

QR Code based Toll Gate Accessing System Reducing Manpower

P. Ananthi
IV Cse N.S.N Cet karur

M. Narasimman
Assistant Professor Department of Cse N.S.N Cet. Karur

S.Thirumajari
IV Cse N.S.N Cet karur

Dr. P. Gomathi
Assistant Professor N.S.N Cet karur

Abstract-Time is the more precious in today's world. So, everything has been automated. But still, in India people was waiting in long queues in toll plazas to pay the toll fee. This is because of the complexity of toll system architecture. It requires a toll collector or attendant. Based on the classification of vehicles, cash toll is collected by the collector. The collector, who also dispenses change, may accept and sell scrip, tickets, coupons, making an entry of the vehicle in the system and issuing receipts to the patron. Due to manual intervention, the processing time is so long. The main idea is to implement the automatic the toll fee collection in toll plazas of Indian roads. The QR code tag system is day by day. The people's economic power is increased and also living standard is changed because of that they have many automobiles like bikes, cars, and many others which leads to traffic. So, traffic issues will be a big challenge for controlling the traffic. During the rush hours, it is more difficult for drivers to drive from congested places. An embedded system based on the QR code, web cam and application program is developed for automatic toll collection in minimum time to overcome the traffic problem. The multipurpose included in system check the FITNESS CERTIFICATE(FC), LICENCE and INSURANCE of the vehicle.

Keywords:- Quick Response(QR), Toll, Fitness Certificate(FC), Licence.

I. INTRODUCTION

As we all know that transportation is the backbone of any country economy .Improvement in transportation systems result into the good lifestyle in which we achieve extraordinary freedom for movement, immense change factory-made product and services, as well as higher rate of employment levels and social mobility.

In fact, the status of a nation has been closely regarding economical ways in which of transportation. Increasing variety of vehicles on the road, result into variety of issues cherish congestion, accident rate, pollution and lots of alternative. As it is studied by researchers and additionally applied in varied expressways, bridges, and tunnels need such a method of electronic toll assortment. ETC is capable of decisive if the vehicle is registered or not, and so informing the management center

close to method violations, debits, and participating accounts .The most excellent advantage of this ETC system is that it's capable of eliminate congestion in parcel of land, particularly throughout those seasons once traffic appears to be over traditional.

II. EXISTING SYSTEM

This analysis paper is predicated on comparison of manual toll assortment verses automatic toll assortment systems and proposes plan of tool assortment mistreatment RFID. A TCSR is an automatic Toll assortment System mistreatment RFID used for grouping tax mechanically. In this we have a tendency to do the identification with the assistance of oftenness. A vehicle will hold an RFID tag. In accordance with this range we are going to store, all basic info still because the quantity he has paid ahead for the TOLL assortment. Reader are strategically placed at toll assortment center. Whenever the vehicle passes the toll booth, the tax amount will be deducted from his prepaid balance.

