

A
PROJECT REPORT
ON
Vehicle Parking Management System

IN THE PARTIAL FULLFILLMENT OF THE POST GRADUATE COURSE

IN

“DIPLOMA IN ADVANCE COMPUTING(PG-DAC)”

YEAR 2022-2023



SUBMITTED BY

Mr.Shriram Sonawane

Mr.Praveenkumar Bhosale

Miss.Siddhi More

Miss.Ashwini Tande

Mr.Buddhabhushan Gaikwad

CERTIFICATE

This is to certify that the project entitled
“Vehicle Parking Management System”

Has been satisfactorily completed by:

Mr.Shriram Sonawane

Mr.Praveenkumar Bhosale

Miss.Siddhi More

Miss.Ashwini Tande

Mr.Buddhabhushan Gaikwad

Under supervision and guidance for partial fulfillment of the

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Nariman Point, Mumbai-400 021.

Pradnya Kanojia

Course Co-ordinator

Director

Batch: DAC February 2022 Batch

Date:

ACKNOWLEDGEMENT

We have taken efforts in this project. However, it would not have been possible without the kind Support and help of many individuals. We would like to extend our sincere thanks to all of them. We are highly indebted to our guide **Mr.Dhan sigh sir** for his guidance and constant supervision as well as for providing necessary information regarding the project and also for his support in Completing the project.

We express our thanks to Course coordinator **Miss.Pradnya Kanojia** for extending their support. We would also thank our Institution and the faculty members without whom this project would have been a distant reality. Our thanks and appreciations also go to all people who have willingly helped us out with their abilities.

SUBMITTED BY
Mr.Shriram Sonawane
Mr.Praveenkumar Bhosale
Miss.Siddhi More
Miss.Ashwini Tande
Mr.Buddhabhushan Gaikwad
(Batch 2022)

ABSTRACT

The ParkQuick project is a Vehicle Parking Management System, it provides solution to the parking problems, including 2-wheeler and 4-wheeler. The platform also includes booking and reservation module where-in the customers can select a parking slot and book or reserve the parking slot based on their preferred date and time. It is a multi-user system. Instead of vehicle caught in towing, it can be parked on safe and secured place. The main goal of the system is automate the process carried out in the organization with improved performance and realize the vision of computer based system.

Index

SR NO	TOPIC
1	Introduction
3	Objective & Scope
3	Operating Environment
4	Specific Requirements
5	DFD
6	ER Diagram
7	Table Structure
8	Screenshots
9	Conclusion
10	Future Scope
11	Reference

1. Introduction

Parking management system for managing the records of the incoming and outgoing vehicles in an parking house It's an easy for Admin to retrieve the data if the vehicle has been visited through numberhe can get that data .

Now days in many public places such as malls, multiplex system, hospitals, offices, market areas there is a crucial problem of vehicle parking. The vehicle parking area has many lanes/slots for car parking. So to park a vehicle one has to look for all the lanes. Moreover this involves a lot of manual labour and investment. Instead of vehicle caught in towing the vehicle can park on safe and security with low cost.

Parking control system has been generated in such a way that it is filled with many secure devices such as, parking control gates, toll gates, time and attendance machine, car counting system etc. These features are hereby very necessary nowadays to secureyour car and also to evaluate the fee structure for every vehicles entry and exit

The objective of this project is to build a Vehicle Parking management system that enables the time management and control of vehicles using number plate recognition. The system that will track the entry and exit of cars, maintain a listing of cars within the parking lot, and determine if the parking lot is full or not. It will determine the cost of per vehicle according to their time consumption.

2.Objective & Scope

2.1 Objectives :

We can park our vehicle in our own slot by paying.

- Because of that there is no towing problems.
- And our vehicle has been parked as a secure condition.
- There is no risk for vehicle owner for parking the car.
- In case of any damages and problem of vehicle that will claim by parking management.
- As the world is facing many threads daily, robberies are done easily with no track to trace, bomb blasts occur with the use of vehicle, so if a proper system is adopted each and every record can be saved and anyone can be track easily therefore mainly is to make a better and fast software, most important user- friendly
- Maintain records in short time of period.
- Determines the parking area is full or not.
- Enhances the visitor's experience.

