Title of the Project

Vehicle Parking Management System

Presented by:

Name:

Roll no:

Name:

Roll no:

Index

Acknowledgement: -

I thank the people who were a part of this project in numerous ways, people who gave their unending support right from the stage the project idea was conceived.

The four things that go on to make a successful endeavor are dedication, hard work, patience and correct guidance.

I would like to thank our principal **DR. Shaila Boot Wala** who has always been the source of inspiration.

I also thankful to **Ms. Hadiya,** our coordinator, for all the help she has rendered to ensure the successful completion of the project.

I am grateful to all teaching staff (I.T) who shared their experience and gave their suggestions for developing our project in a better way.

Finally, I would like to thank all our friends and family and family members for their support, and all others who have contributed to the completion of this project directly or indirectly.

Introduction: -

Parking management system for managing the records of the incoming and outgoing vehicles in a parking house

It’s easy for Admin to retrieve the data if the vehicle has been visited through number he can get that data.

Nowadays 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 must look for all the lanes. Moreover, this involves a lot of manual Laboure and investment. Instead of a vehicle caught in towing the vehicle can park safely and securely 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 to evaluate the fee structure for every vehicle's 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 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.

A parking management system refers to the innovative technologies providing solutions in the parking industry. The core idea behind any parking management system is self-explanatory:

It's a system that helps people, companies, and organizations to manage their parking spaces.

Managing car parks isn't an easy task for companies and organizations because there are lots of moving parts including traffic and the availability of spaces. It is a time-consuming task, requires human labor, and is inefficient. Using a parking management system can help reduce a business's administrative overhead on parking and reduce the impact of their parking space on their local community.

Parking software is used at educational institutions, municipalities, offices, businesses, and corporate organizations. This article defines parking management systems, discusses their key components, and the different use cases for the systems and software.

Scope of System: -

In the modern age. Many people have vehicles. A 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 details of vehicles to give the facility. These systems might be computerized or non-computerized. With the help of a computerized system, we can deliver good service to customers who want to park their vehicle on any organization's premises.

Vehicle parking management system is an automatic system which delivers data processing in very high speed in a 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 every area of parking management. In coming future there will be excessive need of Vehicle parking management system.

Existing System: -

In the Existing system parking areas must manually maintain information regarding parking. Information relating to parking details and completion must be maintained separately. Provide a simpler method to store and access information related to parking slots, available slots, booked slots and vehicle. Provide a simple interface which will be easily used without much training. Reduce paperwork and make all related information accessible easily.

Traditional parking management relies on manual processes, often resulting in inefficiencies and frustrations for both drivers and parking lot operators. Here's a brief overview of how it typically works:

- **Entry**

Drivers arrive at the parking lot and physically seek an available space.

Entry points may have attendants issuing tickets or collecting fees manually.

No real-time information is available on open spaces, leading to wasted time searching.

- **Parking**

Drivers occupy spaces without any automated tracking or reservation system.

Overcrowding and misuse of reserved spots can occur.

No guarantee of finding a space, especially during peak hours.

- **Exit**

Drivers return to the entry point or designated exit booth.

Attendants manually calculate parking fees based on entry time or validate pre-paid tickets.

Cash handling and manual calculations can be slow and prone to errors.

- **Overall Issues**

Time-consuming process for drivers searching for and paying for parking.

Inefficient use of parking spaces due to lack of real-time data.

Security concerns with cash handling and lack of automated access control.

Limited data insights for parking lot operators to optimize usage and revenue.

Proposed System: -

The vehicle Parking Management system is a web-based technology that will manage 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. Vehicle parking management system is an automatic system that delivers data processing in very high speed in a systematic manner.

This web-based system streamlines parking operations by managing incoming and outgoing vehicles in a parking house. Here's a summary of its key features:

- **Benefits**

Improved parking efficiency by tracking available spaces and guiding drivers.

Enhanced security by recording vehicle data and access.

Streamlined data management for admins.

Reduced manual work and errors.

- **Functionality**

Real-time vehicle tracking: Monitors vehicle entries and exits, providing accurate occupancy data.

Automated data processing: Processes data at high speed, ensuring efficient system operation.

Easy data retrieval: Admins can quickly access vehicle visit history using license plate numbers.

Systematic record management: Maintains organized records of all parking activity.

- **Technology**

Web-based platform for accessibility and convenience.

Potential integration with license plate recognition (LPR) for automated entry and exit.

Secure database management for data integrity.

- **Importance of VPMS**

Efficient parking management is crucial for optimizing parking resources and improving the overall experience of drivers. With the Vehicle Parking Management System, businesses and organizations can effectively manage their parking facilities, reduce congestion, and provide a seamless parking experience for their customers.

Feasibility Study: -

- **Economic feasibility**

Economic feasibility attempts to weigh the cost of developing and implementing a new system, against the

benefits that would accurate from having the new system in place. This feasibility study gives the top management the economic justification for the new system

A simple economic analysis which gives the actual comparison of costs and benefits are much more meaningful in this case. In addition, this proves to be a useful point of reference to compare actual costs as the project progresses. There could be various types of intangible benefits of account of automation. These could include increased customer satisfaction, improved accuracy of operation, better documentation and record keeping, faster retrieval of information.

- **Schedule feasibility**

Schedule Feasibility means that the project can be completed on time

The project does not have a deadline but according to the proposed system the development process is on schedule. Therefore it is feasible.

