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Analysis of Rules Violation & Efficient E-Challan Generation Using OCR In Real Time Traffic

Prof. Amit R.Welekar[1], Rajesh S. Dahake[2], Shubham M. Bodhane[2], Tanvee B. Wawre[2], Rashmi P. Umbarkar[2], Priyanka S. Ghormode[2]

[1]Professor, Department of Computer Engineering, BDCE, Maharashtra, India

[2]Student, Department of Computer Engineering, BDCE, Maharashtra, India

ABSTRACT

Diligent Traffic Enforcemenet is a major problem across India, often mired in corruption and in complaints of harassment; it is a subject of major reforms initiated by senior management of all traffic police establishments in India. Hence, in this paper we are proposed the efficient e-challan generation technique using OCR (Optical Character recognition) in which the challan is ceated using android application. It detecting the variety plate and fetching facts from database and generating E-Challan.

Keywords : OCR, Automated Number Plate Detection.

I. INTRODUCTION

E-challan is the most interesting and hard studies topic from beyond few years. In this paper we've evolved a system to detect wide variety plate of numerous fonts specially in India. The detection method is split into numerous steps are optical man or woman popularity (OCR) & template matching. By way of using this we are able to stumble on wide variety plates successfully with minimal time period and approximation. Automated car wide variety plate reputation is a device that captures the photograph of vehicle and identifies their range plate. Duty of the site visitors police concerning traffic control includes making use of traffic rules and guidelines and penalizing the driver in case of violating site visitors policies. Additionalmethod of applying visitors discipline is common conduction of focus program, from the department of site visitors police, based totally on the offence statistics accumulated. But the present gadget do now not have centralized repository for storing the penalized information, so this project paintings is an try and expand an android application with the intention to help the site visitors police to file the penalty evidence in the centralized depository. Application to be developed will also encompass analysis a part of site visitors offences based on which higher government can take vital measures concerning traffic area.

II. LITERATURE SURVEY

Visitors offence control is a main apprehension in cities around the sector. Prepared site visitors offence system is aauthoritative cellular based software that information all the site visitors offences dedicated citywide. The application helps the visitors police keep perfect facts of all site visitors offences that has been dedicated via street users and also preserve the databases of the motive force and vehicle information. We've got many existing android packages that enables the automobile driver to test his challan reputation and he will pay the penalty on-line without the intervention of visitors police.

In Pune city E-challan gadget is done with the help of CCTV digital camera. Visitors culprit will not acquire an SMS detailing his violation each also picture proof at the equal time with a link directing him at nearest police station wherein penalty may be paid.

Mumbai site visitors police has completely automated traffic enforcement. In Mumbai, automatic challan machine can be spot site visitors price tag allocated via the site visitors police for violation the facility will consist of hand held gadget for spot quality collection and layout printed receipt. The relation at the back of this facility (linking the e-challan system with cctv cameras) is to reduce the load of site visitors police and help us go paperless whilst ensuring that no offender goes scot-un fastened. These picture are saved on line, and textual content messages are generated and ship to the cellular variety of all violator along the E-Challan.

Mr a. N. Shah, ms a. S. Gaikwad[1] proposed the paintings which variety plate popularity device (NPRS) is relevant to extensive variety of uses together with border crossing vehicle, toll road toll-collection, visitors management, parking management at numerous locations and lots of greater. On this paper they've developing a machine to become aware of variety plate of numerous fonts particularly in India.

Ganpati c. Ukarde and dr. S. P. Deshpande[2] proposed the automatic automobile wide variety plate reputation and detection is a machine that captures the photograph of car and understand their number plate. This paper specifically focused on morphological operation for license plate detection. Computerized car wide variety plate recognition and detection is a system that captures the photo of vehicle and recognizes their quantity plate.

III. PROBLEM DEFINATION

The Project detects any signal break by the vehicle on the traffic signals and generates the e-challan through implementation of programming and hardware mechanism.Deploying the RFID technology which constitutes tags storing data and transferring that data to readers over a wireless interface.Owner has to pay the challan amount to the RTO office or can pay online if linked to online payment system. [3]

IV. PROPOSED METHODOLOGY

The maintenance of traffic offence management system is difficult by using existing system which increases the paper work. Therefore, the problem stated above can be overcome using proposed system.

While designing such project we have an objective to improve efficiency of the traffic system which is the efficient system between user and traffic police. We are generating E-challan on one click, for reducing time work. The management of E-challan record on database. So there is no need of any paper work. Therefore, we are reducing the minimal paper work and this concept is also useful for making corruption free and digital India.

We are developing a web application and android application that is two modules are used in the projects. The web application is specially designed for the storing data at the database side. There are various types of forms like add offences, add officers name, registration of officers add place, add place, add laws and there penalties. If we fill all the forms and submit it then it will stored at database.

Web application also consists of dash boards. Dashboard1 consist of total e-challan collection, total vehicle registration, total violations, Total violation, total police station. Also in web application the graph displays according to the years wise collection, offences wise.

