

Perfect Parker - A Parking System using QR Generator

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Abstract- The number of private vehicles usage is increasing. People like usage of personal Vehicles to commute rather than to rely upon public Transportation. Finding a parking zone in most metropolitan areas, particularly throughout the rush hours, is troublesome for drivers. The desire to supply enough parking places led many slots to assist the user park his vehicle safely, conjointly to make sure the visitor doesn't use non-parking area and cause discomfort to pedestrian. The idea behind our Application - Perfect Parker – A Parking System using QR Generator is to assist the user to analyze areas wherever parking is on the market and variety of slots free in that space, in addition, hours before his expected arrival, the user will pre-book a slot in the Parking Area which is Flexible for him/her. This will facilitate to scale back the load on the administrator as his physical work reduces drastically and user will search the parking slot through Android Application. The aim of this study is to supply a dynamic answer by introducing the idea of parking system over the net and conjointly mistreatment one in every of the newest techniques obtainable these days i.e. the QR code for the user's ease.

Index Terms- QR Code, GPS, Intelligent Parking System (IPS), Android based application, Parking Control Unit

I. INTRODUCTION

Due to several cars, and excessive amount of traffic there's no enough car parking easily available. This is the thing that can be seen in most of the metropolitan cities these days. Individuals stuck with roaming on roads sorting out a parking lot to park their vehicles particularly at peak hours of their time. Our projected system presents a wise parking system that regulates variety of vehicles to the closest parking zone at any given time supported with the parking space handiness. The user requests the Parking Control Unit to examine the standing of obtainable parking slots long before. The Control Unit will then locate the available parking zone in the vicinity of the

destination. If the provision of parking lot is confirmed, the user will book the parking lot and proceed to pay. The vehicle follows the path towards the direction of the car park through GPS. The user fixes his slots by showing his confirmation details to the involved person at car park. Once done with validation the vehicle can follow its path to the allotted parking slot. The parking availability in that area for a particular parking zone will be then updated. Therefore our projected methodology reduces the user's time, effort and fuel looking out a parking slot. Also results into improved customer experience by reducing wait times, increased efficiency and lowered dependency.

II. LITERATURE SURVEY

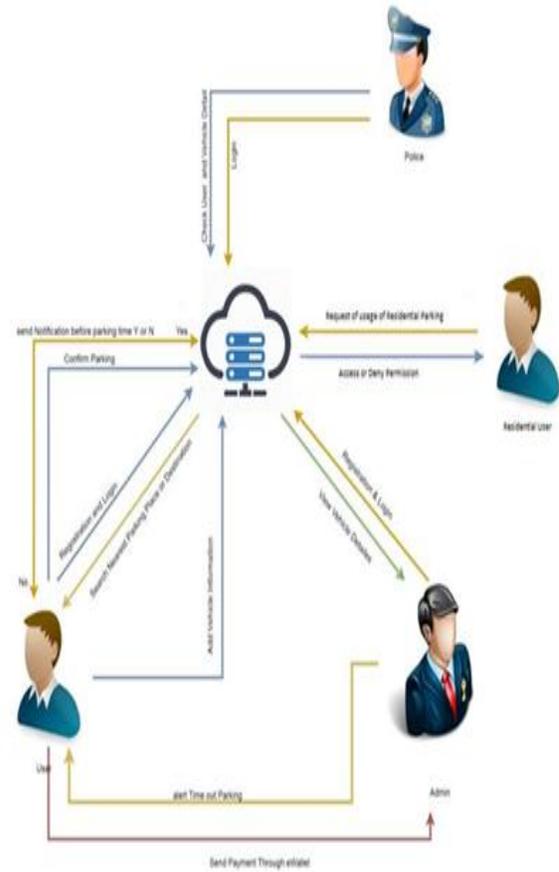
D.J. Bonde ,Rohit Sunil Shende, reviewed in their paper Automated Car Parking system commanded by Android application stated aim to propose a style of associate Automated automotive Parking System commanded by associate robot application that regulates the quantity of cars to be place on designated car park by automating the Parking and Unpacking of the automotive with the assistance of commands of associate robot Application. The study of some existing systems shows that the amount of automation in them is restricted solely to options like variety plate extraction, Comparison supported Snapshots of parking spaces, process of pictures or Mechanical lifts just in case of multilevel parking. The system aims to scale back the human intervention to the least by automating the method of automotive parking. This successively would convince be helpful in reducing the time needed for search of free automobile parking space by manually driving through multiple slots. The automation within the automotive is achieved by suggests that of feature of Path Tracing mistreatment Sensors. We, hereby, additionally gift a mathematical illustration of our

system. We tend to additionally herewith gift the results obtained and finally, target the long run advancements for the project.

Pratik Nirnay Jadhav, Faiz Ibrahim Shaikh, Saideep Pradeep Bandarkar, reviewed in their paper Smart Parking System Based on Embedded System and Sensor Network that locating a automobile parking space in middle areas, especially during the height hours, is cumbersome for drivers. The issue arises from not having the information of wherever the obtainable spaces could also be at the time, although legendary, several vehicle may request terribly restricted parking areas to cause severe traffic congestion. During this paper the planning and implementation with a model of Reservation-based sensible Parking System (RSPS) that allows drivers to effectively find and withhold the vacant parking areas is mentioned. This system use cluster primarily based algorithmic rule that helps in periodically learning the parking standing from the sensing element networks deployed in parking areas, the reservation service is influenced by the modification of parking standing. The driver's square measure allowed accessing this aforementioned cyber-physical system with their personal communication devices.

