table is used to store the vehicles info like car name, rental price etc.

APPENDIX B: RELATED DIAGRAM
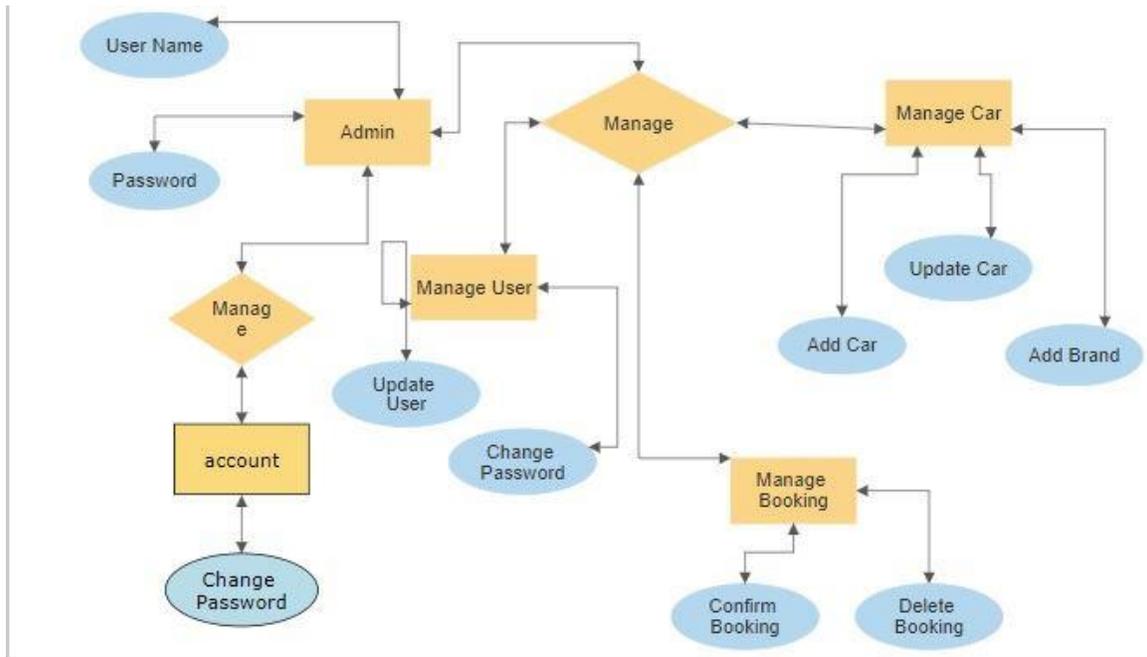
Fig 1: ER Diagram Admin
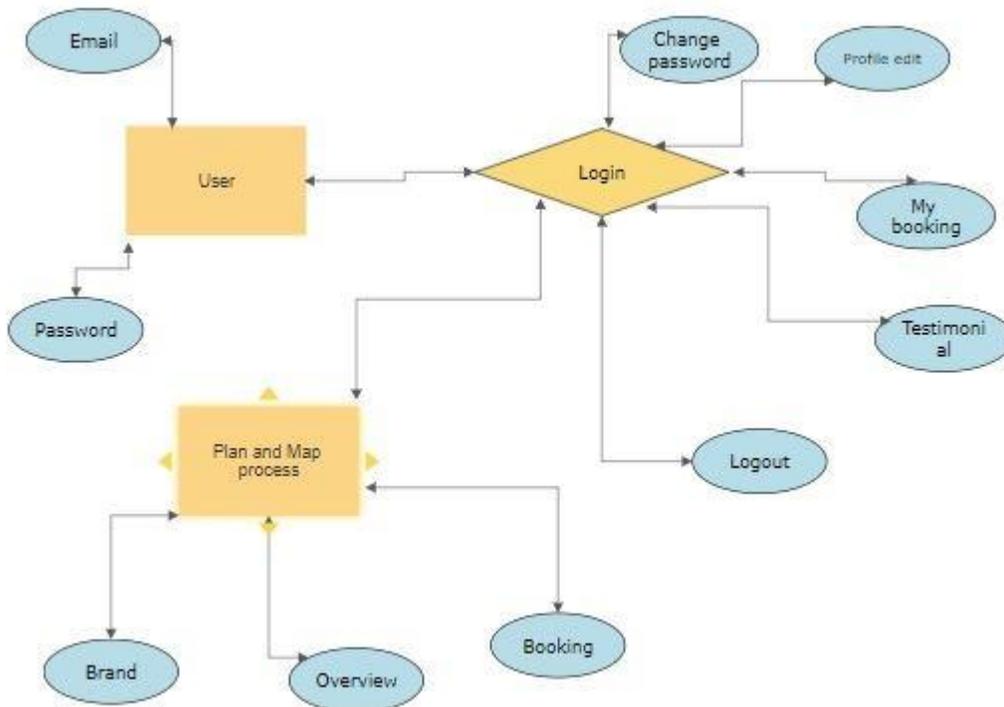