Androids application consists of login module for officers and there are 3 option that is for make challan, view graph, and view details. The make challan consist of first step is to capture the image then using

edge detection algorithm the number plate is recognized. Then by using the fetch option we can fetch the data and then the data will be automatically fetched from the database. Then enter the challan number and the offences area and after selecting the violation then automatic sections of law is selected automatically. Then submit the challan receipt

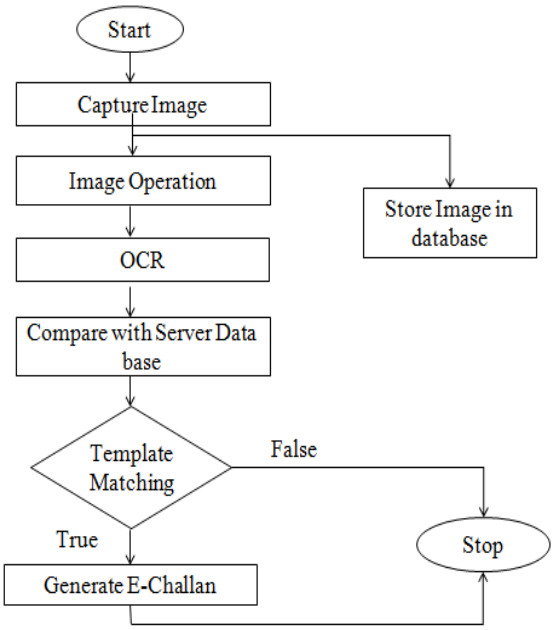


Figure 1. Process of generating E-Challan

After submitting the challan the two messages is generated using API. First message is contains the e-challan no and fine and violation name. And second message containing one link in which the proof of violation is stored.

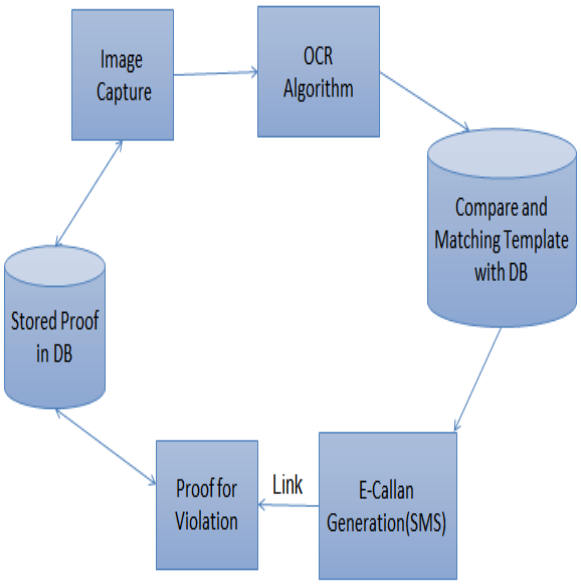


Figure 2. Block diagram of E-challan system

Using this application traffic police to fetch the no plate and generate the challan.

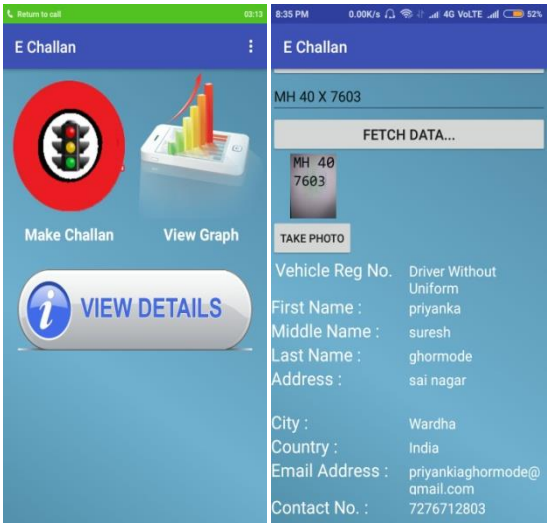
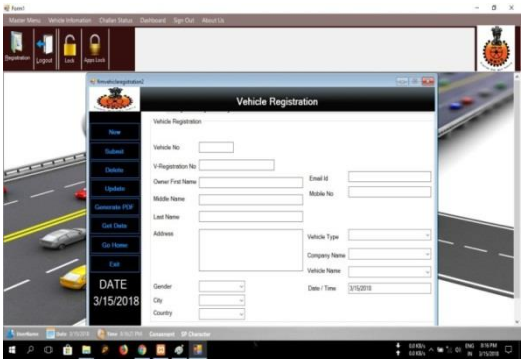
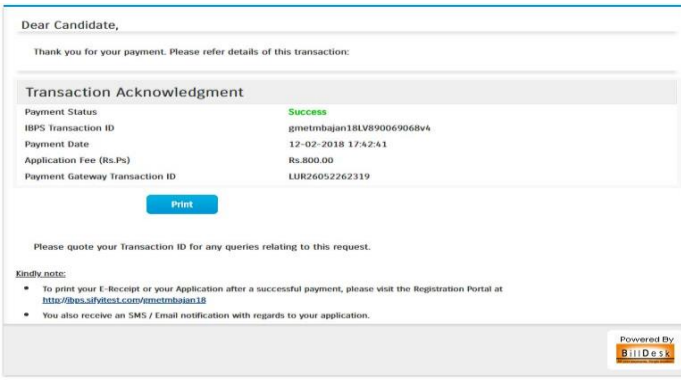


Figure 3 .-E-Challan Mobile Application



Fligure 4. Vehicle Registration Form

In this vehicle registration form, admin will register the hole information about the vehicle.



Fligure 5. payment recipt

V. CONCLUSION

By using OCR technique on number plate we will detect owner information. The proposed method has better performance than traditional method. Furthermore the verification process will be done in the real time. We will generate the E-challan at theinstant time and the violator will pay the fine online or by visiting at the office.

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