2.2 Scope:

In the modern age. Many people have vehicles. Vehicle is now a basic need. Every place is under the process of urbanization. There are many corporate offices and shopping centers etc. There are many recreational places where people used to go for refreshment. So, all these places need a parking space where people can park their vehicles safely and easily. Every parking area needs a system that records the detail of vehicles to give the facility. These systems might be computerized or non-computerized. With the help of computerized system we can deliver a good service to customer who wants to park their vehicle into the any organization's premises.

Vehicle parking management system is an automatic system which delivers data processing in very high speed in systematic manner. Parking is a growing need of the time. Development of this system is very useful in this area of field. We can sell this system to any organization. By using our system they can maintain records very easily. Our system covers the every area of parking management. In coming future there will be excessive need of Vehicle parking management system.

2.3 Definition of problem:

Now a days in parking like valet parking they maintain just with the tokens and they have records the vehicle details in books so that during some critical situations like police enquiry of terrorist car or vehicle roberrrer that case it is difficult to find the details of particular vehicle but in this case is easy to find in 1to 2 seconds

By parking the vehicle in public place the vehicle can be claimed by towing person but in this case there is no towing problems and no need to give fine for anything we can park our vehicle with securely.

3 Operating Environment:

_Server Side:

Processor: Intel® Xeon® processor 3500 series

HDD: Minimum 500GB Disk Space

RAM: Minimum 2GB

OS: Windows 8.1, Linux 6

Database: MySQL

Client Side (minimum requirement):

Processor: Intel Dual Core

HDD: Minimum 80GB Disk Space

RAM: Minimum 1GB

OS: Windows 8.1, Linux 6

Design and Implementation Constraints:

- The application will use JavaScript, and CSS, Bootstrap as main web technologies.
- HTTP and FTP protocols are used as communication protocols. FTP is used to upload the web application in live domain and the client can access it via HTTP protocol.
- Several types of validations make this web application a secured one and SQL Injections can also be prevented

4 Specific Requirement

External Interface Requirements:

User Interfaces:

- All the users will see the same page when they enter in this website. This page asks the users a username and a password.
- After being authenticated by correct username and password, user will be redirect to their corresponding profile where they can do various activities.
- The user interface will be simple and consistence, using terminology commonly understood by intended users of the system. The system will have simple interface, consistence with standard interface, to eliminate need for user training of infrequent users.

Hardware Interfaces:

- No extra hardware interfaces are needed.
- The system will use the standard hardware and data communication resources.
- This includes, but not limited to, general network connection at the server/hosting site, network server and network management tools.

Application Interfaces:

OS: Windows

Web Browser:

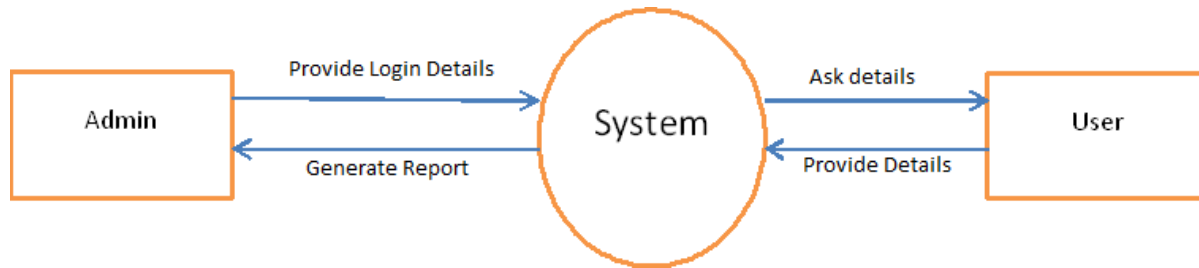
The system is a web-based application; clients need a modern web browser such as Mozilla Firefox, Internet Explorer, Opera, and Chrome. The computer must have an Internet connection in order to be able to access the system.

Communications Interfaces:

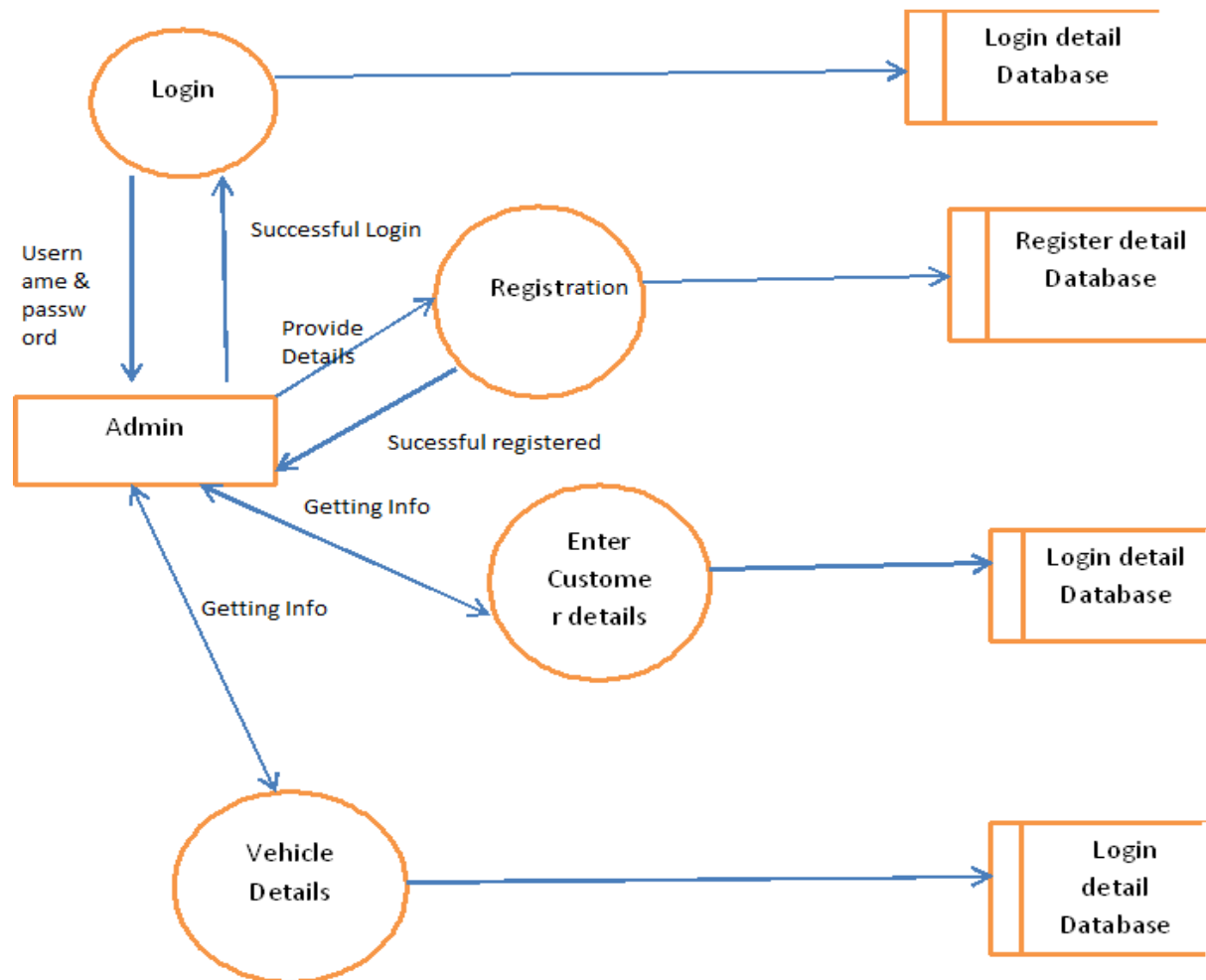
- This system uses communication resources which includes but not limited to, HTTP protocol for communication with the web browser and web server.
- This system uses communication resources which includes but not limited to, HTTP protocol for communication with the web browser and web server and TCP/IP network protocol with HTTP protocol.
- This application will communicate with the database that holds all the booking information. Users can contact with server side through HTTP protocol by means of a function that is called HTTP Service. This function allows the application to use the data retrieved by server to fulfil the request fired by the user.

