

# **“CAR RENTAL SYSTEM”**

## **Mini Project**

Submitted in partial fulfillment of the requirement of University of Mumbai  
For the Degree of

**(Computer Engineering)**

**By**

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**Under the Guidance of**

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UNIVERSITY OF MUMBAI  
2020 -2021**

# **Terna Engineering College**

**NERUL, NAVI MUMBAI**

## **CERTIFICATE**

*This is to certify that*

- |                     |                      |
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| 1. "ANIKET THORAT"  | "ID No: TU3F1819038" |
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*Has satisfactorily completed the requirements of the **Mini Project***

*Of subject*

**"Database Management System"**

*As prescribed by the **University of Mumbai** Under the guidance of*

Prof. **"PRAMILA MATE"**

**Subject Incharge**

**HOD**

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# **Chapter 1**

## **Abstract**

Since the internet has become such a vast medium of transfer of information to a large number of people in a few clicks. It's also equally important for a business to have their own website to help the business flourish and grow exponentially.

Not only does it spread the word but it also makes it easy for the company to keep records and keep a check on their data. Also having a good database structure and management with required authentication and security options makes it easy for the administrator to keep track of the business.

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 simplifies vehicle and staff management.

This project is designed for a Car Rental Company specializing in renting cars to customers. It is an online system through which customers can view available cars, Sign Up and book cars.

## Chapter 2

# Introduction

The company does a car rental business and has several locations with different addresses. The cars are classified as subcompacts, compacts, sedans, or luxury. Each car has a particular make, model, year made, and color. Each car has a unique identification, number, and a unique license plate.

For every car, we keep the odometer reading and fuel tank reading and display it to the customer at the time of placing the order so he's aware of the present state and condition of the car. We charge the customers day-wise according to the price of the car rented.

We also allow our Employees to rent the cars as well, they go through the same portal and need to fill in the same information and being the employee they receive a discount on basis of their level of position in the company.

There is also an Employee Section mentioned on the website for the ADMIN to check on the database reports and to alter information from the database.

This project traverses a lot of areas ranging from business concept to the computing field and is required to perform several kinds of research 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, the process involved, and the opportunity that exists 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.

### **Existing System**

In the present system, organizations do maintain a person for the allocating and proper functioning of transportation

The authorized person maintains the transportation details in papers

### **Problems in Existing System**

- Details are stored in papers
- Maintenance is a huge problem
- Updatons, changes in details in a tedious task
- Performance is not achieved up to the requirements

### **Proposed system**

The proposed system overcomes the problems in the Existing system and reduces time-complexity and record maintenance from the client's perspective. Also makes it a lot easier and comfortable for customers to complete the renting process.

### **Advantages of the proposed system**

- Data is centralized which has overcome the sharing problems in the previous system
- As data is maintained electronically, it's easy for a person to update the details, which has overcome the tedious updatons in the previous system.
- Maintenance is easy and performance is good.
- Mainly the system has automated the billing process.

### **Hardware and Software requirements**

#### **HARDWARE:**

Intel core i3 6th generation with 4GB ram or higher with a reliable internet connection

