Effective Parking Management System For Vehicle

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Abstract - Day by day, increasing the population has leads to traffic leads to parking problems, so the parking problem is now an important thing. Assume us parking the vehicle in stand and miss the parking pass. If customer book a slot online, means show the pass via android application. Suppose if we are book a spot offline, we must provide numerous forms of identification to guarantee the vehicle. It leads many problems for vehicle owners and vehicle parking owner, it leads waste of time. So, a lost pass causes time to be wasted as well as several problems for both the owner of the vehicle and the owner of the parking space. During the time of parking the vehicle, to ask the customer for their email and send the OTP to the customer's registered email and verify it if they are missing their vehicle pass. These solutions are offered in this project and are useful and efficient for vehicle stand.

I. INTRODUCTION

In recent days, vehicles count has increased gradually. This leads to traffic and parking problems. If the user needs to park the vehicles on a stand, then user gets the pass from parking place admin. Suppose the user loses the pass, then some problem will occur. This problem will be solved by using this project.

II.LITERATURE SURVEY

2.1Hasan Phudinawala [1]

The use of this application can look for the availability of slots. All open slots are marked green until a user books one, at which point it is marked red. Credit cards and online banking are accepted for reservations. Also, this application offers the ability to cancel the reserved time slot within 20 minutes of the time of booking. The reservation will be cancelled and the payment returned if the user is late getting to the destination. A parking number is supplied to the user's email or mobile number upon successful payment for further inquiry. So, by utilizing the internet of things, this application saves the user time and effort when looking for a parking spot and also prevents traffic congestion.

2.2 Amira. An .Elsonbaty [2]

This paper offers an online car parking slot booking solution. It cuts down on time wasted waiting for offline books. The closest available parking place can be found using the integrated smart car parking system. The system's main objective is to address the parking issue, reduce the amount of time spent hunting for parking spots, and prevent vehicles from making unnecessary excursions. Using mobile applications, the user is informed of the availability. The number of parking spaces, the number of vacant spaces, and the number of reserved spaces are detected by Arduino sensors that are placed for each parking region. The smartphone app and sensors communicate using a WIFI module.

2.3 Amol Pomaji [3]

The maintenance of the incoming and exiting car records in a parking lot will be handled by the parking management system. With the use of this application, users may park affordably and safely in public places while avoiding vehicle towing concerns. It takes a lot of effort and time to register a vehicle manually, which is the system we now use. The task of parking a car is being reduced by this project by paying and providing basic vehicle information in order to save data.

2.4 Fabian Bock [4]

On-street parking occupancy monitoring around the city is still a problem that has to be resolved. Research from the past has shown the possibility of parking crowd sensing using the probe vehicles' standard on-board sensors, assuming the utilization of high-mileage vehicles like taxis. The attainable spatiotemporal sensing coverage, however, has never been thoroughly studied. The placement of static parking sensors is expensive, so the traffic management authorities should look into parking crowd-sensing using probe cars as a promising substitute.

III. EXISTING SYSTEM

To locate a parking space, follow these three steps. The first location where the user and the parking lot may communicate with one another is the parking lot, thanks to sensors and Arduino gadgets. The second level includes the cloud services that act as a link between the user and the parking lot. The third step is the user side. A smartphone notification of the application's availability is delivered to the user. Each parking spot has an Arduino sensor installed, which keeps track of all available places, both paid and unpaid. The smartphone app and the sensors communicate using a Wi-Fi module.

3.1 DISADVANTAGES OF EXISTING SYSTEM

We can't say every time book only via online mode. Sometimes, user booking the slot via offline means rising some issues. The previous application only reduced the slot book time and searching parking house. They can't consider about offline booking issue.

IV. PROPOSED SYSTEM

During the time parking a vehicle in a stand, ask the customer for their name, email ID, type of vehicle, and vehicle number. After that, the vehicle pass will be issued to the customer. If the vehicle pass is lost while coming to pick up the vehicle, then ask the customer for their email ID and send the OTP to the customer's registered mail ID and verify it. These solutions are offered in this project and are useful and efficient for vehicle stands.

4.1 ALGORITHM

The order for the pass lacking problem-solving phases is as follows:
Step 1: The user must first reserve a car slot directly or offline.
Step 2: The parking manager requests the customer's car number and email address.
Step3: the data are stored in data base.
Step4: If customer give the pass to the parking house admin, step 5 will be continued. Else customer lost the pass go to step 6.
Step5: the vehicle will be delivered. The total cost will be displayed.

Step 6: Delivered the vehicle after sending the OTP to the customer's registered email to confirm user information.

Step7: The entire price will be shown as soon as the car leaves the parking space.

V.FUTURE ENHANCEMENT

Once the destination date is reached, we will alert them via SMS or phone call.

VI.CONCLUSION

Finally, we concluded this project used for parking house owner and vehicle owners. To solve the pass missing problems.

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