5 Data Flow Diagram

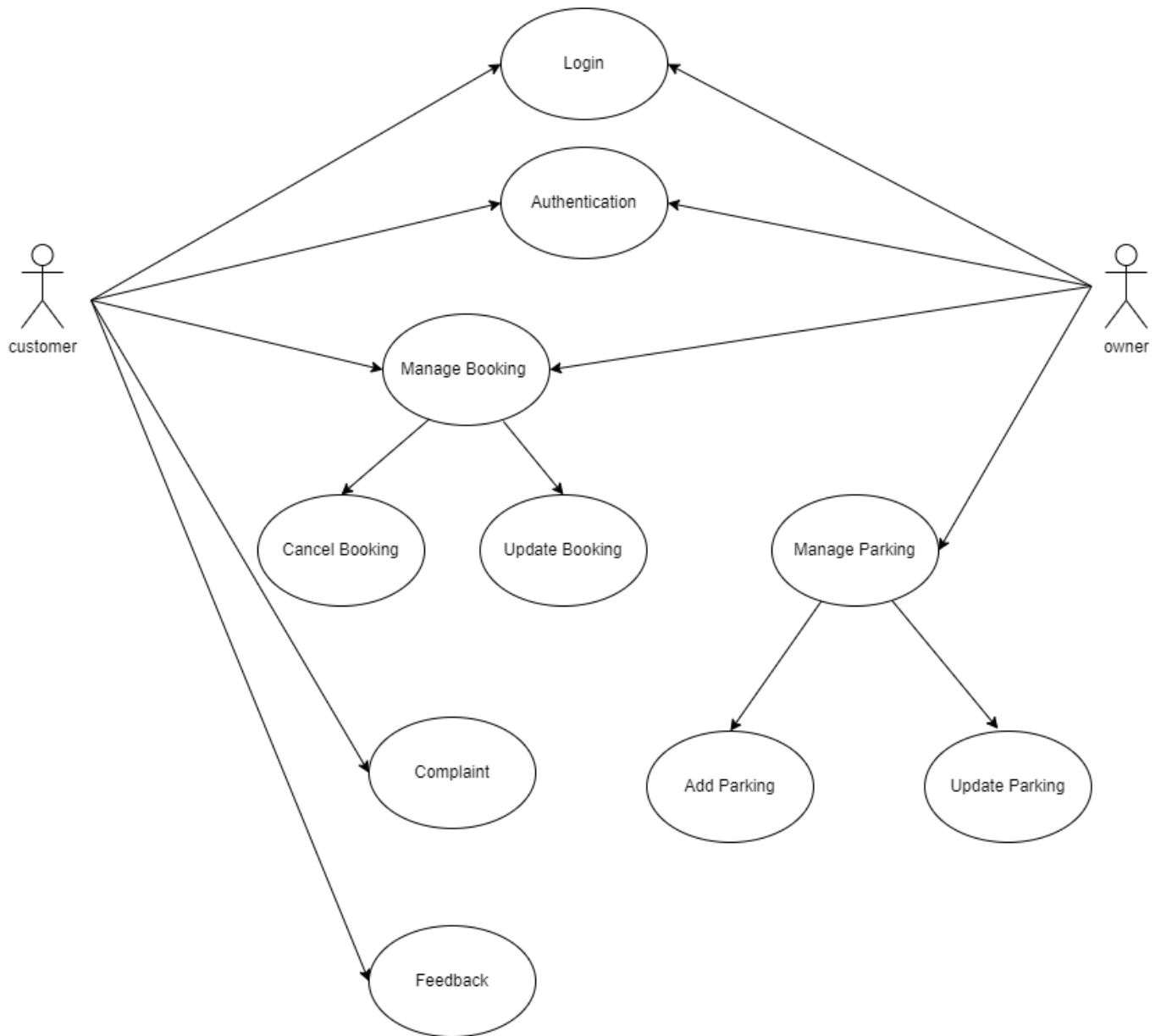
Level 1 DFD



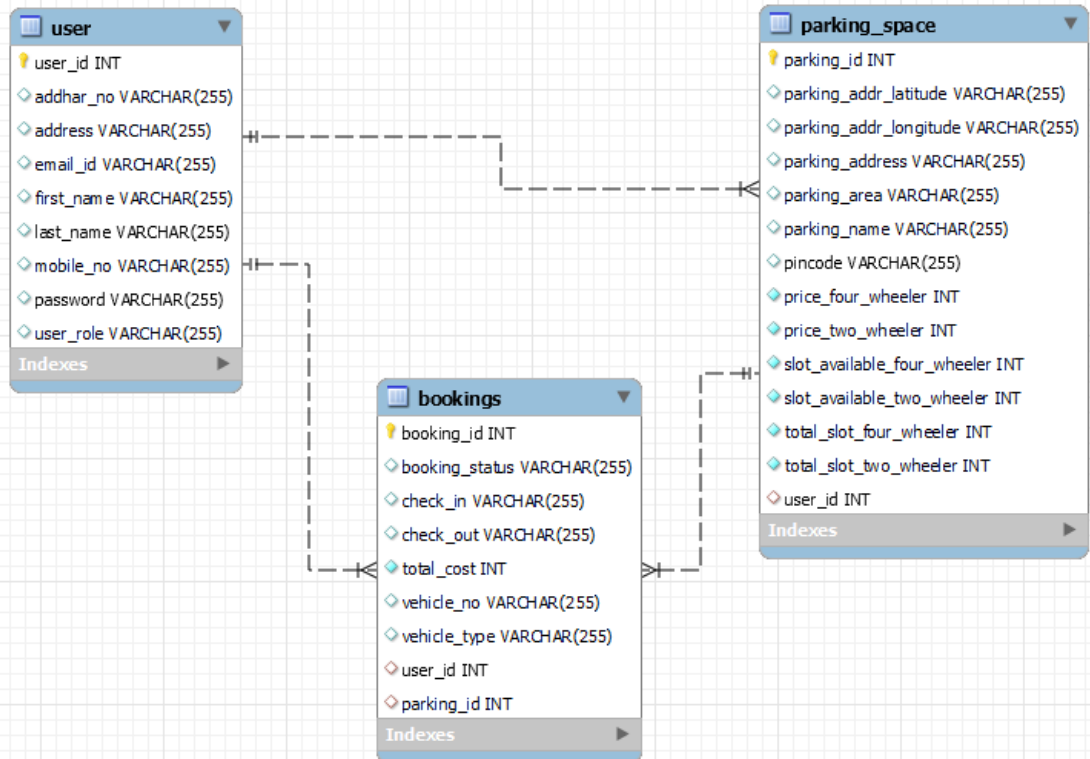
DFD level 2



6 ER DIAGRAM



7. Table Structure

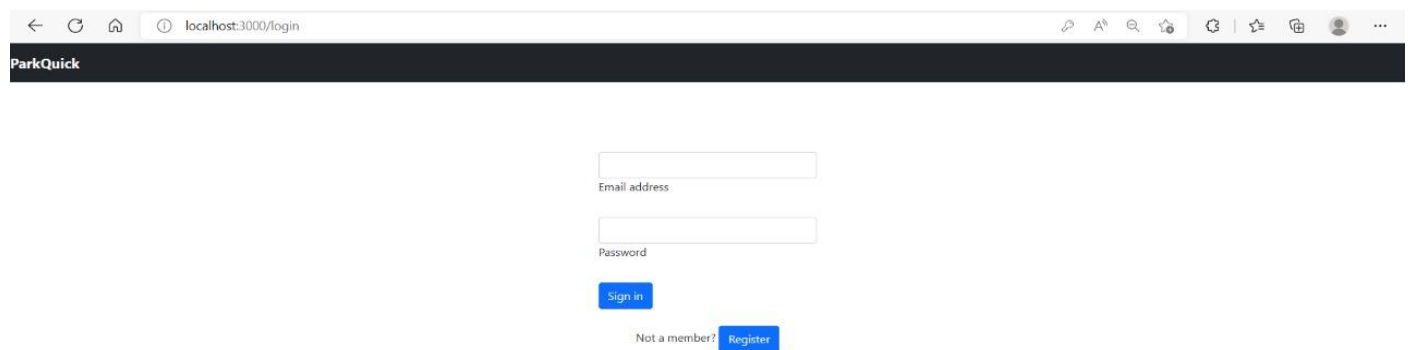


8 SNAPSHOT

Landing Page




Login Page



Resister Page

localhost:3000/register-user

ParkQuick



REGISTRATION YOURSELF

First name Last name

Email Id Mobile No

Address


Password Re-enter Password

Aadhar Number Register As

Parking Book

localhost:3000/book-parking/6

ParkQuick



SAMARTH PARKING

26 Slots Available for 2 Wheelers

15 Slots Available for 4 Wheelers

40 Charges for 2 Wheelers

70 Charges for 4 Wheelers

Vehicle Number

Vehicle Type

70 Final Charges

Parking Space

The screenshot shows a web browser at localhost:3000/parking-list. The application header is 'ParkQuick'. The main title is 'List of Parking spaces'. A table lists parking spaces with columns: Name, Address, Available (2 Wheeler), Available (4 Wheeler), and Actions. A modal for 'Samarth Parking' is open, showing details like Parking Id, Charges, Address, Longitude, Latitude, Pincode, Area, and slot counts. The modal has a 'Close' button.

