CAR RENTAL MANAGEMENT SYSTEM
PROJECT REPORT

ABSTACT

Customers will be able to reserve their vehicles from anywhere in the world due to the Car Rental System. Consumers provide information to this application by filling in their personal information. When a consumer creates an account on the website, he or she can reserve a car. The proposed system is an online system that is fully integrated. It effectively and efficiently automates manual procedures. Customers are aided by this automated method, which allows them to fill in the specifics according to their needs. It contains information on the sort of car they want to hire as well as the location. The goal of this system is to create a website where customers can book their automobiles and request services from anywhere in the world.

This Car Rental System project is designed to help the car rental organization to enable renting cars through an online system. It helps the clients to scan for available cars view profile and book the cars for the time period. It has an easy to understand interface which helps the client to check for cars and rent them for the period determined. They could likewise make payment on the online. The rental cars will be ordered into an economy, premium and so forth. Based on a type of car required by the client, the client will have able to make bookings. The utilization of internet technology has made it simple for the clients to rent a car at anytime. This Car Rental System makes the booking easy. It spares time and work. The apparatus will approach the client for data, for example, the date and time of journey, kind of car and so forth. Likewise, it will require a recognizable identification number. Utilizing these details, the tool will help the client with booking a car for the journey.

EXISTING SYSTEM: Car Rental System service will help clients with booking a car for some fee determined. Till now there was no clear web-based UI to help the clients with renting the vehicle. They needed to manually rent the vehicle through their offices. It was a difficult task to manage rental vehicles. Keeping track of all the rental cars was an issue.

PROPOSED SYSTEM: This Car Rental System task will enable the client to rent a vehicle. The client will log in to the system and check for the availability of cars. The client indicates a kind of car and the journey date and time. The Car Rental System will check for the availability of the car and rent the car to the client. The client can make payment on the online. Every one of the information with respect to the rental cars are stored in MySQL database. The client needs to enter his name, address, phone details and check for the cars available for rent. The main advantage is that the client will have the ability to pick a car depending upon his budget.

INTRODUCTION

There are three phases to this car rental system.

1) The first phase entails organising car rental locations into pools and allowing pooled car rental outlets to share a fleet of automobiles.

2) The second phase for each pool determines the types and quantities of cars to be acquired and delivered to the auto manufacturer, as well as the geographic redistribution of automobiles among pools across the long-term planning horizon.

3) The third phase entails day-to-day operations, during which the fleet's deployment within each pool and among its locations is determined.

Need for Car Rental System Nowadays, there is Online Car Rental, which benefits users greatly. A rental service is one where customers come to seek the rental of a rental unit. It is more convenient than paying for the unit's ownership and maintenance. A car rental company lends autos for a price for a few hours, a few days, or a week or more.

Objective of Car Rental System The project's goal is to automate vehicle rental and reservation so that clients don't have to waste time calling and waiting for a vehicle. To convert the manual car rental procedure into a digital method. A customer satisfaction test was used to validate the rental automobile system.

A framework is a set of defined concepts, techniques, and criteria for dealing with a certain type of problem that may be used as a guide for approaching and resolving future challenges of the same sort.

Data and Information Data gathering plays a vital function in a project's succession and also it plays an unavoidable role in the timely completion of the project. The project's data comprises the clients' contact information as well as their feedback/complaints, which are saved in a database. Only the admin has access to the information given by the clients in order to ensure security.

Software Requirements:

Atom is a source code editor for macOS, Linux, Microsoft Windows with support for plug-ins written in Java Script, and embedded Git Controller and open-source. Developed by GitHub, Atom is a desktop application built using web technologies. Most of the extending package have free software licenses and are community-built and maintained. Atom is based on electron (formerly known as Atom Shell), a framework that enables cross-platform desktop application using node.js. Atom is written in CoffeeScript and less, but much of it has been converted to JavaScript.

Hardware Requirements :

● **RAM:** Minimum 4GB RAM is required to run and process this application.

● **Hard Disk Space**: At least 100 MB space is required. The space occupied by all the files in this application is less than 100 MB. Therefore there is a requirement of at least 100MB

Languages Used

● HTML: is the standard markup language for documents designed to be displayed in a web browser. It can be assisted by technologies such as CSS and scripting languages like PHP and JavaScript. HTML describes the structure of a web page semantically and originally included cues for the appearance of the document. Web browsers receive HTML documents from a web server or from local storage and render the documents into multimedia web pages.

●CSS: **C**ascading **S**tyle **S**heets is a simple design language intended to simplify the process of making web pages presentable. CSS handles the look and feel part of a web page. Using CSS, you can control the color of the text, the style of fonts, the spacing between paragraphs, how columns are sized and laid out, what background images or colors are used, layout designs,variations in display for different devices and screen sizes as well as a variety of other effects. CSS is easy to learn and understand but it provides powerful control over the presentation of an HTML document. Most commonly, CSS is combined with the markup languages HTML or XHTML.

● MySQL: MySQL is a freely available open source Relational Database Management System (RDBMS) that uses Structured Query Language SQL is the most popular language for adding, accessing and managing content in a database. It is most noted for its quick processing, proven reliability, ease and flexibility of use. MySQL is an essential part of almost every open source PHP application. MySQL has stand-alone clients that allow users to interact directly with a MySQL database using SQL, but more often MySQL is used with other programs to implement applications that need relational database capability.

