EasyChair Preprint

№ 5436

CopFriendlyApp - ESeva

Amol Dhakne, Deep Shah, Rohit Gore, Rudraksh Agrawal and Swapnil Sharma

EasyChair preprints are intended for rapid dissemination of research results and are integrated with the rest of EasyChair.

June 3, 2021

CopFriendlyApp - ESeva

Dr Amol Dhakne[1] ,Deep Shah[2], Rohit Gore[3], Rudraksh Agrawal[4], Swapnil Sharma[5]

Professer & Students, Computer Science and Engineering, D.Y.P.I.E.M.R, Maharashtra

Abstract: : With the increasing importance of corruption has become a major factor to be considered as a result the number of vehicles and the rapid development of population are growing in our everyday life. Existing process of RTO is a very time consuming process. Traffic management is a serious issue confronted by the city. As a result people cannot get things done at the right time. Since the proposed framework is digitalized and android based, it will serve as a handier instrument and helpful option for traffic. An android application is provided to traffic police to retrieve vehicle information, fine details.

1. INTRODUCTION

In this Project we have different modules in which they store different information and have different services. As the number of vehicles increasing on road the load on traffic police increases day by day. Their work has increased. Along with the increasing number of vehicles, the related problem has started to rise which include violation of rules, identifying the vehicle owners etc. as the number of rule violations increase, the fine collection also increases. Issue of information about license, which include application form and other information it helps for public awareness. Provide mail alerts for users and also registrations of complaints. The vehicle owner uploads the vehicle document and it will be stored in the database. Advantages of this application are: considerably reduced the corruption in the transport department. In case of an accident helps to identify the injured person and also ask for an ambulance from the medical team.

1.1Existing System:

The current system that is used for the fine collection system has many flaws and loopholes in it. There is a need to overcome these loopholes in the existing system. During patrolling if an offender commits a crime and is caught it is difficult to find out if the license is fake or real and in the same manner it is difficult for common people to find out if the officer who is pretending to be an official authority is fake or real one. There are many cases where the user runs away after being caught and the police person can't take the appropriate action on the offender. Even there are many cases where the vehicles possess fake number plates and the police officers can't recognize them.

In case of an emergency, the traffic police officer have to call 108 and register the emergency by providing details of the location and the accident. This process can be lengthy and time consuming which may cause someone their life.

So to overcome these loopholes in the existing system we have proposed a new system to help us to solve the issues.

2. LITERATURE SURVEY

In existing traffic system, the storage of records of vehicles and civilians breaking traffic rules is not real time. Manual work also leads to many errors. Most of the work is done on paper. In proposed system, we will develop a dynamic android application which can be used to take real time data as well as location and transfer data to dynamic web application integrated with Google Map API. So we are reducing the manual work and errors in the system.The main causes of traffic jams and accidents at a signalized junction are lane change and red signal violation. To avoid these incidents many systems have been deployed in the past, ranging from simple devices like inductive loops, laser-based devices to traffic light queue control system. Traffic congestion is a major problem in cities of developing Countries like India. Growth in urban population and the middle-class segment contribute significantly to the rising number of vehicles in the cities.Congestion on roads eventually results in slow moving traffic, which increases the time of travel, thus stands-out as one of the major issues in metropolitan cities.

3. PROPOSED SYSTEM

The proposed System is aimed to automate the major processes in the TRAFFIC police department.. The traffic central team can register new traffic police to the system.
As well as, issue challans to the submitted traffic rules violators. Traffic police can login with the credentials provided.Traffic officers can retrieve complete data of violators from it. Traffic officers can view violators vehicle information and previous violations too.

App is developed with all the functions required for traffic police for fine collection. Traffic officers will select fine & rules violated and generate fines for violators.

App is also developed to register an emergency or accident to call an ambulance from the medical rapid force team. The police officer will be able to report any emergency with a single click and the ambulance will reach the accident scene with the help of GPS(Geological Positioning System).