Name	Address	Available (2 Wheeler)	Available (4 Wheeler)	Actions
Samarth Parking	Near EON IT Park, Kharadi, Pune	26	15	View
Pinnacle Parking	Ram Nagar			View
Gurudatta Parking	AzadNagar			View
Laxmi Parking	Near Akurdi			View
Swami Samarth Parking	Near D.Y. P			View
Shree Parking	Krishnanag			View

Samarth Parking

Parking Id	6
Charges for 2 Wheeler(per hour)	Rs.40
Charges for 4 Wheeler(per hour)	Rs.70
Address	Near EON IT Park, Kharadi, Pune
Longitude	73.934982
Latitude	18.550985
Pincode	411014
Area(in sq.ft)	6000
Total 2 wheeler slots	25
Total 4 wheeler slots	15
Available 2 wheeler slots	26
Available 4 wheeler slots	15

Close

ParkQuick

List of Parking spaces

Name	Address	Available (2 Wheeler)	Available (4 Wheeler)	Actions
Samarth Parking	Near EON IT Park, Kharadi, Pune	25	15	View
Pinnacle Parking	Ram Nagar, Hinjewadi	6	4	View
Gurudatta Parking	AzadNagar, Near Sutar Hospital, Kothrud	6	3	View
Laxmi Parking	Near Akurdi Railway Station, Akurdi, Pune	20	14	View
Swami Samarth Parking	Near D.Y. Patil Engineering College, Akurdi, Pune	30	10	View
Shree Parking	Krishnanagar, New Sangavi, Pune	5	4	View

Booking Modification


← ↻ 🏠 ⓘ localhost:3000/parking-list 🔍 ⚙️ ⭐ 🗃️ 👤 ⋮

ParkQuick

List of Parking spaces				
Name	Address	Available (2 Wheeler)	Available (4 Wheeler)	Actions
Samarth Parking	Near EON IT Park, Kharadi, Pune	26	15	View Book
Pinnacle Parking	Ram Nagar, Hinjewadi	6	4	View Book
Gurudatta Parking	AzadNagar, Near Sutar Hospital, Kothrud	6	3	View Book
Laxmi Parking	Near Akurdi Railway Station, Akurdi, Pune	20	14	View Book
Swarni Samarth Parking	Near D.Y. Patil Engineering College, Akurdi, Pune	30	10	View Book
Shree Parking	Krishnanagar, New Sangavi, Pune	6	4	View Book

← ↻ 🏠 ⓘ localhost:3000/modify/booking/20 🔍 ⚙️ ⭐ 🗃️ 👤 ⋮

ParkQuick



SHREE PARKING

20

Pravinkumar

Booking IdCustomer Name

2 Wheeler

MH48R8253

Vehicle TypeVehicle Number

Booking Status

Booked

Booked

Parked

Checked Out

[Back](#) [Cancel Booking](#) [Modify Booking](#)

8 CONCLUSION

This Project is minimizing the task of parking a vehicle by paying and saying some details about customer and vehicle to save data .In this the vehicle is parked as a safe and secure. This project is done as Efficient as possible

Hereby that the project was completely and slowly developed by me and Group Member . I also conclude that this project has helped us gain more knowledge .I would be glad to enhance and promote this project if given chance and help ourselves and society in the near future

The developed application is tested with sample inputs and outputs obtained in according to the requirement. Even though I have tried our level best to make it a dream project. Due to time constraints I could not add more facilities to it.

The efficiency of the developed system can be enhanced with some minor modifications. Future development can be made in proposed system by integration more services like:

- It can be implemented through web pages.
- New effective modules can be added time to time

10 Future Scopes

This is the modern age. Many people have vehicles. Vehicle is now a basic need. Everyplace is under the process of urbanization. There are many corporate offices and shopping centers etc. There are many recreational places where people used to go for refreshment. So, all these places need a parking space where people can park their vehicles safely and easily. Every parking area needs a system that records the detail of vehicles to give the facility. These systems might be computerized or non-computerized. With the help of computerized system we can deliver a good service to customer who wants to park their vehicle into the any organization's premises.

Enhancement to create a Bigger and Better System

These enhancements deal with what would be required in a new improved, bigger and better system

- In future if when a vehicle enters into the parking area there should be one sensor in which the user can easy identify from outside only Is there parking is full or empty or space is allocated.
- In future the vehicle can be parked by machines

11 REFERENCES

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- 2.www.youtube.com
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- 4.Javatpoint