Fig 2: ER Diagram User
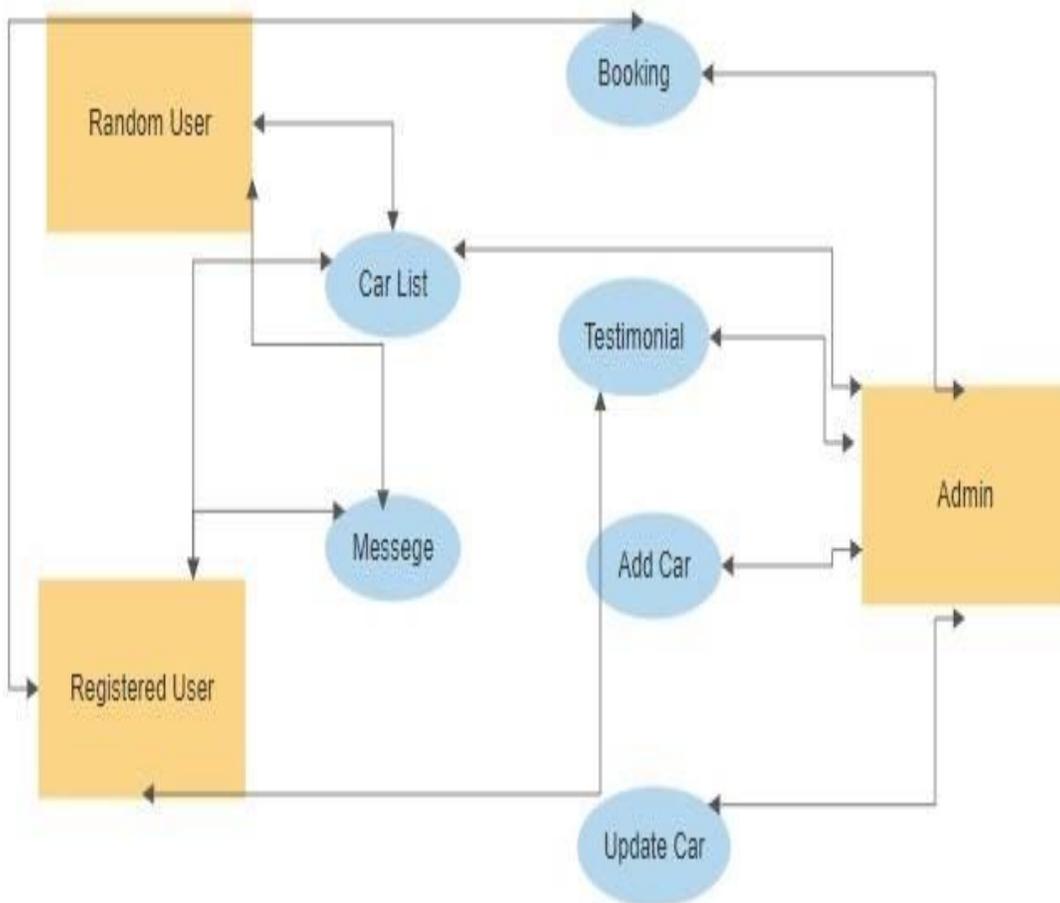
Fig 3: Use case
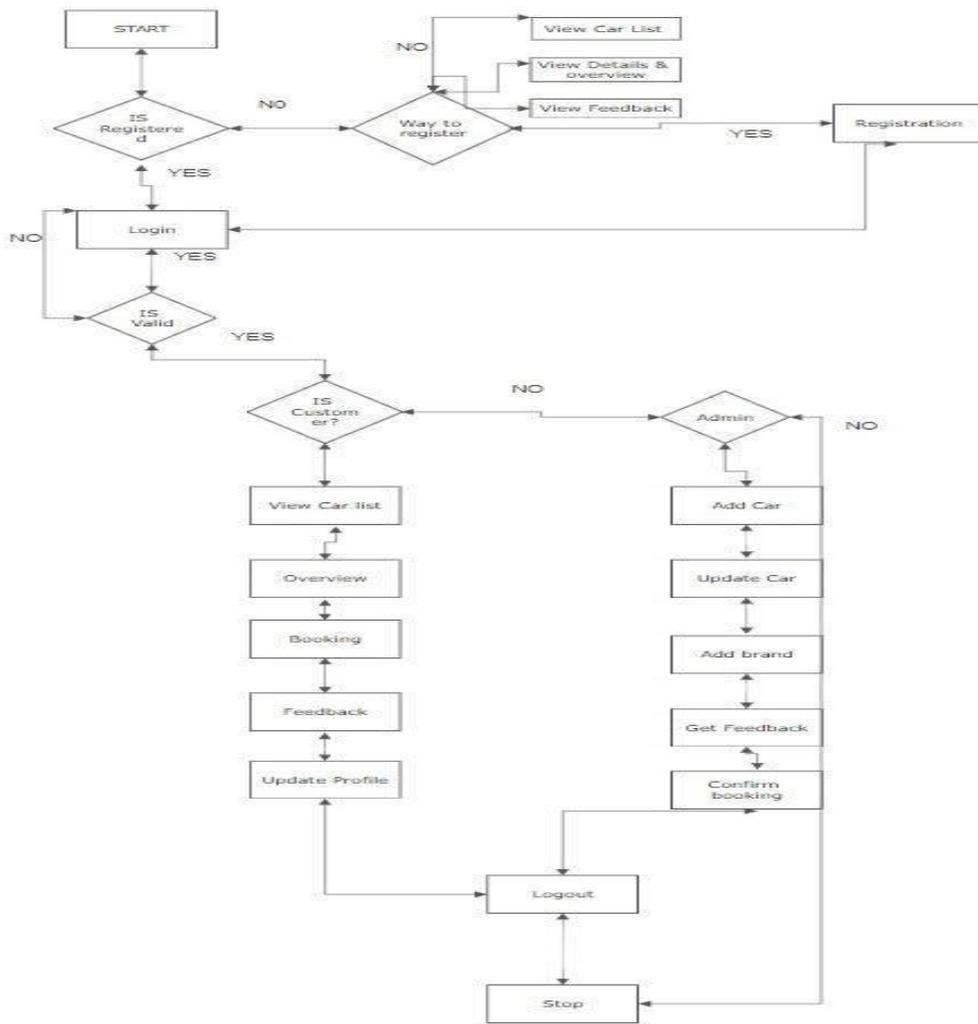
Fig 4: Flow Chart
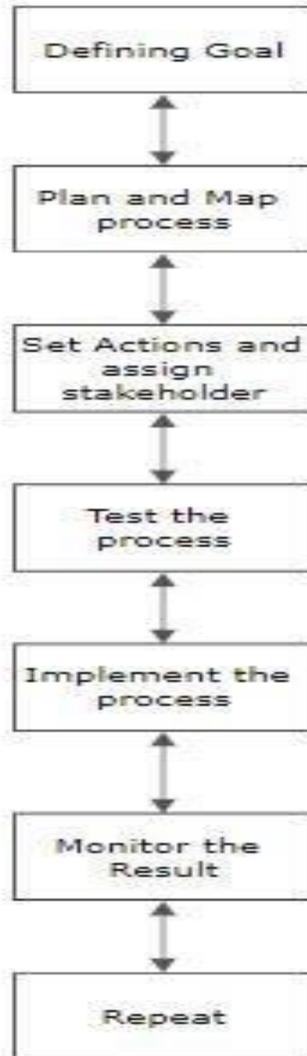
Fig 5: Business Process