- **Operational feasibility**

Proposed project is beneficial only if it can be turned into information systems that will meet the organization operating requirements. Simply stated, this test of feasibility asks if the system will work when it is developed and installed. What are major barriers to implementation?

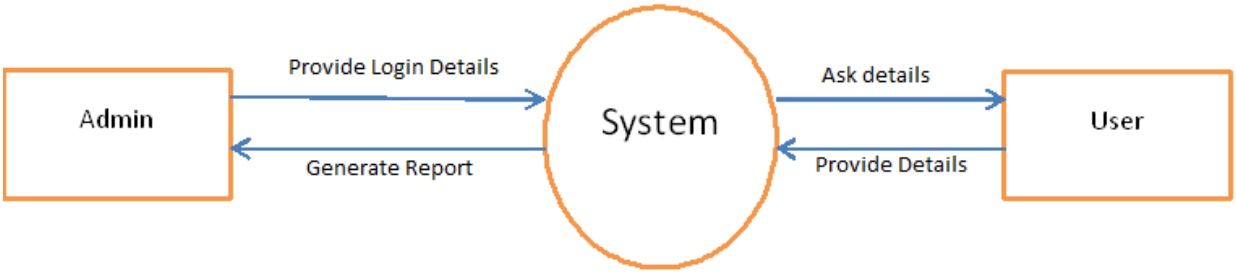
Here are questions that will help test the operational feasibility of a project

- **Technical feasibility**

Technical feasibility centers on the existing computer system(hardware, software, etc.) and to what extent it can support the proposed addition. For example, if the current computer is operating at 80% capacity-an arbitrary ceiling-then running another application could overload the system or require additional hardware. This involves financial considerations to accommodate technical enhancements. If the budget is a serious constraint, then the project is judged but not feasible.

