Android app for Sindhudurg Traffic Police

[1]Harshal V. Khanolkar,[2]Chetan B. Londhe,[3]Utkarsha V. Samant, [4]Somanath M. Melsagare
[1]UG Student,[2]UG Student,[3]UG Student, [4]Assistant Professor
[1]Department of Computer Engineering,
[1]S.S.P.M.'s College of Engineering, Kankavli,India

Abstract:Presently, Traffic Management is a serious issue confronted by the city. Tragically petty criminal offenses are wild particularly when police men are not present. Traffic police officer has to do lot of work like collect fine. The system is manual and is not reliable. To take care of this issue this paper talks about an application composed in Android.
This application will store the information of user. It chips away at customer server application model to guide Traffic Police to RTO Server model. This information will be put away on server side in the database. Further, the classification of the wrongdoing conferred is chosen. This will create a programmed measure of the fine. The primary point is to automate the customary procedure. Utilizing this innovation we can track the activity police area to check whether they are available in their particular assigned regions. Further citizens will also have online storage of their document. This will contribute to Digitalizing India ideology. Since, the proposed framework is digitalized and Android based, it will serve as handier instrument and helpful option implies for Traffic.Accordingly, these blunder free records could be tended to as and when require. The system will replace the traditional system of traffic police operation.

KEYWORDS: QR code, Android App, MySQL database, Performance prediction

I.INTRODUCTION

As the number of vehicles is increasing on road the load on traffic police officers is increasing day by day. Their work has increased. Along with increase in number of vehicles, the related problems have started to rise which includes violation of rules, identifying the vehicle owner etc. As the number of rule violation increase, the fine collection also increase. These records collected are manually filled into the receipt book. There is no reliable system to collect and store this information. This paper aims to tackle this problem of maintaining data in an efficient manner. It aims to replace the traditional ways with digital records. The current system has many drawbacks. It is paper-pen based system. The traffic police officers has to carry the receipt book to register the complaints.
Today 81% of India's population has access to a mobile phone while 10% of the population uses smart phones. Every month, for the next five years, India will add on an average 5 million internet users and 8.3 million networked devices. A digitizing India will get value from the connections between things and citizens, supported by networked processes to transform data into actionable information. All are using smart ways of doing things. Citizens expect more digitized and reliable interaction everywhere. Android devices are used widely in India. If an app is developed in android it will be accessible to users easily.
Designing an android app system that is efficient for use for both citizens and traffic police officer is needed. The traditional system also requires more time to generate records, to perform analysis and to retrieve conclusions from that. New system will generate quick records and will be faster in all aspect. As India is witnessing the revolution of digitization, new system will be have its contribution to Digitizing India making traffic police officers job easy.

II. RELATED WORK

There are few projects [1] which have implemented traffic police assistance system. But, there is only tracking of officer who is on duty. It offers no modules regarding the rule violation and fine collection and its maintenance. The IEEE paper [2] discusses along with app a smart data analysis center to make a comprehensive and systematic evaluation of employee work performance. Management can obtain the key information quickly and adjust work assignments based on performance. New solutions and algorithms for indoor and outdoor location, GPS deviation improvement, and work performance measurement are put forward thepaper [3] has details regarding to android application, it is very user based not traffic officer based. It discusses a breadth of applications which range from towing vehicles, location of police station and traffic rules. The paper [4] has details of the use of GPS technology to locate the location and then file the complaint. This concept is studied in the given paper.. The area of concern has been divided in blocks for ease of administration. GPS technology can be used to track location exactly .Notifications can be provide to user about their duty. Aim is to make job of officers easy. Data must be properly recorded in server. And must be organized.. Complaint can also be filed against officer. The paper discusses major issues and challenges regarding smart application for digitizing the system.