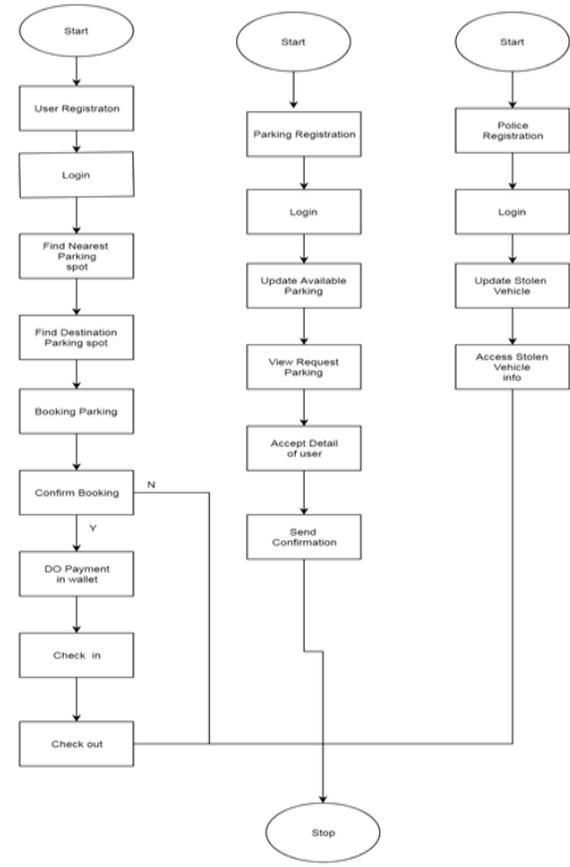
ElMouatezbillah Karbab , Djamel Djenouri , in their paper Car park management with networked wireless sensors and active RFID devised that system considers automatic parking lot management, which becomes associate inevitable choice to rationalize traffic management in fashionable cities. Integration of networked sensor/actuator and frequency identification (RFID) technologies is explored to modify refined services via the net in the rising web of things context. Supported this integration, we tend to propose a ascendible and cheap automobile parking framework (CPF). A preliminary example implementation and experimentation of some modules of the planned CPF has been performed. The bunch of sensors (sensing boards) into a single speck victimization the quality I2C protocol has been explored, and experimental results demonstrate appreciable reduction in price and energy consumption.

III. ARCHITECTURE DIAGRAM



IV. PROPOSED SYSTEM

We present a new smart car parking system, named Perfect Parker, with dynamic resource allocation and pricing models, to optimize the parking system for both parking managers and drivers. The contributions of our work include: 1) increasing parking resource utilization, 2) increasing parking revenue, 3) improving parking experience of drivers by lowering cost, parking spot searching and walking times. Our work is different from the one in where a dynamic resource allocation model was proposed. The main limitations of that model are that only reservation for limited period of time (e.g., few minutes) was allowed, fixed price was used, and revenue was not taken into account and only a single choice of destination was considered. Whereas our model allows a driver to reserve a parking space for any time in future, the revenue is considered, and new pricing models are introduced.



V. CONCLUSION

If it's a home, amusement centre or a market place, the primary and foremost question within the minds of most are regarding the parking slot. Compared to alternative developed countries, the matter of parking is demoralizing in India as there's no well devised arrangement in situ. Here we have touched a little situation of parking drawback of India in this paper. The parking drawback will often be tackled with a well-thought arrangement given here. It helps to find out the provision of a parking lot, get the provision confirmed, and reach the place among the interval assigned. It helps the administration to portion the vacant slot to consequent person in queue. A well-thought parking arrangement saves the time of visitors in booking a parking, extract advance, and therefore utilize the vacant portion in a organized and arranged manner.

REFERENCES

[1] Priyanka S. Patil, S.K. Shah, "A Review: Development of Android Applications WHATS HERE Places", International Journal of Advanced Research in Electronics and Communication Engineering (IJARECE) Volume 4, Issue 4, April 2015

[2] Faiz Ibrahim Shaikh, Pratik Nirnay Jadhav, Saideep Pradeep Bandarkar, Omkar Pradip Kulkarni, Nikhilkumar B. Shardoor "Smart Parking System Based on Embedded System and Sensor Network", International Journal of Computer Applications (0975 – 8887) Volume 140 – No.12, April 2016

[3] Thanh Nam Pham¹, Ming-Fong Tsai¹, Duc Binh Nguyen¹, Chyi-Ren Dow¹, And Der-Jiunn Deng² "A Cloud-Based Smart-Parking System Based on Internet-of-Things Technologies", IEEE Access, Received July 24, 2015, accepted August 16, 2015, date of publication September 9, 2015, date of current version September 23, 2015.

[4] Mouatezbillah Karbab, Djamel Djenouri, Sahar Boulkaboul, Antoine Bagula, CERIST Research Center, Algiers, Algeria University of the Western Cape, Cape town, South Africa,"Car Park Management with Networked Wireless Sensors and Active RFID",,978-1-4799-8802-0/15 ©2015 IEEE