#### **SOFTWARE:**

Internet Browser: Safari/ Chrome/ Firefox

Operating System: macOS 10.15/ Ubuntu 18/ Windows 10

#### **FRAMEWORKS:**

Frontend: HTML, CSS, JavaScript, Bootstrap5

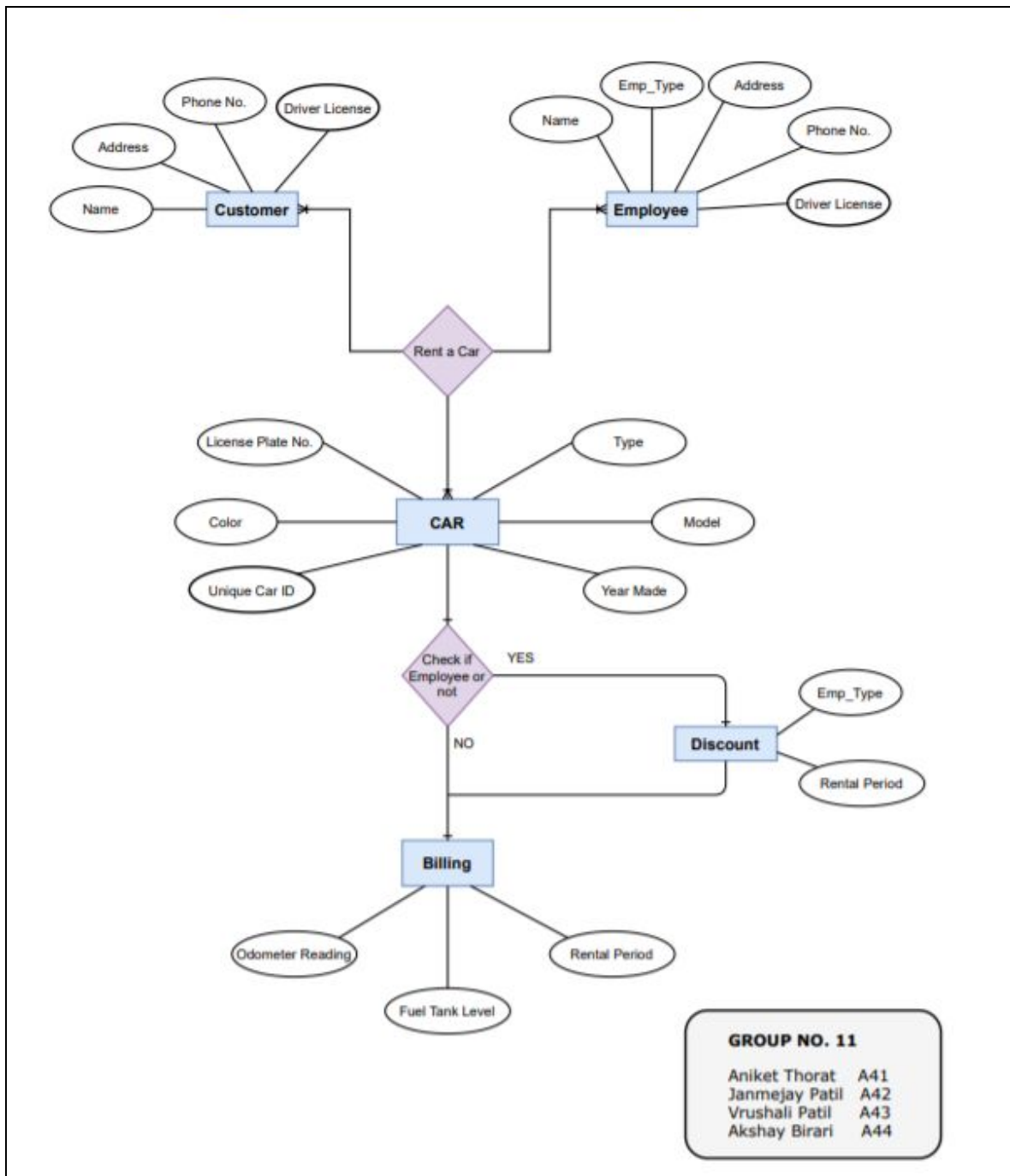
Backend: PHP

Database: MySQL database using XAMPP

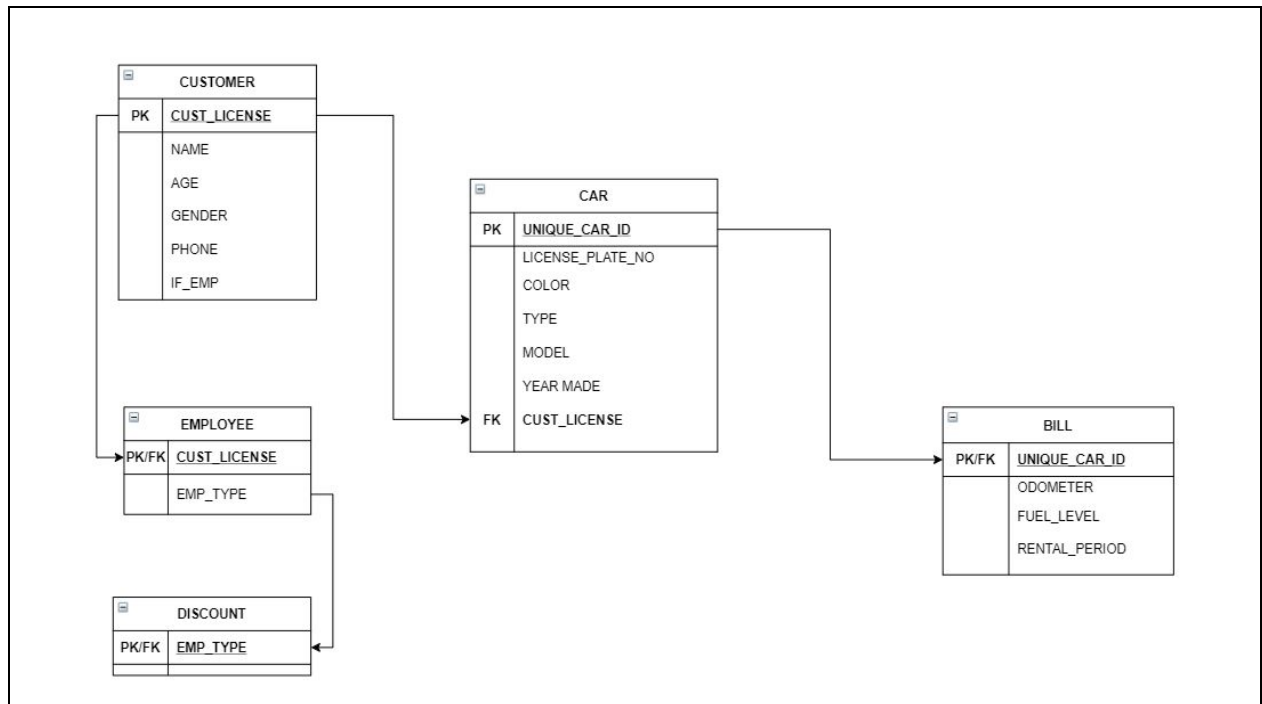
## Chapter 3

### Design

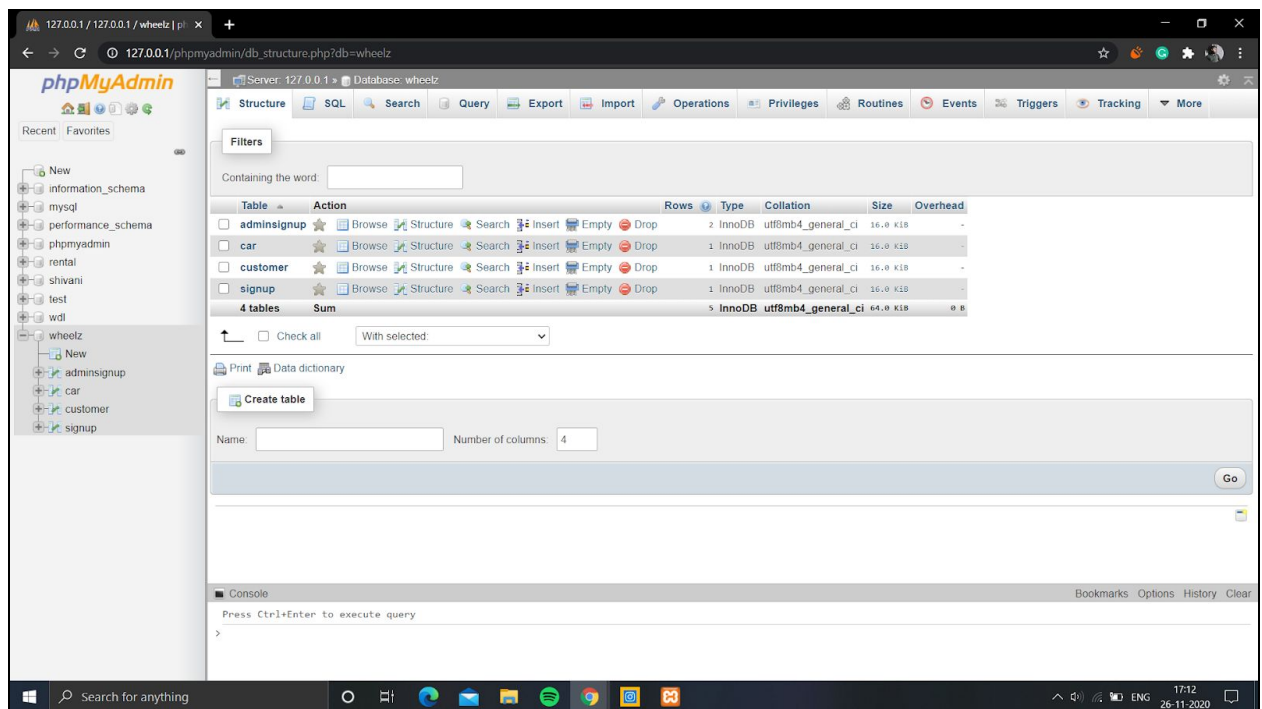
#### ER DIAGRAM



## DATABASE RELATIONAL MODEL



## XAMPP Database





## Chapter 4

# Implementation

### DATABASE CONNECTION CODE

```
<?php

$db_host = "localhost";
$db_user = "root";
$db_password = "";

$conn = mysqli_connect($db_host,$db_user,$db_password);

if(!$conn) {
    die("Connection Unsuccessful");
}

$sql = "CREATE DATABASE wheelz";

