**Dr. J. J. Magdum Trust’s**

**Dr. J. J. Magdum College of Engineering,**

**Jaysingpur.**



**Mini Project Report**

**Department of Computer Science &**

**Engineering.**

**Shivaji University,Kolhapur**

**Academic Year:2023-24**

**Dr. J. J. Magdum Trust’s**

**Dr. J. J. Magdum College of Engineering,**

**Jaysingpur.**

**A Mini Project Report On**

**“Car Parking Management System”**

**Submitted by,**

|  |  |  |
| --- | --- | --- |
| **Sr.No** | **Name of Students** | **RollNo./**  **Seat No.** |
| **1.** | **Jadhav Omkar Pravin** |  |
| **2.** |  |  |
| **3.** |  |  |
| **4.** |  |  |

**Date:- Prof P.V.Kothawale**

**Place:-Jaysingpur Project Guide**

**Department of Computer Science &**

**Engineering.**

Year of Submission

2023-24

**Dr. J. J. Magdum Trust’s**

**Dr. J. J. Magdum College of Engineering,**

**Jaysingpur.416101**

**Department of Computer Science & Engineering.**

****

CERTIFICATE

This is to certify that the project report titled “**Car Parking Management System”**.submitted by,

|  |  |  |
| --- | --- | --- |
|  | **Name of Students** | **RollNo./SeatNo.** |
| 1. |  |  |
| 2. |  |  |
| 3. |  |  |
| 4. |  |  |

has satisfactorily completed the project entitled "**Car Parking Management System**" in partial fulfillment for award of Bachelor of Engineering Degree in Computer Science and Engineering by Shivaji University,Kolhapur.

Prof. P. V. Kothawale Dr.D.A.Nikam

**Project Guide H.O.D.CSE Dept.**

Dr.S.B.Patil

**Principal External Examiner.**

**Dr. J. J. Magdum Trust’s**

**Dr. J. J. Magdum College of Engineering,**

**Jaysingpur.416101**

**Department of Computer Science & Engineering.**

****

CERTIFICATE

This is to certify that the project has entitled. Car parking Management System presented before Department Research Committee (DRC) by.

|  |  |  |
| --- | --- | --- |
| **Name of Students** | **RollNo./SeatNo.** | **Signature** |
| 1. Jadhav Omkar Pravin |  |  |
|  |  |  |
|  |  |  |
|  |  |  |

Under the guidance of Prof. P. V. Kothawale for academic year 2023-24. The DRC has consented to give the approval for the said project.

Head,

Department Research Committee(DRC)

Department of Computer Science of Engineering

**Acknowledgement**

First of all, I would like to thank Prof. P. V. Kothawale who is presently working as Assistant Professor of Computer Science of Engineering Department for guiding me through this seminar/project work. I am extremely grateful to themfor all his invaluable guidance and kind suggestions during all the phases of my seminar/ project work. Their ever-encouraging attitude, guidance and whole hearted help were biggest motivation for me in completing this seminar/project work.

I am thankful to the founder Chairman Late Dr. J. J. Magdum and the Chairman Mr. Veejhay J. Magdum of Dr. J. J. Magdum Trust, Jaysingpur, for their encouragement. I am very grateful to Dr. Mrs. S. B. Patil Principal, of Dr. J. J. Magdum College of Engineering, Jaysingpur for motivating me for this seminar/ project work. Also, I am thankful to Prof. Dr. D.A.Nikam Head, Department of Computer Science and Engineering for providing necessary facilities forcompletion of this seminar/project work.

I am also thankful to Rushikesh Pujari, Nikita Mane & Mahaveer Magdum for supporting me in completion of this seminar/project work. Lastly, I thank all the persons who have guided and helped me directly or indirectly.