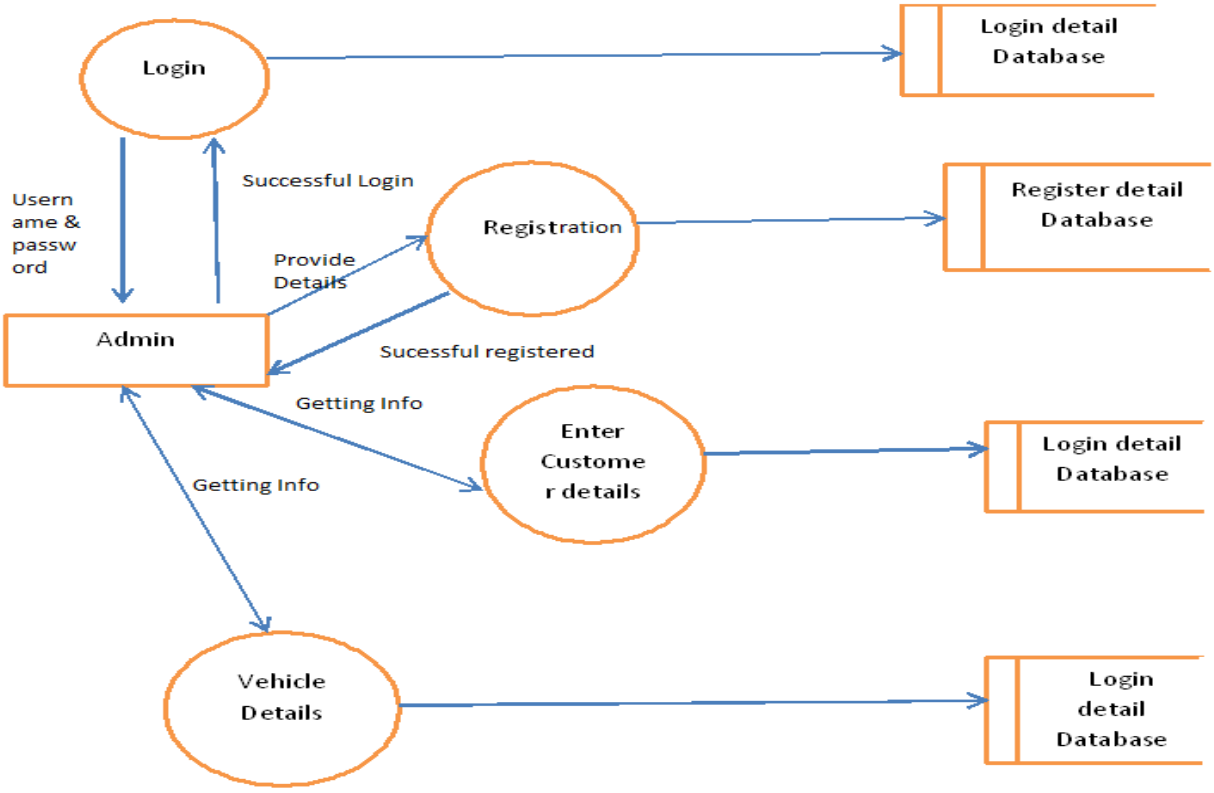
DFD Diagram: -

Level 0: -

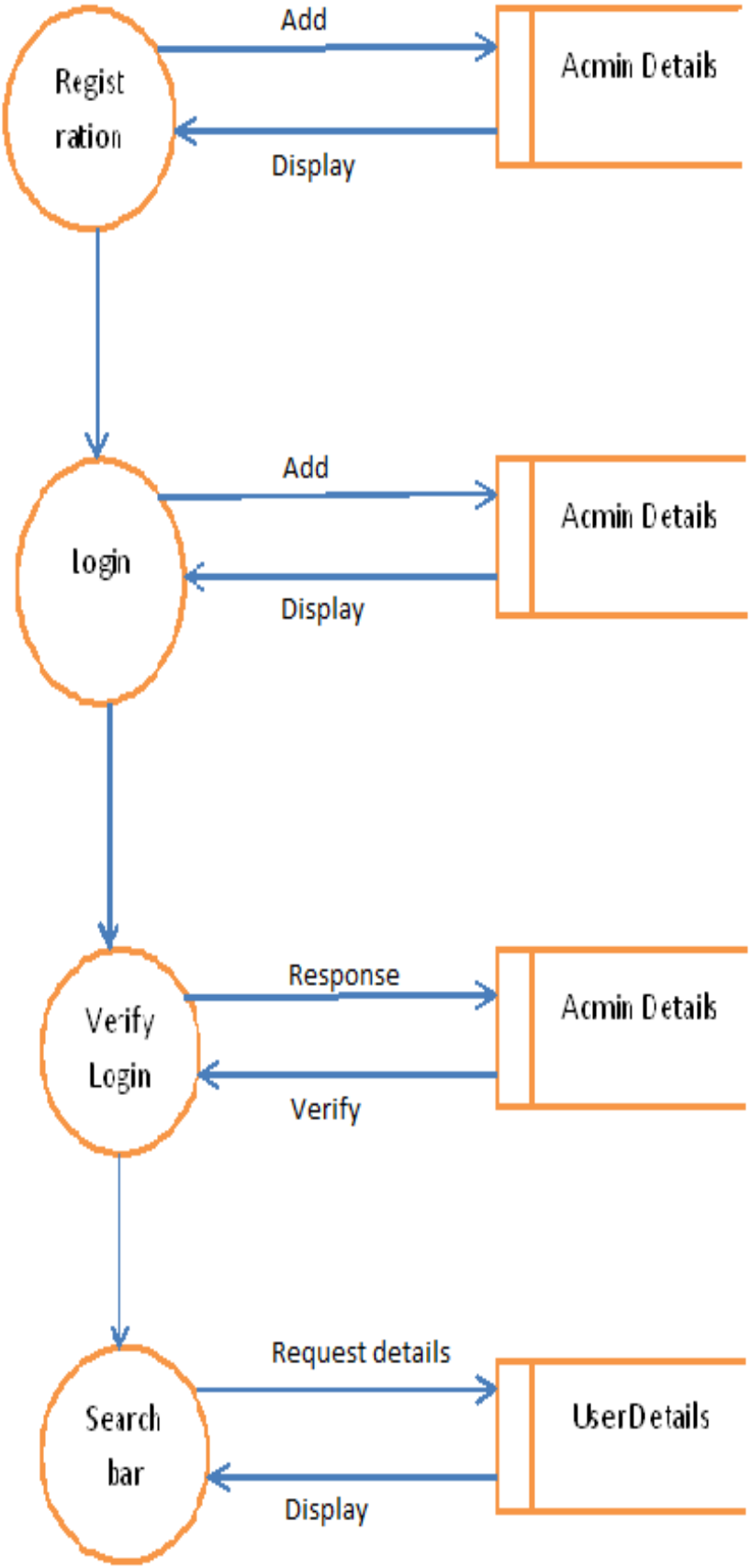


Level 1:-

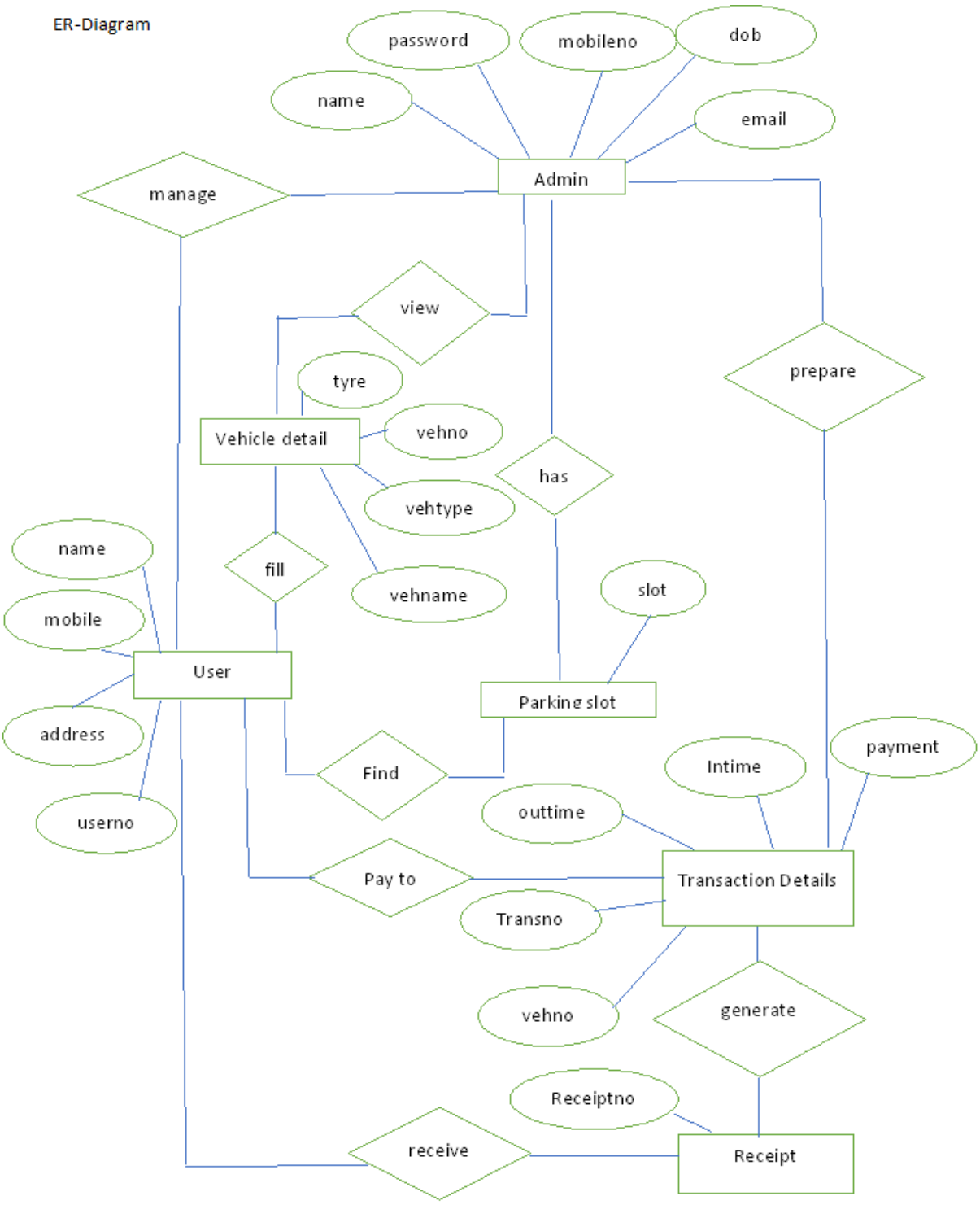
.



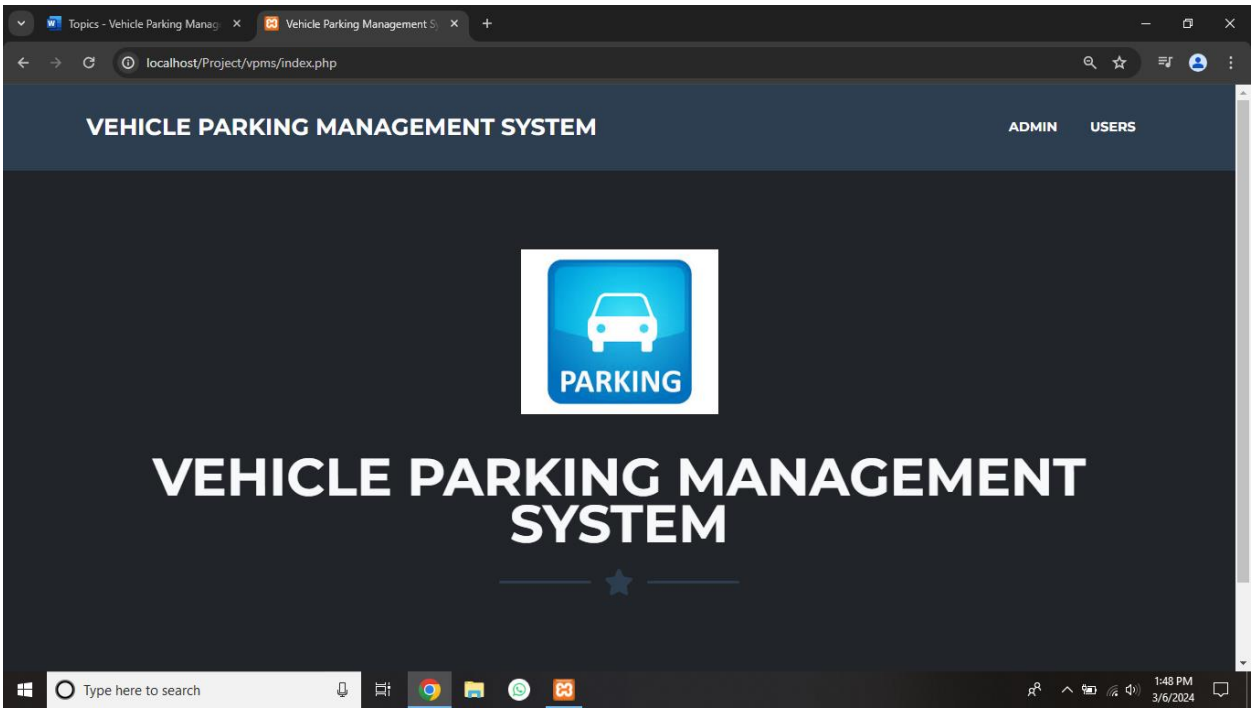
Level 2


Regist ration
Add
Display
Acmin Details
login
Add
Display
Acmin Details
Verify Login
Response
Verify
Acmin Details
Search bar
Request details
Display
UserDetails