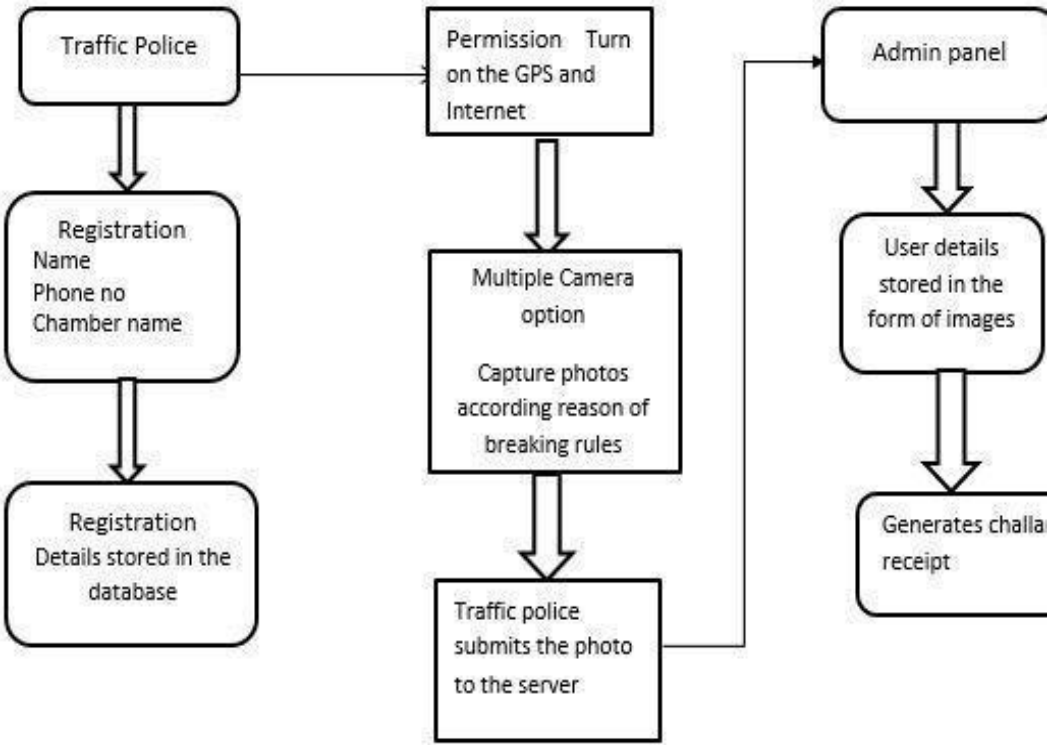
The proposed system has three modules-

1. Traffic Police - Traffic police will register violations. While registering officer will have to submit vehicle number, driver's name, driver's photo with vehicle and violation. The officer can also see the previous violations and pending penelty.

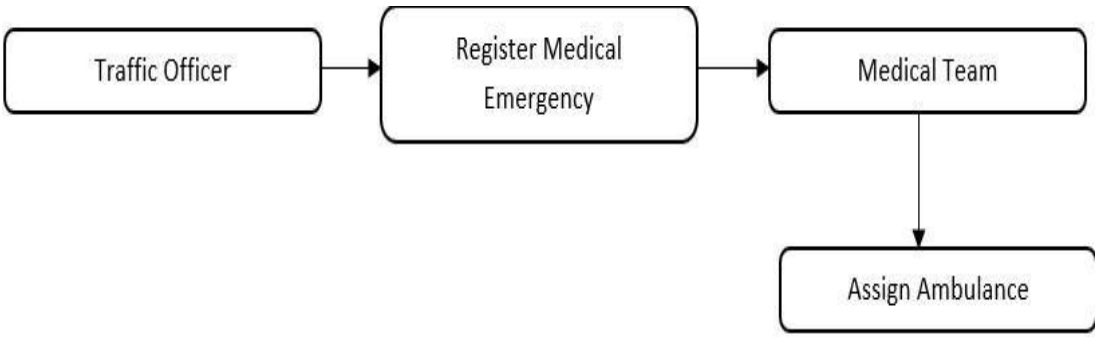
2. Traffic central team - The central team can register traffic officer and provide them with login credentials. Central team can also de-register one if required. It will issue challan to the violator accordingly and accept payment via online medium.

