INTERNATIONAL JOURNAL OF ADVANCE RESEARCH, IDEAS AND INNOVATIONS IN TECHNOLOGY

**ISSN: 2454-132X**
**Impact factor: 6.078**
***(Volume 6, Issue 2)***
Available online at: www.ijariit.com

# E-Challan Generation using QR code

*Gouri Chavan*
*chavangouri3197@gmail.com*
*D. Y. Patil College of Engineering and Technology, Kolhapur, Maharashtra*

*Megha Khot*
*meghakhot2410@gmail.com*
*D. Y. Patil College of Engineering and Technology, Kolhapur, Maharashtra*

*Panchshila Kamble*
*panchshilakamble12@gmail.com*
*D. Y. Patil College of Engineering and Technology, Kolhapur, Maharashtra*

## ABSTRACT

***During the past few years, traffic accidents & breaking traffic rules have increased day by day. It is very difficult to find a vehicle who breaks the rules and generates the fine for them. This work aims at implementing a vehicle document check system where information is retrieved from the database by the traffic police using their Smartphone and the physical documents are not needed to be carried along thereby saving time of filling details manually. QR code is developed in 1994 which has become admired outside the automotive industry due to its fast readability and greater storage capacity compared to standard Universal Product Code (UPC) barcodes. OCR is Optical Character Recognition to convert the electrical images into the machine-encoded text used for many purposes. This work takes an account of QR codes and OCR, at the front end, an android application is created with which traffic police can scan the QR code or number plate using QR code scanner or OCR scanner respectively on officer's phone and all the details about the owner of the vehicle will be shown on the phone and accordingly, E-Challan will be generated and sent to the vehicle owner through SMS. Thus, this work is an attempt to highlight the automatic generation of E-Challan using QR codes and OCR.***

***Keywords***— *QR code, Smartphone, Vehicle*

## 1. INTRODUCTION

Due to the increasing number of users on road, it is difficult to identify every vehicle uniquely and to analyse the vehicle manually it's no easy task to do. In the current situation, the police officer has to stop traffic rules the offender's vehicle on the road and manually give the challan to the person who breaks the rule. Because of this manual process, the time of the traffic police and the driver is wasted. This project aims to automate the recognition of the vehicle and make challan immediately. In today's time, there are so many people breaking traffic rules because of this accident are happing. To avoid this, we have introducing a system that is E-challan using QR code.

In our project, we will be generating and scanning of QR code and OCR for generating E-challan for the traffic violator. The application will be created and install on the officers' smartphones and it contains a QR code scanner and OCR scanner.

All police officers will have an independent login ID and password and this will maintain the security of the system. This application will be created to record the violations that happen by the particular person of a particular area. In this work, the QR code will contain information of the vehicle owner which will be on the vehicle. So when the vehicle user breaks any set rule, an officer will scan the QR code or number plate with his Smartphone's scanner and will enter the offense of vehicle user which will be again stored in the database against that vehicle user. The record of the same will also be sent to the vehicle user via SMS and also written notice. The deadline will be provided to the offender so than he can pay challan online as well as offline at respective RTO office.

## 2. METHODOLOGY

Every road driver needs to follow a certain set of traffic rules and regulations. These rules ensure the smooth functioning of the traffic system in the country. Today many road accidents are caused in India traffic rules are not being followed. Hence, to ensure that a driver does not break any rule and also to ensure the safety of other drivers on the road the traffic E-Challan is needed. The other thing is the traffic police facing the burden when traffic gets jam. And also due to this, the people have to face the problem like delay to work and delay to school.

## 3. PROPOSED SYSTEM ARCHITECTURE

The current work aims to propose and experimentally evaluate an automatic system, called E-Challan System and it is used to vehicle verification. In this, we create a webpage for customers and applications for traffic police officers to scan the QR Code which will be present on the vehicle. This information store in the database.

On the other side, the website is provided to the vehicle user. In this website vehicle user will register by entering their name, mobile number, e-mail id, address and the scanned document like license, PUC. After the registration, the vehicle used will get their unique QR code for their vehicle. This QR

 

code will contain the all information of a user and scanned document, so the user needs not to carry the documents physically. The vehicle user will put the QR code on the number plate. When any Traffic police will scan the code and vehicle users' details will be displayed and according to traffic rules penalty is calculated. This is sent using SMS, email and sending written notice to their address.

