PROJECT REPORT ON

Parking Management System

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Topic	:	*Parking Management System*
Subject	:	*Python Programming*
Subject code	:	*INT213*

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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.

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 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.

Main Report

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.
- 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.

Django:

Django is a python based open source web framework. It is maintained by the Django Software Foundation (DSF), an American independent organization. It enables rapid development of secure and maintainable website. Django takes care of much of the hassle of web development, so we can focus on writing our app without needing to reinvent the wheel.

Why Not Tkinter:

Tkinter is python's standard Graphical User Interface (GUI) package. Tkinter is not the only GUI Programming toolkit for python. It is however the most commonly used one. But in this project which is made in Python Programming Language, we are using Django instead of Tkinter. To run a Python program using Tkinter, it is mandatory for a user to install python with Tkinter module being present in the system to run the application. However, Django helped to make the application as a web application. which means it will run on the browser and this makes it platform independent and user will not have to install anything just they need a Brower and a internet connection to run the application.

ER Diagram

Number of Entities required:

1) Vehicle : It will handle vehicles which are Entering and Exiting
2) Categories : It will handle the category of the vehicles

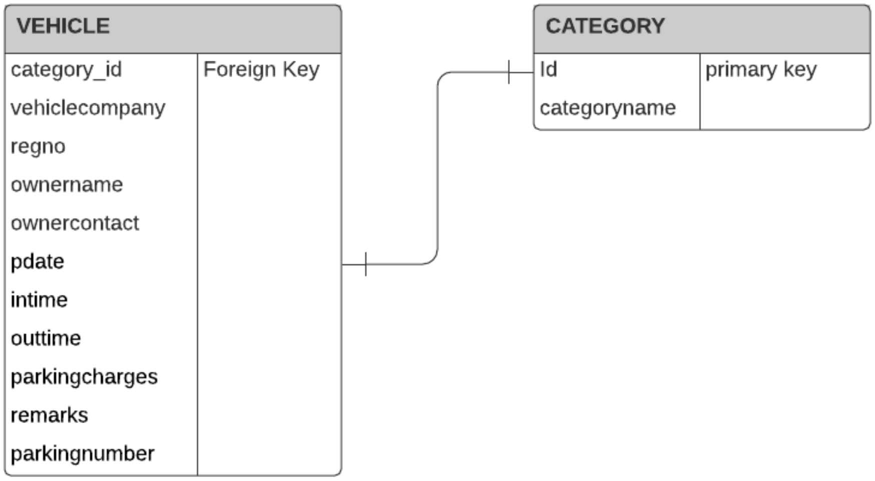
Attributes: ‘

1) Vehicle → parkingnumber, vehiclecompany, regno, ownername, ownercontact, pdate, intime, outtime, parkingcharges, remark, category_id (Foreign Key)
2) Category → Id(Primary Key), categoryname

So,

1) In category Table, Id is **PRIMARY KEY**
2) In vehicle Table, category_id is **FOREIGN KEY**

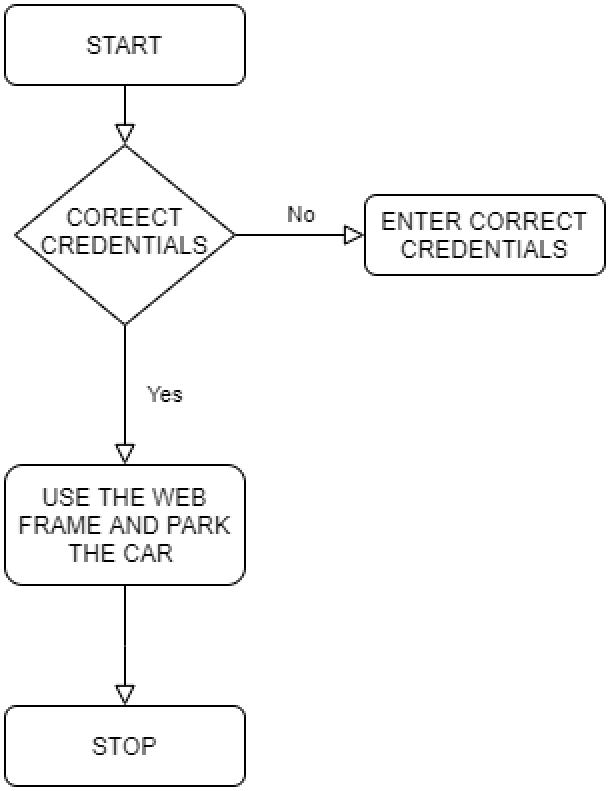
BELOW IS TH ENITIY RELATIONSHIP DIAGRAMS



VEHICLE	
category_id	Foreign Key
vehiclecompany	
regno	
ownername	
ownercontact	
pdate	
intime	
outtime	
parkingcharges	
remarks	
parkingnumber	

