A
Mini-Project Report on

Vehicle Parking Management System

Submitted in partial fulfillment of the requirementsfor the degree of
BACHELOR OF ENGINEERING
IN
Computer Science & Engineering
Artificial Intelligence & Machine Learning

by

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CERTIFICATE

This is to certify that the project entitled "**Vehicle Parking Management System"** is a bonafide work of Milind Chavan (22206007), Harshal Deshmukh (22206008), Aryan Bane (22206009) submitted to the University of Mumbai in partial fulfillment of the requirement for the award of **Bachelor of Engineering** in **Computer Science & Engineering (Artificial Intelligence & Machine Learning).**

_____   _____

Prof. Kiran Babar   Dr. Jaya Gupta
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Project Report Approval

This Mini project report entitled "**Vehicle Parking Management System"** by **Milind Chavan (22206007), Harshal Deshmukh (22206008), Aryan Bane (22206009)** is approved for the degree of **Bachelor of Engineering** in **Computer Science &Engineering**, (AIML) **2022-23**.

External Examiner: _____

Internal Examiner: _____

Place: APSIT, Thane
Date:

Declaration

We declare that this written submission represents my ideas in my own words and where others' ideas or words have been included, I have adequately cited and referenced the original sources. I also declare that I have adhered to all principles of academic honesty and integrity and have not misrepresented or fabricated or falsified any idea/data/fact/source in my submission. I understand that any violation of the above will be cause for disciplinary action by the Institute and can also evoke penal action from the sources which have thus not been properly cited or from whom proper permission hasnot been taken when needed.

Milind Chavan   Harshal Deshmukh   Aryan Bane

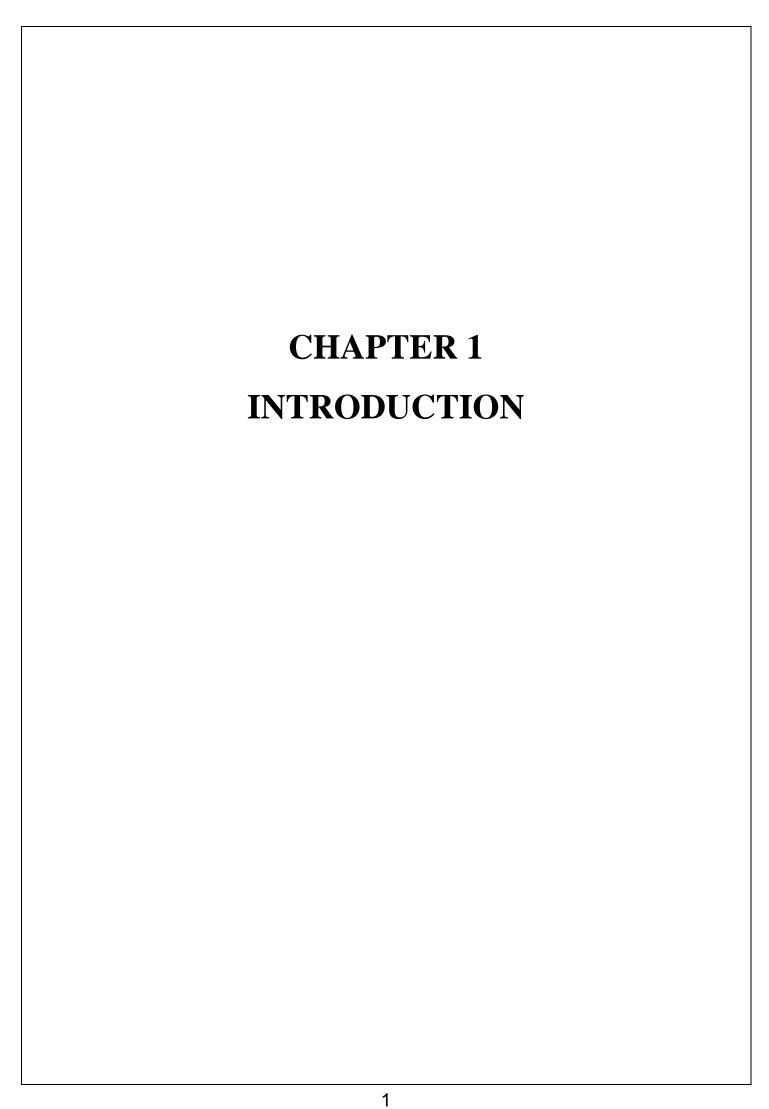(22206007)   (22206008)   (22206009)