3. Medical team- Medical team can respond to medical emergencies by assigning an ambulance to the accident scene and provide information on ETA of amubulance to the scene using GPS tracker.

4. FIGURES & DIAGRAM



(a) Traffic Violation Module



(b) Medical Team

Fig: Flowchart of CopFriendly App 5.TECHNOLOGY &

PROGRAMMING LANGUAGES

Front End	Angular 9+ Google Material Design BootStrap / Bulma
Server Side	Spring Boot Spring Web (Rest Controller) Spring Security Spring AOP Spring Hibernate
Core Platform	OpenJDK 11
Database	MySQL

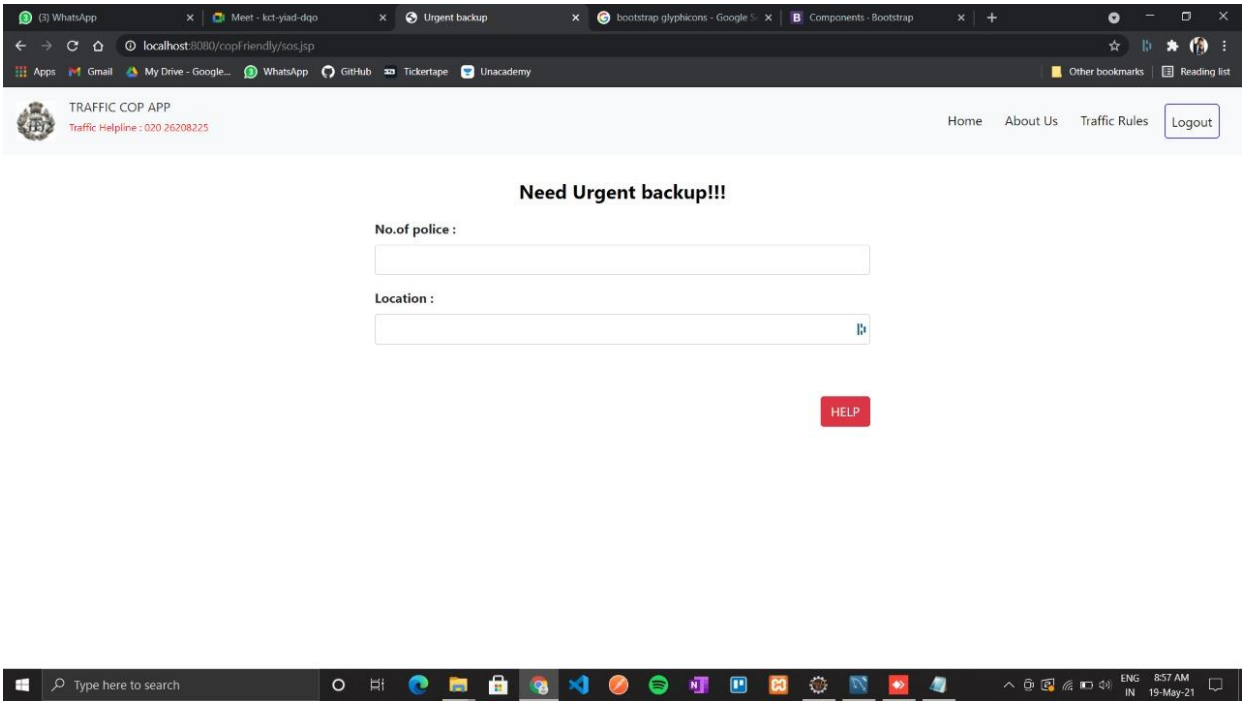
6.CONCLUSION AND FUTURE SCOPE

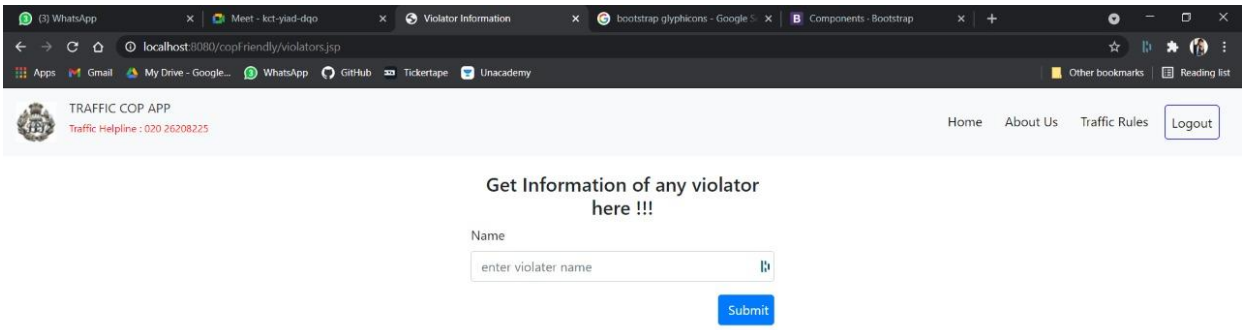
The applications of traffic information have become more popular with improvement of the condition of the wireless network, mobile devices and so on. It also can get the real time traffic information which improves the efficiency of traffic service and management. System provides a faster way of information collection for traffic police, reporting an accident and also a secure method for citizens.