III. SYSTEM ARCHITECTURE

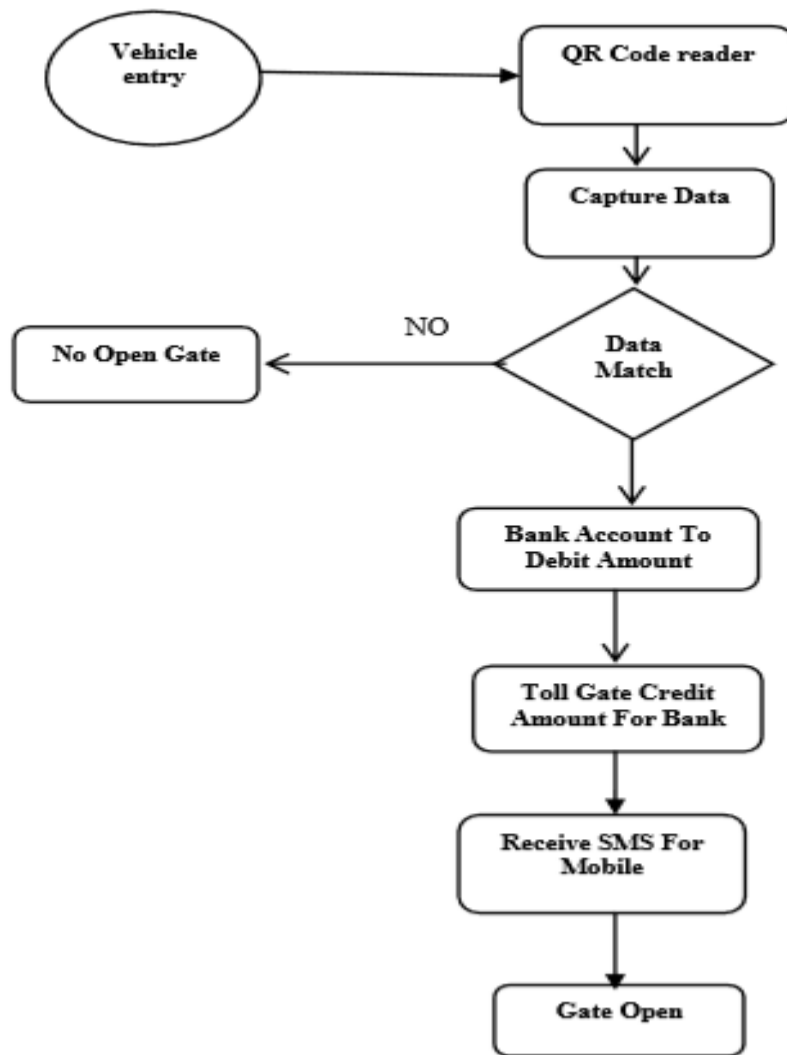


Fig 1:- Data Flow Diagram

When the vehicle enters the toll the qr code reader scans the qr code pasted on the window screen of the vehicle. Then the system compares the scan details with the already stored details. If the data is matched then the amount will be debited from the user bank account. Otherwise the toll will not open for the vehicle to cross the toll. The debited amount will be credited into toll account. Then the service sms will be sent to user's mobile number.



Fig 2:- Maestro E220

IV. HARDWARE SYSTEM DESIGN

A. MAESTRO E220

Maestro E220 M2M Routers are extremely versatile routers accessible with 3G, LTE, WAN, LAN, Wi-Fi, and serial property. These routers offer advanced failover and change seamless shift between multiple web interfaces and maximize period of time.

B. WEB CAMERA

A digital camera could be a video camera that feeds or streams its image in real time to or through a laptop to a network. When "captured" by the pc, the video stream is also saved, viewed or sent on to alternative networks travel through systems like the web, associated e-mailed as an attachment.



Fig 3:- Web cam

V. SOFTWARE SYSTEM DESIGN

A. XAMPP SERVER

XAMPP may be a free and ASCII text file crossplatform internet server answer stack package developed by Apache Friends, consisting chiefly of the Apache protocol Server, Maria decibel info, MYSQL and interpreters for scripts written within the PHP and Perl programming languages. Since most actual internet server deployments use a similar elements as XAMPP, it makes transitioning from a neighborhood check server to a live server potential.

B. PAGEKITE SERVER

Whether you utilize Linux, a Mac or Windows, PageKite works on your PC. Your PC will live beneath a table, on a shelf - or be mobile such as you. Whether you are using a DSL connection, a 3G dongle or borrowed WiFi, as long as you have a working Internet connection, PageKite will make your servers visible to the world.

VI. OUTPUT

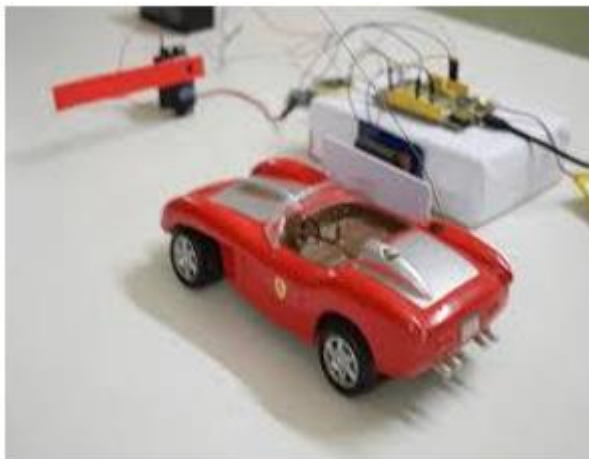


Fig 4:- Output

VII. CONCLUSION

This paper concludes that by using Quick Response code scanning we can save more time. QR code provides easy recognition, storing of large amount of data in small space, less cost for generation and scanning is easy to understand. Automatic Toll Collection Using QR Code Scanning provides flexibility, reliability and easy use that control the traffic and make collection of toll easy and save to the fuel. The multipurpose included in system check

the FITNESS CERTIFICATE(FC), INSURANCE and LICENCE of the vehicle.

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