ABSTRACT

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 number he 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 labor 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 secure your 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.
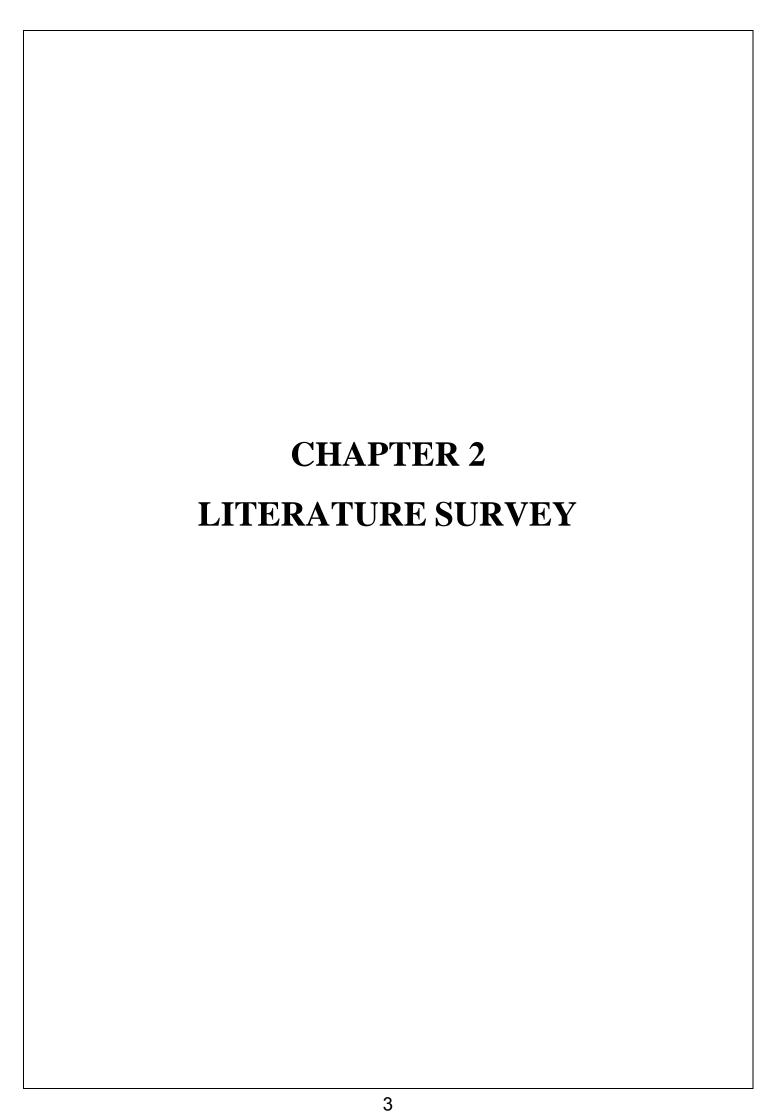
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CHAPTER 1
INTRODUCTION

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 number he 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 labor 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 secure your 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.

CHAPTER 2
LITERATURE SURVEY

2. LITERATURE SURVEY

[1] Vehicle Parking Management System (IEEE EXPLORE 2020) Srinivas Vishwanath, Saurab Sharma, Kirna Deshpande, Sneha Kanchan.

Proposed parking system integrating the Wireless Sensor Technology with the Android Application so that the user can book or pre-book a slot. The vehicle owner will be able to reserve a slot for his/her vehicle from anywhere and will be provided with a QR code which will be scanned on the entry of the parking area. Another feature of system is providing information about the near-by parking areas which comes handy when the current parking area is full.