Database Design

Structure of Database:

In this model, we require sixteen tables, login , address, admin, availability, booking, cancellation, car model, cars, customer, damage, driver, enquiry, feedback, insurance, owner , payment. The login table would consist of details of user like login_id, Password, Role, Username, to which role they belong to and a password associated with each member. This password is used to login to the application.The address table would consists of details of Street, Pincode, City, State. The admin table consists of Password and address that is used to login and track address. The availability table consists of Car_model, Car_id, Color which is used to show the user wheather the car which was selected by the customer was available for that particular time or not. The booking table consists of Car_id, Customer_id, Date_, Return_date, Phone_num which shows to the user to book the car which is available. The Cancellation table consists of Payment_id, Bill, Car_id, Booking_date which is used to cancel the car booking. Car model table has attributes like mileage, brand, type, color, capacity , which shows detail of car in brief. Car table consists of car_model, insurance, car_plate_no , car_id. The customer table consists of Name, Customer_id , address, DOB, password , Phone_num, Email, Aadhar_no, License which represents the whole details of the client. Damage table consists of Repair_cost, Car_id, Rate which shows damage cost of the car, Driver table consists of License, Driver_id, Phone_num, DOB, License_exp_date which shows complete details of the driver. Enquiry table consists of Availability, Date_, Rating of the selected car, Feedback table consists of attributes Customer_id, Review_id, Car_id, Date_, Rating so the customer can share their experiences which will be helpful to the next coming customers. Insurance Table consists of id, Expiry _date which describes the insurance of the car and its expiry date, Owner table consists of attributes Name, Car_id, Phone_num, Car_Registration_num. payment table consists of customer_id, Phone_num, Email, Payment_id which shows the customer to pay his bill. These tables maintain relationships with other tables in the database.

Each customer can raise any number of bookings and hence the customer table and booking table, cancelling table have a relationship. Whenever the customer book a car they must pay else if they need to cancel they can cancel so the customer table , booking table, payment table, cancellation table, cars table has relationship. If the customer need to book a car the owner must provide car and customer need a driver so there is a relationship between cars, drivers and owners. In order to book a car the customer need to enquiry about the car so theirs a relationship between customers, cars and enquiry table, after booking and if any damage is occurred the customer need to pay and it will be informed to the admin so their exists a relationship between the payment, damage and the admin. In order to use the services all the customers admins and the owners need to login so their exists a relationship between login, customer, admin, owner. After service is provided to the customer he must give feedback so their exists a relationship between customer and feedback table and the admin will manage the server so their exist a relationship between them. In the next section, we shall see the ER diagram representation of the complete Car Rental Management System which gives us a clear picture of the database.

ER DIAGRAM:

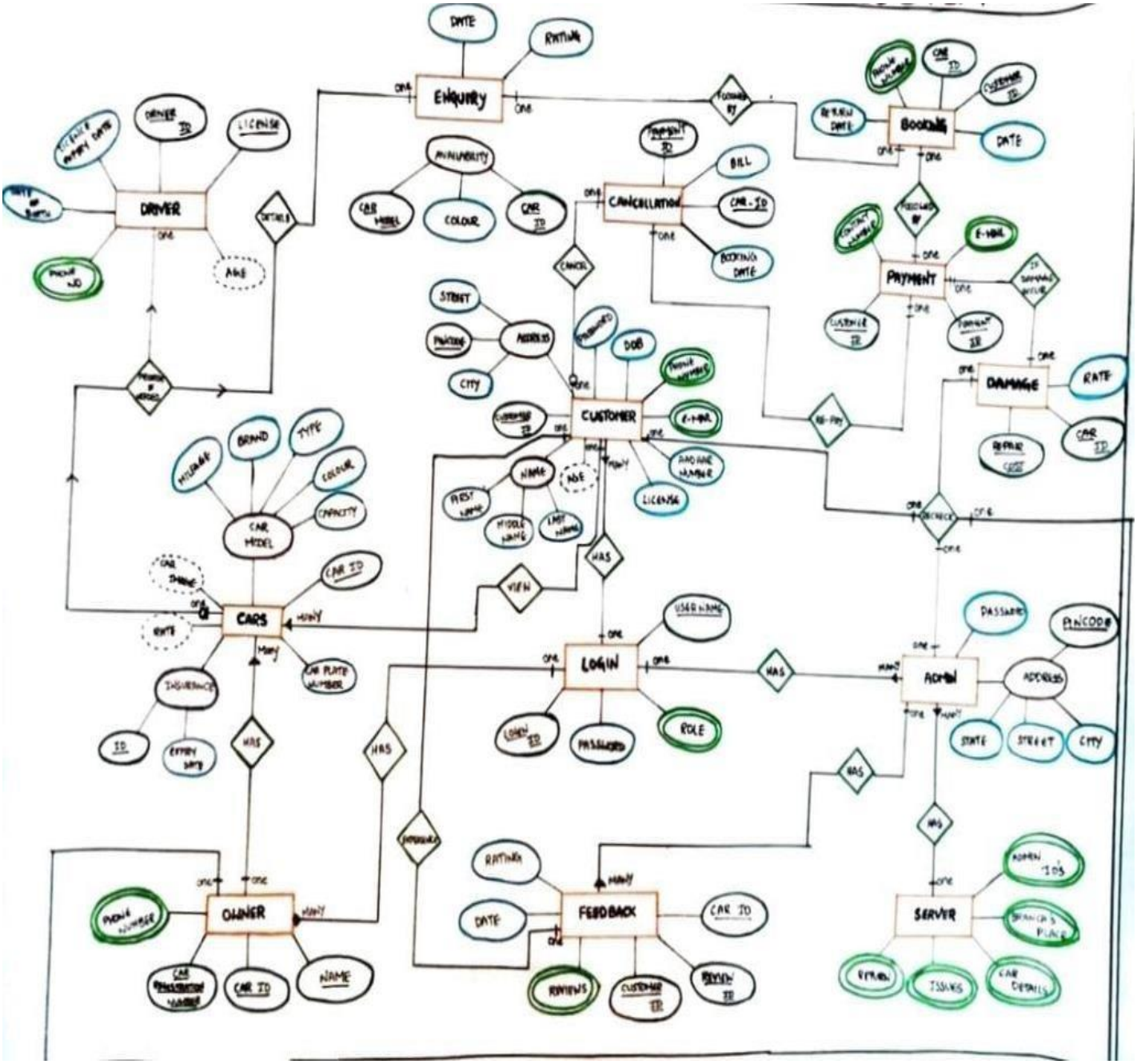

ENQUIRY
DATE
RATING
DRIVER
LICENSE
AGE
CANCELLATION
BILL
CAR_ID
BOOKING DATE
CUSTOMER
NAME
DOB
E-MAIL
ADDRESS
STREET
CITY
PAYMENT
DAMAGE
RATE
CARS
CAR ID
CAR MODEL
BRAND
TYPE
COLOUR
CAPACITY
INSURANCE
LOGIN
USER NAME
PASSWORD
ROLE
ADMIN
ENCODE
OWNER
NAME
FEEDBACK
RATINGS
REVIEWS
SERVER
HAS
VIEW
CANCEL

TABLE USED:

LOGIN TABLE

cid	name	type	notnull	dflt_value	pk
0	Login_id	int	0	NULL	1
1	Password	varchar(10)	1	NULL	0
2	Role	varchar(20)	1	NULL	0
3	Username	varchar(20)	1	NULL	0

```
+----------+-------------+------+-----+---------+-------+
| Field    | Type        | Null | Key | Default | Extra |
+----------+-------------+------+-----+---------+-------+
| Login_id | int         | NO   | PRI | NULL    |       |
| Password | varchar(10) | NO   |     | NULL    |       |
| Role     | varchar(20) | NO   |     | NULL    |       |
| Username | varchar(20) | NO   |     | NULL    |       |
+----------+-------------+------+-----+---------+-------+
```

ADDRESS TABLE

cid	name	type	notnull	dflt_value	pk
0	Street	varchar(10)	0	NULL	0
1	Pincode	int	0	NULL	1
2	City	varchar(10)	1	NULL	0
3	state	varchar(10)	1	NULL	0

```
+---------+-------------+------+-----+---------+-------+
| Field   | Type        | Null | Key | Default | Extra |
+---------+-------------+------+-----+---------+-------+
| Street  | varchar(10) | YES  |     | NULL    |       |
| Pincode | int         | NO   | PRI | NULL    |       |
| City    | varchar(10) | NO   |     | NULL    |       |
| state   | varchar(10) | NO   |     | NULL    |       |
+---------+-------------+------+-----+---------+-------+
```

ADMIN TABLE

cid	name	type	notnull	dflt_value	pk
0	Password	varchar(10)	1	NULL	0
1	Address	varchar(20)	1	NULL	0

```
+----------+-------------+------+-----+---------+-------+
| Field    | Type        | Null | Key | Default | Extra |
+----------+-------------+------+-----+---------+-------+
| Password | varchar(10) | NO   |     | NULL    |       |
| Address  | varchar(20) | NO   |     | NULL    |       |
+----------+-------------+------+-----+---------+-------+
```

AVAILABILITY TABLE

cid	name	type	notnull	dflt_value	pk
0	Car_model	varchar(15)	0	NULL	1
1	Car_id	varchar(15)	0	NULL	0
2	Color	varchar(10)	0	NULL	0

```
+-----------+-------------+------+-----+---------+-------+
| Field     | Type        | Null | Key | Default | Extra |
+-----------+-------------+------+-----+---------+-------+
| Car_model | varchar(15) | NO   | PRI | NULL    |       |
| Car_id    | varchar(15) | YES  | MUL | NULL    |       |
| Color     | varchar(10) | YES  |     | NULL    |       |
+-----------+-------------+------+-----+---------+-------+
```

BOOKING TABLE

cid	name	type	notnull	dflt_value	pk
0	Car_id	varchar(15)	0	NULL	1
1	Customer_id	varchar(10)	0	NULL	0
2	Date_	date	1	NULL	0
3	Return_date	date	1	NULL	0
4	Phone_num	varchar(10)	1	NULL	0

```
+-------------+-------------+------+-----+---------+-------+
| Field       | Type        | Null | Key | Default | Extra |
+-------------+-------------+------+-----+---------+-------+
| Car_id      | varchar(15) | NO   | PRI | NULL    |       |
| Customer_id | varchar(10) | YES  | MUL | NULL    |       |
| Date_       | date        | NO   |     | NULL    |       |
| Return_date | date        | NO   |     | NULL    |       |
| Phone_num   | varchar(10) | NO   |     | NULL    |       |
+-------------+-------------+------+-----+---------+-------+
```