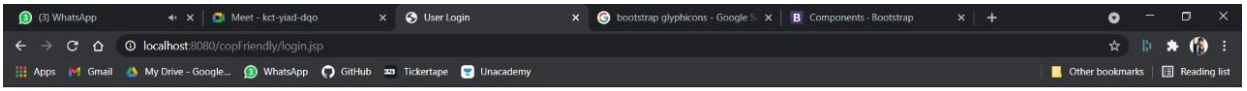
It also maintains complete information about the user who committed the crime and fine generated. Here we are developing such a type of module which helps to reduce RTO work manually and it helps to save time. Considerably reduce the corruption in the transport department.The Operating System of smartphone is android which helps in interfacing with embedded systems.

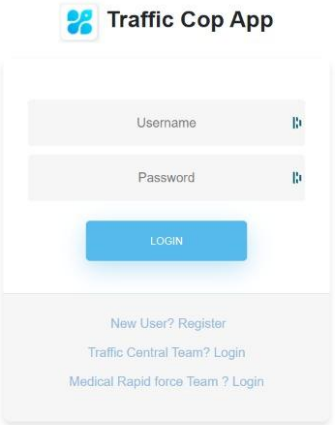
This is an effort to automate the current system in the fine collection System. Therefore enhanced penalties would be imposed for repetition of violation of traffic rules.Fake registration plates, if any, would be detected immediately. The medical rapid force team saved a number of lives due to its GPS feature which helps the ambulance driver reach to the exact location without wasting time, hence saving so many lives.