if(mysqli_query($conn,$sql)) {
    //
}

$db_name = "wheelz";

$conn = mysqli_connect($db_host,$db_user,$db_password,$db_name);

$sql1 = "CREATE TABLE customer(
    id INT AUTO_INCREMENT PRIMARY KEY,
    custName VARCHAR(250),
    licenceNo VARCHAR(250),
    phoneNo VARCHAR(15),
    custGender VARCHAR(10),
    custAge INT,
    custAddress TEXT,
    email VARCHAR(50),
    custType TEXT
)";

if(mysqli_query($conn,$sql1)) {
    //
}
```

```

$sql2 = "CREATE TABLE car(
    id INT AUTO_INCREMENT PRIMARY KEY,
    UNIQUE_CAR_ID VARCHAR(50) ,
    LICENSE_PLATE_NO VARCHAR(50) ,
    MODEL VARCHAR(50) ,
    TYPE VARCHAR(50) ,
    COLOR VARCHAR(50) ,
    YEAR_MADE INT,
    ODOMETER INT,
    FUEL_LEVEL VARCHAR(50) ,
    price INT,
    DAYS INT,
    email VARCHAR(50)
)";

if(mysqli_query($conn,$sql2)) {
    //
}

$sql3 = "CREATE TABLE signup(
    id INT AUTO_INCREMENT PRIMARY KEY,
    name VARCHAR(50) ,
    email VARCHAR(50) ,
    password VARCHAR(50)
)";

if(mysqli_query($conn,$sql3)) {
    //
}

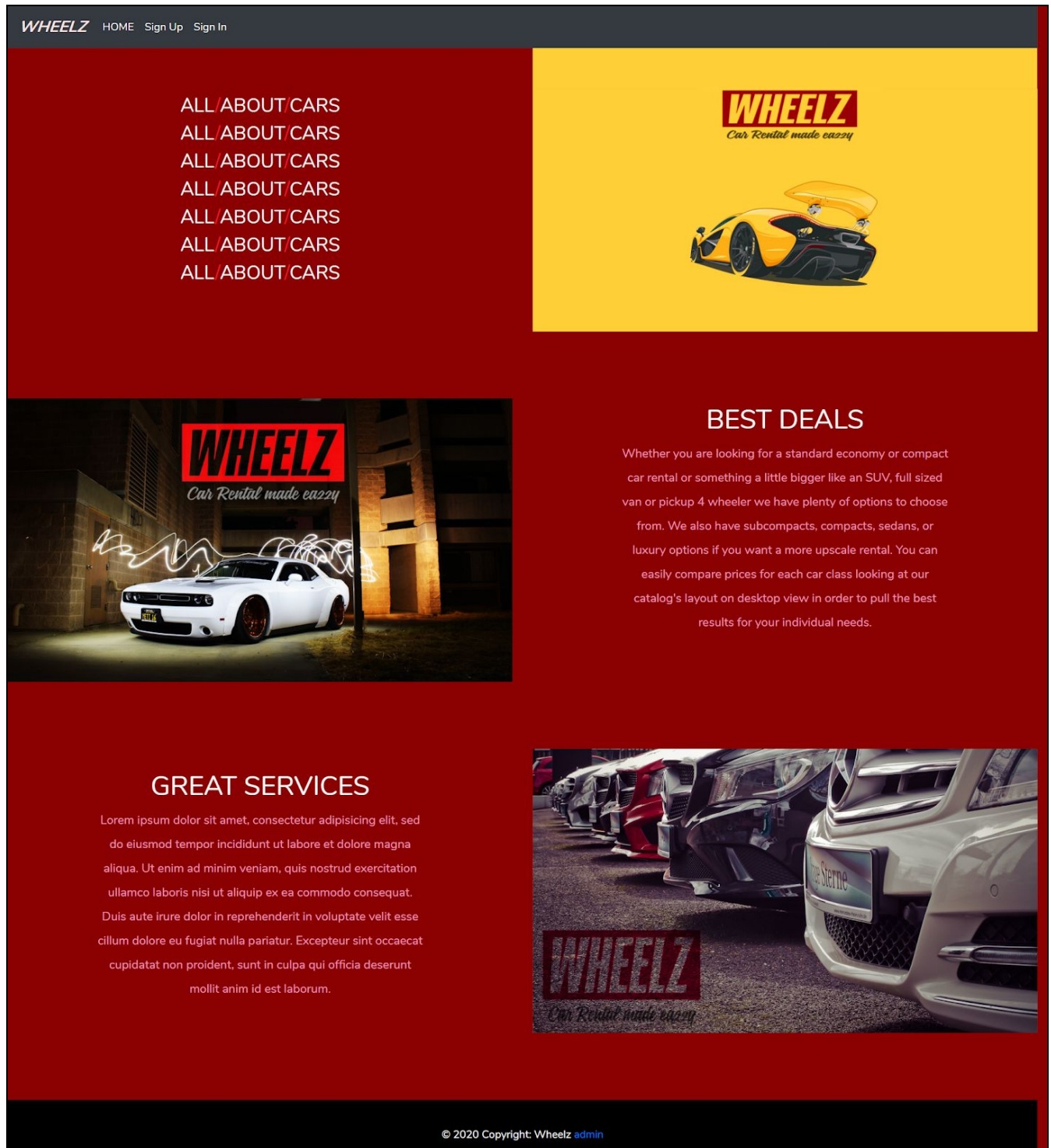
$sql4 = "CREATE TABLE adminsignup(
    id INT AUTO_INCREMENT PRIMARY KEY,
    name VARCHAR(50) ,
    email VARCHAR(50) ,
    password VARCHAR(50)
)";

if(mysqli_query($conn,$sql4)) {
    //
}

?>

```

## WEBSITE SCREENSHOTS



**Static front page with visuals and graphics for an attractive website.**

**Also brief description of services and facilities provided by the Car Rental Company.**

## Create An Account

**Name**

**Email**

**Password**

Sign Up

Have An Account ? [Sign In](#)

Back To HOME

## Sign In

**Email**

**Password**

Sign In

Don't Have An Account ? [Sign up](#)

Back To HOME

**Simple and user-friendly Sign Up and Sign in tabs to allow users to make an account and add data to the company's database to maintain authenticity throughout.**

**WHEELZ** HOME BOOKINGS Log Out

**Customer Name**

**Driver's License No.**

**Phone Number**

**Gender**

**Age**

**Address**

☐ Are you Employee
 ☐ Manager
 ☐ Supervisor/Executive
 ☐ Staff

CHOOSE A CAR! RESET

**Bookings Page: Accepts and saves customer's/employee's data and take them to the car's page to choose a suitable car to rent.**



## CHOOSE YOUR **WHEELZ!**

We aim to provide you with the best rental deals and amazing cars to suit your budget!