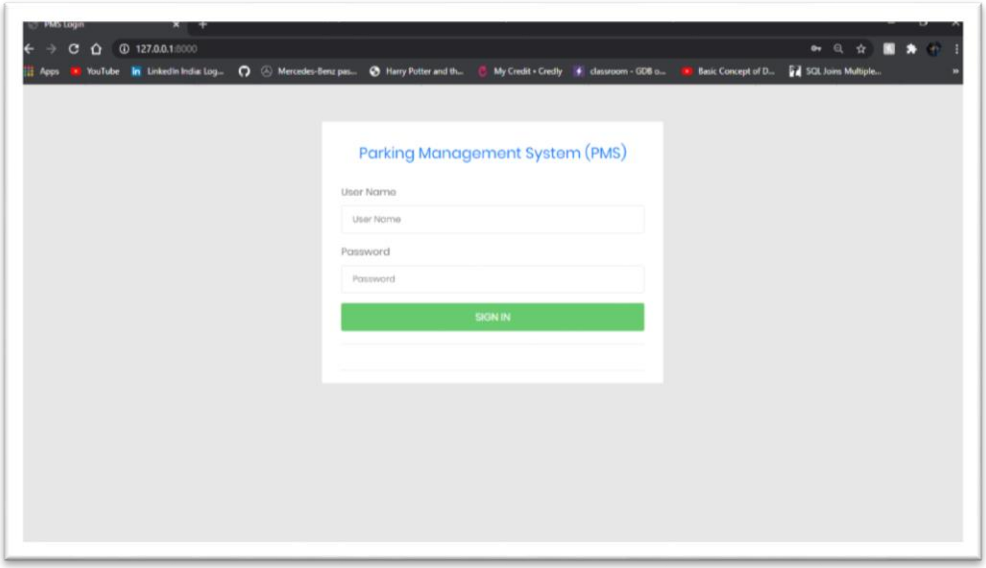
CATEGORY	
Id	primary key
categoryname	

Flowchart


START
COREECT CREDENTIALS
No
ENTER CORRECT CREDENTIALS
Yes
USE THE WEB FRAME AND PARK THE CAR
STOP

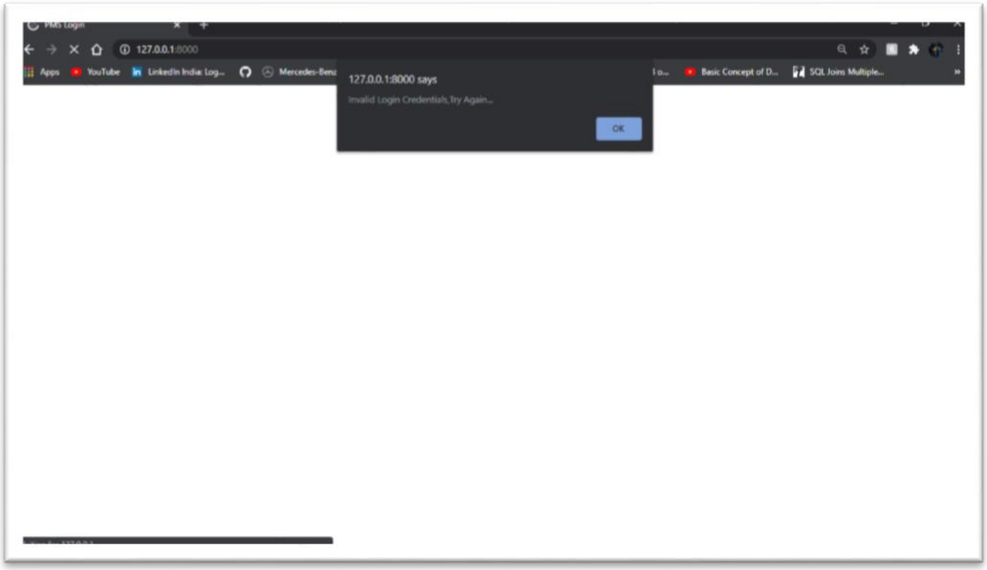
Results

1. Admin Login



Parking Management System (PMS)