7. Screenshots

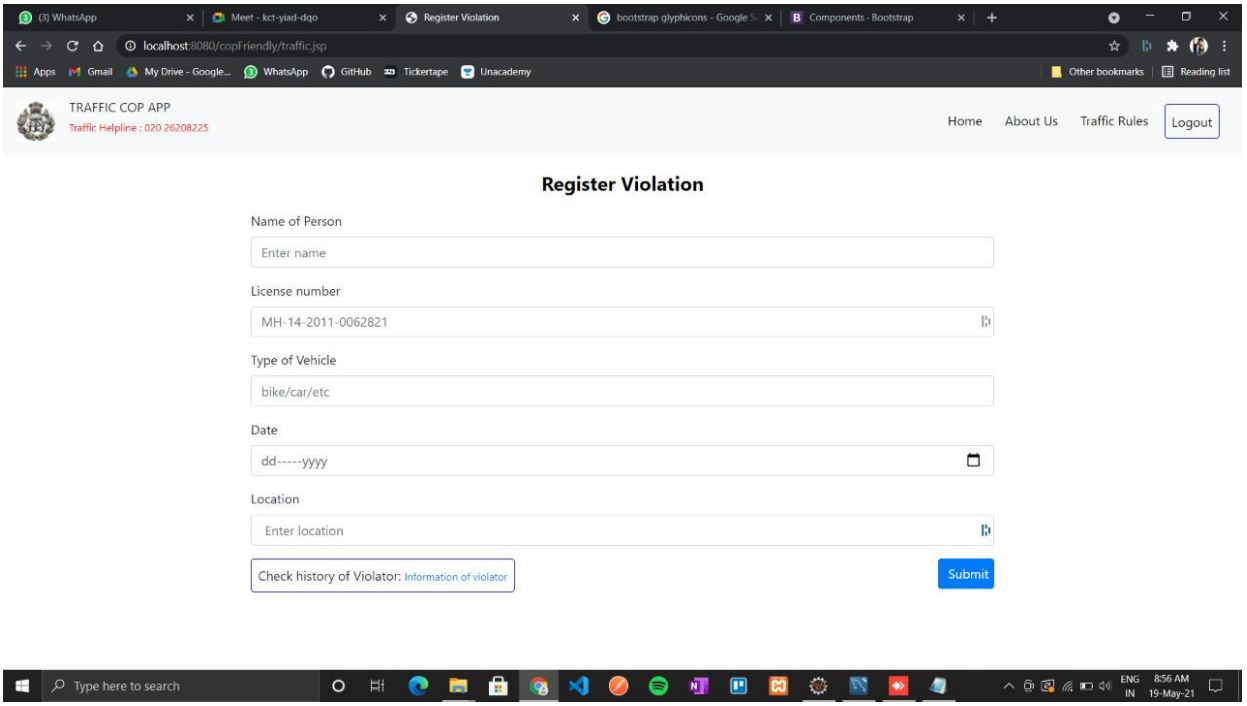




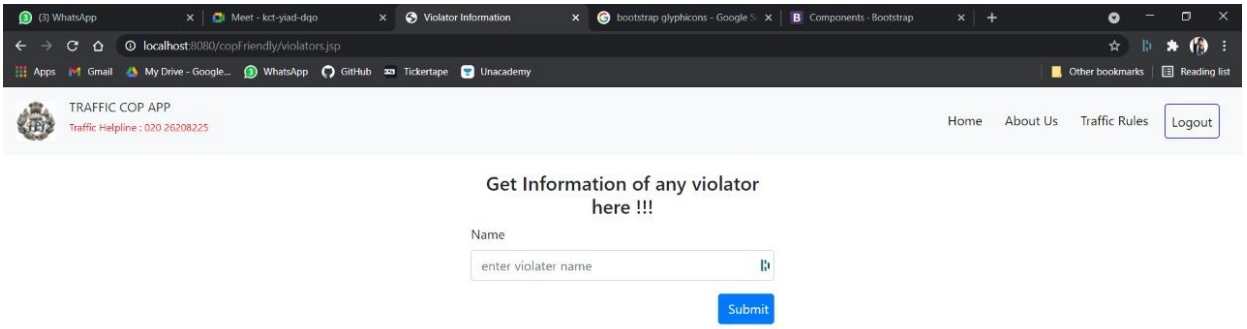

(3) WhatsApp
Meet - kct-yiad-dqo
User Login
bootstrap glyphicons - Google S
Components · Bootstrap
localhost:8080/copFriendly/login.jsp
Apps
Gmail
My Drive - Google...
WhatsApp
GitHub
Tickertape
Unacademy
Other bookmarks
Reading list