Subcompact Compact Sedans **Luxury**



### Audi A8

It has a nice cabin and spacious seating

Power: 335 hp

Mileage: 17 mpg

**Rs. 3500** /day

Enter Rental Period

Enter Days

Book



### Bentley Bentayga

Filled with rich-smelling leathers, real wood trim, and glitzy metal accents.

Power: 535 hp

Mileage: 14 mpg

**Rs. 4000** /day

Enter Rental Period

Enter Days

Book



### Mercedes-Benz S 550

It's impeccable interior, lounge-like seating, and thrilling engine choices.

Power: 362 hp

Mileage: 19 mpg

**Rs. 4500** /day

Enter Rental Period

Enter Days

Book



### Rolls-Royce Phantom

An interior tailored for kings can even be adorned with a custom-artwork dash.

Power: 563 hp

Mileage: 12 mpg

**Rs. 5000** /day

Enter Rental Period

Enter Days

Book

**Cars Page: Divided into 4 categories of cars. Describes the car's details and customers can choose one or more cars to rent at a time. Just have to enter rental period (in days)**

WHEELZ
HOME
BOOKINGS
Log Out

Back To Book

Customer Details :

Customer Name	Customer Age	Customer Gender	Phone No	Customer License No
Jay	23	MALE	9876543210	ABCD123

Car Details :

UNIQUE_CAR_ID	LICENSE_PLATE_NO	MODEL	TYPE	COLOR	YEAR_MADE	Action
LXC02	BBB4545	Bentley Bentayga	Luxury	Olive Green	2019	Delete

Transaction Details :

ODOMETER	FUEL_LEVEL	RENTAL_PERIOD	Per Day Price	UNIQUE_CAR_ID
8000	FULL	2	4000	LXC02

Final Bill Amount: 8000

Thank you for connecting with Wheelz. See you again!

**Billing Page:** The page shows all the details related to the transaction and the final bill amount also saving the bill amount in the database.

## Chapter 5

# Applications

**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 increasing their return on investment (ROI).

**Online Vehicle Reservation** tools through which customers can reserve available cars online prior to their expected pickup date or time.

**Customers registration** Sign Up and Sign In portal to hold customers details, monitor their transactions and use the same to offer better and improve services to them.

**Group bookings** allows the customer to book more than one car in the case of weddings or corporate meetings or vent management.

## **Chapter 6**

### **Conclusion**

As the implementation part of the project suggests the project is constructed using XAMPP and PHP which was a new experience for the team but with collaborative efforts from everyone we were able to achieve the expected output i.e. allowing a user to proceed through the website effortlessly and fulfill their order without any constraints.

The frontend, as well as backend, has been created with utmost efforts and we've tried to present a fast and effective website with equally efficient database connectivity.

The car rental business has emerged with new goodies compared to the past experience where every activity concerning the car rental business was 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 the internet.

Nowadays, customers can reserve cars online, rent a car online, and have the car brought to their doorstep once the customer by 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 satisfy customers' needs at the click of a button.

During the entire course of the project, we've reached the conclusion that many of the functionalities of the website work competently.

As good as it is now, there will always be scope for adjustments and improvements.



## References

1. ***Fundamentals of Database Systems*** by Ramez Elmasri and Shamkanth Navathe
2. ***PHP A Beginner's Guide*** by Vikram Vaswani
3. ***v5.getbootstrap.com/docs/5.0*** referenced for frontend development and creating responsive templates for the website.
4. Various sites including ***wikipedia.org***, ***geeksforgeeks.org*** ***w3school.com***, etc were assisted during the formation of the project.