[2] Smart Parking System using IoT Technology (IEEE EXPLORE 2020) Denis Ashok, Akshat Tiwari, Vipul Jirge

System proposes implementation of state-of-the-art Internet of Things (IoT) technology to mold with advanced Honeywell sensors and controllers to obtain a systematic parking system for users. Unoccupied vehicle parking spaces are indicated using lamps and users are guided to an empty parking space

[3] Smart Car Parking System for Cars (IEEE EXPLORE 2020) Balwant K. Patil , Avinash Deshpande , Sonal Suryavanshi , Rudesh Magdum
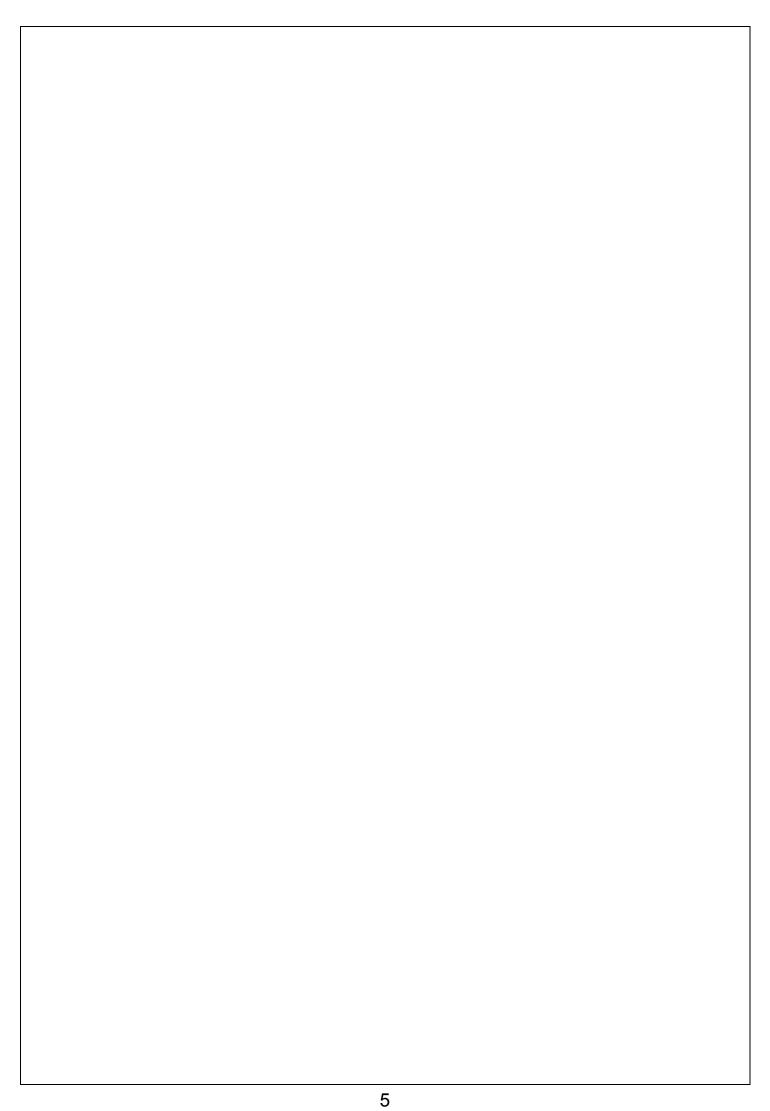
System propose the centralized system ,where the car driver is directed to select the closest traffic free path to reach the parking slot identifying the free slots
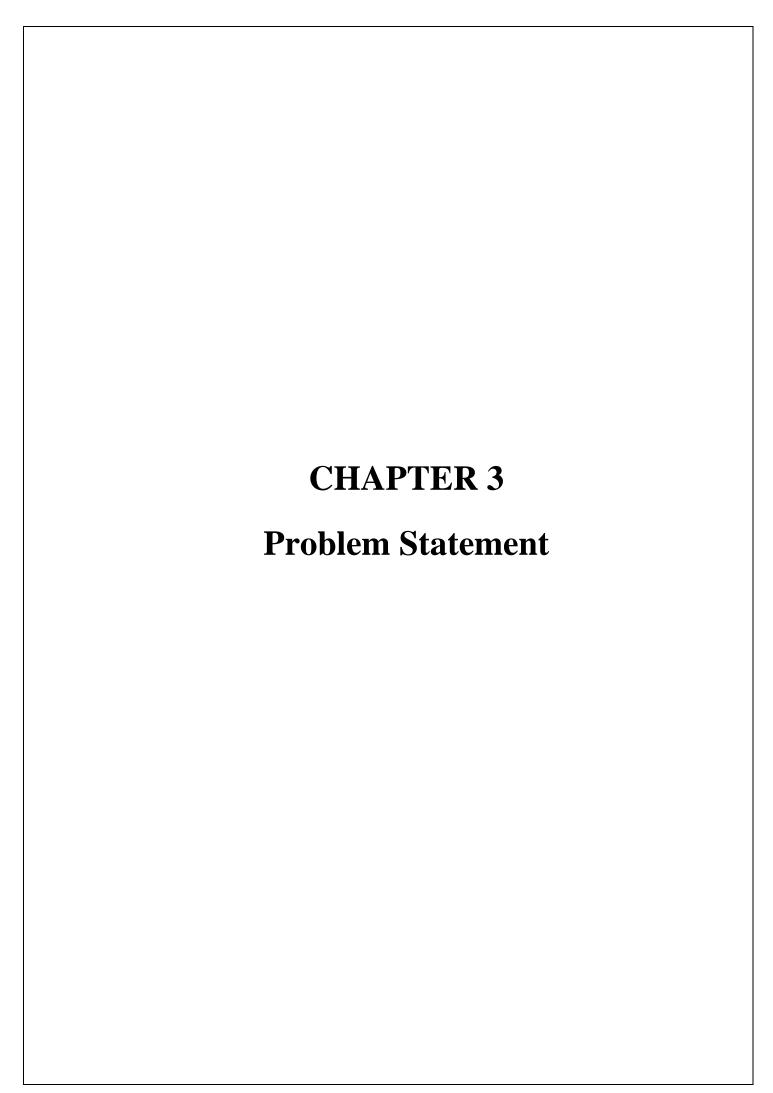
[4] Vehicle Auto Parking System (IEEE EXPLORE 2017) Adnan Al-Smadi, Mofeed Msallam .