2. Invalid Login and Password



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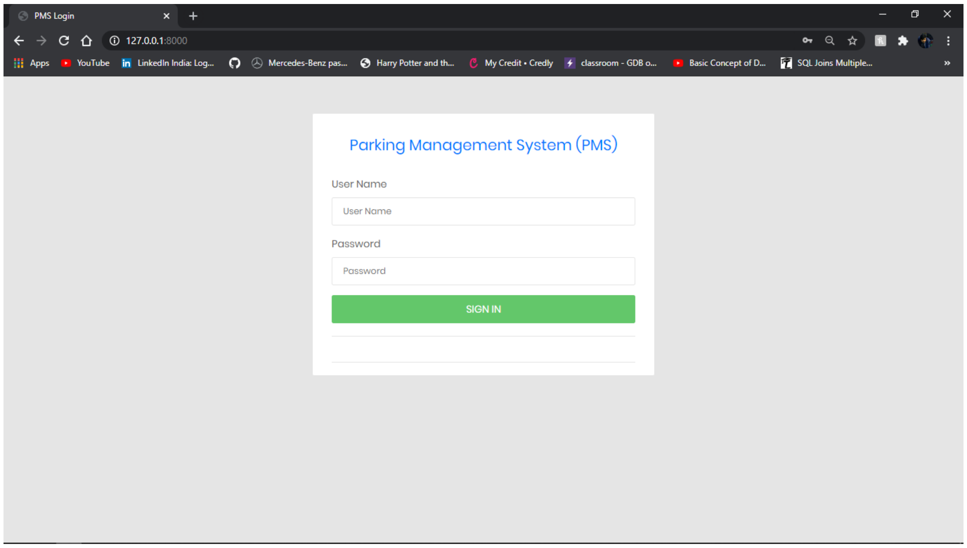
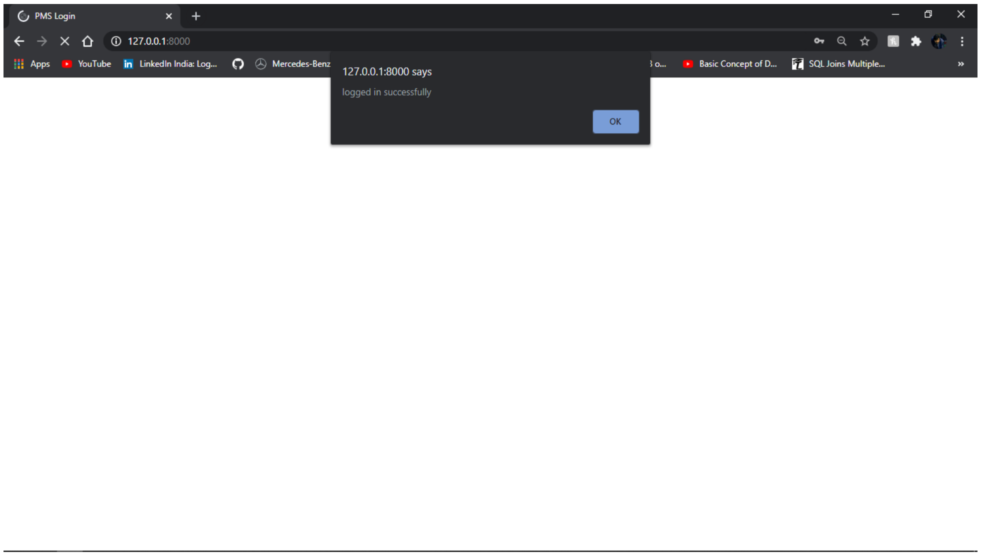
Invalid Login Credentials,Try Again...

