SPIASAGAR UNIVERSIA



BCA 6TH SEMESTER, 2021
Project Report On

Car Rental Portal

Submitted By

Subhadip Maiti

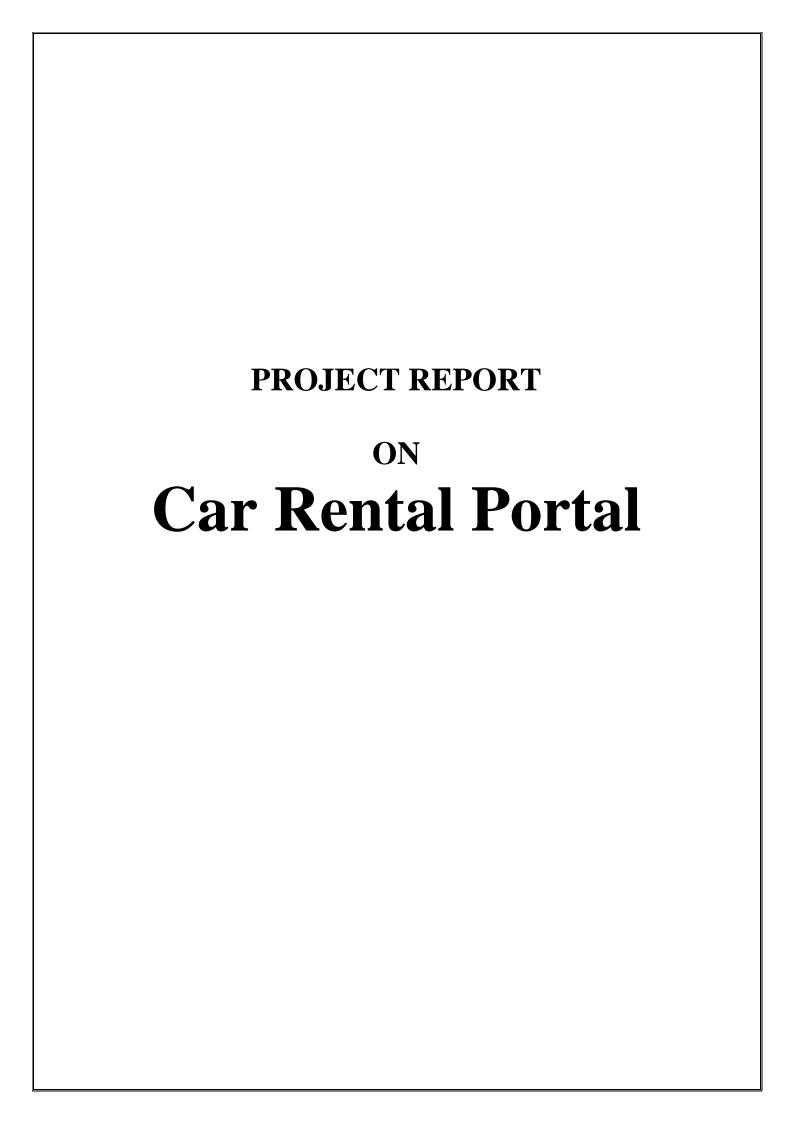
 $\begin{array}{ccc} Roll - 46118136 & No - 046 \\ Reg. \ No - 0000474 & \end{array}$

Guided By

Mr. Jayanta Pahari, Mr. Sachchidananda Jana

Submitted To

Department of Computer Science & Application, VU in partial fulfillment of the requirements for the degree BCA



-: Declaration :-

We hereby declare that this project report entitled "Car Rental Portal" has been prepared by us under the guidance of Mr. Jayanta Pahari.

We would like to declare that this is the result of our own effort and that it has not been satisfied to this College or to other any University or boards for the award of degree.

This project fulfills the requirement of the ordinance relating to the final year of City University and is up to standard in respect of content, presentation and language for being referred to the examiner. The work has never been submitted anywhere. It's only submitted to **Vidyasagar University**.

Prepared by:

Subhadip Maiti Debojyoti Sheet Ashima Maity

Guide by:

Mr. Jayanta Pahari

Mr. Sachchidananda Jana

-: Acknowledgement :-

We would like to express our deepest sense of gratitude to our project guide **Mr. Jayanta Pahari** and for his untiring guidance, constant supervision, enthusiastic encouragement, sagacious advice and an effective surveillance throughout the entire period of our project & thesis work and preparation of the manuscript. We greatly say thank you. Wish to express our heart full thanks to all of our honorable teachers of the **Department of Computer Science & Application, Prabhat Kumar College, Contai**.

We sincerely thank our Head of Department **Prof. Poulomi Bosu Roy** for giving us the chance as well as the support for all the time being.

