International Journal of Scientific Research in Engineering and Management (IJSREM)
Volume: 06 Issue: 06 | June - 2022 Impact Factor: 7.185 ISSN: 2582-3930

TRAFFIC OFFENCE MANAGEMENT SYSTEM

Prof.Veena B[1*], Maruthi K B[2*]
[1]Professor, Department of Master Applications,
University B.D.T College of Engineering, Davanagere, Karnataka, India
[2]Student, Department of Master Applications,
University B.D.T College of Engineering, Davanagere, Karnataka, India

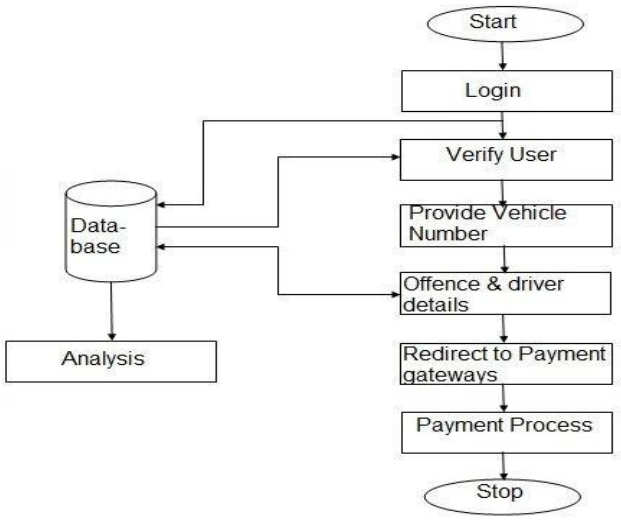
Abstract—
Nowadays road traffic has become real problem in one-tier and two-tier cities. There are several ways to make travelling safe and one is through the Traffic Police. Responsibility of the traffic Police regarding traffic management includes directing traffic, enforcing traffic rules and regulations and penalizing the driver in case of violating traffic rules. Another way of enforcing traffic discipline is frequent conduction of awareness program, from the Department of Traffic Police, based on the offence data collected. But the existing system do not have centralized repository for storing the penalized data, so this project work is an attempt to develop an android application which will help the traffic police to record the penalty information in the centralized repository. Application to be developed will also consist of analysis part of traffic offences based on which higher authorities can take necessary measures regarding traffic discipline

I.INTRODUCTION

In recent years, the quantity of motor vehicles increases rapidly and the burden of the management of the road traffic are increasingly heavy. There are several ways to make travelling safe and one is through the Traffic Police. Responsibility of the traffic Police regarding traffic management includes enforcing traffic rules and regulations and penalizing the driver in case of violating traffic rules [1] .

In today's information-rich society, everything is becoming smart. This project shows the design and development of smart traffic offence analysis tool with e-payment..Traffic-Offence-Management-System TMS project is about management of offences on the road. TMS project is about management of offences on the road, basically challan and offence records, vehicle records and vehicle owners pertaining to the offence etc. The existing approach of decentralised road traffic offence information is not efficient as having single integrated road traffic offence information enhances fast, timely and secured accessibility and sharing of road traffic offence information for the agency's decision making. Manual means of identifying offender with only information about an offender is not enough, Identifying road traffic offenders with their pictorial images will aid the agency in authentic documentation and avoid prosecuting wrong persons. In the same line, as pragmatic beings who believe what they see, showing offender a display diagram sketch of his crime will convince him .This also will provide forensic evidence that will facilitate prosecutions.
The proposed model is anticipated to offer an improved solution in road traffic offence information management in real time despite the geographical locations. If the proposed model will be implemented it is expected to improve transparency and accountability and therefore strengthening road safety. The system is designed using Object Oriented Analysis and Design and Unified Modelling Language was used to bring the

view to real life situation. Top down approach was adopted as the implementation approach for this project research. This involves breaking complex system into subsystems and then into modules for easy study and understanding. The system architecture is basically divided into three basic



parts. The first is the front end that shows the user interface designed with PHP, HTML and JavaScript, the back end which hold the database server and different tables, at the middle is the internet Information Service or application server using the Apache server; which provides the connectivity between the front end and the back end. The user interfaces are interactive and provisions are made for security of data stored. The use of the system is relatively simple and the I.T knowledge requirement for its usage is relatively minimal.