3. Correct Credential



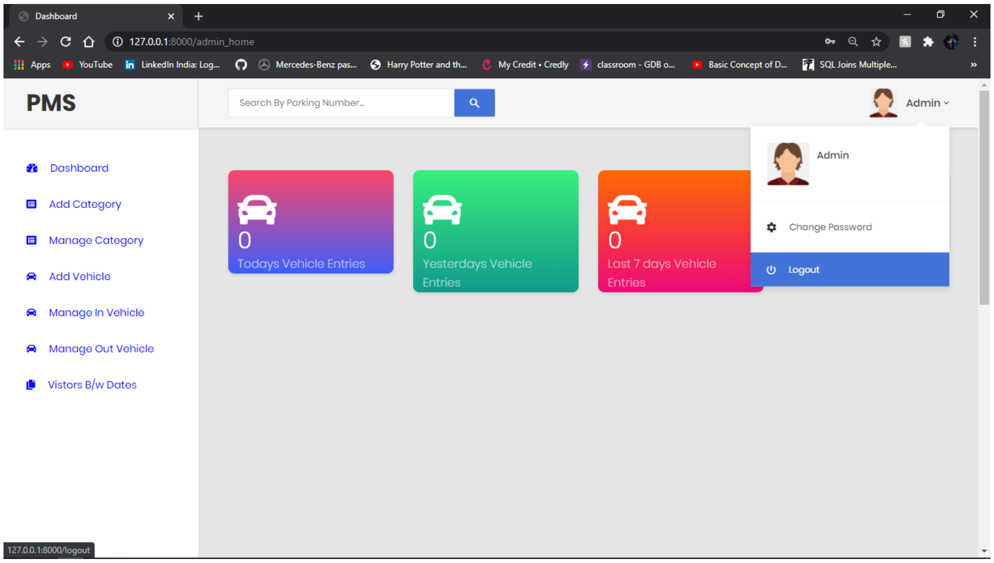
4. Successful Login



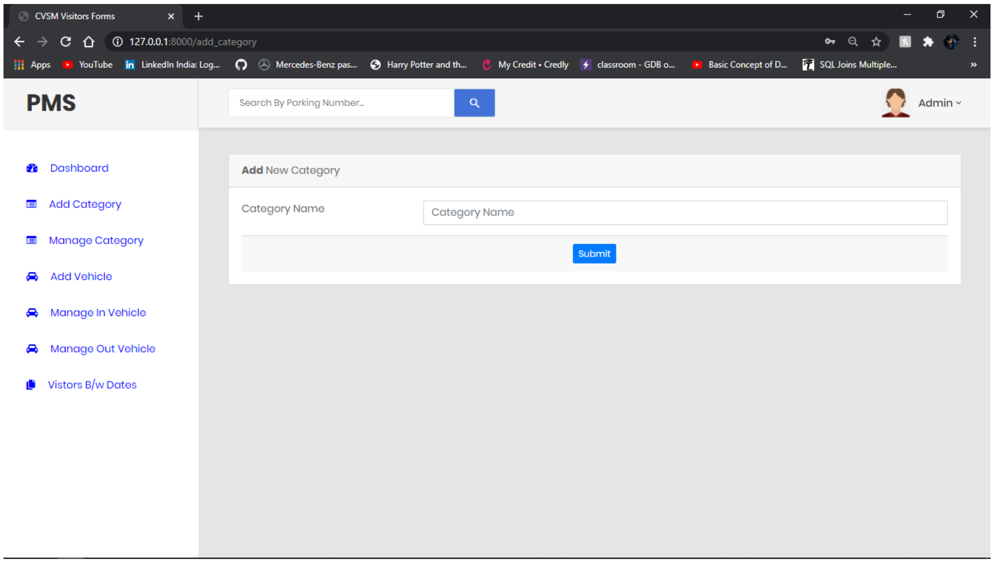
127.0.0.1:8000 says

logged in successfully

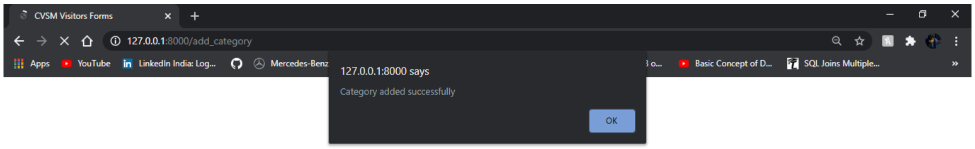
5. Main Dashboard



6. Add Category



7. Category added successfully

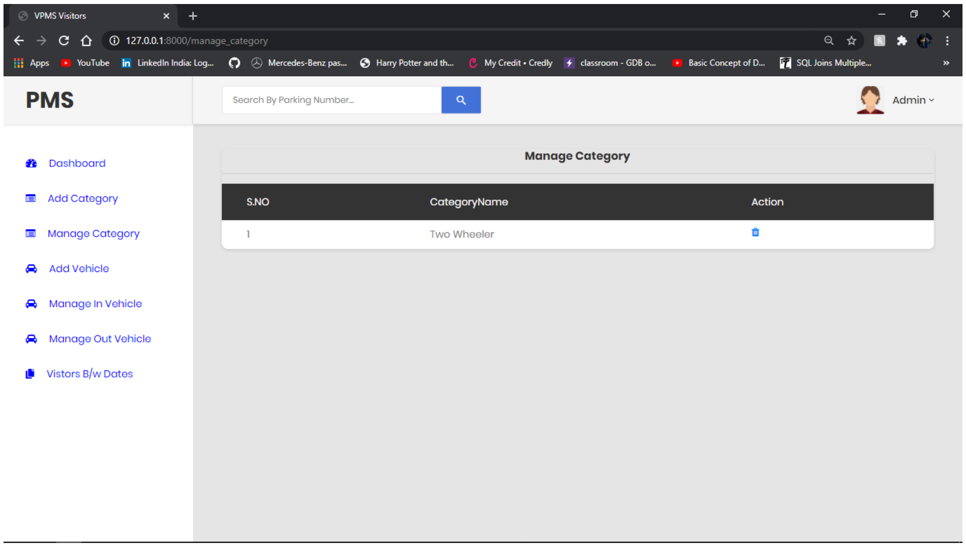


127.0.0.1:8000 says

Category added successfully

OK

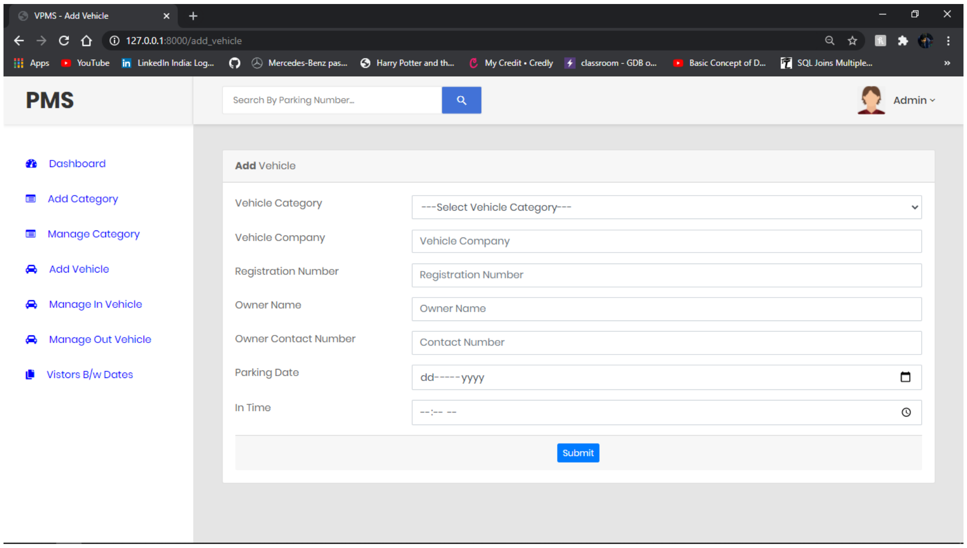
8. Manage category



Manage Category