Automatic car parking is an autonomous car maneuvering system that takes the car from a traffic lane to a parking space. The system uses ultrasound sensors and Arduino microcontroller to detect the parking place automatically, then moves the car to park in the accurate position. The system uses a four-wheel drive miniature vehicle to simulate the mechanism of a real car.

[5] IoT Based Economic Smart Vehicle Parking System (IEEE EXPLORE 2020) Minal Patil , Vijay Chakole , Krushna Chetepawad.

The proposed system is implemented with the help of Adriano Uno board for car parking and Node MCU to connect parking area with web or internet. The proposed system incorporated with an infrared sensor in each slot for getting information about vacancy position of parking slot. The user book parking slot well in advance, all the necessary information is available on server.

CHAPTER 3

Problem Statement

3. Problem Statement

"To handle and maintain the details of vehicle in any parking places."

The aim of the project is to show the real-world implementation of Database Management System developed using technologies such as HTML5, CSS, JavaScript, PHP. The tool is deployed on web for the admin to access and maintain details of Vehicle parking. It can be used across different operating systems and solely depends on the type of web browser and version of MySQL used, as the project is developed for web platform. But the deployed version only depends on the user's browser and its version.

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 referrer 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
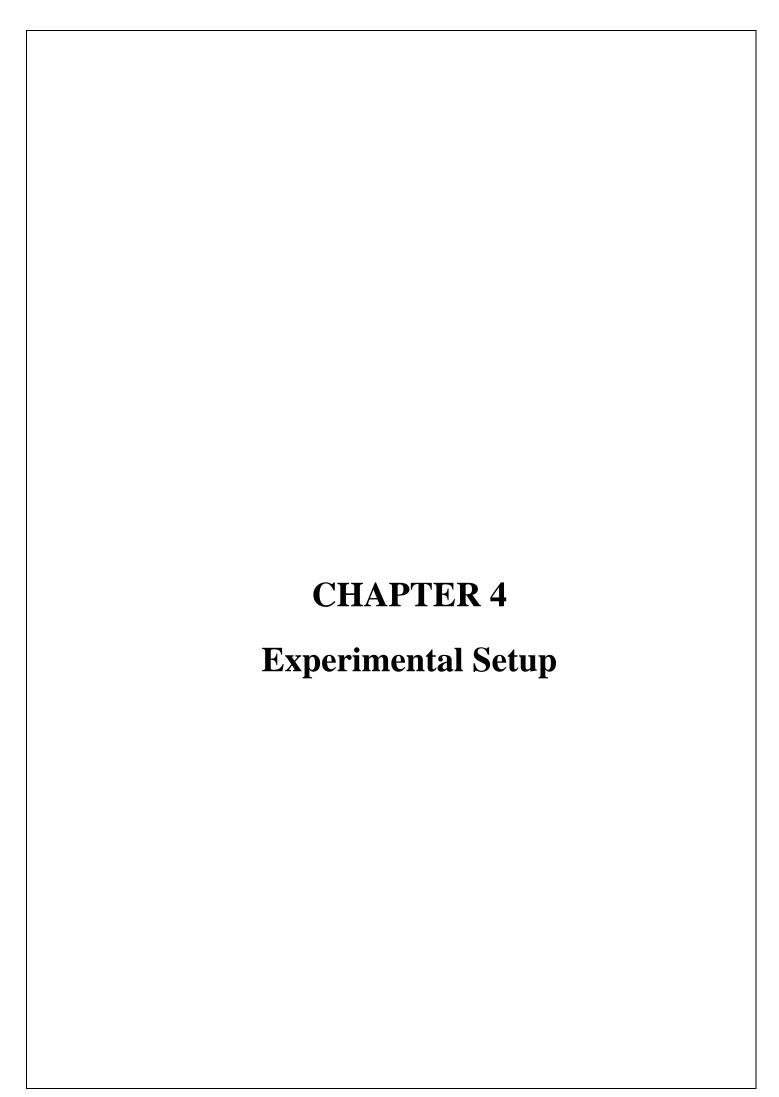
3.1 Objectives:

- We can park our vehicle in our own slot by paying.
- Because of that there is no towing problems.
- 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

3.2 Scope

In 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 freshmen. 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.

CHAPTER 4

Experimental Setup

4. Experimental Setup

4.1 SPECIFIC REQUIREMENTS

The specific requirements of the Vehicle Parking Management System are stated as follows:

4.2 SOFTWARE REQUIREMENTS

Web Browser – Google Chrome 62.0.3202.89 (stable)
Editor – Microsoft Visual Studio Code v1.29
XAMPP v7.2.8
XAMPP control panel v3.2.2
phpMyAdmin v4.8.2
PHP v7.2.8
Apache v2.4.34
Operating System – Windows 8 or later
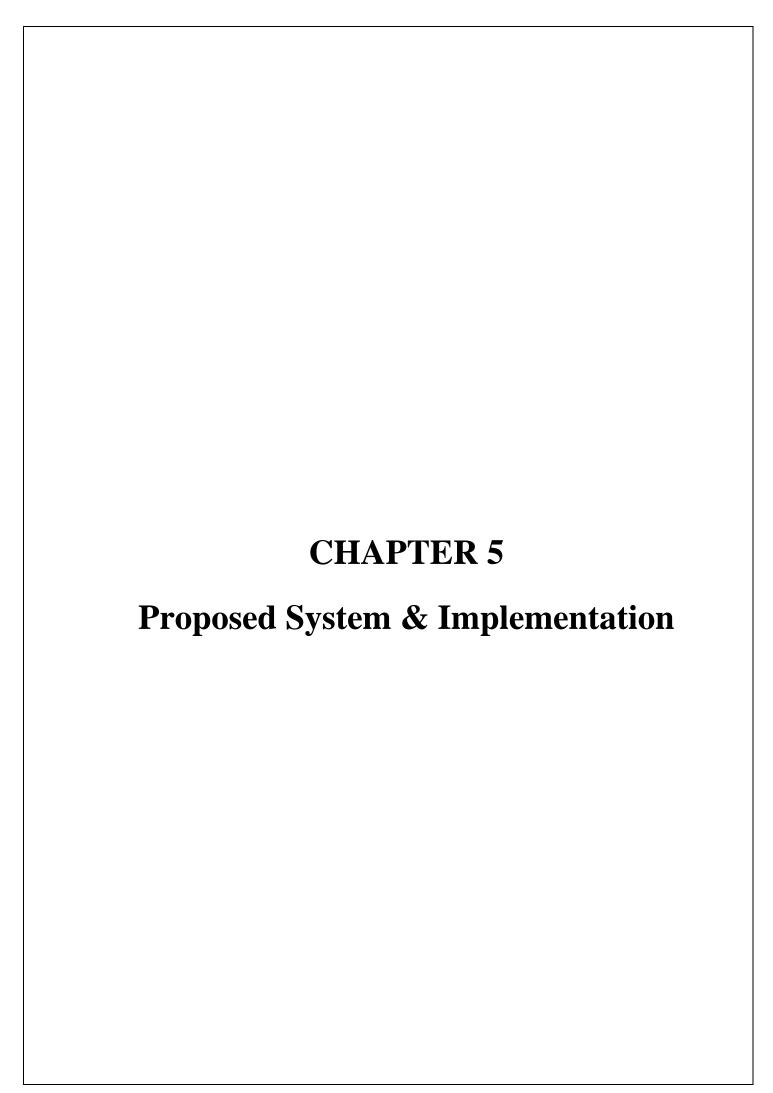
4.3 TECHNOLOGY STACK