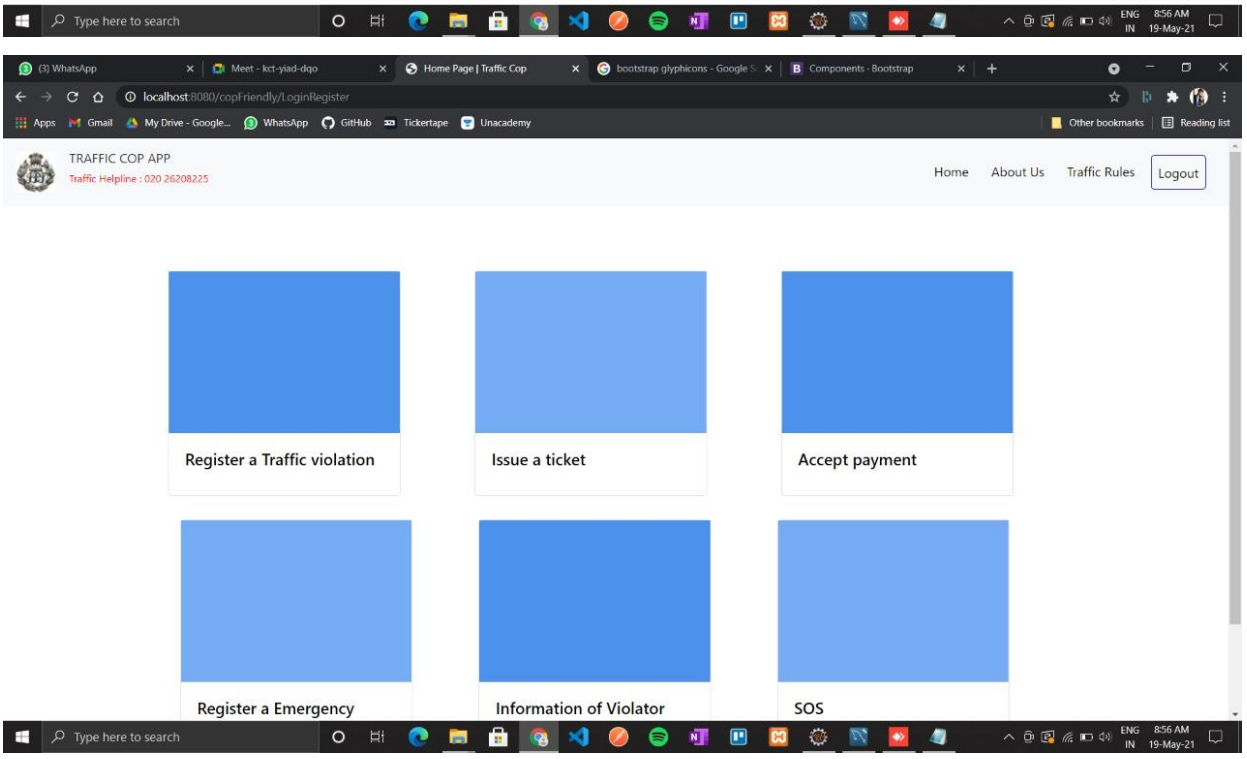

Traffic Cop App
Username
Password
LOGIN
New User? Register
Traffic Central Team? Login
Medical Rapid force Team ? Login

