Software Engineering

Project Synopsis

Project Name: Campus Parking Management

Section: F

Group Members:

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Objective

Campus Parking Management is designed to manage parking facilities on the university campus efficiently. The system aims to streamline the parking process by offering real-time updates on available spots, managing parking permits, and handling parking violations.

Abstract

Campus Parking Management is a solution designed to address the challenges associated with parking management on a university campus. With the increasing number of vehicles on campuses, finding available parking spaces has become a major concern for students, faculty, and visitors. This project aims to optimise the parking experience by offering a system that provides real-time updates on parking availability, manages permits, and handles parking violations effectively.

The search for parking spots, especially during peak hours, leads to congestion on campus roads, causing delays. The system reduces congestion by guiding users to available parking spots quickly, minimizing the time spent searching and reducing traffic on campus.

Different user roles, including administrators, security personnel, and regular users, are accommodated with tailored access to features and data.

This project enhances the parking experience and also contributes to better traffic flow on campus. By implementing such a parking management system, the university can reduce the time spent searching for parking, improve enforcement of parking regulations, and ultimately create a more organised and efficient campus environment.

Key Features

1. **Real-Time Parking Availability:** Provides live updates on the availability of parking spots across campus, helping users find parking more easily.
2. **Permit Management:** Handles the issuance and renewal of parking permits for students, faculty, and visitors.
3. **Violation Handling:** Manages parking violations, including issuing tickets and tracking repeat offences.
4. **User Roles:** Supports different user roles, including administrators, security personnel, and regular users, each with specific access privileges.

Challenges Addressed: The system addresses common parking challenges such as overcrowding, permit enforcement, and difficulty in finding available spots, thus improving overall campus experience.