HTML provides a means to structure text based information in a document. It allows users to produce web pages that include text, graphics and hyperlinks.

CSS (Cascading Style Sheets) is a style sheet language used for describing the Presentation of a document written in a markup language.

JavaScript is a scripting language which supports the development of both client and server applications. It is preferred at client side to write programs that can be executed by a web browser within the context of a web page.

SQL is the language used to manipulate relational databases. It is tied closely with the relational model. It is issued for the purpose of data definition and data Manipulation.

PHP: Hypertext Preprocessor (or simply PHP) is a server-side scripting language designed for Web development, and also used as a general-purpose programming language.

CHAPTER 5

Proposed System & Implementation

5. Proposed system and Implementation

5.1 Block diagram :

5.2 Implementation

Index:

5.2.1

admin-login :

5.2.2

admin-dashboard :

5.2.3

admin-profile :

5.2.4

admin registered-users :

Admin

- Dashboard
- Vehicle Category >
- Add Vehicle
- Manage Vehicle >
- Reports >
- Search Vehicle
- Reg Users

Dashboard

Dashboard / Registered Users / Registered Users

Registered Users

S.NO	Name	Contact Number	Email	Registration Date	Action
1	Tester 01	1234567890	tester01@gmail.com	2022-05-10 23:35:56	Delete
2	Milind Chavan	9876543210	milind@gmail.com	2023-04-13 10:13:36	Delete
3	Harshal Deshmukh	9876541230	harshal@gmail.com	2023-04-13 10:20:27	Delete

Vehicle Parking Management System @ 2022

5.2.5

admin manage-incoming-vehicle :

5.2.6

admin manage-outgoing-vehicle :

5.2.7

user-login & register :

5.2.8

5.2.9

user view-vehicle :

VPMS Users

- Dashboard
- View Vehicle
- Add Vehicle

Dashboard

Dashboard / View Vehicle Parking Details / View Vehicle Parking Details

View Vehicle Parking Details (on the basis of Registered Mobile No)

S.NO	Parking Number	Owner Name	Vehicle Reg Number	Action
1	659173139	Harshal Deshmukh	MH43HJ0005	View Print

Vehicle Parking Management System @ 2022

5.2.10

user add-vehcile :

VPMS Users

- Dashboard
- View Vehicle
- Add Vehicle

Dashboard

Dashboard / Vehicle / Add Vehicle

Add Vehicle

Select	Select Category
Vehicle Company	Vehicle Company
Registration Number	Registration Number
Owner Name	Owner Name
Owner Contact Number	Owner Contact Number

Add

Vehicle Parking Management System @ 2022

5.2.11

CHAPTER 6

Conclusion

6. 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

We also conclude that this project has helped us gain more knowledge about the topic that we are indulged ourselves into "Visual Studio".

The developed application is tested with sample inputs and outputs obtained in according to the requirement. Even though we have tried our level best to make it a dream project.

References

[1] Vishwanath, Srinivas, Saurabh Sharma, Kiran Deshpande, and Sneha Kanchan. "Vehicle Parking Management System." In 2020 International Conference on Convergence to Digital World-Quo Vadis (ICCDW), pp. 1-6. IEEE, 2020.

[2] Ashok, Denis, Akshat Tiwari, and Vipul Jirge. "Smart parking system using IoT technology."
In 2020 International Conference on Emerging Trends in Information Technology and Engineering (ic-ETITE), pp. 1-7. IEEE, 2020.

[3] Patil, Minal, Vijay Chakole, and Krushna Chetepawad. "IoT based economic smart vehicle parking system." In 2020 3rd International Conference on Intelligent Sustainable Systems (ICISS), pp. 1337-1340. IEEE, 2020.