II.LITERATURE REVIEW

Traffic offence management is a major concern in cities around the world. Mobilized Traffic Offence System is a powerful mobile based application that records all the traffic offences committed citywide [1]. The application helps the traffic police keep adequate information of all traffic offences that has been committed by road users and also maintain the databases of the driver and vehicle details [2].We have many existing android applications that helps the vehicle driver to check his challan status and he can pay the penalty online without the intervention of traffic police .but our application focuses on traffic police as user and he can penalize the one who commits the traffic offence and can collect the penalty amount on spot using e-payment .with the information stored in the database the higher authorities can take appropriate measures [3][4].

III.METHOD

3.1 DATA FLOW DIAGRAM: The maintenance of the traffic offence management system is difficult by using the existing spot billing machine (SBM), which increases the paper work. Therefore the problem stated above can be overcome using proposed application

Figure 1: Dataflow diagram of smart traffic offence.

3.2 SYSTEM DESIGN: System design is a transition phase from a user oriented documented system to a purely programmatic oriented system for programmer's database personnel. The system design makes the high level decisions about the overall architecture of the system. The system design phase provides the understanding and procedure details necessary for implementing the system recommended study. The target system is arranged into subsystems based on the analysis structure and the proposed architecture.

The system design has been in two phases-logical design and physical design. In the logical design, the user specification for the proposed system were formulated, also procedures were designed in a manner that would meet the project requirement

Physical design follows the logical design phase, in

this phase, emphasis is put on how the requirements are to be achieved in terms of hardware equipment's and procedures were formulated.

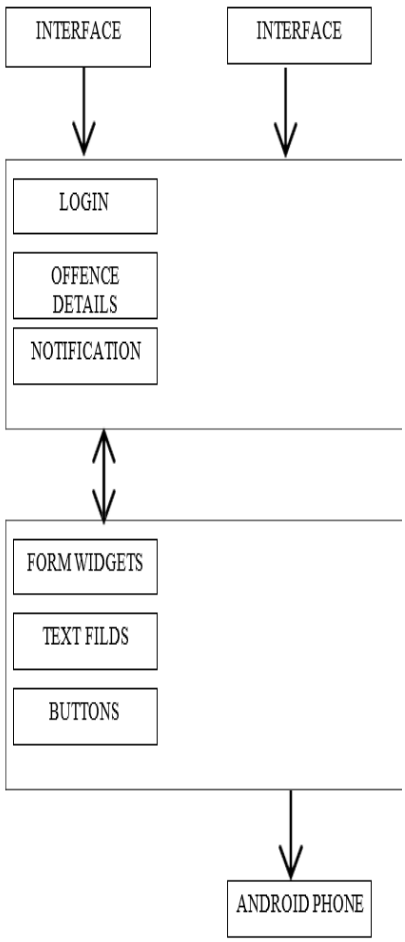


Figure 1 : System Architecture

The above figure represents the system architecture of our android application. The android application consists of front end and back end. Front end represents the graphical user interface which is visible to the users. The Backend consists of activities or modules which constitutes an application the GUI consists of form widgets, text fields, buttons layouts, images, wi-fi. Front end consists of required modules of one application

IV.IMPLEMENTATION

4.1 PACKAGES AND TOOLS

- SDK (Software Development Kit) A set of tools and libraries that allow the user to create an application based on a product.

- IDE (Integrated Development Environment) - A software application that consists of a source code editor, A compiler, build automation tools and a debugger. It makes programming and running applications easier.

- ADT (Android Development Tools) - A plug in for eclipse that extends the Eclipse ID by providing more tools to develop Android Applications

- AVD (Android Virtual Device) - An Android emulator that allows you to simulate how the application will run on an actual Android device.

- IDK (Java SE Development Kit) - A popular Java SDK that is used to program Android applications.

- ANDROID STUDIO: It is the official integrated development environment for android platform development.