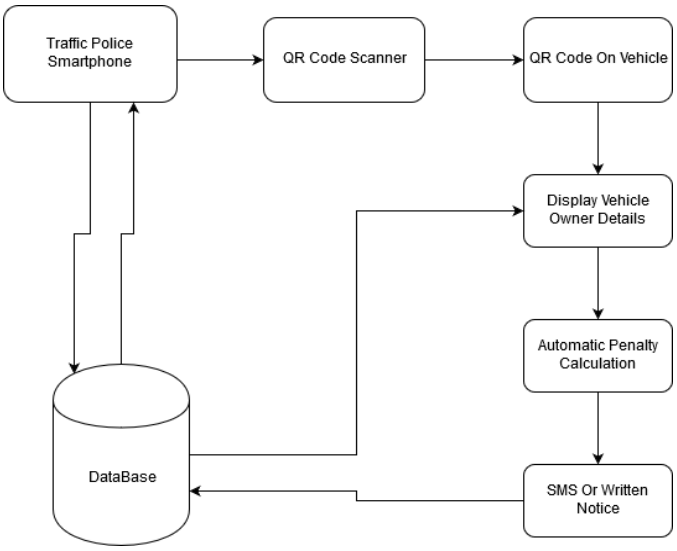


**Fig. 1: Proposed System Architecture**

## 4. DATA FLOW DIAGRAM

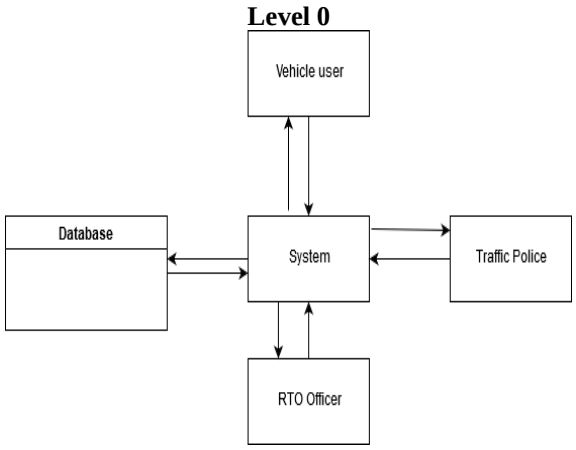


**Fig. 2: Data Flow Diagram of level 0**

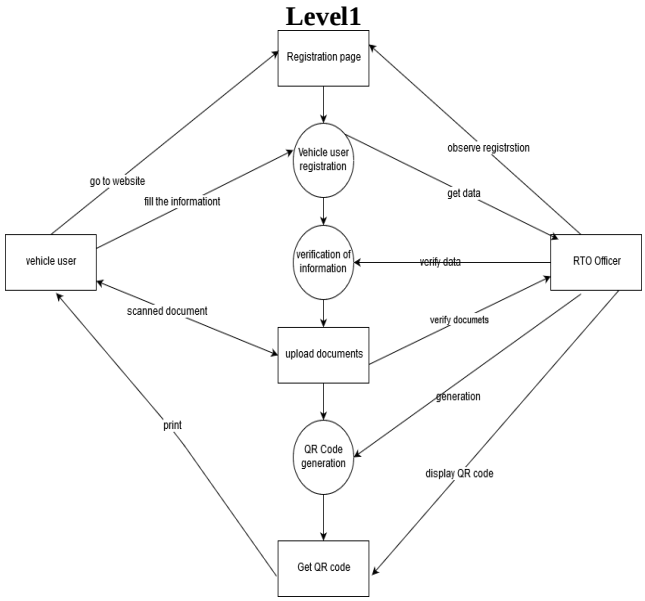


**Fig. 3: Data Flow Diagram of level 1**

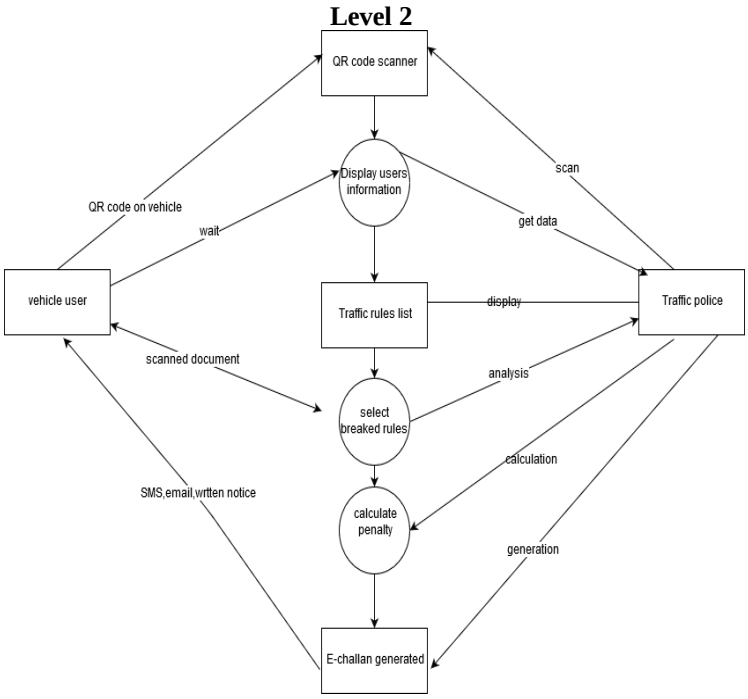


**Fig. 4: Data Flow Diagram of level 2**

In our E-challan generation system, we have used the database which is the MySQL database. We have used our laptop as a local server for creating our system's database. We have created a database which is named as e-challan. In this e-challan database, we have created a table to store the vehicle user's data. This table name we have given is the users' table. Further, this table includes eight columns for storing the user's data in a well-structured format because this is easy to access as required by the vehicle user and by the admin also. The first column includes the name of the vehicle users which is given by the user during the registration process. In the second column, the address of the vehicle user is stored, in the third valid email id of the vehicle user is stored. In the fourth columns, the mobile number of the respective user is stored in the table. Fifth column stores the vehicle number of the user. Sixth column stores the password of the user to login to their profile page. The seventh column is the unique Id is provided to every user which is to be stored, and at the last, the QR code of every user is stored in the column. This is how the database of our system is configured.

## 5. SYSTEM REQUIREMENTS

The implementation has been done using the android environment and PHP server. The QR scanner is required for scanning the QR code. Java and Php languages are used for the development of the system.