APPENDIX C: PROJECT REFLECTION

```php
<body>
<!--Header-->
<?php include('includes/header.php');?>
<!-- /Header -->

<!-- Banners -->
<section id="banner" class="banner-section">
  <div class="container">
    <div class="div_zindex">
      <div class="row">
        <div class="col-md-5 col-md-push-7">
          <div class="banner_content">
            <h1>Find the right car for you.</h1>
            <p>We have more than a thousand cars for you to choose. </p>
            <a href="#" class="btn">Read More <span class="angle_arrow"><i class="fa fa-angle-right"
            aria-hidden="true"></i></span></a> </div>
        </div>
      </div>
    </div>
  </div>
</section>
<!-- /Banners -->


<!-- Resent Cat-->
<section class="section-padding gray-bg">
  <div class="container">
    <div class="section-header text-center">
      <h2>Find the Best <span>CarForYou</span></h2>
```

```php
      <div class="recent-tab">
        <ul class="nav nav-tabs" role="tablist">
          <li role="presentation" class="active"><a href="#resentnewcar" role="tab" data-toggle="tab">New Car
          </a></li>
        </ul>
      </div>
      <!-- Recently Listed New Cars -->
      <div class="tab-content">
        <div role="tabpanel" class="tab-pane active" id="resentnewcar">

<?php $sql = "SELECT tblvehicles.VehiclesTitle,tblbrands.BrandName,tblvehicles.PricePerDay,tblvehicles.
  FuelType,tblvehicles.ModelYear,tblvehicles.id,tblvehicles.SeatingCapacity,tblvehicles.VehiclesOverview,
  tblvehicles.Vimage1 from tblvehicles join tblbrands on tblbrands.id=tblvehicles.VehiclesBrand";
$query = $dbh -> prepare($sql);
$query->execute();
$results=$query->fetchAll(PDO::FETCH_OBJ);
$cnt=1;
if($query->rowCount() > 0)
{
foreach($results as $result)
{
?>

<div class="col-list-3">
<div class="recent-car-list">
<div class="car-info-box"> <a href="vehical-details.php?vhid=<?php echo htmlentities($result->id);?>"><img src
="admin/img/vehicleimages/<?php echo htmlentities($result->Vimage1);?>" class="img-responsive" alt="image"></a
>
<ul>
<li><i class="fa fa-car" aria-hidden="true"></i><?php echo htmlentities($result->FuelType);?></li>
<li><i class="fa fa-calendar" aria-hidden="true"></i><?php echo htmlentities($result->ModelYear);?> Model</li>
<li><i class="fa fa-user" aria-hidden="true"></i><?php echo htmlentities($result->SeatingCapacity);?> seats</
li>
</ul>
```