CANCELLATION TABLE

cid	name	type	notnull	dflt_value	pk
0	Payment_id	varchar(15)	0	NULL	1
1	Bill	int	1	NULL	0
2	Car_id	varchar(15)	1	NULL	0
3	Booking_date	date	1	NULL	0

Field	Type	Null	Key	Default	Extra
Payment_id	varchar(15)	NO	PRI	NULL	
Bill	int	NO		NULL	
Car_id	varchar(15)	NO		NULL	
Booking_date	date	NO		NULL	

CAR MODEL TABLE

cid	name	type	notnull	dflt_value	pk
0	Mileage	int	0	NULL	0
1	Brand	varchar(15)	1	NULL	0
2	Type	varchar(10)	0	NULL	0
3	Color	varchar(10)	1	NULL	0
4	Capacity	int	1	NULL	0

Field	Type	Null	Key	Default	Extra
Mileage	int	YES		NULL	
Brand	varchar(15)	NO		NULL	
Type	varchar(10)	YES		NULL	
Color	varchar(10)	NO		NULL	
Capacity	int	NO		NULL	

CARS TABLE

cid	name	type	notnull	dflt_value	pk
0	Car_model	varchar(15)	1	NULL	0
1	Insurance	varchar(10)	0	NULL	0
2	Car_plate_no	int	1	NULL	0
3	Car_id	varchar(15)	0	NULL	1

```
+--------------+-------------+------+-----+---------+-------+
| Field        | Type        | Null | Key | Default | Extra |
+--------------+-------------+------+-----+---------+-------+
| Car_model    | varchar(15) | NO   | MUL | NULL    |       |
| Insurance    | varchar(10) | YES  |     | NULL    |       |
| Car_plate_no | int         | NO   |     | NULL    |       |
| Car_id       | varchar(15) | NO   | PRI | NULL    |       |
+--------------+-------------+------+-----+---------+-------+
```

CUSTOMER TABLE

cid	name	type	notnull	dflt_value	pk
0	Name	varchar(20)	1	NULL	0
1	Customer_id	varchar(10)	0	NULL	1
2	Address	varchar(20)	1	NULL	0
3	DOB	date	1	NULL	0
4	Password	varchar(10)	1	NULL	0
5	Phone_num	varchar(10)	1	NULL	0
6	Email	varchar(20)	1	NULL	0
7	Aadhar_no	int	1	NULL	0
8	License	int	1	NULL	0

Field	Type	Null	Key	Default	Extra
Name	varchar(20)	NO		NULL	
Customer_id	varchar(10)	NO	PRI	NULL	
Address	varchar(20)	NO		NULL	
DOB	date	NO		NULL	
Password	varchar(10)	NO		NULL	
Phone_num	varchar(10)	NO		NULL	
Email	varchar(20)	NO		NULL	
Aadhar_no	int	NO		NULL	
License	int	NO		NULL	

DAMAGE TABLE

cid	name	type	notnull	dflt_value	pk
0	Repair_cost	int	1	NULL	0
1	Car_id	varchar(15)	0	NULL	1
2	Rate	int	0	NULL	0

Field	Type	Null	Key	Default	Extra
Repair_cost	int	NO		NULL	
Car_id	varchar(15)	NO	PRI	NULL	
Rate	int	YES		NULL	

DRIVER TABLE

cid	name	type	notnull	dflt_value	pk
0	License	varchar(20)	0	NULL	0
1	Driver_id	varchar(15)	0	NULL	1
2	Phone_num	varchar(10)	1	NULL	0
3	DOB	date	1	NULL	0
4	License_exp_date	date	0	NULL	0

Field	Type	Null	Key	Default	Extra
License	varchar(20)	YES		NULL	
Driver_id	varchar(15)	NO	PRI	NULL	
Phone_num	varchar(10)	NO		NULL	
DOB	date	NO		NULL	
License_exp_date	date	YES		NULL	

ENQUIRY TABLE

cid	name	type	notnull	dflt_value	pk
0	Availability	varchar(10)	1	NULL	0
1	Date_	date	1	NULL	0
2	Rating	int	0	NULL	0

Field	Type	Null	Key	Default	Extra
Availability	varchar(10)	NO		NULL	
Date_	date	NO		NULL	
Rating	int	YES		NULL	

FEEDBACK TABLE

cid	name	type	notnull	dflt_value	pk
0	Customer_id	varchar(15)	0	NULL	1
1	Review_id	varchar(15)	0	NULL	0
2	Car_id	varchar(15)	0	NULL	0
3	Date_	date	1	NULL	0
4	Rating	int	0	NULL	0

Field	Type	Null	Key	Default	Extra
Customer_id	varchar(15)	NO	PRI	NULL	
Review_id	varchar(15)	YES		NULL	
Car_id	varchar(15)	YES	MUL	NULL	
Date_	date	NO		NULL	
Rating	int	YES		NULL	