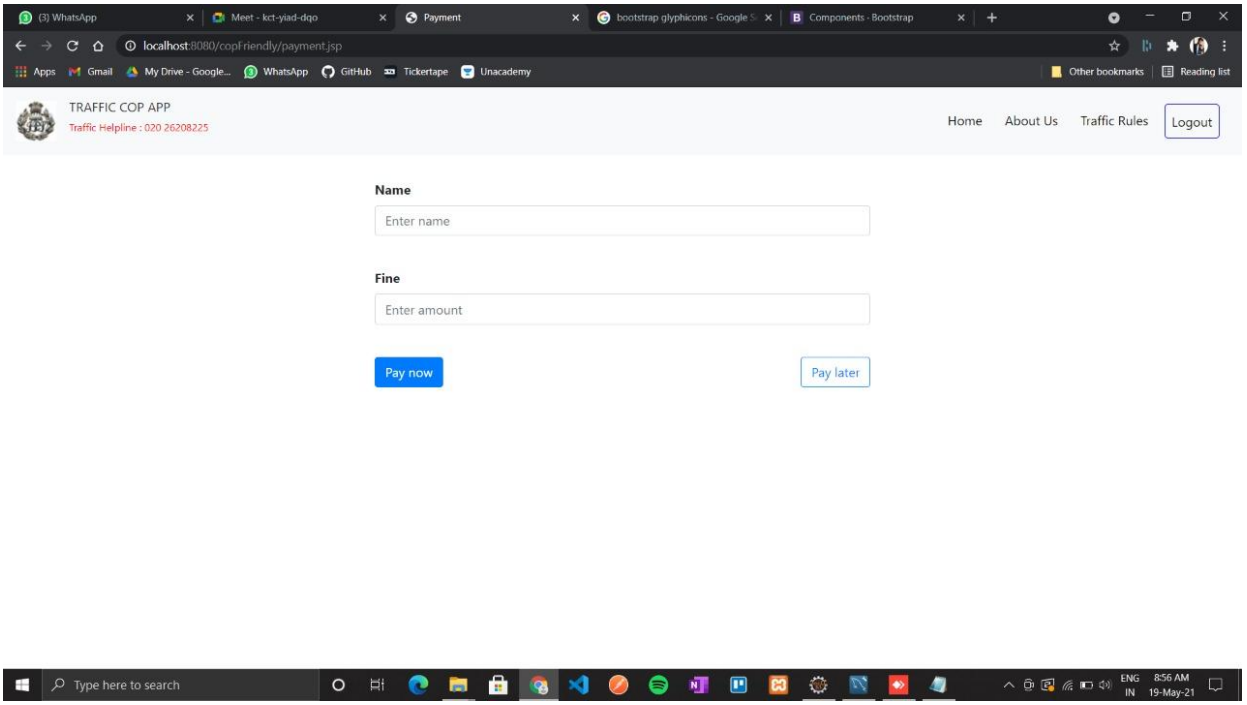
Type here to search
ENG
IN
8:54 AM
19-May-21


(3) WhatsApp
Meet - kct-yiad-dqo
Register Violation
bootstrap glyphicons - Google S
Components · Bootstrap
localhost:8080/copFriendly/traffic.jsp
Apps
Gmail
My Drive - Google...
WhatsApp
GitHub
Tickertape
Unacademy
Other bookmarks
Reading list
TRAFFIC COP APP
Traffic Helpline : 020 26208225
Home
About Us
Traffic Rules
Logout
Register Violation
Name of Person
Enter name
License number
MH-14-2011-0062821
Type of Vehicle
bike/car/etc
Date
dd-----yyyy
Location
Enter location
Check history of Violator: Information of violator
Submit

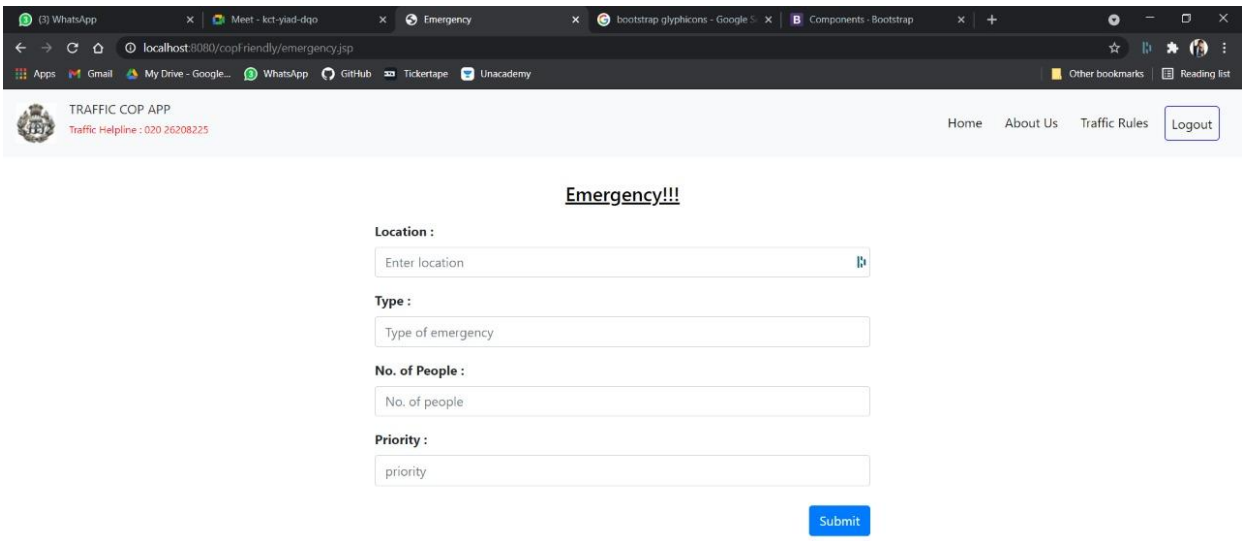
Type here to search
ENG
IN
8:56 AM
19-May-21