Fig 6: Home Page

```php
<?php
if(isset($_POST['login']))
{
$email=$_POST['email'];
$password=md5($_POST['password']);
$sql ="SELECT EmailId,Password,FullName FROM tblusers WHERE EmailId=:email and Password=:password";
$query= $dbh -> prepare($sql);
$query-> bindParam(':email', $email, PDO::PARAM_STR);
$query-> bindParam(':password', $password, PDO::PARAM_STR);
$query-> execute();
$results=$query->fetchAll(PDO::FETCH_OBJ);
if($query->rowCount() > 0)
{
$_SESSION['login']=$_POST['email'];
$_SESSION['fname']=$results->FullName;
$currentpage=$_SERVER['REQUEST_URI'];
echo "<script type='text/javascript'> document.location = '$currentpage'; </script>";
} else{

  echo "<script>alert('Invalid Details');</script>";


}

}

?>

<div class="modal fade" id="loginform">
  <div class="modal-dialog" role="document">
    <div class="modal-content">
      <div class="modal-header">
        <button type="button" class="close" data-dismiss="modal" aria-label="Close"><span aria-hidden="true">&
        times;</span></button>
        <h3 class="modal-title">Login</h3>
      </div>
      <div class="modal-body">
        <div class="row">
          <div class="login_wrap">
            <div class="col-md-12 col-sm-6">
              <form method="post">
                <div class="form-group">
                  <input type="email" class="form-control" name="email" placeholder="Email address*">
                </div>
                <div class="form-group">
                  <input type="password" class="form-control" name="password" placeholder="Password*">
                </div>
                <div class="form-group checkbox">
                  <input type="checkbox" id="remember">

                </div>
                <div class="form-group">
                  <input type="submit" name="login" value="Login" class="btn btn-block">
                </div>
              </form>
            </div>

          </div>
        </div>
      </div>
      <div class="modal-footer text-center">
        <p>Don't have an account? <a href="#signupform" data-toggle="modal" data-dismiss="modal">Signup Here</a
        ></p>
        <p><a href="#forgotpassword" data-toggle="modal" data-dismiss="modal">Forgot Password ?</a></p>
      </div>
    </div>
  </div>
</div>
```

