Ezy-Parking: A Smart Parking Management System

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Abstract

Efficient parking management is a critical challenge in urban areas. Ezy-Parking is a smart solution designed to streamline parking space booking and management using web technologies. The system provides real-time availability, secure payment options, and a user-friendly interface. Leveraging data analytics, it optimizes space utilization and revenue generation. This paper discusses the system's architecture, implementation, and benefits.

Keywords

Smart Parking, Web-based System, Parking Management, Data Analytics, Urban Mobility

1. Introduction

Parking congestion in urban areas has led to inefficiencies and increased travel time. The need for a smart and automated parking solution is evident. Ezy-Parking is a web-based platform that enables users to reserve parking spaces in real time, ensuring seamless and hassle-free parking experiences.

2. System Overview

Ezy-Parking employs a user-friendly interface to facilitate booking, payment, and space management. The platform integrates web technologies such as HTML5, CSS, JavaScript, PHP, and MySQL for seamless operation.

3. Technologies Used

The system is developed using modern web technologies:

• HTML5 and CSS for the front-end design.
• JavaScript for dynamic interactions.
• PHP for backend processing.
• MySQL for database management.

4. System Design and Implementation

The system follows a modular approach, consisting of key modules such as User Management, Parking Slot Management, and Payment Processing. An entity-relationship model ensures efficient database design.

5. Results and Discussion

Ezy-Parking improves parking efficiency by providing real-time updates and dynamic pricing. The system has been tested for functionality, scalability, and security, ensuring reliability in real-world applications.

6. Conclusion and Future Work

Ezy-Parking is an innovative solution addressing urban parking challenges. Future enhancements include AI-driven predictive analytics and mobile application integration to further optimize the user experience.

References

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