

Online Parking Booking System

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Abstract: The proposed project is a smart parking reservation system that offers clients an easy way to reserve a parking space online. It overcomes the problem of Finding a parking area in industrial or commercial areas that is useful consumes time. As a result, this challenge provides an internet-based reservation machine where customers can view numerous parking regions and select the space to view whether an area is to be had or not. If the reserved space is available, he can book it for a specific time slot. The booked area might be marked yellow and could no longer be available for all of us for the specified time. This gadget affords the additional characteristic of cancelling the bookings. Each time, the user can cancel their books area. Users can make payment online via Credit card, UPI, etc. Users are notified approximately after making the payment, the booking via email along with a particular parking number. Online Vehicle Leaving Framework, as portrayed above, can prompt mistake free, secure, solid and quick administration framework.

Keywords: Website, Python, SQLite.

1. Introduction

People's Parking had challenges concerning the safety of its data in the store since they Currently, a paper-based system is used, resulting in physical struggles for parking by drivers, as well as time waste. Congestion and collisions. There was also a problem with monitoring the profit made by the company. Whereby the company lost money to the workers who received it (fraud). This system majorly solved the congestion, avoided collisions, and saved time during parking activities. Parking is extremely important all over the world, particularly in major cities. Every day, thousands of car drivers spend numerous amounts of time locating where to park. The end result of this case involves theft in urban areas, growing visitor congestion, and the frustration of drivers. In order to resolve this hassle, the implementation of an online vehicle park reservation system in this metropolis Coping with parking locations is obligatory. It will allow drivers to reserve a parking space on the Platform whenever, anywhere. It is intended to make online parking space reservations simpler for users. In today's parking lots

The process of looking for parking spots is not standardised. Most people's everyday concern and time-consuming in a big city is finding a parking spot that is free. The search for a parking spot frequently leads to increased traffic and air pollution in a particular location.

2. Objectives

The main objective of the project on online parking booking system is to manage the details of car, car number parking, parking space, parking slots, parking fees. The only person with access to the project is the administrator because it has been entirely constructed there. The project's goal is to create an application software that will cut down on manual management of cars, parking spaces, car numbers, and parking spots. It keeps track of every detail pertaining to parking spaces, slots, and fees.

3. Methodology

One of the biggest problem that the driver faces is finding a free parking spot, so many driver stopping their cars at the edges of the street. Therefore, we choose this project to prevent the frustration of finding a parking spot, and they can reserve a spot online. The project we are working on is a smart parking booking system that provides customers an easy way of reserving a parking space online. It overcomes the problem of finding a parking space in commercial areas like malls offices which unnecessary consumes time. Hence this project offers a web-based reservation system where users can view various parking areas and select the area whether space is available or not. If the booking space is available, then he or she can book it for specific time slot. The booked space will be marked and will not be available for anyone else for the selected time by user. This system provides an additional feature of cancelling the booking. User can cancel their booked space anytime. Users can even make payment online by credit card. After making payment users are notified about the booking by email along with unique parking number. In this way it will help association in better usage of assets.

4. Literature Survey

Anuja Deokar, Ruchita Bhoje, Shristhi Nayak, Nidhi Sharma [1] has developed the system that will show three components in this architecture include parking zones, users and the admin. As a result, the state of parking resources is changed by users parking decisions. The management system broadcast live parking availability information to users (also drivers). Upon receiving parking information, the user selects desired parking lot and reserves a space. User can have their

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username, login id, phone number, email and address. Admin can collect the whole data from database system.

Dharmini Kanteti, D. V. S. Srikar and T. K. Ramesh [2] has developed Online Parking Booking System with the IP camera sensors which are placed at the entrance of the area tries to recognize the number plate and searches for the details of the user in the database. When the server could not match the obtained details with any of the details in the database, then it will give a red signal indicating that it is not the right path for entering into the area and the barricade will not open. When the user parks in the wrong slot unknowingly due to lack of proper data connectivity or by mistake, PIR sensors which are connected in the parking area gets triggered and sends a notification to the central controlling and processing system which on identification sends a notification to the user's mobile.

Robin Grodi, Danda B. Rawat, Fernando Rios-Gutierrez [3] For Online Parking Booking System there is not only need of Software but also there should be proper hardware infrastructure. Many parking guidance systems have been proposed in recent years that try to enhance upon the basic system. These new systems each have advantages and disadvantages. All these systems require a mechanism to detect if a vehicle is in the parking spot. This mechanism could range from a simple ultrasonic sensor [5] that detects a vehicle based on a threshold distance or RFID chips [6] that are activated based on distance to complex optical sensors [7]. These sensors detect the presence of a vehicle or other objects. Once a vehicle is detected, the system needs a way to notify drivers or a parking spot being occupied.