We also want to express our appreciation to our classmates and friends who helped us in one way or another during the course of developing this project. They endured the long hours of our absence during the development of this project.

We deeply express our respect to our parent and our teachers for their blessing and constant inspiration in every step of our education.

We would like to thank our College Management, Faculties and all others for giving us the opportunity to learn and deploy our skills in the field of online project.

We acknowledge all the above mentioned for the direct or indirect help in our endeavor. Last but not the least I would thank all my Project Partners for being like a family and doing this uphill task and supporting each other in times of difficulties and need.

Thanking You.

With best regards

Subhadip Maiti Debojyoti Sheet Ashima Maity

Student of Department of Computer Science & Application Prabhat Kumar College, Contai

-: **Abstract** :-

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.

The Proposed system is completely integrated online systems. It automates manual procedure in an effective and efficient way. This automated system facilitates customer and provides to fill up the details according to their requirements. It includes type of vehicle they are trying to hire and location. The purpose of this system is to develop a web site for the people who can book their vehicles along with requirements from ant part of the world.

Qrabhat Kumar College, Contain.



CERTIFICATE

This is to certify that the work embodied in this project entitled "Car Rental Portal" submitted by Subhadip Maiti, Debojyoti Sheet, Ashima Maity to the Department of Computer Science & Application, P.K College, Contai is carried out under my supervision and guidance.

The project work has been prepared as per the regulations of **Vidyasagar University** and I strongly recommend the project work be accepted in partial fulfillment of the requirement for the degree of **BCA**.

Dr. Arindam Roy DEPT .OF C.SC & APPLICATION P.K.COLLEGE , CONTAI

Table of Contents

Chapter	1

1.1. Introduction	1
1.2. Reason for the Project	1
1.3. Problem Statement	2
1.4. Aims & Objectives	2
1.5. Scope	2
1.6. How Car Rental Portal Work	3
1.7. Benefits of Car Rental Portal	3 - 4
Chapter 2	
2.1. FUNCTIONAL AND NON-FUNCTIONAL REQUIREMENTS	5 - 6
2.2. Hardware Requirements Specification	6
2.3. Software Requirements Specification	6
2.4. Register Users Features	7
2.5. Admin Features	7 - 8
Chapter 3	
3.1. System Design	9
3.2. Logical Design	9-10
3.3. Physical Design	10
3.4. Level 0 DFD for Car Rental Portal	11
3.5. Level 1 DFD for Car Rental Portal	12
3.6. ER diagram for Car Rental Portal	13
Chapter 4	
• INTRODUCTION OF TECHNOLOGIES USED IN PROJECT	14 - 18
Chapter 5	
Sample Snapshots of Project	19 - 26
• CONCLUSION	27
• REFERENCES	28

-: Chapter-1 :-

1.1. Introduction:-

CAR RENTAL PORTAL is a web based system for a company that rents out cars. This system enables the company to make their services available to the public through the internet and also keep records about their services.

The world has become a place where there is a lot of technological development; where every single thing done physically has been transformed into computerized form. Nowadays, people's activities have been transformed into work done by computerized systems. One of which is the main target of this project which is about Car Rental Portal. The system of renting cars exist back in the previous years, were people rent cars for their personal reasons. Car renting is essential to many peoples' plan to travel or move from one place to another for business purposes, tour, and visit or holidays, for these reasons Car renting is very helpful.

The starting point of Car renting is really unknown as said by Thomas Pretty; he also mentioned that many beliefs that Joe Saunders was the first man to start a Car renting company. According to Thomas Pretty, charges were calculated with the help of mileage tracking device. Many people became interested in the Car rental business and hence got involved. Car renting became more popular as years pass by. Today Car renting services is found all over the world, especially in the developed and developing countries. To make this service more popular and accessible to the public it has been transform into a web base system and connected to the internet were everyone can be able to have access to it.

1.2. Reason for the Project:-

The advancement in Information Technology and internet penetration has greatly enhanced various business processes and communication between companies (services provider) and their customers of which car rental industry is not left out. This E-Car Rental Portal is developed to provide the following services:

- Enhance Business Processes: To be able to use internet technology to project the rental company to the global world instead of limiting their services to their local domain alone, thus increase their return on investment (ROI).
- Online Vehicle Reservation: A tools through which customers can reserve available cars online prior to their expected pick-up date or time.
- **Customer's registration**: A registration portal to hold customer's details, monitor their transaction and used same to offer better and improve services to them.
- **Group bookings**: Allows the customer to book space for a group in the case of weddings or corporate meetings (Event management).

1.3. Problem Statement:-

A car rental is a vehicle that can be used temporarily for a fee during a specified period. 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.

1.4. Aims & Objectives:-

- 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.