## 6. CONCLUSION

This system creates an innovative platform for traffic police to solve traffic problems. The QR code will be placed on the vehicle and QR code is scanned by the scanner which will be provided to traffic police mobile phones. QR code will be used for vehicle owner identification, vehicle model identification, traffic control, and E-challan generation. It can provide various advantages like traffic safety enforcement, security- in case of doubtful action by vehicle, easy to use, immediate information availability- as compare to searching.

## 7. REFERENCES

[1] A Novel Approach for Automated E-challan Generation using QR Code and OCR Nilima Jichkar1, Aishwarya Deulkar2, Anuja Thakare3, Samiksha Bolakhe4, Swati

 

Vaidya5 1Assistant Professor, Dept. of Computer Technology, Yeshwantrao Chavan College of Engg., Nagpur, India 2,3,4,5Student, Dept. of Computer Technology, Yeshwantrao Chavan College of Engg., Nagpur, India. March 2019

[2] Priyanka Bansod, Naziya Pathan, "Trans-Seva: E-Challan System using QR-Code," (IJESC) International Journal of Engineering Science and Computing, Vol. 7, Issue 6, June 2017.

[3] Kinjal H. Pandya, Hiren J. Galiyawala, "A Survey on QR Codes: in context of Research and Application", International Journal of Emerging Technology and Advanced Engineering, Volume 4, Issue 3, pp 258-262, March 2014.

[4] Avinash Shinde, Rounak Sathe, Prof. R. Sadakale," Automatic E-challan generation for traffic violation", International Journal of Advanced Engineering and Research.

[5] Rajesh Dahake, Shubham Bodhane, Tanvee Wawre, Rashmi Umbarkar, "Analysis of rules Violation and Efficient E-challan Generation Using OCR In Real-Time Traffic", (IJSRSET).

[6] Sidhant Shivam, Tushar Teotia, Shubham Mishra, Himanshu Mital," IOT based E-challan automation for RTO using RFID", International Research Journal of Engineering and Technology.

 