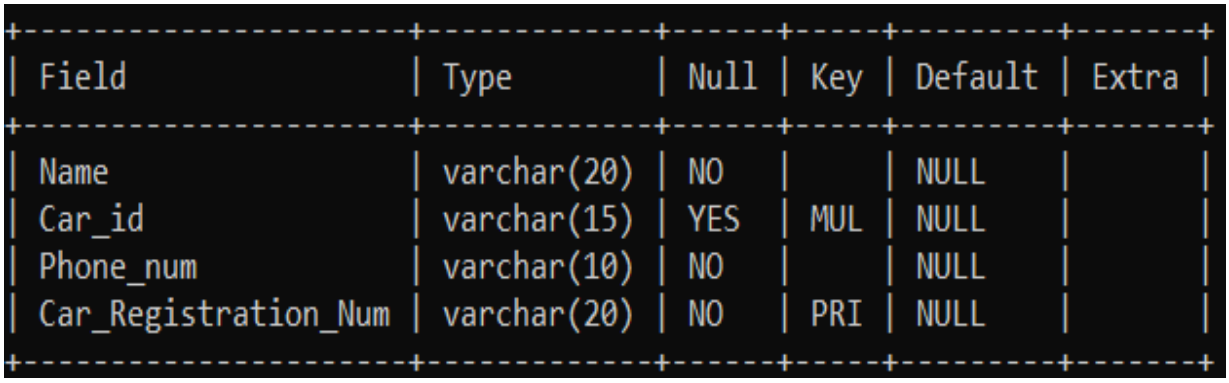
INSURANCE TABLE

cid	name	type	notnull	dflt_value	pk
0	Id	varchar(15)	0	NULL	1
1	Expiry_date	date	0	NULL	0

Field	Type	Null	Key	Default	Extra
Id	varchar(15)	NO	PRI	NULL	
Expiry_date	date	YES		NULL	

OWNER TABLE

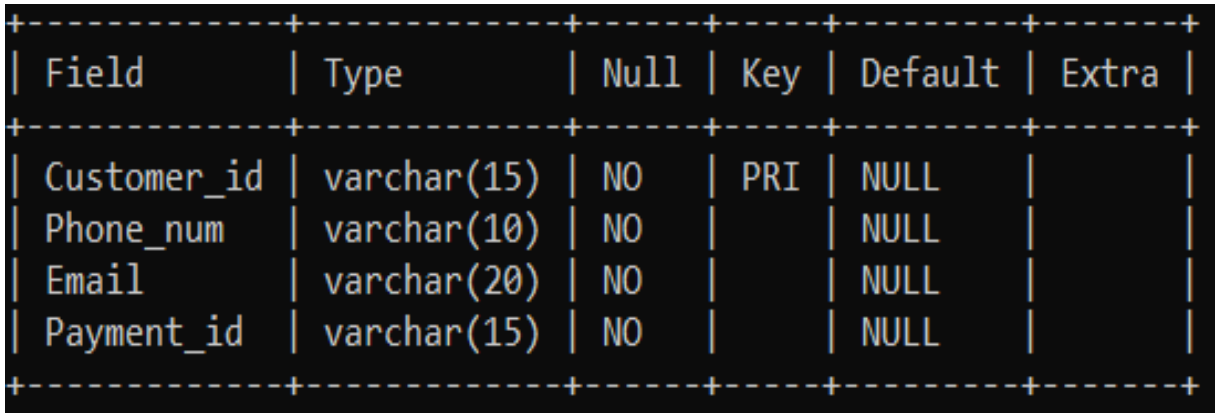
cid	name	type	notnull	dflt_value	pk
0	Name	varchar(20)	1	NULL	0
1	Car_id	varchar(15)	0	NULL	0
2	Phone_num	varchar(10)	1	NULL	0
3	Car_Registration_Num	varchar(20)	0	NULL	1



Field	Type	Null	Key	Default	Extra
Name	varchar(20)	NO		NULL	
Car_id	varchar(15)	YES	MUL	NULL	
Phone_num	varchar(10)	NO		NULL	
Car_Registration_Num	varchar(20)	NO	PRI	NULL	

PAYMENT TABLE

cid	name	type	notnull	dflt_value	pk
0	Customer_id	varchar(15)	0	NULL	1
1	Phone_num	varchar(10)	1	NULL	0
2	Email	varchar(20)	1	NULL	0
3	Payment_id	varchar(15)	1	NULL	0



Field	Type	Null	Key	Default	Extra
Customer_id	varchar(15)	NO	PRI	NULL	
Phone_num	varchar(10)	NO		NULL	
Email	varchar(20)	NO		NULL	
Payment_id	varchar(15)	NO		NULL	

DESIGN OF APPLICATION:

HOME PAGE:

ONLINE BOOKING FOR CAR RENTALS

E-mail:carrental@gmail.com Phone No:9187654578 Visit Us:RTC COMPLEX Opp.GUPTA ARTS,VIZAG

