Smart Car Parking Using QR Code
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Abstract - We approach a special system for smart parking reservation and security maintenance in a commercial car parking area in an urban environment. This system mainly designed to avoid unnecessary time conception to find an empty lot in a car parking area. By the same case we can also save more than 80% of fuel wastage in a car parking area to finds the empty parking slot. The reservation process is happening only by user. Hence the user finds the empty parking slot and makes the action of reservation through an internet access by an embedded process control unit (EPCU) with driver’s own knowledge. Here we give the major response to user’s reservation action and hence the driver can reserve his own likely parking slot based on the cost function. We have proposed a system with multi-processing queuing mechanism (MPQM) to avoid multi-user approach problem (MUAP) during reservation process in our smart car parking system.

Keywords — Security, Reduction of Time and Fuel, MPQM

I. INTRODUCTION
In busy run of urban life, parking is a huge pain point. More over the location of an individual's parked vehicle sometimes is a great pain since there are multiple things going in Human brain. Hence we stand to solve problem using Technology that is by using Shared QR code mechanism for user with shared secret key. With every technology, there come some disadvantages, that is what if someone tries our secret code with different QR code! Well, again that is taken care of. We propose to develop QR code based car parking locator system. This is android application with web portal application services by using HTTP protocol over internet.

In this user has to use android application where a secret number is generated and this secret number will be given to admin to generate QR Code. Considering there are more than one person on/in vehicle, the number of QR Code will be generated. Admin will now give the parking allotment for that vehicle on its registration. Admin uses web portal over internet. Whenever user want to find his car from this system it simply scan QR code at the entrance of the Parking with Secret code entered into that system that will show the location where the car is parked. From this application user get help to park his car with security and easily find park location of park car.

II. EXISTING SYSTEM
Car parking is today’s common issue and Drivers cannot find parking as easily as they would like. Cars are parked are jamming the streets for long periods. Parking in official premises and No parking zones Cost adversely, than on street spaces. New parking spaces are built in the city, but no one parks there because it is either unknown or too expensive and far away. Anger and rage: People fight, yell and scream over parking spaces. Wasted time: People circle the block roads by looking for parking & cruising for parking. Angry drivers, increases traffic congestion and air pollution, and wastes gasoline and time.

Unauthorized person or Car thief accesses cars from parking so parking arises many issues so for observing all this issue we develop QR code based parking car locator system. From this system we try to solve all issues of parking from car thief, unauthorized personnel through and nearby all parking place idea given by QR code and returns with location of parked car.

III. SCOPE
The application that will be developed is going to be useful to the smart people living in the smart cities. There are many other applications going to be developed due to this project for smart parking.

• Shopping Malls
• Organization
• Industries

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Project feasibility through technical aspect is mainly dependent on feasibility assessment of implementing algorithm. Feasibility assessment can be done through following ways:

1. **Technical Feasibility**
   Technical feasibility is one of the first studies that must be conducted after a project has been identified. The technical aspect explores if the project is within the limits of current technology and does the technology exist at all! A feasibility study needs to demonstrate that the proposed system is technically feasible. This requires-
   - An outline of the requirements.
   - A possible system design (e.g. database, server, technical tools, etc).
   - Possible choices of software to be acquired or developed.

   The technical approach actually followed may be very different.

## V. DATA FLOW DIAGRAM

### VI. APPLICATIONS
- Shopping Mall
- Organizations
- Industries
- Hospitals

## VII. CONCLUSION

Thus we have concluded that we have developed a system in which we can park car using QR code and it can be captured using mobile phones cameras. It can also be used in online shopping sites and can also be used in many more applications in future. So to find out place for the parking will be easier.

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### REFERENCES