PS:-

IOT?

The present study proposes and develops an effective cloud-based SPS solution based on the Internet of Things

Parameteres & cost?

we constructs each car park as an IoT network, and the data that include the vehicle GPS location, distance between car parking areas and number of free slots in car park areas will be transferred to the data center.

The data center serves as a cloud server to calculate the costs of a parking request, and these costs are frequently updated and are accessible any time by the vehicles in the network

RFID use at entry level of car?

each car park can function independently as a traditional car park.

Our ps system prototype with wireless access in an open-source physical computing platform based on Arduino with RFID technology using a smartphone that provides the communication and user interface for both the control system and the vehicles to verify the feasibility of the proposed system

SPS based on the integration of UHF frequency, RFID and Wireless Sensor Network technologies. This system can collect information about the state of occupancy of the car parks, and can direct drivers to the nearest vacant parking spot by using a software application

A parking space can be reserved by a smartphone via Internet access.

Upon entering the car park, the reserved parking space will be displayed on a small map using wireless transmission for vehicles under the dedicated short-range communication protocol DSRC.

An inertial navigation system (INS) is implemented to guide the vehicle to the reserved space.

The system will periodically update the status of the parking space in real time to help ensure system accuracy.

System performance is measured through the accuracy of the inertial navigation systems run in an indoor environment, and the system implementation is evaluated by considering the accuracy of the GPS.

The automated parking method allows the parking and exiting of cars using sensing devices.

Entry to or exit from the car park is commanded by an Android based application.

PS:- Zigbee Wireless Sensor Network

The system uses the WSN consisting of RFID technology to monitor car parks.

An RFID reader counts the percentage of free parking spaces in each car park.

The use of RFID facilitates implementation of a large-scale system at low cost.

The system provides a mechanism to prevent disputes in the car park and helps minimize wasted time in looking for a parking space.

After logging into the system, the user can choose a suitable parking space. Information on the selected parking location will be confirmed to the user via notification. Then, the system updates the status of the parking space to “pending” during which time the system will not allow other users to reserve it. If after a certain period of pending time the system determines that no car is parked in that space, then it changes the status to “available.”

The system will update the status from the WSN node (the status of car park spaces) when a new car joins in the system. Therefore, the status of the overall parking system is always updated in real time. The system will help plot the parking time for each parking space in real time and can support the business with hourly parking charges.