S.NO	CategoryName	Action
1	Two Wheeler	🗑

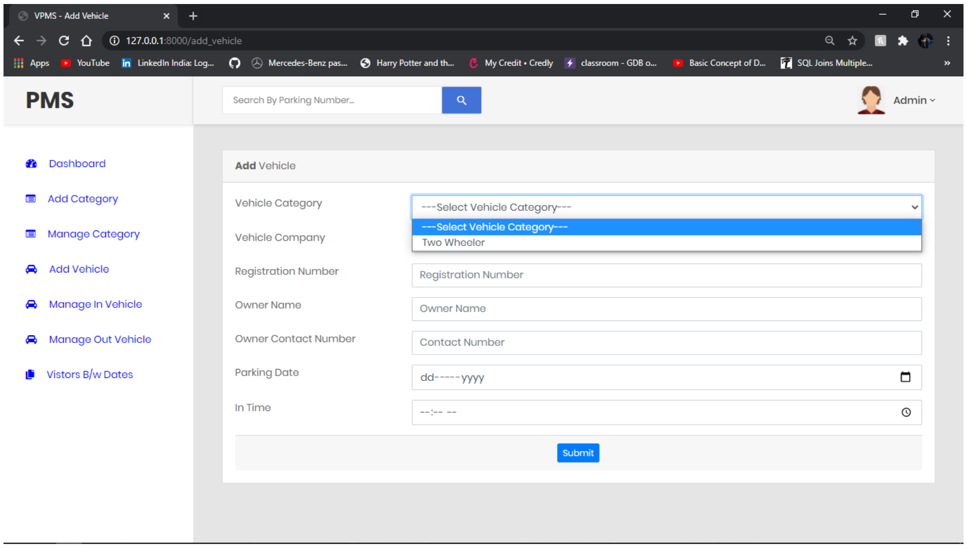
9. So now we are Adding vehicle to park a car



Add Vehicle

Vehicle Category	---Select Vehicle Category---
Vehicle Company	Vehicle Company
Registration Number	Registration Number
Owner Name	Owner Name
Owner Contact Number	Contact Number
Parking Date	dd-----yyyy
In Time	--:-- --

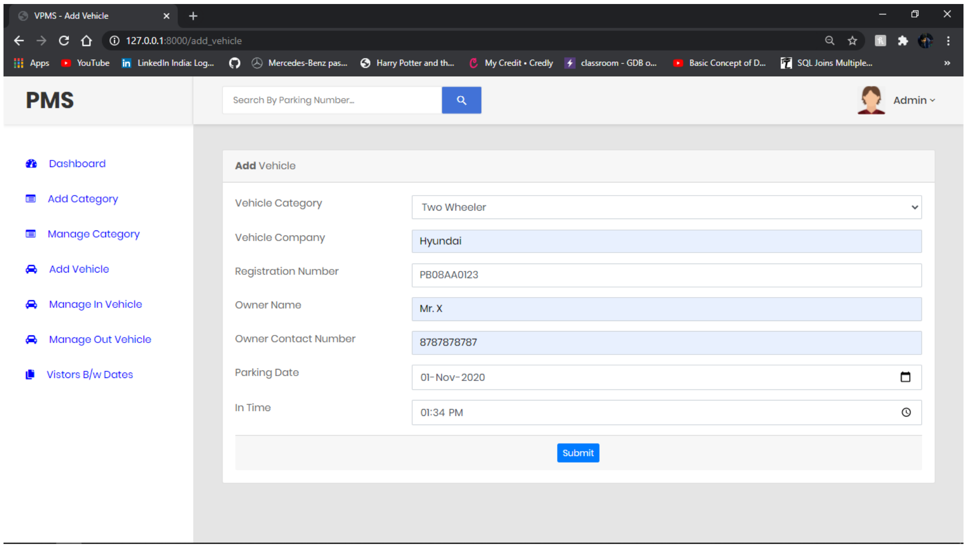
10. This dropdown would have a category which we have added