1.5. <u>Scope</u>:-

This project traverses a lot of areas ranging from business concept to computing field, and required to perform several researches to be able to achieve the project objectives. The area covers include:

- Car rental industry: This includes study on how the car rental business is being done, process involved and opportunity that exist for improvement.
- PHP Technology used for the development of the application.
- General customers as well as the company's staff will be able to use the system effectively.
- Web-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.

1.6. How Car Rental Portal Work:-

A car rental is a vehicle that can be used temporarily for a period of time with a fee. Renting a car assists people to get around even when they do not have access to their own personal vehicle or don't own a vehicle at all. The individual who want to rent a car must first contact the car rental company for the desire vehicle. This can be done online. At this point, this person has to supply some information such as; dates of rental, and type of car. After these details are worked out, the individual renting the car must present a valid Identification Card.

Most companies throughout the industry make a profit based of the type of cars that are rented. The rental cars are categorized into economy, compact, compact premium, premium and luxury. And customers are free to choose any car of their choice based on their purse and availability of such car at the time of reservation.

1.7. Benefits of Online Car Rental Portal:-

- This online car rental solution is fully functional and flexible.
- It is very easy to use.
- This online car rental portal helps in back office administration by streamlining and standardizing the procedures.
- It saves a lot of time, money and labour.
- Eco-friendly: The monitoring of the vehicle activity and the overall business becomes easy and includes the least of paper work.

• The software acts as an office that is open 24/7.
• It increases the efficiency of the management at offering quality services to the customers.
• It provides custom features development and support with the software.
Page No - 5

-: <u>CHAPTER-2</u> :-

2.1. FUNCTIONAL AND NON-FUNCTIONAL REQUIREMENTS:-

Functional Requirements:-

Requirement analysis is a software engineering technique that is composed of the various tasks that determine the needs or conditions that are to be met for a new or altered product, taking into consideration the possible conflicting requirements of the various users.

Functional requirements are those requirements that are used to illustrate the internal working nature of the system, the description of the system, and explanation of each subsystem. It consists of what task the system should perform, the processes involved, which data should the system holds and the interfaces with the user. The functional requirements identified are:

- **a. Customer's registration:** The system should allow new users to register online and generate membership card.
- **b. Online reservation of cars:** Customers should be able to use the system to make booking and online reservation.
- c. Automatic update to database once reservation is made or new customer registered: Whenever there's new reservation or new registration, the system should be able update the database without any additional efforts from the admin.
- **d. Feedbacks to customers:** It should provide means for customers to leave feedback.

• Non-Functional Requirements:-

It describes aspects of the system that are concerned with how the system provides the functional requirements. They are:

a. Security: The subsystem 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; and only users with valid password and username can login to view user's page.

- **b. Performance and Response time:** 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.
- **c. Error handling:** Error should be considerably minimized and an appropriate error message that guides the user to recover from an error should be provided. Validation of user's input is highly essential. Also the standard time taken to recover from an error should be 15 to 20 seconds.
- **d. Availability:** This system should always be available for access at 24 hours, 7 days a week. Also in the occurrence of any major system malfunctioning, the system should be available in 1 to 2 working days, so that the business process is not severely affected.
- **e. Ease of use:** Considered the level of knowledge possessed by the users of this system, a simple but quality user interface should be developed to make it easy to understand and required less training.

2.2. Hardware Requirements Specification:-

The Minimum Specification of Hardware are:

Processor : Intel Pentium IV or later

Main Memory (RAM) : 256 MB Cache Memory : 512 KB

Monitor : 14 inch Color Monitor

Keyboard : Standard keyboard (108 Keys)

Mouse : Optical Mouse

Hard Disk : 160 GB

2.3. Software Requirements Specification:-

Front End : HTML, CSS, JAVASCRIPT

Back End : PHP
Database : MYSQL

Additional Tools : WAPM Server

Operating System : Windows 7, 8, 8.1 or later.

2.4. Register Users Features:-

- Car Booking
- View car booking history
- •Update His / Her profile
- Update his/her password
- Post Testimonials
- View testimonials
- Logout

2.5. Admin Features:-

- Admin can create vehicle brands
- Manage Vehicle Brands (Edit, Delete)
- Post Vehicle
- Manage Vehicle (Edit, Delete)
- Manage Booking (Admin can confirm and cancel Booking)
- Manage Testimonials (Active and Inactive)
- Manage Contact us Query
- •Admin can the details of registered users
- Admin can also update the page content
- Admin can update the contact us details
- Manage Subscribers
- •Admin Dashboard (Admin can view the count of reg. users, total booking, total subscribers, total queries, etc)

Change Password (admin can change own password)
•Logout
Page No - 9

-: **CHAPTER-3** :-

3.1. System Design:-

Design is the first step into the development phase for any engineered product or system. Design is a creative process. A good design is the key to effective system. The term "design" is defined as "the process of applying various techniques and principles for the purpose of defining a process or a system in sufficient detail to permit its physical realization". It may be defined as a process of applying various techniques and principles for the purpose of defining a device, a process or a system in sufficient detail to permit its physical realization.