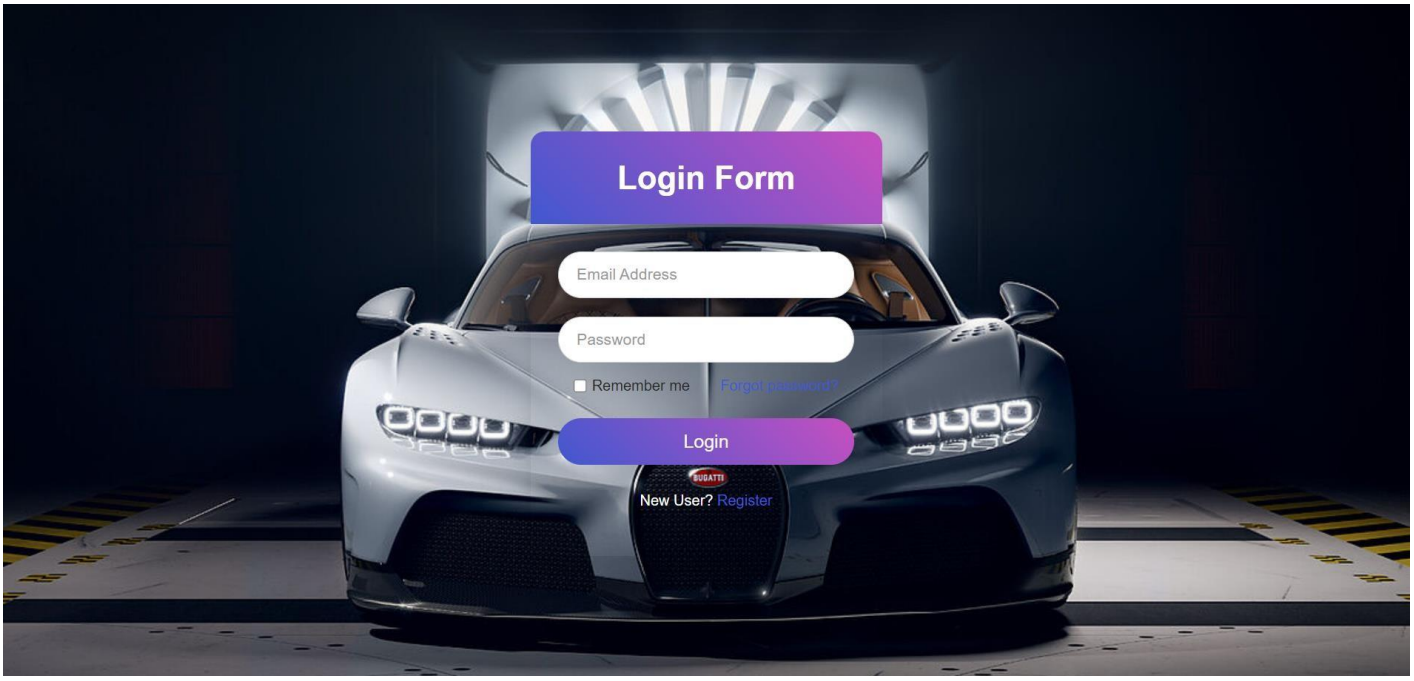
home | about | help | Contact us

Discover new rental cars

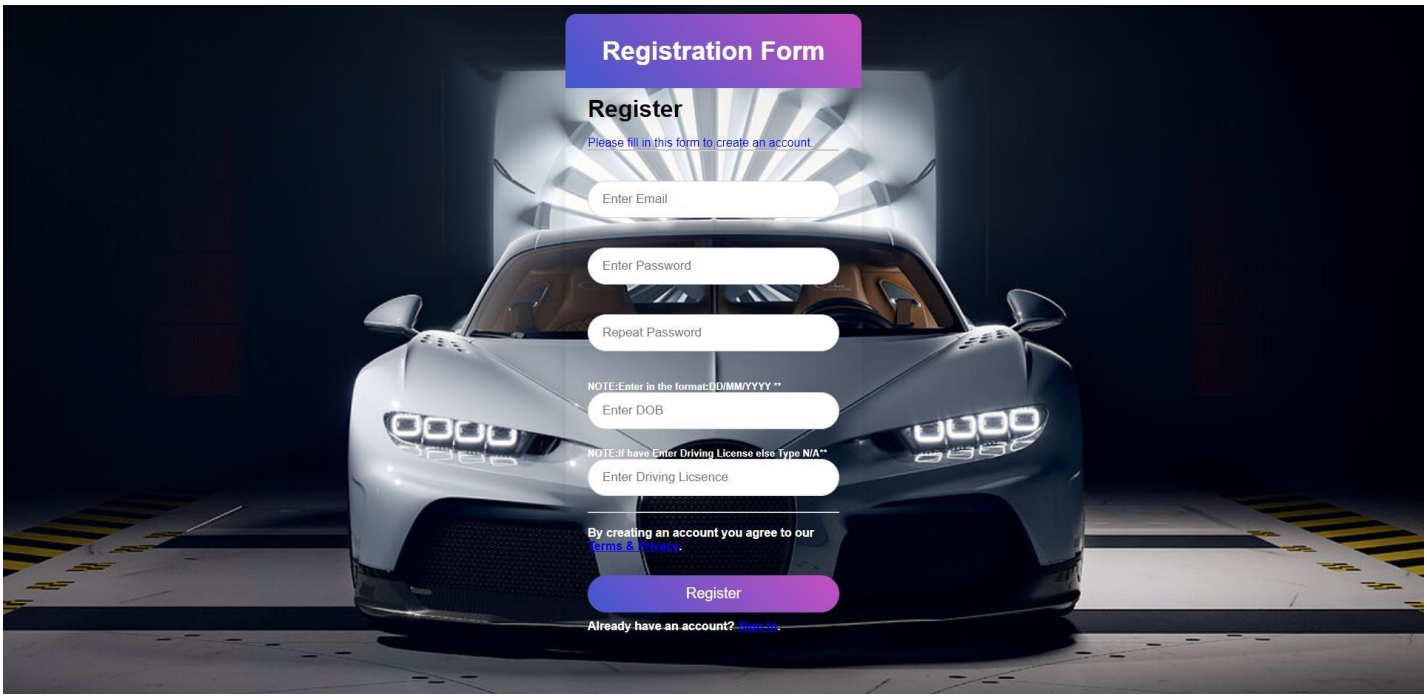
CAR RENTAL SYSTEM (CRS) is a web based system for a company that rents out cars. This system enables the company to make their services available to the public through the internet and also keep records about their services. The world has become a place where there is a lot of technological development 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 System. 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.