- WAMP SERVER: It is a software stack for the Microsoft windows operating system, created by Romain Bourdan and consisting of the Apache web server, openSSL for SSL support, MySQL database and PHP programming language.

V.RESULT AND SNAPSHOTS

Fig 8.1 Payment Details Snapshot

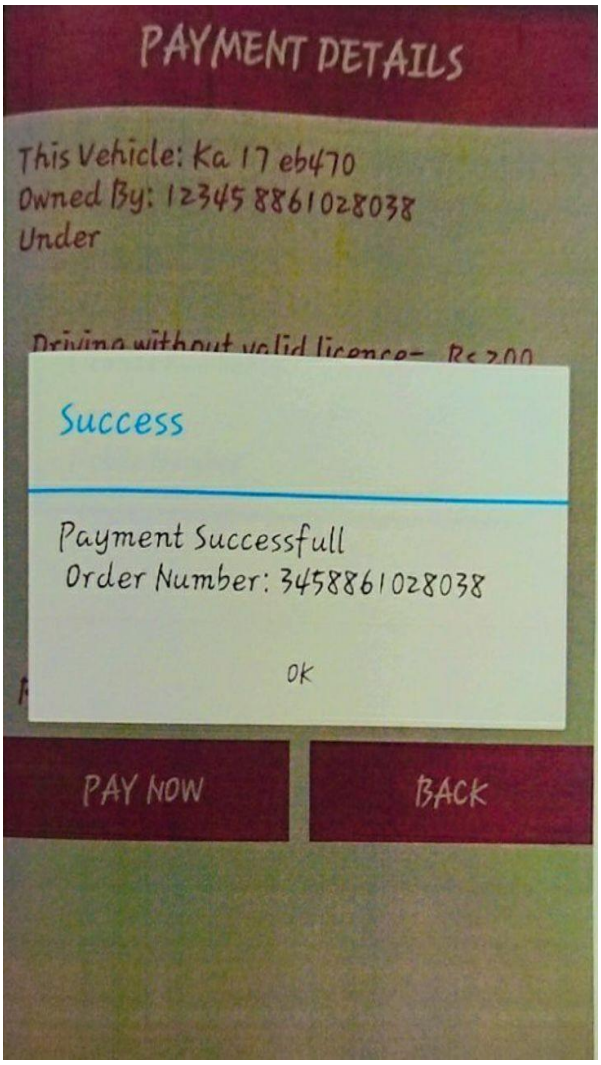


Fig Payment Details Snapshot
Fig: payment Notification Snapshot

This project is being developed as an android application and aimed to help traffic police to document all road traffic offences incurred by the road users.

CONCLUSION

The proposed application helps traffic police to penalize traffic offences. And helps them in analyzing traffic details with centralized data repository stored in the department server. There by generates graphs for the easier analysis by which the traffic police can enforce the traffic discipline. By this application, we can reduce the traffic offences drastically.

REFERENCES

[1] XIAO Ai-mei, 2015. Design and Implementation of the Road Traffic Offense Information Management System Based on J2EE. David Publishing.

[2] Aditi Dambe, Upasana Gandhe and Varsha Bendre, 2013. AUTOMATIC PENALTY CHARGING FOR VIOLATION OF TRAFFIC RULES. www.ijareeie.com.

[3] Declan N. Dike, 2012. ASSESSMENT OF MANAGEMENT INFORMATION SYSTEMS IN ROAD TRAFFIC MANAGEMENT IN NIGERIA. Cenresin Publications.

[4] Florentina Farcas and Suresh Chandra, 2003. Traffic Police Management. Norrköpin

[5] British Department for Transport: Report No. 122: "Road Safety Research". Available online: http:// assets dft.gov.uk/publications/per-roadsafety-research-rsrr-theme5 natcen2010survey-mainreport.pdf/mainreport.pdf (accessed on 4 May 2014)

[6] "International Road Traffic Accident Database" http://www.bast.de/htdocs/fachthemen/irtad/ [7] Traffic Incident Management Handbook, November, 2002, http://www.itsdocs.fhwa.dot.gov//IPODOCS/REPT MIS/@92011.PDF