The system design develops the architectural detail required to build a system or product. As in the case of any systematic approach, this software too has undergone the best possible design phase fine tuning all efficiency, performance and accuracy levels. The design phase is a transition from a user oriented document to a document to the programmers or database personnel.

System design goes through two phases of development:

- Logical Design and
- Physical Design.

3.2. Logical Design:-

The logical flow of a system and define the boundaries of a system. It includes the following steps:

- Reviews the current physical system its data flows, file content, volumes, frequencies etc.
- Prepares output specifications that is, determines the format, content and frequency of reports.
- Prepares input specifications format, content and most of the input functions.
- Prepares edit, security and control specifications.
- Specifies the implementation plan.
- Prepares a logical design walk through of the information flow, output, input, controls and implementation plan.

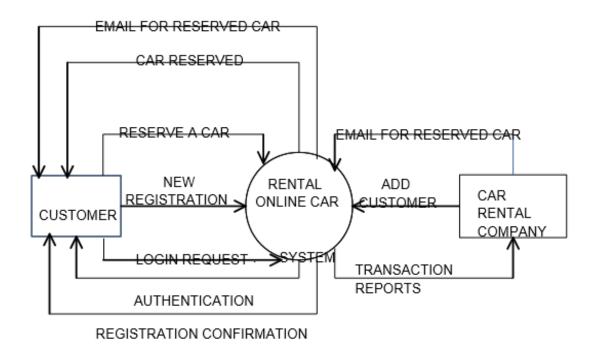
• Reviews benefits, costs, target dates and system constraints.

3.3. Physical Design:-

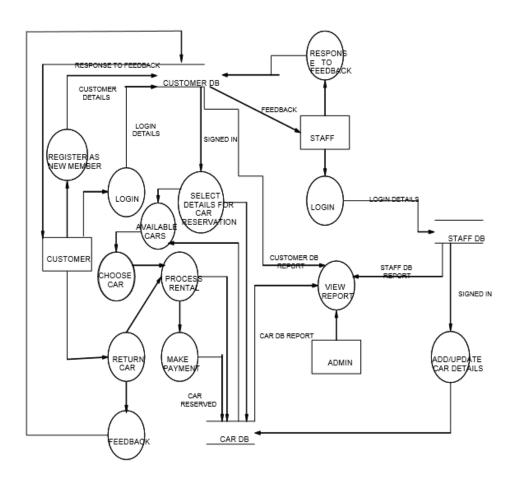
Physical system produces the working systems by define the design specifications that tell the programmers exactly what the candidate system must do. It includes the following steps.

- Design the physical system.
- Specify input and output media.
- Design the database and specify backup procedures.
- Design physical information flow through the system and a physical design Walk through.
- Plan system implementation.
- Prepare a conversion schedule and target date.
- Determine training procedures, courses and timetable.
- Devise a test and implementation plan and specify any new hardware/software.
- Update benefits, costs, and conversion date and system constraints.

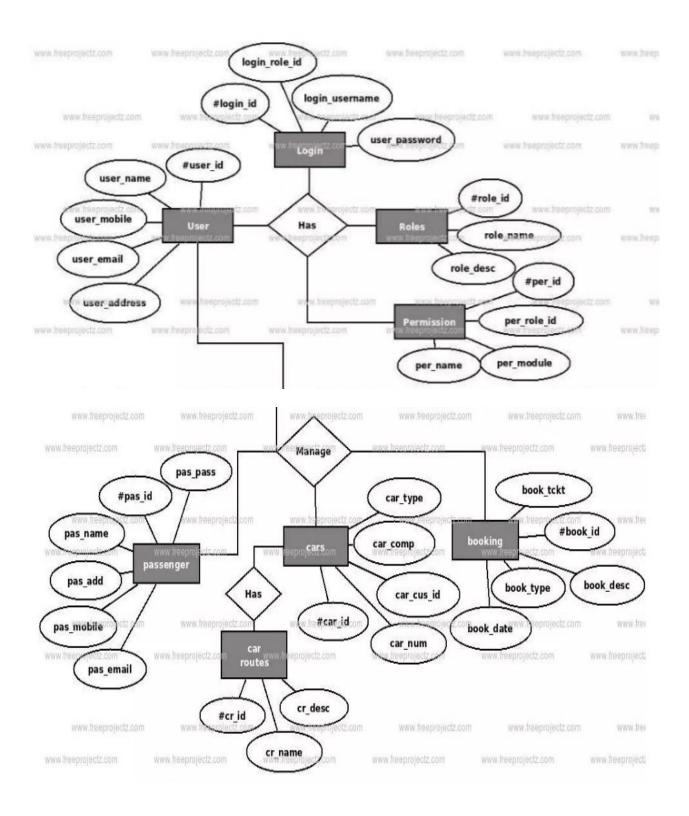
3.4. Level 0 DFD for Car Rental Portal:-