INDEX

|  |  |  |
| --- | --- | --- |
| Sr.No | Contents | Page No. |
| \* | Synopsis |  |
| 1 | Introduction |  |
| 2 | Literature Survey |  |
| 3 | Proposed Systeam  3.1 Problem Statement  3.2 Objective  3.3 Scope  3.4 Block Diagram |  |
| 4 | System Requirement  4.1 Hardware Requirement Details  4.2 Software Requirement Details |  |
| 5 | Implementation  5.1 User Case  5.2 Flow Chart  5.3 Snapshots |  |
| 6 | Future Scope |  |
| 7 | Conclusion |  |
| 8 | Reference |  |

**Introduction**

A car parking management system is a software-based solution designed to efficiently manage parking spaces in various settings, such as malls, office buildings, airports, and residential complexes. It typically includes features like real-time occupancy monitoring, automated payment processing, reservation systems, and integration with access control systems. The goal is to optimize space utilization, streamline operations, and enhance the overall parking experience for both facility owners and users**.**

The number of car client’s increases was requested more parking spots, and with the growth of the internet of things causes smart urban areas to have picked up grind popularity. In this way, issues, for example, traffic blockage, constrained vehicle leaving offices, and street security are being tended to by IoT. So, several parking organization systems have been organized to decrease such traffic issues and improve the comfort of car users, it has combined smart mobiles, wireless algorithms, and mobile applications. The idea of the Internet of Things (IoT) started with things with Personal communication devices, which the devices could be tracked, controlled to use remote PCs connected with the internet . The Internet of Things (IoT) equals “=’ Physical devices, vehicles, structures, and different things implanted with hardware “+” Controller, Sensor, and Actuators “+” organize a network that lets these things to gather and exchange information (Internet) . Sensors are deployed in smart systems, which in turn collect information from the device for processing and analysis. So, Sensors would be deployed in the parking area and through the mobile application for helping the user to know the freedom of parking places on a real-time basis with more efficiency, and less cost . A smart parking system reduces the time to locate available places and reduces fuel consumption. The paper is organized as follows: First, it presents the concept of the smart parking system and its various functions, then its reviews previous research and studies on the implementation of smart parking. Then it describes the system implementation and operation and gives a conclusion of the

In today's rapidly urbanizing world, efficient management of parking spaces has become a pressing concern. The Car Parking Management System offers a comprehensive solution to this challenge, leveraging technology to optimize space utilization, enhance user experience, and promote sustainability.This innovative system integrates advanced sensors, mobile applications, and centralized control mechanisms to revolutionize how we approach parking in urban environments. By providing real-time monitoring, automated billing, and navigation assistance, it aims to streamline parking operations and alleviate congestion.

By accurately tracking parking availability and dynamically allocating spaces, the system maximizes the utilization of parking facilities, reducing congestion and improving accessibility.Through intuitive mobile applications, drivers can easily locate available parking spaces, reserve spots in advance, and make secure payments, simplifying the parking process and improving customer satisfaction.By collecting and analyzing parking data, administrators gain valuable insights into usage patterns, enabling them to make informed decisions regarding space allocation, pricing strategies, and infrastructure planning.The system promotes sustainable practices by reducing traffic congestion, minimizing emissions from circling vehicles, and optimizing resource utilization through efficient parking management.

Smart Sensor Technology: Advanced sensors installed in parking spaces detect vehicle presence in real-time, facilitating accurate monitoring of occupancy levels.Mobile Application: A user-friendly mobile app allows drivers to easily find available parking spaces, reserve spots, and make payments using their smartphones.Centralized Control System: A centralized platform enables administrators to monitor parking activity, manage reservations, and analyze data for optimization purposes. Automated Billing: The system automates the billing process, calculating charges based on actual parking duration and reducing the need for manual ticketing.Reduced traffic congestion and improved traffic flow.

Enhanced user satisfaction and convenience.Increased revenue through optimized space utilization and dynamic pricing strategies.Environmental benefits through reduced emissions and fuel consumption.In conclusion, the Car Parking Management System represents a transformative approach to urban mobility, offering a scalable and efficient solution to the challenges of parking management in densely populated areas. By embracing innovation and leveraging technology, we can create a more sustainable, accessible, and livable urban environment for all.