IOT BASED-SMART PARKING

TEAM MEMBER

712221106016-SAI G HARI PRASANNA

Phase 2 Submission Document

SMART PARKING

INTRODUCTION

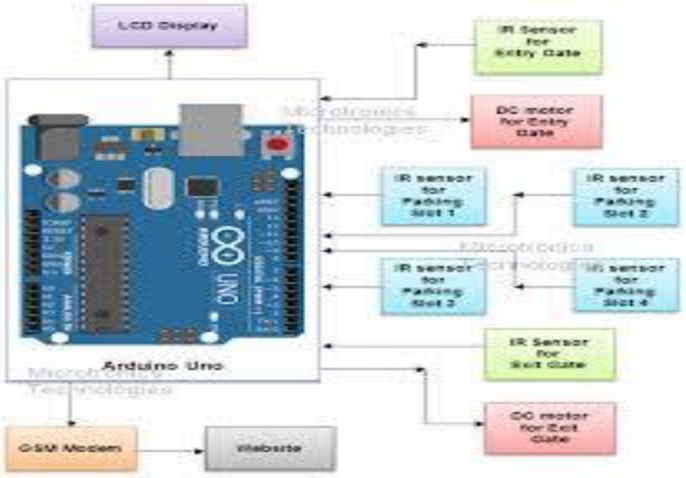
The project entitled smart parking system is to manage all the parking facilities to an user. The recent growth in economy and due to the availability of low price cars in the market, an every average middle-class individual can afford a car, which is good thing, however the consequences of heavy traffic jams, pollution, less availability of roads and spot to drive the motor car. One of the important concerns, which is to be taken in accounting, is the problem of parking those vehicles .Though, if there is space for parking the vehicle but so much time is squandered in finding that exact parking slot resulting in more fuel intake and not also environment friendly. It will be a great deal if in some way we find out that the parking itself can provide the precise vacant position of a parking slot then it'll be helpful not limited to the drivers also for the environment . Initially when the user is about to enter the location the LCD displays the number of empty and filled spots and when the user is with its vehicle near to the parking detect sensor ,he/she would be thrown with a notification on their mobile app of the parking slot number ,where they should park there vehicle.

PROBLEM STATEMENT

In recent research in metropolitan cities the parking management problem can be viewed from various angles such as high vehicle density on roads. This results in annoying issues for the drivers to park their vehicles as it is very difficult to find a parking slot. The drivers usually waste time and effort in finding parking space and end up parking their vehicles finding a space on the street which further leads to space congestion. In worst case, people fail to find any parking space especially during peak hours and festive season.

OBJECTIVES

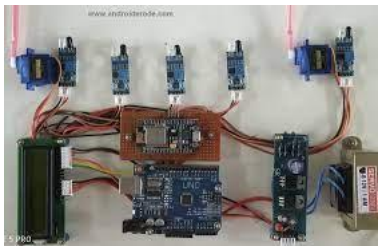
1. Optimized parking
2. Reduced traffic
3. Reduced pollution
4. Increased Safety
5. Decreased Management Costs
6. Enhanced User Experience



COMPONENTS

1. Node Mcu
2. 16*2 LCD Display
3. IR sensor
4. LED
5. Buzzer

- **ArduinoUNO**



Feature

- Operatingvoltageis5v.
- DCcurrentperinputpinis40mA.
- Clockspeed16MHz.
- DCcurrentfor3.3vpinis50mA.
- SPAM2 KB
- EEPROM1KB

APPLICATIONS

A smart car parking system using IoT can address many issues and tasks. For example, a driver can view available parking slots directly from their smartphone with such a solution. Companies, in turn, can supervise their parking spaces more efficiently. And most importantly, they can do it remotely.

CONCLUSION

The concept of Smart Cities has always been a dream for humanity. Since the past couple of years ago large advancements have been made in making smart cities a reality. The growth of Internet of Things and Cloud technologies have given rise to new possibilities in terms of smart cities. Smart parking facilities and traffic management systems have always been at the core of constructing smart cities. In this project, we address the issue of parking and present an IoT based Cloud integrated smart parking system. The system that we propose provides real time information regarding availability of parking slots in a parking area. Users from remote locations could book a parking slot for them by the use of our mobile application. The efforts made in this project are intended to improve the parking facilities of a city and thereby aiming to enhance the quality of life of its people