3.5. Level 1 DFD for Car Rental Portal:-



3.6. ER diagram for Car Rental Portal:-



-: **CHAPTER-4** :-

INTRODUCTION OF TECHNOLOGIES USED IN PROJECT:-

4.1. About PHP:-

PHP: Hypertext Pre-processor is a widely used, general-purpose scripting language that was originally designed for web development to produce dynamic web pages. For this purpose, PHP code is embedded into the HTML source document and interpreted by a web server with a PHP processor module, which generates the web page document.

As a general-purpose programming language, PHP code is processed by an interpreter application in command-line mode performing desired operating system operations and producing program output on its standard output channel. It may also function as a graphical application. PHP is available as a processor for most modern web servers and as standalone interpreter on most operating systems and computing platforms.

PHP was originally created by Rasmus Lerdorf in 1995 and has been in continuous development ever since. The main implementation of PHP is now produced by the PHP Group and serves as the de facto standard for PHP as there is no formal specification. PHP is free software released under the PHP License.

PHP is a general-purpose scripting language that is especially suited to server-side web development where PHP generally runs on a web server. Any PHP code in a requested file is executed by the PHP runtime, usually to create dynamic web page content. It can also be used for command-line scripting and client-side GUI applications. PHP can be deployed on most web servers, many operating systems and platforms, and can be used with many relational database management systems. It is available free of charge, and the PHP Group provides the complete source code for users to build, customize and extend for their own use.

Originally designed to create dynamic web pages, PHP now focuses mainly on server side scripting, and it is similar to other server-side scripting languages that provide dynamic content from a web server to a client, such as Microsoft's Active Server Pages, Sun Microsystems' Java Server Pages, and mod_perl. PHP has also attracted the development of many frameworks that provide building blocks and a design structure to promote rapid

application development (RAD). Some of these include CakePHP, Symfony, Codelgniter and Zend Framework, offering features similar to other web application frameworks.

4.2. PHP Syntax:-

HTML and PHP code is written on the same page, and to distinguish PHP code from HTML, the PHP code is enclosed within <? php ?> Tags.

For example:-

```
<html>
<head><title>php basics</title></head>
<body>
<h2>HELLO</h1>
<?php
echo "hello";
?>
</body>
</html>
```

In the above example PHP code is embedded within HTML. In this way PHP and HTML coding is combined on the same page.

Since PHP is a server side scripting language, the PHP coding cannot be seen by the end user through view source option, due to this feature PHP is very secure.

PHP is a parsed language; therefore PHP environment is necessary at the server for running PHP scripts.

4.3. Working of PHP:-

- •When a client requests web page containing PHP code from the server, then the requested PHP pages are parsed under PHP environment and interaction with database is made if required.
- •After server side processing, the resulting HTML pages are passed to client and displayed on the browser.

In this way the working of php is complete.

4.4. Connecting PHP Application to MySQL Database:-

4.5. Introduction to MySQL:-

MySQL is a relational database management system (RDBMS) that runs as a server providing multi-user access to a number of databases. MySQL is officially pronounced ("My S-Q-L"), but is often pronounced ("My Sequel"). It is named for original developer Michael Widenius's daughter My.

The MySQL development project has made its source code available under the terms of the GNU General Public License, as well as under a variety of proprietary agreements. MySQL is owned and sponsored by a single for-profit firm, the Swedish company MySQL AB, now owned by Sun Microsystems, a subsidiary of Oracle Corporation.

MySQL code uses C and C++. The SQL parser uses yacc and a home-brewed lexer, sql_lex.cc.

MySQL works on many different system platforms, including AIX, BSDi, FreeBSD, HPUX, i5/OS, Linux, Mac OS X, NetBSD, Novell NetWare, OpenBSD, OpenSolaris, eComStation, OS/2 Warp, QNX, IRIX, Solaris, Symbian, SunOS, SCO OpenServer, SCO UnixWare, Sanos, Tru64 and Microsoft Windows. A port of MySQL to OpenVMS also exists.