5. Functionalities

- Provides the searching facilities based on various factors such as Car, Parking Space, Parking Slots, Parking Fees.
- Online Car Parking System also manage the Car Number details online for Parking Slots details, Parking Fees details, Car.
- It tracks all the information of Parking, Car Number, Parking Slots, etc.
- Shows the information and description of the Car, Parking Space.
- It deals with monitoring the information and transactions of Parking Slots.
- To increase efficiency of managing the Car, Parking.
- Editing, adding and updating of Records is improved which results in proper resource management of Car data.

6. Modules

- *Admin Login:* The system is supervised by the admin, who also oversees the reservations that are made.
- *User login and registration:* Users must register before they may log in.
- *Three Parking Spaces:* The system will offer users three parking spaces in various locations.
- *Checking parking availability:* The user can view the availability by clicking on a space. When a place is already reserved, it will be indicated in yellow, while those that are

still available will be displayed in their original colour.

- Online parking space reservations for certain dates and times: Users may reserve a parking place.
- *Automated cost calculation:* Based on the user's requested booking time, the system computes the entire cost for parking.
- *Cancellation of parking:* Users may at any moment cancel their reservations by logging into the system.
- *Email sent after successful parking reservation:* The system sends a confirmation and "Thank you" email once the user successfully parks in the designated spot.
- *User input:* The system contains a form for user feedback, which users can submit to the system.

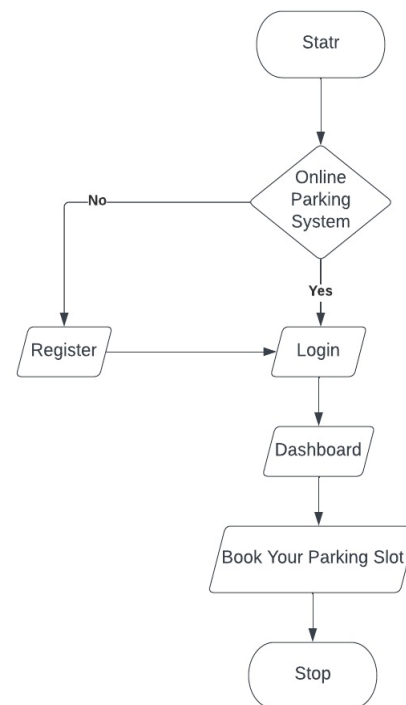


Fig. 1. Flowchart

7. Scope of the Project

These facilities are absent from some parking lots, which makes them ineligible for parking and violates all security regulations. By looking such a huge concern, it is highly required that each parking area should be well equipped with high tech parking control systems, that nevertheless lasts the best. These characteristics are therefore crucial nowadays to protect your vehicles and to assess the cost associated with each vehicle's entry and exit. This also helps with the Security and time management of the parking. Because of the increased transmission of information via technology, PPK is now easier to trade. From manual and neighborhood vehicle parking reservation systems to computerized and online. The Vehicle Parking Reservation System was used to manage, register, and pay for parking spaces booking simpler. The research has helped reduce paperwork and errors in the reservation workplace like misspelling the quantity plate, vehicle version, time wastage, delays, and congestion at the reservation

workplace. The examine became also useful to the researcher in the manner that it helped him in setting the received information in computer science with a sensible attitude. This study shall additionally be useful to the government in getting applicable records and make policies for such organizations and encourage others to do the same.

8. Advantages

- Users can learn about the parking options available at specific places.
- Users don't have to spend as much time looking for parking spots in a large parking lot.
- The system provides a graphical view of the parking area.
- The user can confirm their space and pay right away.
- It reduces the need of human efforts for managing parking area.

9. Disadvantages

- It requires an internet connection.
- It requires large database.

10. Applications

- Employee parking might be provided by the project in commercial locations.
- It can be utilized by companies and organizations (hospitals) to automate their parking system.
- The system can be utilized for public parking in malls, stations, and other public locations.

11. Conclusion

Since that we live in a technologically advanced environment, the online automobile parking reservation system enhances the current system. Adopting parking management system significantly reduces the amount of time consumed in seeking the parking space, renders valuable data upon the availability of the parking area, accurate mapping of the parking space, offers guidance and suggestion for proper vehicle parking increase the safety of the property since the parking lot is numbering. With this new system is mandatory, it enables the user of the system to reserve a parking slot online.

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