II. SYSTEM ARCHITECTURE

System architecture has 3 major components from below Fig 1(A):

1. Administrator (RTO) has access to the server by a web application. The admin officer has right to register and add traffic police to the system. Server provides login ids and passwords to every authentic traffic police officer. The complaints are received by the server from client. The fine details can be seen on server. Officer can retrieve complete data of user from it. The server consists of database manager which keeps all the records of the users who violated the rules also keeps complete details like vehicle number license number etc. It also provides notification to the user after the collection of fine by the clients. The server keeps track of the location of traffic police using Google Maps. The administrator can give any message or notification to all the system users and even message the client personally.
2. Through smartphones the traffic police officers can access the system. He is the second user. App is developed with all the functions required for traffic police officer for fine collection. The role of the client is to register the user's details on the server along with the violation details.Traffic officer will select fine rule violated and generate fine for user. From server access. The client will collect the fine generated by the server and will update the details on the server. The client or citizen will pay the fine then. The real-time location will also be tracked by the server to keep the records for later reference.
3. The third is citizen who has created offense. Citizen can upload the documents online and can access them anytime and anywhere by login. QR code is generated by user app when required for identity.

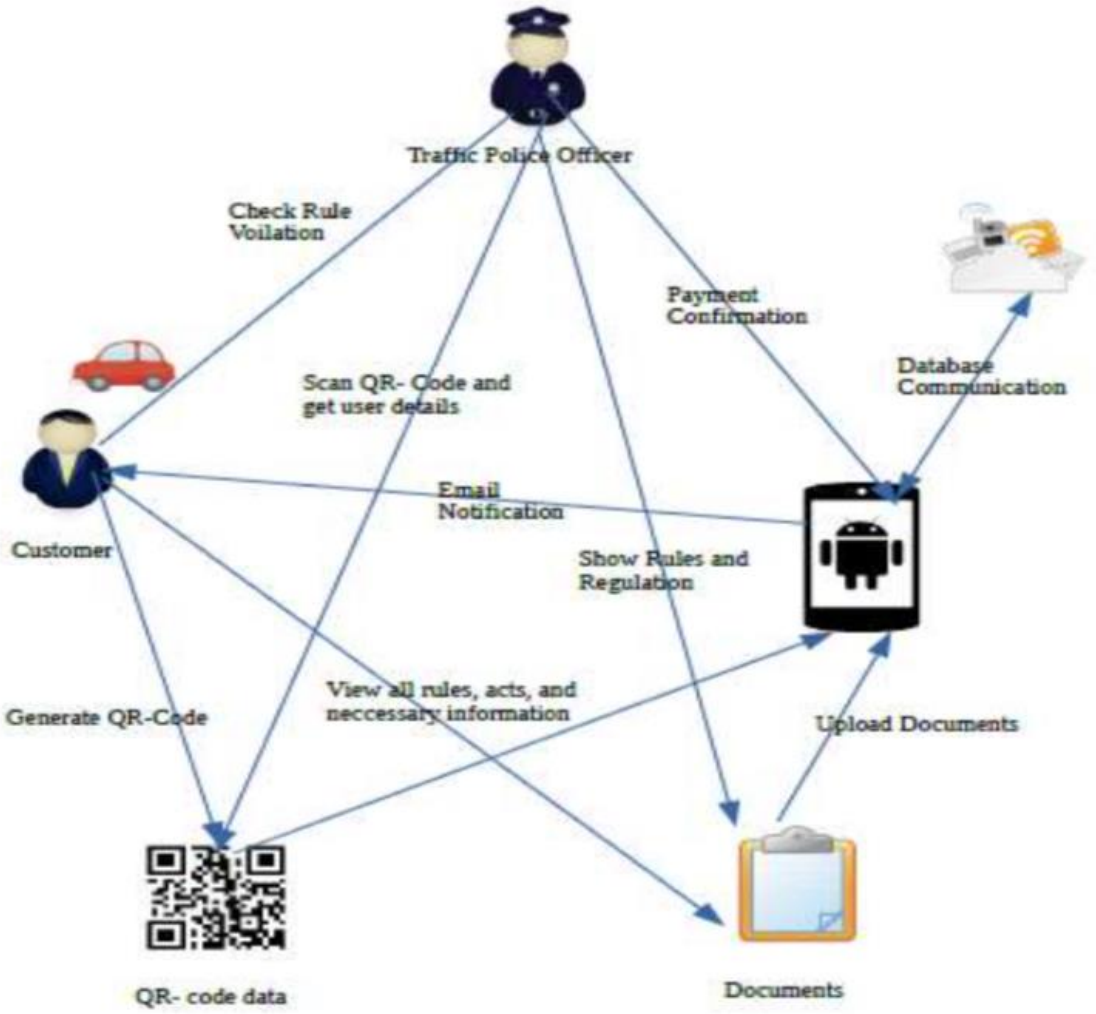

Fig.1(A). SYSTEM ARCHITECTURE

IV. MODULES

All Module are shown in Fig.1(B)

1. Officer Registration module: The authentic traffic officers will be first registered on the web portal by the administrator. The head officer (RTO) will be admin of the system.
2. Login module: Each traffic officer will be given login username and password .He will log into it on duty.
3. User Registration and document uploading: The citizen will register himself on the web portal and upload his all documents such as license, addhar card etc.

4. QR code Generation: QR code will be generated for each citizen based on the documents uploaded.
5. Traffic police Scanner: In this application there is a scanner which will scan the QR code of the customer
Once the QR ode get scanned it will store all the information of client with current catalogue and fine type on server.
6. Encryption: The data will be uploaded to server in encrypted form to be safe and private.
7. Location Tracking (GPS): App will support GPS to track the officer on duty. The head can check for location and time.
8. Notification: The notifications can be poped in the app by admin to assign any new duty or notice or message to traffic officers.
9. Performance Prediction: The data stored on server will be analyzed by data mining and performance of officer will be judged.
10. Finding sensitive traffic zone: Busy traffic zone information will be gathered from the data and will help in managing and planning for the traffic jam situation.
11. Complaint Management: Citizens can complain about the traffic situation or officers or emergencies.
12. Complaint tracking: It will be tracked and officers can be assigned for the same