ER-Diagram

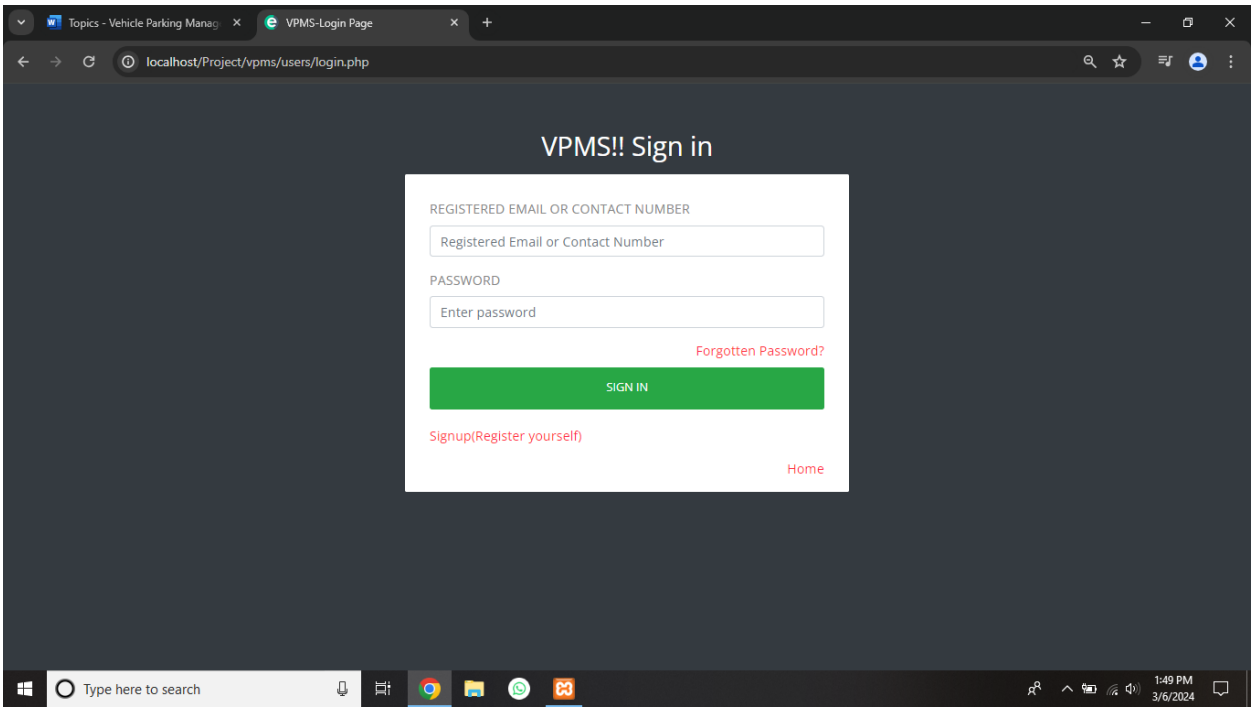

ER-Diagram
password
mobileno
dob
name
email
Admin
manage
view
prepare
tyre
Vehicle detail
vehno
has
vehtype
name
fill
vehname
slot
mobile
User
Parking slot
address
Find
Intime
payment
userno
outtime
Pay to
Transaction Details
Transno
vehno
generate
Receiptno
receive
Receipt