LOGIN

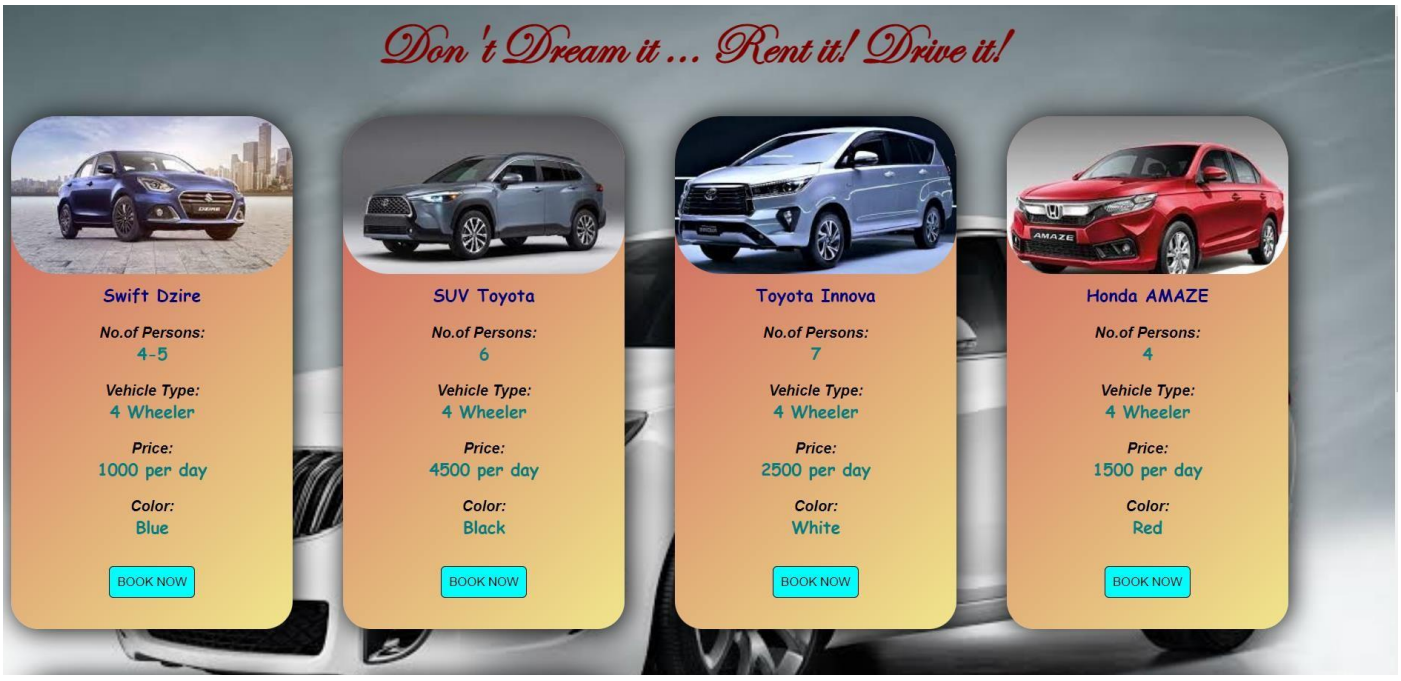
LOGIN PAGE:

