Web Application For Traffic Violation Management

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Abstract- Traffic police experience a lot of difficulties in field work while reporting violation and collecting fine from the violators as the system is manual and traffic creation while holding vehicles for a long period of time. Reporting violations and analysis done on that data are also not accurate and effective. There are no emergency handlers for traffic police in emergency situations. Addressing to the above problems this work aims to provide a solution by means of a web application that can effectively collect field data. This paper proposes a web application that uses centralized database to store all information about violations and emergency requests. The traffic police report the violation by entering the vehicle number that fetches all the details of the violator. It can make instant digital payment of fine or take necessary actions against violator. Traffic police also can make request to get help from fellow police or medical team. The analyzed report can classified based on location, violation, date so that it can be used for decision making.

Keywords- Web application, Instant digital payment of fine, Emergency handlers, Centralized database, Traffic violation.

I. INTRODUCTION

All working sectors embed technology to do their work .In case of traffic police department there is still no significant technological development to help them. This paper proposes a web application that helps traffic police to do their work accurately and effectively. In traditional method, if violation is found then all the details is manually entered then the fine receipt is given. It is time consuming process on roadand every violation cannot be detected. In recent time systems like the fine ticket is issued to violators where they can pay the fine within the mentioned period. This system is not efficient as it doesn't insist them to follow traffic rules strictly. Some applications like violation reporting system, fine collecting system address a specific problem. These traditional ways requires more manual work, paper work and it doesn't insist the people to follow the traffic rules strictly.To overcome these limitations,web application is proposed to ensure the effectiveness of traffic system by providing violation reporting system with instant digital payment, emergency handlers and database to store all information.In this system, there is user interface for reporting violation, traffic police enters the vehicle number and select the type of violation, the details is reported to violation database and

directed to digital fine payment page.In case of any emergency situations the traffic police can seek help from medical team by sending request to them and the medical team can assist by providing ambulance service or hospital alert and They can also request for fellow police help by clicking SOS button.All the details of the request will be stored in SOS database and medical emergency database as documentation that can be checked by admin user at any time and These data can be used for analysis of violations in specific area.

II. WEB APPLICATION USED BY THE ADMINISTRATOR

The engineering of this framework is client server design. The server side is overseen by the admin team of the framework which consists of administrator side and UI. The admin has the option to add the traffic police, erase the passage of any traffic police and monitor their areas.

The administrator communicates with the framework through Graphical User Interface (GUI) and gives the login distinguishing pieces of proof to any recently added traffic police. The admin team monitors the area of traffic police. The data set keeps the total records of any client who disregarded the traffic rule alongside the necessary details. The client side comprises of violation details and UI. The customer side is for the end-clients for example the traffic cops.

The traffic police utilize an android application to speak with the admin team. The admin side gives the details of fine to be gathered dependent on the standard rule enlisted for that violator by the traffic police. The client is told through message by the admin after effective assortment of fine by the traffic police. In the event of any correspondence disappointment among customer and server the customer can store the record of the violator in its data set.

III. MOBILE APP FOR TRAFFIC POLICE

The traffic police has option to enroll and add traffic police to the framework. Manager gives login id and secret word to each real traffic cop the fine details can be seen on server side. Official can recover total information of client from it. The admin team consists of information base chief

which keeps all of the records of the client who violates the rules additionally keeps total details like vehicle number. Application is created with every one of the capacities needed for traffic police for fine assortment. Policeman will choose fine, rule abused and produce fine for client. The user will gather the fine produced by traffic police and will update the subtleties on the server side. The user or a resident will pay the fine at that point.

IV. PROPOSED SYSTEM

RTO office needs to confront numerous instances of corruption. Along these lines, giving a digitized solution will likewise assist with making the framework all the more spotless and straightforward. In this manner, remembering these two destinations our paper proposes an solution which won't just be monetary however will likewise have a commonsense methodology in Smart City Project. The conventional framework devours more opportunity to create report and perform factual examination. The proposed framework will assist with producing quick report as this interaction is quick and automated.

The architecture of this framework is client-server architecture. The server side is managed by the administrator which consists of admin side and user interface and has the right to add, delete the entry of any traffic police, keep the track of locations and has the access to the reported databases. The database keeps the complete records of violators along with the required details. The client side consists of violation details and user interface. The traffic police load the vehicle number of the violator to the server and issue the digital fine sheet by which the fine amount is collected by digital payment method instantly. The application has emergency handlers through which the cop can co-ordinate with emergency team, medical team, ambulance by registering the time and location of the spot which will be intimated to the server. SOS button is provided to get help from the fellow police men. The information from the databases can be used for analysis and used for decision making purposes.

V. SYSTEM ARCHITECTURE

System architecture has 3 major components:

1. Administrator:

Administrator has access to the server by a web application. The admin team has right to register and add traffic police to the system. Server provides login id and secret word to every real traffic police officer. The violations details are received by the server from client. The fine and

violation details can be seen on admin side. police officer can recover complete information of violator from it. The admin side consists of data set manager which keeps complete records of the violator who violated the rules also keeps complete details like vehicle number , license number etc. The administrator monitors the area of traffic cop. The admin user can give any information or notification to all the traffic police.

2. Traffic Police

Through smart phones 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 part of the customer is to enlist the client's details on the worker alongside the infringement subtleties. Traffic officer will choose traffic rule disregarded and produce fine ticket for violator from worker access. The violator will collect the fine ticket created by the server and will refresh the information on the server. The client or citizen will pay the fine then. The location will also be tracked by the admin team to keep the records for later reference.

3. Medical Team:

The third is Medical Team.Medical Emergency Requirement can be viewed in Medical team dashboard which was intimated by the traffic cop in the field and the medical team sends Ambulance or other teams to the location.
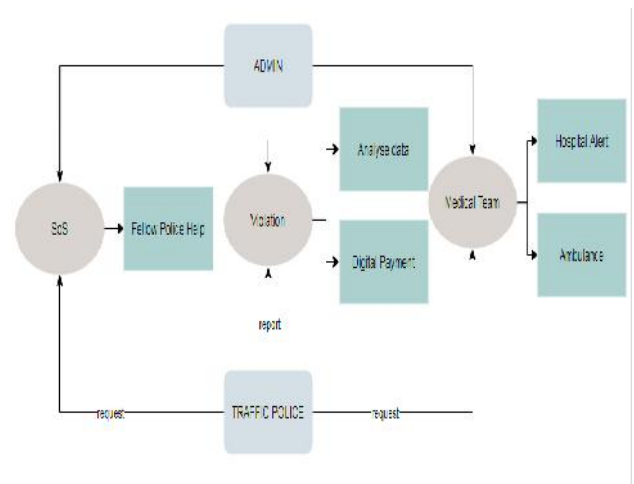

Fig 1. Block Diagram

VI. CONCLUSION

This framework will help traffic police to stamp the zone with more number of traffic violations submitted in that zone. Subsequently we anticipate build up an android application for traffic cops. The higher specialists can utilize

this framework for examination and take choices. This framework will diminish the manual work and blunders in the current rush hour traffic framework.

The framework will give effective upkeep of the fine records just as client's details The client's details put away as pictures on the admins information base can be additionally utilized whenever needed by extricating the information through picture preparing. For executing reason we need to ensure whether the traffic police knows about this computerized framework. Further modules might be added into the framework for mindfulness reason to advance traffic mindfulness among them.

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