All major programming languages with language-specific APIs include Libraries for accessing MySQL database. In addition, an ODBC interface called MyODBC allows additional programming languages that support the ODBC interface to communicate with a MySQL database, such as ASP or ColdFusion. The HTSQL - URL based query method also ships with MySQL adapter allowing direct interaction with MySQL database from any web client via structured URLs. The MySQL server and official libraries are mostly implemented in ANSI C/ANSI C++.

4.6. Introduction to APACHE 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.

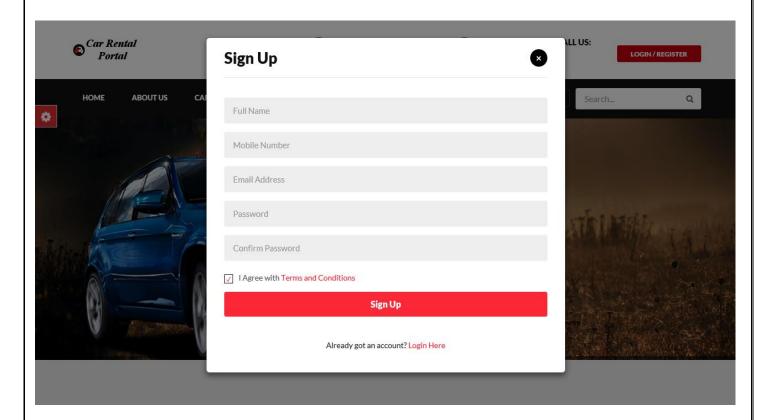
In our project apache server is configured to work with PHP, in this way all the PHP pages ar parsed and executed by the server.	e
When apache is installed on the system, then its services is controlled by apache service monitor.	e
	_
Page No - 1	.9

Г

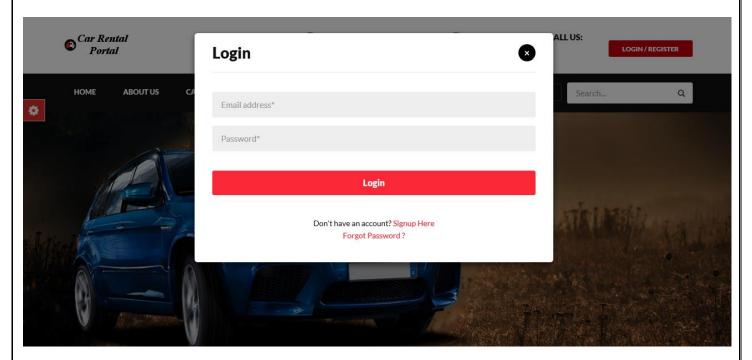
-: **CHAPTER-5** :-

5.1. Sample Snapshots of Project:-

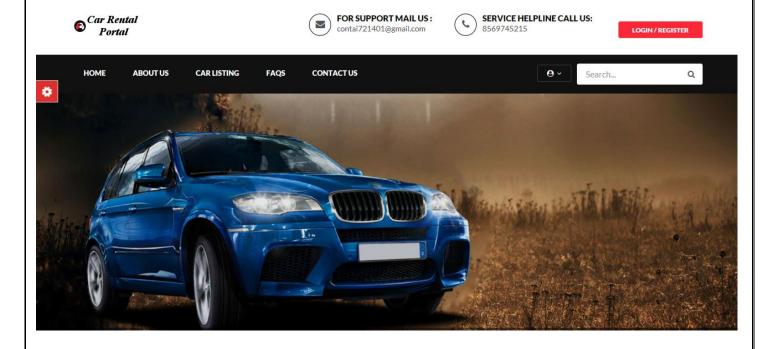
• Registration form:



• Login form:

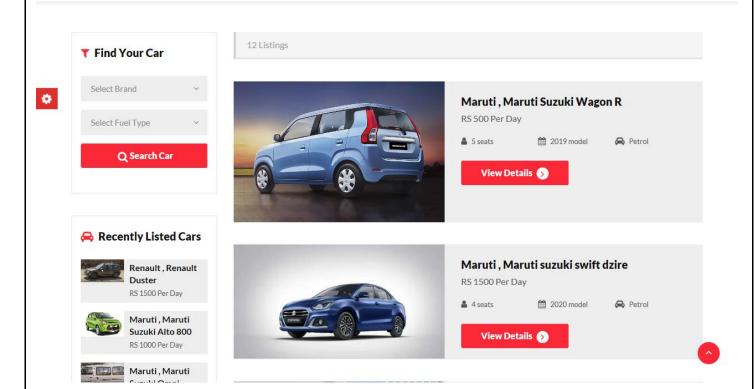


• Home page:

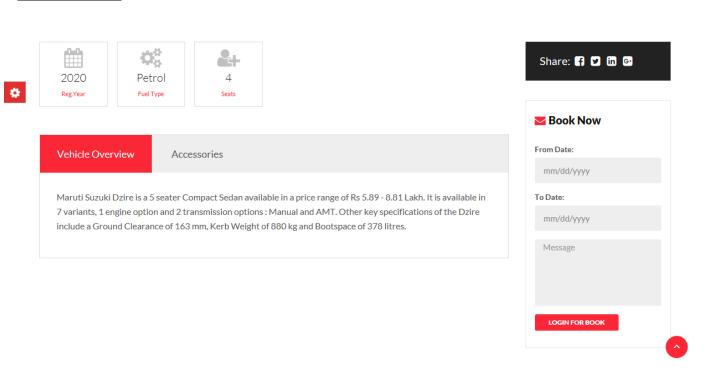


• Password change form: Subhamay Paria ø **Profile Settings** Update Password Update password My Booking Post a Testimonial **Current Password** My Testimonials Sign Out Password Confirm Password Update • **Update profile**: **Subhamay Paria** ø **GENRAL SETTINGS Profile Settings Update Password** Reg Date - 2020-10-01 12:01:55 My Booking Full Name Post a Testimonial Subhamay Paria My Testimonials Sign Out **Email Address** subhamay119@gmail.com Phone Number 8535870244 Page No - 22

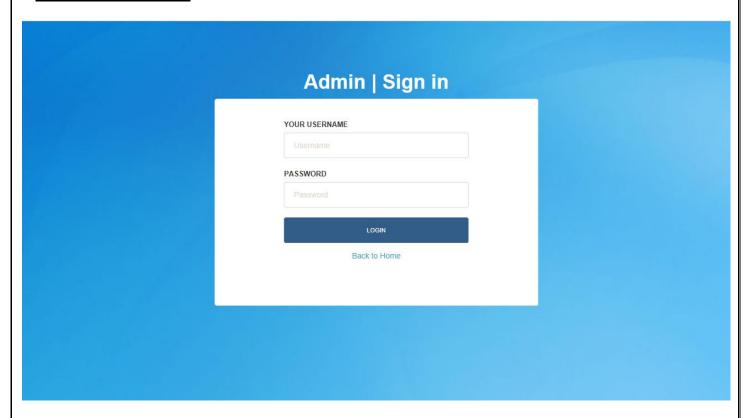
• Car list:



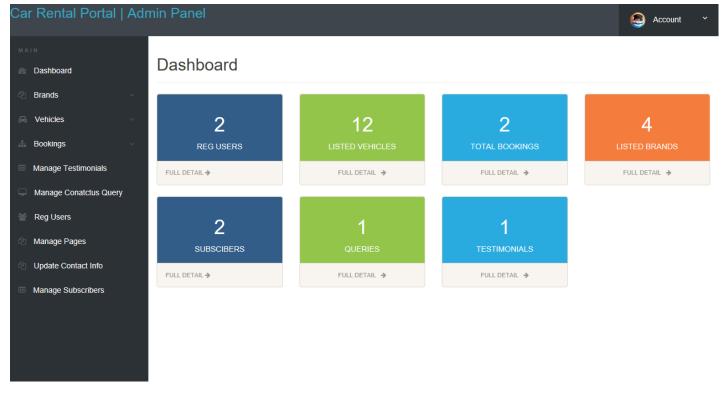
• Booking car:



• Admin login form:

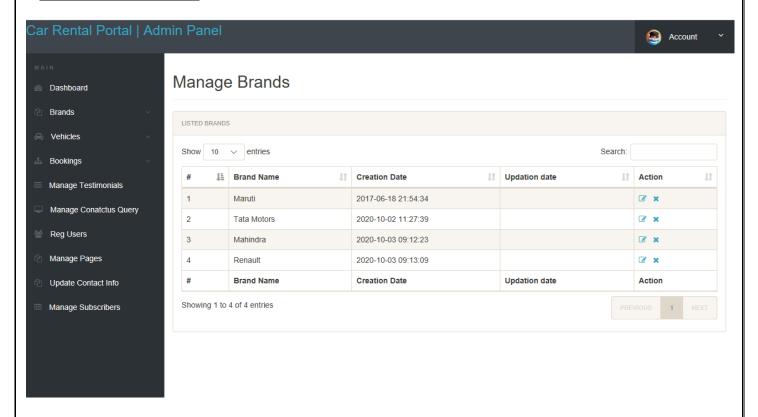


• Admin portal Dashboard:

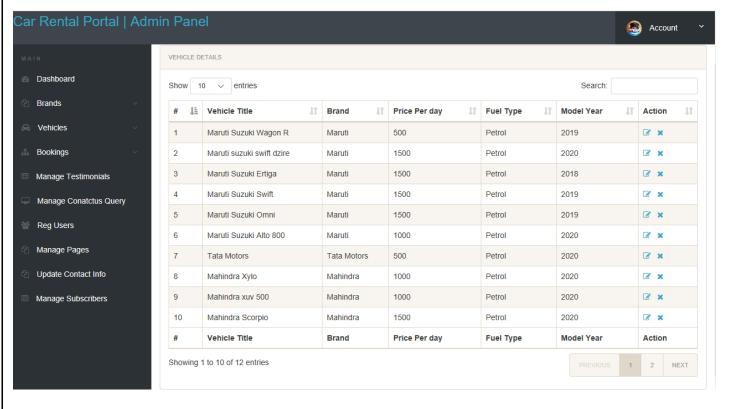


Page No - 24

• Car Brands details:

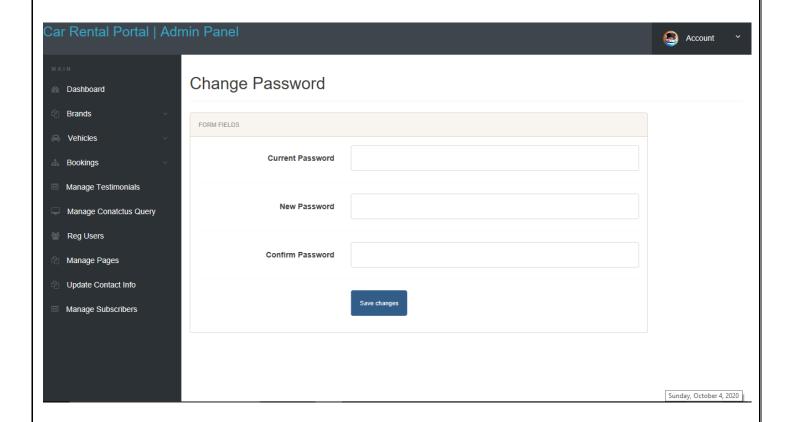


• All car details:

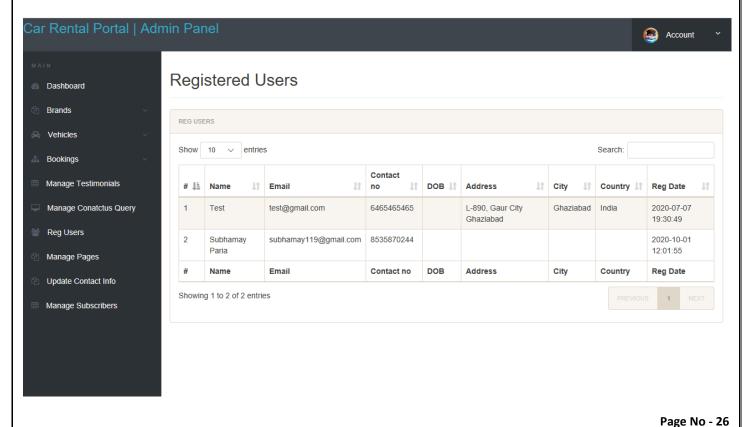


Page No - 25

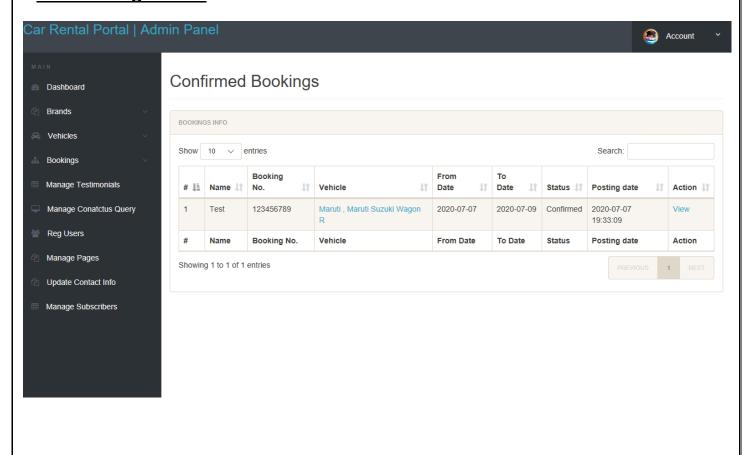
• Change admin panel password form:



• Register user details:



• Car booking details:



-: **CONCLUSION** :-

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.

-: <u>REFERENCES</u> :-

1. For basic details

Website: https://phpgurukul.com/php-projects-free-downloads/

Website: https://www.academia.edu

2. For ER diagram

Website: https://freeprojectz.com

3. For DFD

Website: https://www.academia.edu

4. For snapshots

Website: https://phpgurukul.com

5. Website: https://youtu.be/vYYh4tsgc0o