Add Vehicle

Vehicle Category	---Select Vehicle Category--- ---Select Vehicle Category--- Two Wheeler
Vehicle Company	
Registration Number	Registration Number
Owner Name	Owner Name
Owner Contact Number	Contact Number
Parking Date	dd-----yyyy
In Time	--:-- --

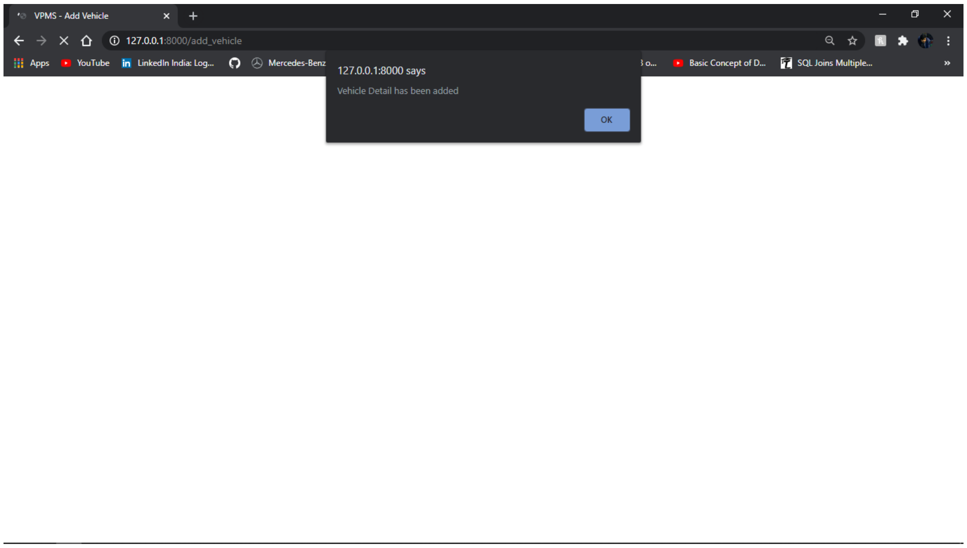
11. Fill the details of the car from the user



Add Vehicle

Vehicle Category	Two Wheeler
Vehicle Company	Hyundai
Registration Number	PB08AA0123
Owner Name	Mr. X
Owner Contact Number	8787878787
Parking Date	01-Nov-2020
In Time	01:34 PM

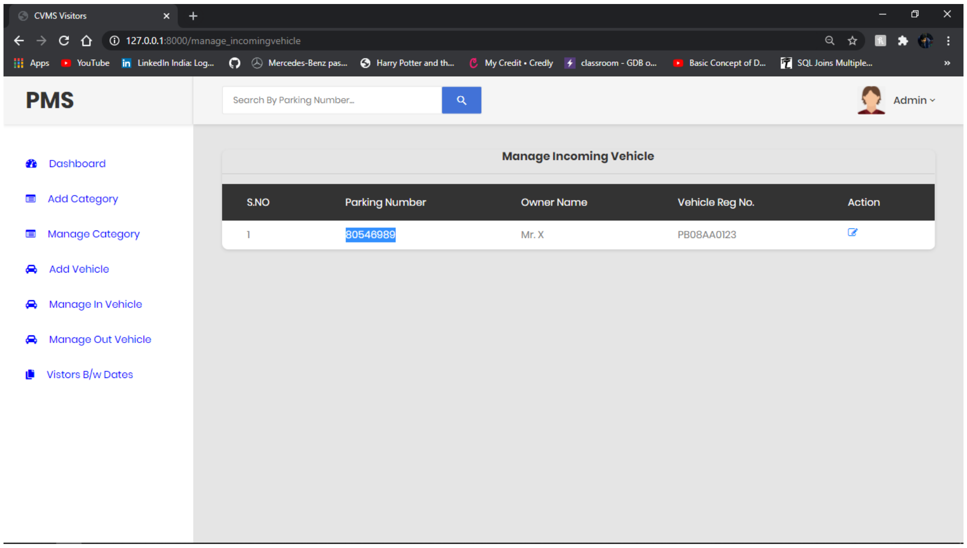
12. Vehicle is been added successfully now



