GNANAMANI COLLEGE OF TECHNOLOGY

DEPARTMENT: BIO MEDICAL ENGINEERING

YEAR: THIRD YEAR

TOPIC: SMART PARKING

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SMART PARKING

INTRODUCTION:

Smart parking is an IOT based parking system is a cetralized management that enables drivers to such for and reserve a parking spot remotely through their smart phones .it offers a convenient arrangements for drivers to park their cars when they are looking to avoid potential traffic congestion.

IOT SMART PARKING SOLUTION SOLVE :

A smart parking system using iot can it can address many issues and task. For example; A driver can view available parking slots directly form the smart phone with such as a solution.

Companies ,in turn ,can supervise the parki8ng spaces more effieciently and most important they can do it remotely.

Here are a few task an iot enable smart parking system can tackle

PROBLEM STATEMENT:

In recent research in metropolitant cities the parking management problem can be viewed from various angles such as high vehicle density on roads.

This result in annoying issues for the drivers to park their vehicles as it very difficult to find a parking slots.

The drivers usually waste time and effort in finding parking space and end up paking their vehicles finfing a space on the street which further leads to space on congestion. In worst case,people fail to find any parking space especially during peak hours and festive season.

SCOPE OF THE PROJECT :

At present some countries have portals which users can gain information about parking areas via the internet . this system can give users the information about parking space but won't be able to give which parkiung slot is vacant and accupied.hence, such as a system cannot smartly handle the issue. Car lifts along automatted robotic system which automatically takes the car to particular parking spot as soon as the car enters on a platform.the system cannot install be medium scale shopping malls, movie theatre as it can cost them huge amount.

HARDWARE USED IN SMART PARKING :

- Enode MCU (ESP8266)

- Jumper wires
- Ifrared sensors
- 16*2 Led display
- DC motor

SOFTWARED USED IN SMART PARKING :

- ARDUINO IDE

INITIAL SETUP :

The initial case of the system when we turn on our project, which inticates the number of vacant and filled spots on a 16*2 display LCD and similarly on the blyink app.

PARKING VEHICLES :

Once when the user enters the parking detect sensor he would receive a parking slot number on his mobile application which he is supposed to park is vehicle.IR sensor succesfully detecting the vehicle it show a notifiction on the app the start time of the vehicle.

UNPARKING VEHICLES:

Unparking your vehicle from the parking slot would pop a notification on the application app starting the start time and end time user has parked the vehicle in the parking slot.

BENEFITS OF SMART PARKING :

- Optimized parking .
- Reduced traffic.
- Reduced pollution.
- Enhanced user experience .
- Integrated payments and POS.
- Increased safety.
- Real- time data and trend insight.
- Decreased management costs.

CONCLUSION:

- The concept of smart cities has always been a dream for humanity . The growthh of Internet of Things and cloud technologies have given rise to new possibilities in terms of smart cities.
- Smart parking facilities and traffic management system have always been at the core of constructing smart cities.
- In this project ,we address the issue of parking and present IOT based cloud integrated smart parking system.

- The effort made in this project are intented to improve are intended to improve the parking facilities of a city and thereby aiming to enhance to qualify of life of its people.