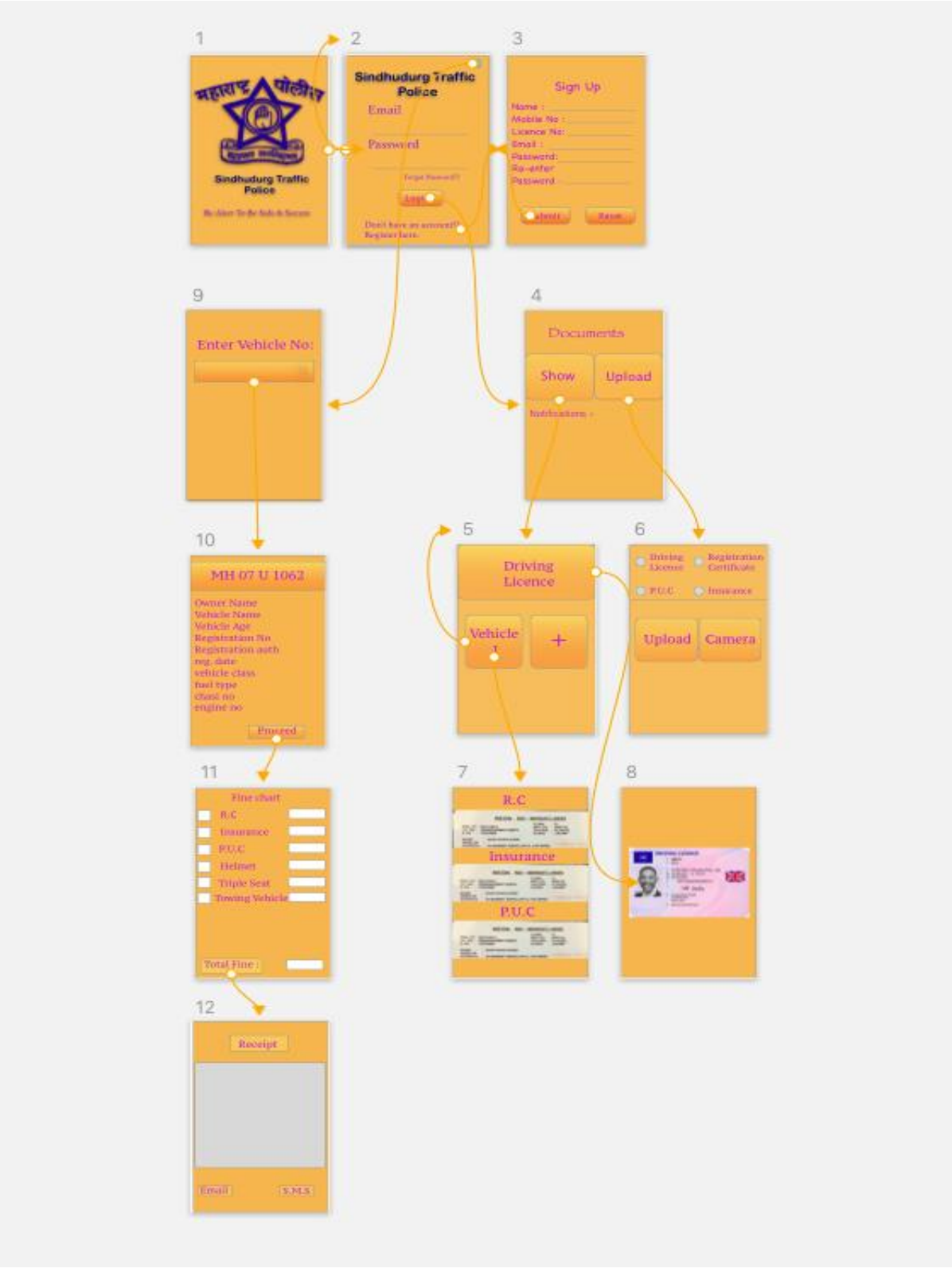

Fig.1(B).GUI OF SYSTEM

.

V. CONCLUSION AND FUTURE WORK

The applications of traffic information have become more popular with improvement of the condition of the wireless network, mobile devices and so on. The system architecture provided the new solution to the traffic police officer duties and working locations. The data generated from traffic department is important, so is the digitalization of that data. Important. The front end component-mobile operation app performs the task of data collection, location information, using tracking and positioning technologies from both the users i.e. is citizen and traffic police officers.At the backend data warehouse and data analysis center components are used, respectively, for data storage and analysis.The system will also provide data analysis from traffic data collected like finding sensitive traffic zone.

It realized the functions of data searching, data importing and modifying through the SQL database. It also can get the real time traffic information, which improving the efficiency of traffic service and management.System provide faster way of information collection for traffic police officer and also secure method for citizens. It also maintaining the complete information about the user who committed the crime and fine generated. Digitalizing the every sector of society services like traffic department is need of time.

I.REFERENCES

[1] Pune traffic app https://play.google.com/store/apps/details?id=com.punetrafficpoli c e.punetrafficapp Hyderabad Traffic App https://play.google.com/store/search?q=hyderabad%20traffic%20p olice%20app&c=apps&hl=en.
[2] A Smart Work Performance Measurement System for Police Officers. IEEE Access Special edition on challenges to smart world.
[3] Muhammad BaqerMollah, KaziReazul Islam, Sikder Sunbeam Islam, E-Police System for Improved EGovernment Services of Developing Countries MAY-2012.
[4] Anand Kulkarni, Naved Khan, AjinkyaModak Voice Enabled Android Application for Traffic Complaint and Pothole Notification System Using GPS and GSM-GPRS Technology International Journal of Advanced Research in Computer and Communication Engineering Vol. 3, Issue 3, March 2014 .
[5] Garima Pandey, DikshaDani, Android Mobile Application Build on Eclipse International Journal of Scientific and Research Publications, Volume 4, Issue 2, February 2014 1 ISSN 2250-3153.
[6] HaroonShakiratOluwatosin, Client-Server Model IOSR Journal of Computer Engineering (IOSR-JCE) e-ISSN: 2278-0661, p- ISSN: 2278-8727Volume 16, Issue 1, Ver. IX (Feb. 2014), PP 6771..