Input & Output Screen: -

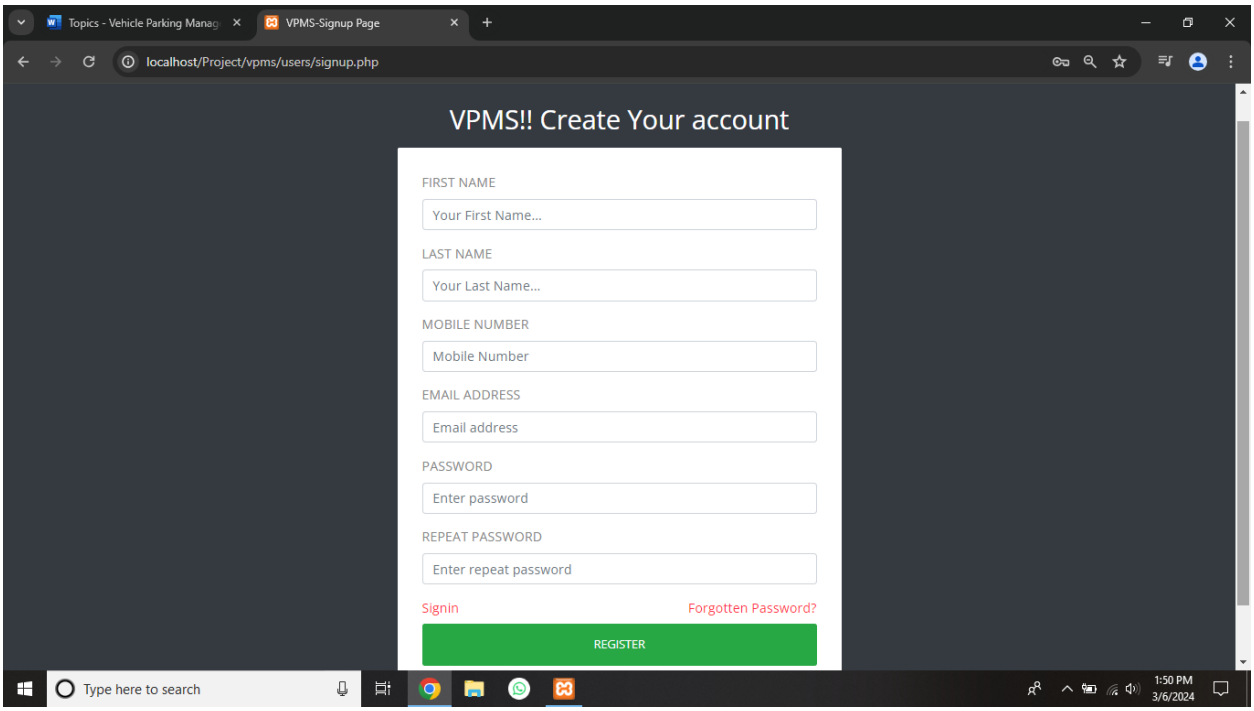


Home Page

User Section

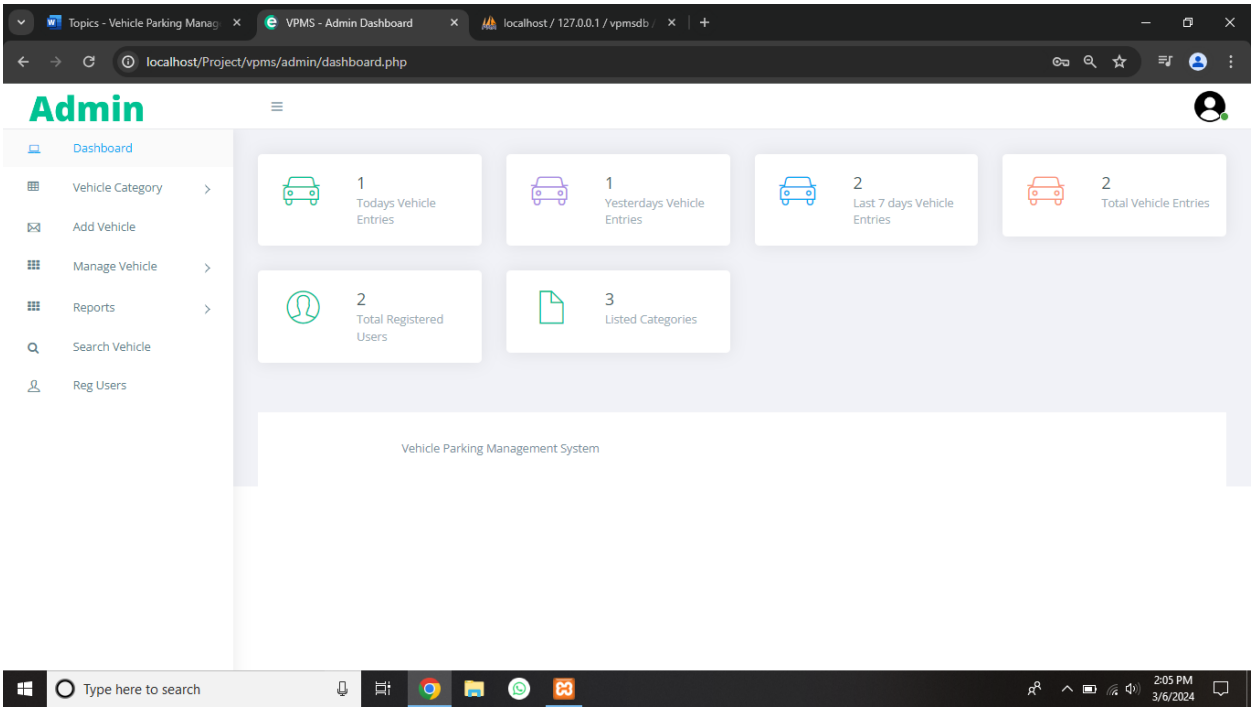


User sign in page

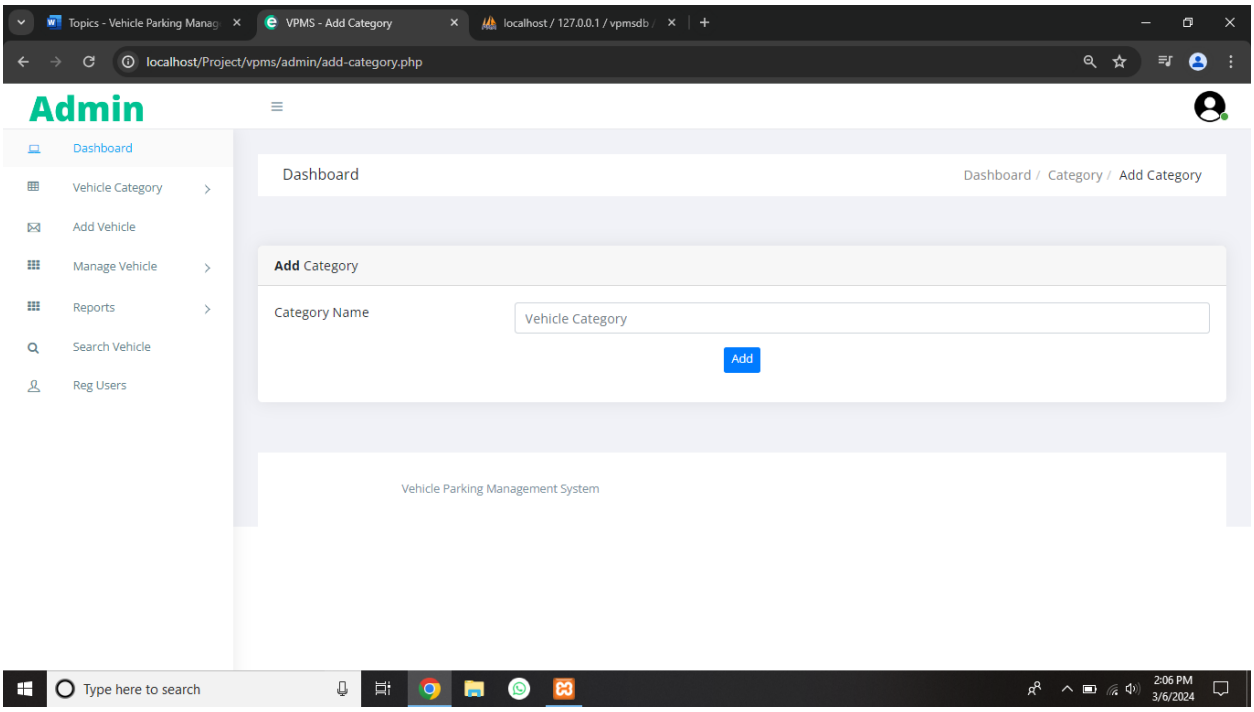


User Signup page

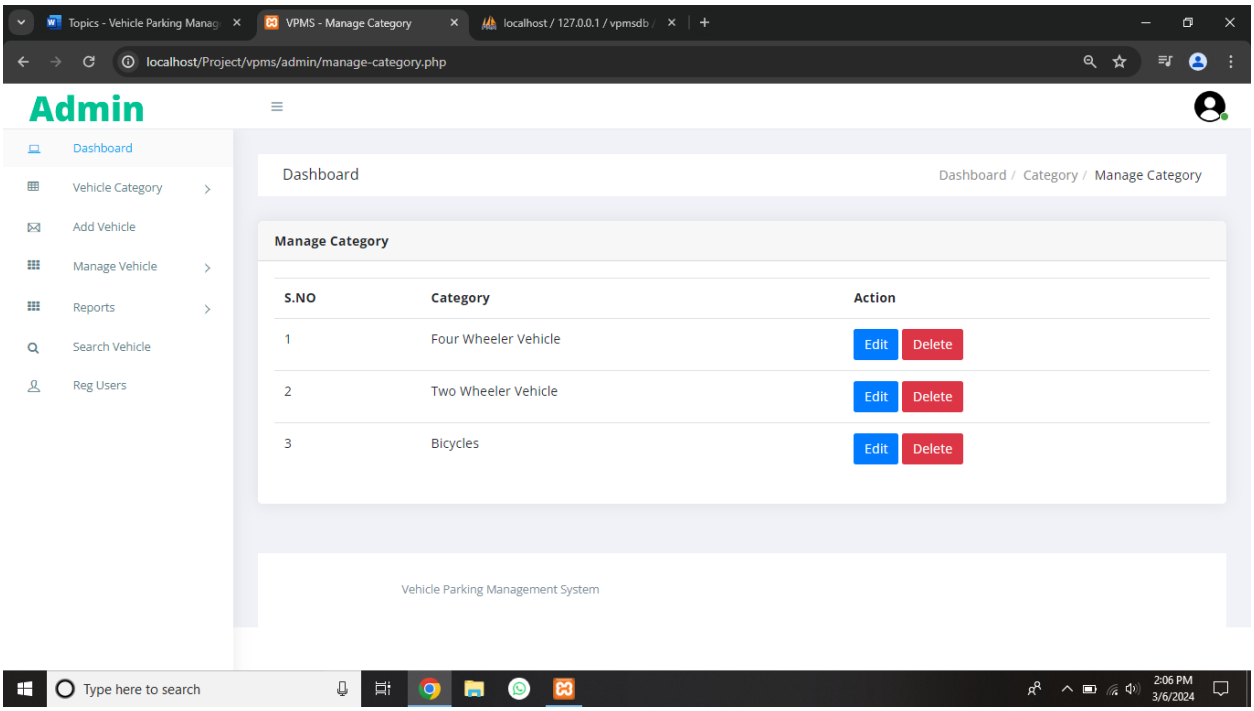
Admin Section

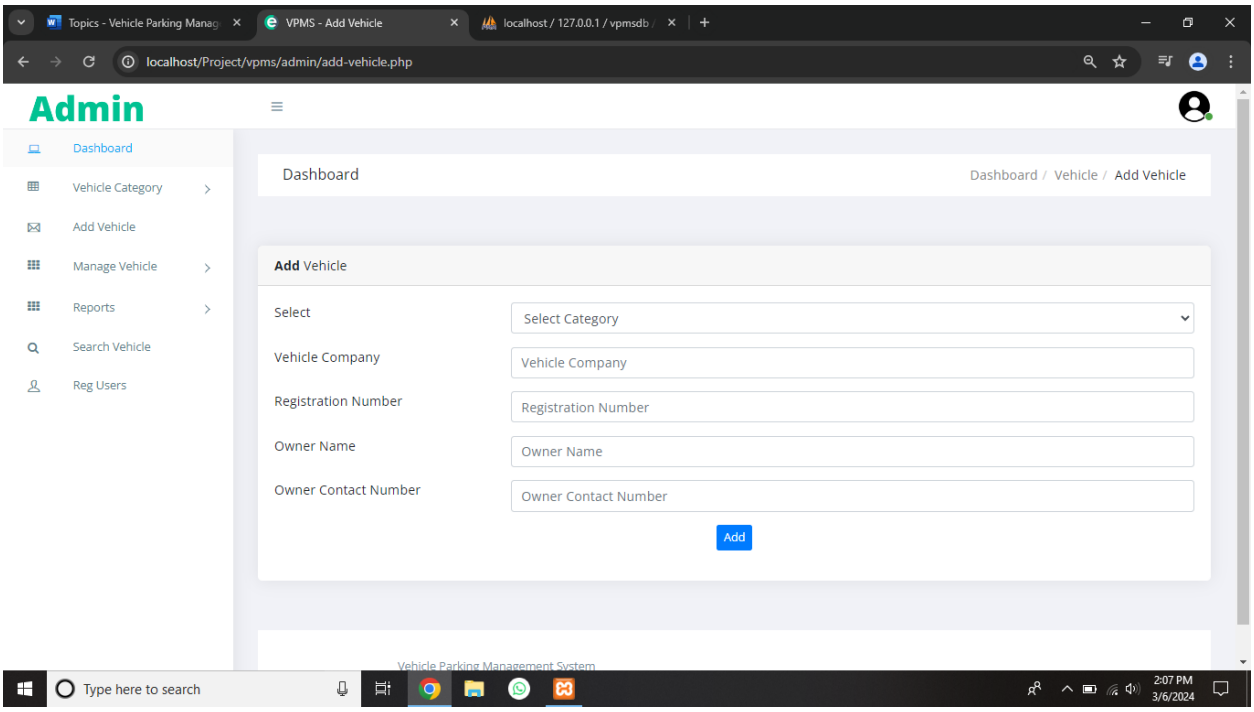


Admin Dashboard

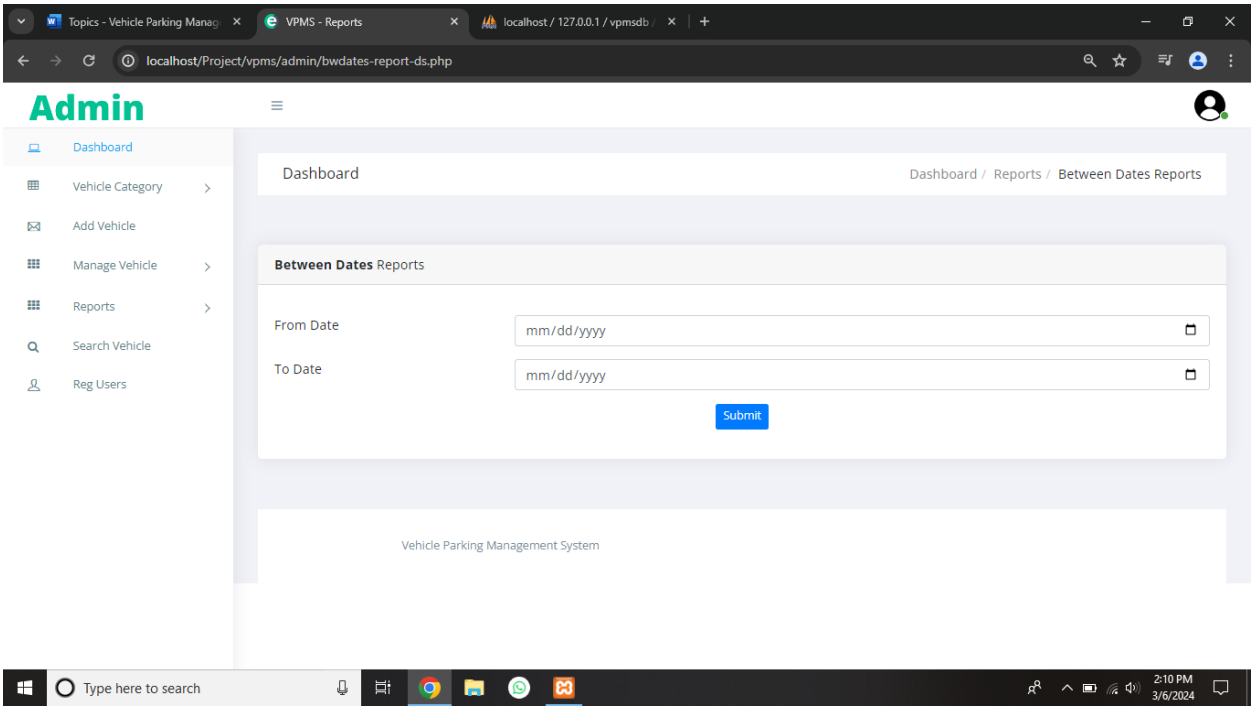


Admin Vehicle Category Edit /Modify





Admin Add Vehicle



Admin Reports

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 I, the Student of BBA(CA) 4th Semester concludes that the project was completely and slowly developed by me. I also conclude that this project has helped us gain more knowledge about the topic that we are indulging ourselves in “Visual Studio”. 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 effectives modules can be added time to time

In short, parking management systems give smart and easy solutions for today's car park challenges. Using tech, they make parking smoother and better, helping with convenience and safety and looking after the environment. Making parking methods better saves time and money for everyone.

There are many good things about parking management systems for car park owners and those who use them. Owners get things done more efficiently, while people parking find it simple and stress-free. These ways of working lead the way in making parking less of a headache, cutting down on pollution, and making our city spaces last longer.

Future Enhancement: -

This is 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.

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