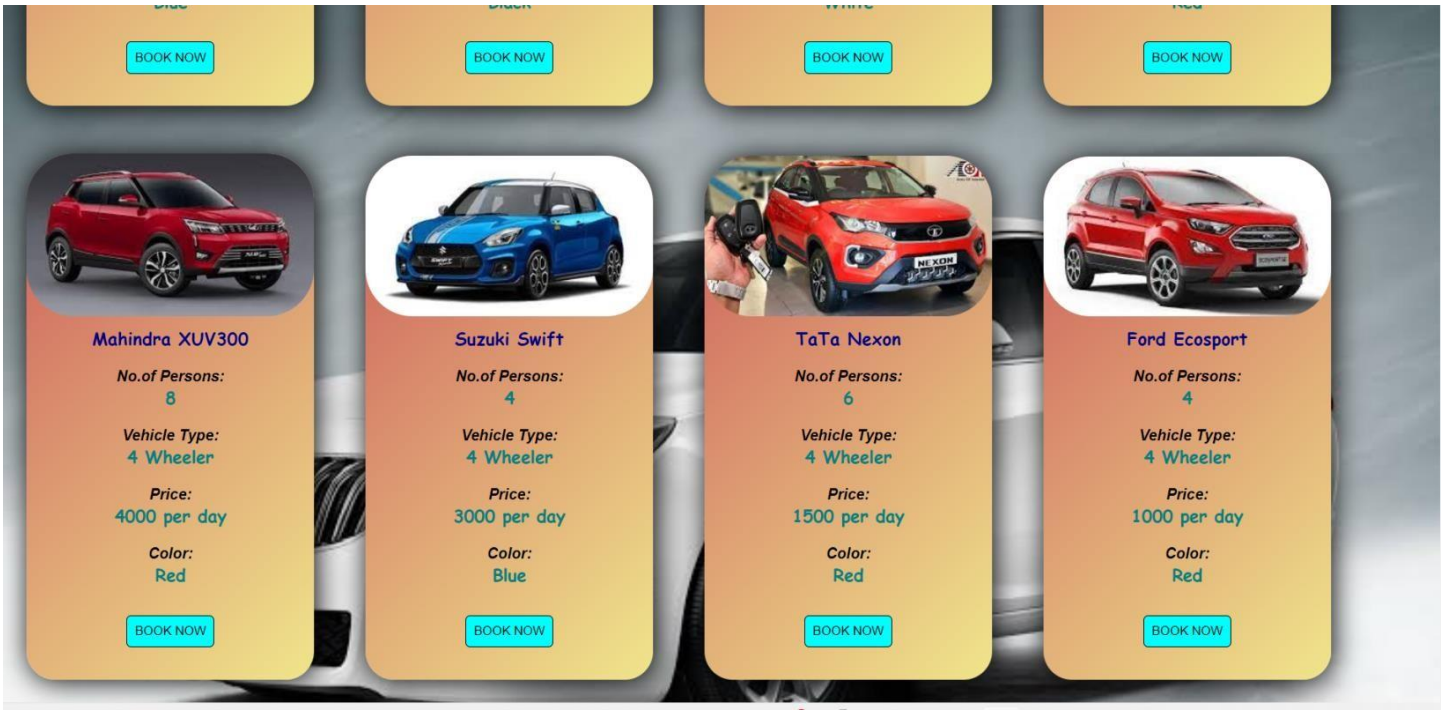


REGISTRATION FORM:

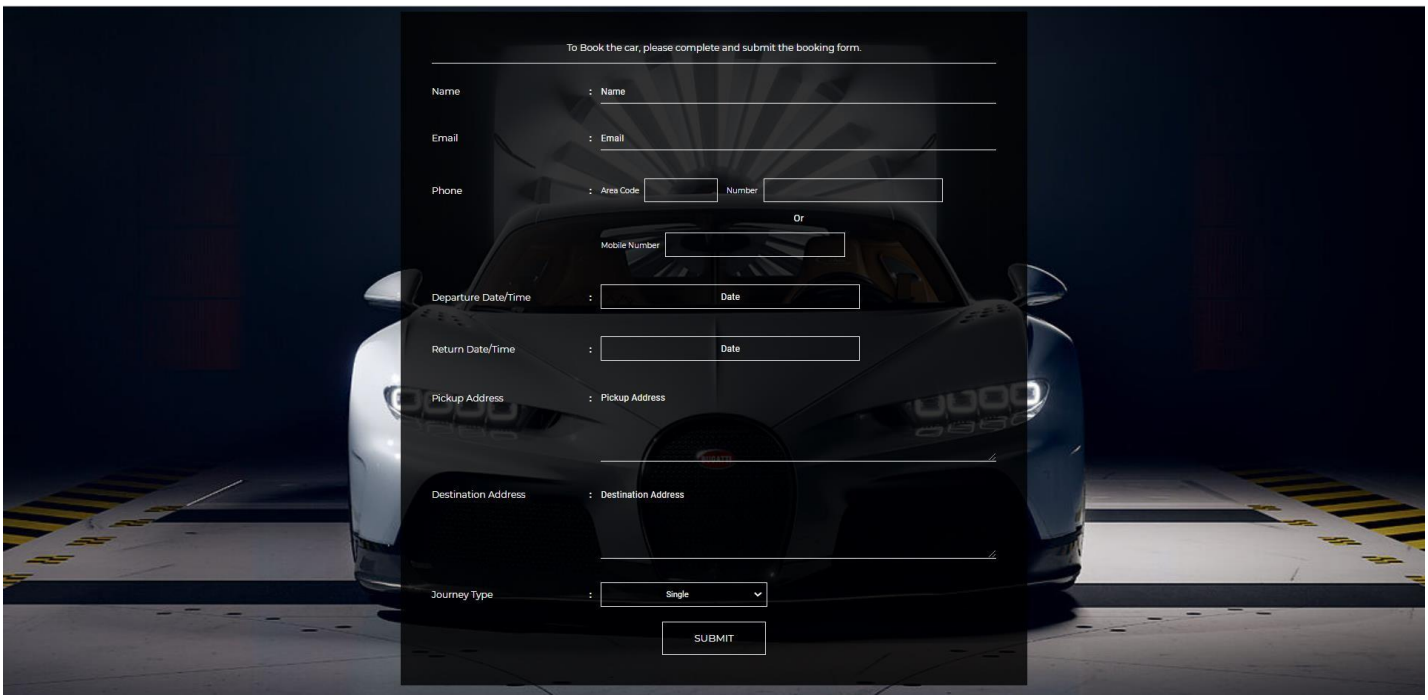


CAR DATA:





BOOKING FORM:



CONCLUSION:

car rental business has merged with a new goodies compared to the past experience where every activity concerning car rental business is limited to a physical local 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 doorstep 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 customer’s need at the click of button.