Fig 7: Login

```
<body>
<!--Header-->
<?php include('includes/header.php');?>
<!-- /Header -->

<!--Page Header-->
<section class="page-header listing_page">
    <div class="container">
        <div class="page-header_wrap">
            <div class="page-heading">
                <h1>Car Listing</h1>
            </div>
            <ul class="coustom-breadcrumb">
                <li><a href="index.php">Home</a></li>
                <li>Car Listing</li>
            </ul>
        </div>
    </div>
    <!-- Dark Overlay-->
    <div class="dark-overlay"></div>
</section>
<!-- /Page Header-->

<!--Listing-->
<section class="listing-page">
    <div class="container">
        <div class="row">
            <div class="col-md-9 col-md-push-3">
                <div class="result-sorting-wrapper">
                    <div class="sorting-count">
```

```php
<?php
//Query for Listing count
$sql = "SELECT id from tblvehicles";
$query = $dbh -> prepare($sql);
$query->bindParam(':vhid',$vhid, PDO::PARAM_STR);
$query->execute();
$results=$query->fetchAll(PDO::FETCH_OBJ);
$cnt=$query->rowCount();
?>
<p><span><?php echo htmlentities($cnt);?> Listings</span></p>
</div>
</div>

<?php $sql = "SELECT tblvehicles.*,tblbrands.BrandName,tblbrands.id as bid  from tblvehicles join tblbrands on
    tblbrands.id=tblvehicles.VehiclesBrand";
$query = $dbh -> prepare($sql);
$query->execute();
$results=$query->fetchAll(PDO::FETCH_OBJ);
$cnt=1;
if($query->rowCount() > 0)
{
foreach($results as $result)
{   ?>
        <div class="product-listing-m gray-bg">
            <div class="product-listing-img"><img src="admin/img/vehicleimages/<?php echo htmlentities($result->
                Vimage1);?>" class="img-responsive" alt="Image" /> </a>
            </div>
            <div class="product-listing-content">
                <h5><a href="vehical-details.php?vhid=<?php echo htmlentities($result->id);?>"><?php echo
                    htmlentities($result->BrandName);?> , <?php echo htmlentities($result->VehiclesTitle);?></a></h5
                >
                <p class="list-price">৳<?php echo htmlentities($result->PricePerDay);?> Per Day</p>
                <ul>
                    <li><i class="fa fa-user" aria-hidden="true"></i><?php echo htmlentities($result->
```

Fig 8: Car Listing

MM Car Rental

20%	%	%	20%
SIMILARITY INDEX	INTERNET SOURCES	PUBLICATIONS	STUDENT PAPERS

PRIMARY SOURCES

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3	Submitted to Arab Open University Student Paper	2%
4	Submitted to University of Mauritius Student Paper	2%
5	Submitted to University of New England Student Paper	1%
6	Submitted to Pathfinder Enterprises Student Paper	1%
7	Submitted to University of Sunderland Student Paper	1%
8	Submitted to Higher Education Commission Pakistan Student Paper	1%
9	Submitted to NCC Education	