127.0.0.1:8000 says

Vehicle Detail has been added

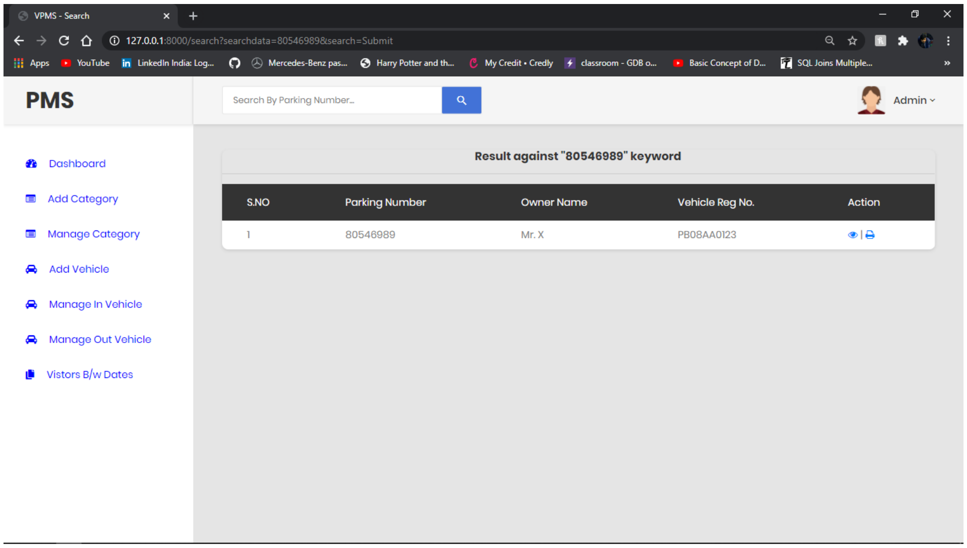
13. Manage incoming vehicles where added vehicle will appear and the parking number is random



Manage Incoming Vehicle

S.NO	Parking Number	Owner Name	Vehicle Reg No.	Action
1	80546989	Mr. X	PB08AA0123	

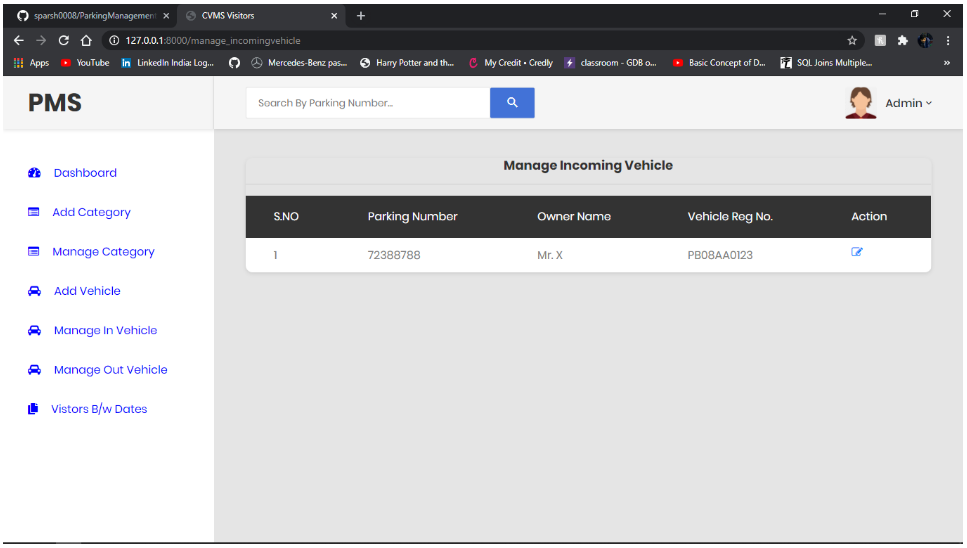
14. We can search for a car with the parking number in the search by parking number text box



Result against "80546989" keyword

S.NO	Parking Number	Owner Name	Vehicle Reg No.	Action
1	80546989	Mr. X	PB08AA0123	|

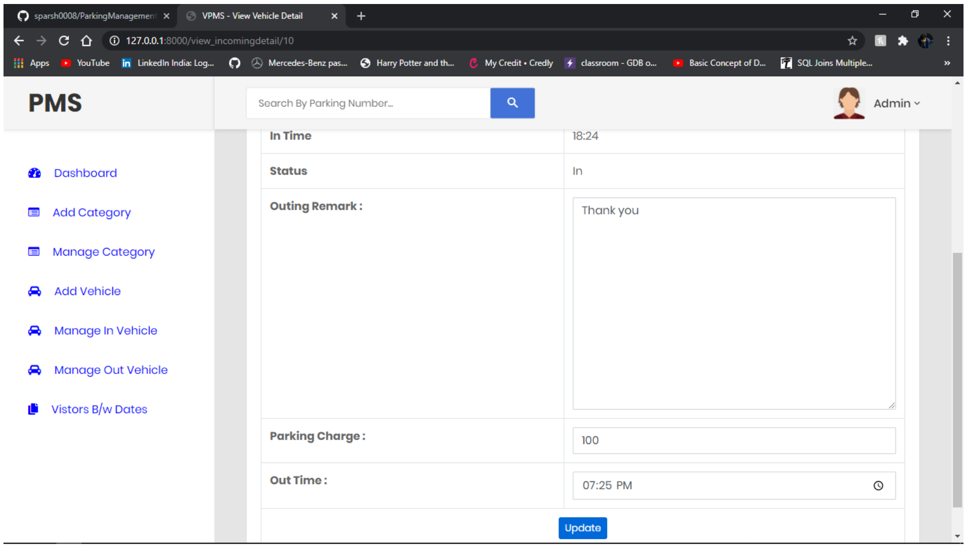
15. Now we are giving a command for exiting the parked car by clicking on the action button next to vehicle regno.



