

Network-Assisted Parking System with In-and-Out Web Registration

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Abstract: NAVPS allows customers/drivers to manage a parking space. Online parking reservation systems make booking parking easier. By enabling clients to reserve parking spaces, purchase additional services, and make payments online, from home or on the go, our online parking reservation system will improve your website. car park reservation system Innumerable space kinds may be added by the administrator, set prices and discounts. Using Microsoft Excel, interview data was analysed to determine functional, non-functional, and system requirements. Data flow diagrams and entity relationship diagrams were created based on these requirements. The designed system was implemented using HTML and CSS for interfaces, JavaScript and JQuery for dynamic web pages and input validation. XAMPP was used to build the database and PHP to connect user interfaces to it. Researchers evaluated the system.

1. INTRODUCTION

Parking is important worldwide, especially in cities. Thousands of drivers spend hours a day looking for parking. This causes urban theft, traffic congestion, and driver frustration. To solve this problem, this city must implement an online parking management system. Users can reserve a parking spot online anytime, anywhere. This Web App handles parking in clubs, hotels, malls, and more. This Web App shows free parking spots in the building. User can block slot by finding empty space. This app provides user information like vehicle number, licence number, and mobile number so administrators can contact them if there is a problem.

After selecting a parking space, the user can pay and confirm the reservation. This chapter describes the study's background, problems, objectives, research questions, scope, and significance. This Web app handles parking in hotels, clubs, malls, and more. This web app shows free parking spots in buildings. User can block slot by finding empty space. This app provides vehicle, mobile, etc. numbers. If there's a

problem, the admin can notify the user. After selecting a parking space, the user can pay and confirm the reservation.

2. Definition of the problem

Vehicle users had problems with data safety due to their use of paper-based systems, parking, time waste, congestion, and collisions. The company had trouble monitoring its profits, so it lost money to its workers (fraud). This system reduced congestion, accidents, and parking time.

Main Objectives: To allow vehicle owners to find and reserve parking

Specific Objectives:

To improve the Vehicle Parking Management system. Create an online parking management system To gather all necessary information to design the new parking reservation system. Questionnaires How can drivers reserve parking spots? How will the parking system be improved? How does People's park? Why research parking management?

Significance of Study: Due to increased information technology, manual and local Vehicle Parking Management Systems were replaced with computerised and online systems, making the board, enrollment, and booking more straightforward. The examination has decreased administrative work, reservation office mistakes like incorrect spelling the number plate and vehicle model, time wastage, postponements, and clog. The study helped the researcher apply his Computer Science knowledge. This research will also help the government make policies and encourage others to adopt.

3. RELATED WORK

Many parking management systems can provide services to users using RFID tags or sensors. In the existing system, empty slots are indicated by electrical equipment. We can only find free slots, not book them.

4. Existing system:

- (a): In the current system, personal vehicle (b) is skyrocketing. Drivers struggle to find parking in most cities, especially during rush hour. Shopping mall and customers must work together to park, which takes a long time. Manpower and expensive devices increase maintenance costs.
- (c): Many parking management systems can only provide services with RFID tax or SENSOR. In the existing system, we can indent empty slots with electrical equipment.

5. Proposed system

The proposed provides Infra Red (IR) sensor nodes sense the car space's status and send the data to a controller. The client can check for void vehicle spaces on an LED screen, saving time. The user interface for pre-booking parking is interactive. The server responds with parking availability when a user requests it.

ExistingSystemLimitations:

- The database is hard to maintain (images of the parking space).
- Booking takes 1-2 minutes (only registered).

Our web app has a list of free slots that users can book. If the database has a map, the user can see the route to a slot after entering the building. Automated parking functions are available. Advantages: User-friendly service. Easy search. Easy slot selection and booking. Saving time in the building may prevent minor accidents.

Searching users quickly and efficiently is easy. Easy slot selection and booking. Saves time looking for a parking spot and may prevent minor accidents. Mission: Existing system must be studied in detail. System study determines the system's functions, user requirements, and structure.

use

6. Methodology

This chapter describes the reality finding methods used to accomplish the task's objectives and targets, including concentrate on populace, information assortment and examination, framework investigation, framework plan and execution, testing and approval.

Study Area & Population

Ongole, Prakasam district, was studied. Drivers (customers) and staff participated. Four people participated. Director, accountant, and current system controller were chosen based on their city jobs. Drivers (customers) (customers)

Data Collection and Analysis

Studying Ongole, Prakasam. Drivers and staff participated. Participants are 4 members. They are city's director,

accountant, and system controller were chosen. (Drivers) (Customers)

7. System Architecture:

The system's architecture reflects OVPMS. The system's architecture used the N-tier model, which layers applications. OVPMS's subsystems form the system's architecture. The MySQL database stores data. Information about a parking lot, a customer, a system user login, a booking, etc. are displayed in the presentation layer. To send findings to the browser/client and other network tiers, it interacts with other layers.

8. Modules:

Owner

The owner registers for a login. The site's owner will get a username and password. Owners can request slots. A slot can be requested by area. Owner must provide vehicle registration.

9. Conclusion:

Our project reduces parking in theatres and malls. Our project helps find a parking spot, confirm its availability, and arrive on time. It helps the administration assign the vacant slot to the next in line. Visitors save time with our parking project.

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Fig.1 Owner register login

Admin

Valid username and password let admin in. Admin can see car-owner requests. Car owners can benefit from admin. Administrators can view car registrations. Admin verifies registration and helps car owners.



Fig.2 Admin register login

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