Manage Incoming Vehicle

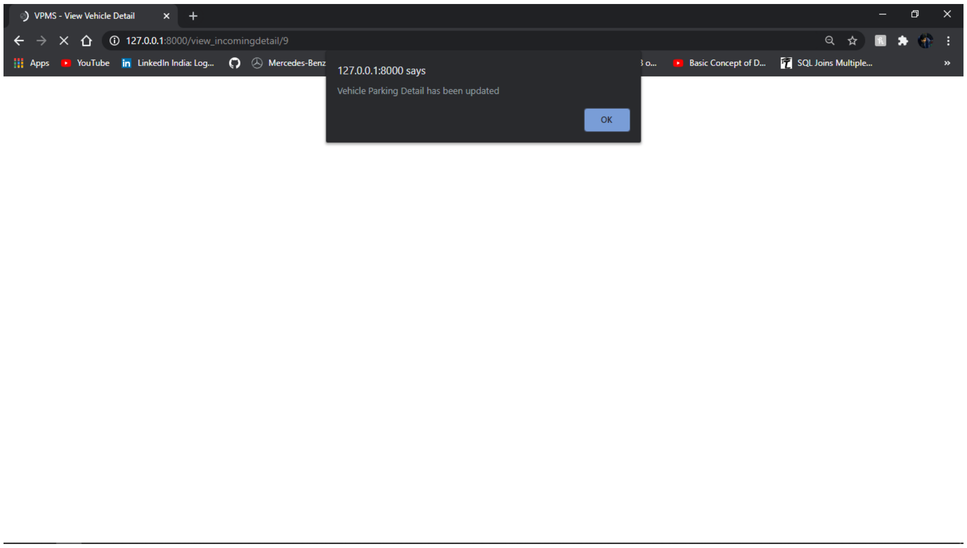
S.NO	Parking Number	Owner Name	Vehicle Reg No.	Action
1	72388788	Mr. X	PB08AA0123	✎

16. This is where we r going to update the car details as its going out from the parking



In Time	18:24
Status	In
Outing Remark :	Thank you
Parking Charge :	100
Out Time :	07:25 PM

17. The car details is been submitted and is been updated and exited the parking ..



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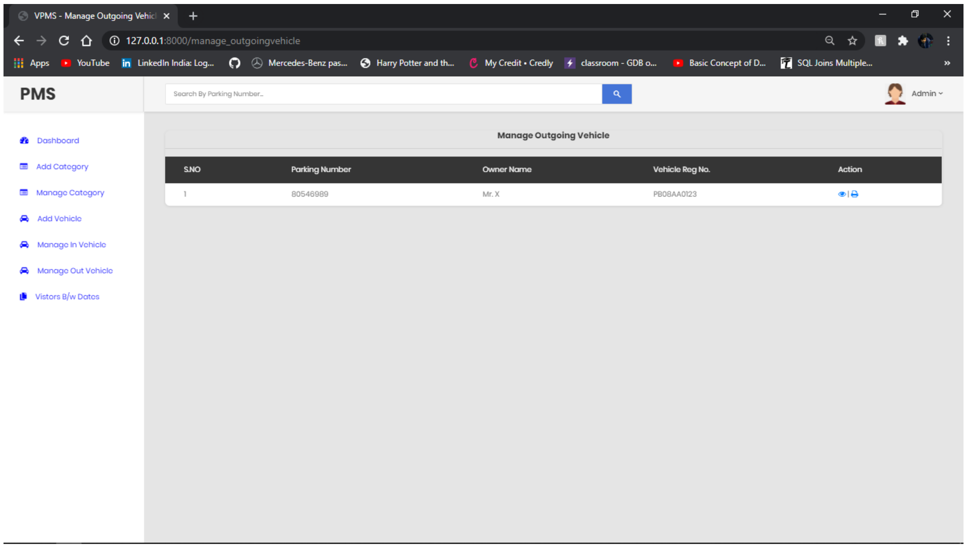
Vehicle Parking Detail has been updated

18. Now the car which went out of the parking slot is been updated in the manage out vehicle



Manage Outgoing Vehicle

S.NO	Parking Number	Owner Name	Vehicle Reg No.	Action
1	80546989	Mr. X	PB08AA0123	👁 | 🖨

So, this was all about the project this portal can be opened by only the admin, these type of software's can be used in parking area in malls and office areas and multiplex….