(3) WhatsApp
Meet - kct-yiad-dqo
Violator Information
bootstrap glyphicons - Google S
Components · Bootstrap
localhost:8080/copFriendly/violators.jsp
Apps
Gmail
My Drive - Google...
WhatsApp
GitHub
Tickertape
Unacademy
Other bookmarks
Reading list
TRAFFIC COP APP
Traffic Helpline : 020 26208225
Home
About Us
Traffic Rules
Logout
Get Information of any violator here !!!
Name
enter violater name
Submit


Type here to search
ENG
IN
8:56 AM
19-May-21
(3) WhatsApp
Meet - kct-yiad-dqo
Home Page | Traffic Cop
bootstrap glyphicons - Google S
Components · Bootstrap
localhost:8080/copFriendly/LoginRegister
Apps
Gmail
My Drive - Google...
WhatsApp
GitHub
Tickertape
Unacademy
Other bookmarks
Reading list
TRAFFIC COP APP
Traffic Helpline : 020 26208225
Home
About Us
Traffic Rules
Logout
Register a Traffic violation
Issue a ticket
Accept payment
Register a Emergency
Information of Violator
SOS
Type here to search
ENG
IN
8:56 AM
19-May-21


(3) WhatsApp
Meet - kct-yiad-dqo
Payment
bootstrap glyphicons - Google S
Components · Bootstrap
localhost:8080/copFriendly/payment.jsp
Apps
Gmail
My Drive - Google...
WhatsApp
GitHub
Tickertape
Unacademy
Other bookmarks
Reading list
TRAFFIC COP APP
Traffic Helpline : 020 26208225
Home
About Us
Traffic Rules
Logout
Name
Enter name
Fine
Enter amount
Pay now
Pay later

Type here to search
ENG
IN
8:56 AM
19-May-21


(3) WhatsApp
Meet - kct-yiad-dqo
Emergency
bootstrap glyphicons - Google S
Components · Bootstrap
localhost:8080/copFriendly/emergency.jsp
Apps
Gmail
My Drive - Google...
WhatsApp
GitHub
Tickertape
Unacademy
Other bookmarks
Reading list
TRAFFIC COP APP
Traffic Helpline : 020 26208225
Home
About Us
Traffic Rules
Logout
Emergency!!!
Location :
Enter location
Type :
Type of emergency
No. of People :
No. of people
Priority :
priority
Submit

Type here to search
ENG
IN
8:56 AM
19-May-21

7.REFERENCES

1. Muhammad Baqer Mollah, Kazi Reazul Islam, Sikder Sunbeam Islam, E-Police System for Improved E-Government Services of Developing Countries MAY-2012.
2. Anand Kulkarni, Naved Khan, Ajinkya Modak Voice Enabled Android Application for Traffic Complaint andPothole Notification System Using GPS and GSM-GPRS Technology International Journal of Advanced Research in Computer and Communication Engineering Vol. 3, Issue 3, March 2014 .
3. 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.
4. Roxanne Hawi. George Okeyo “Techniques for Smart Traffic Control: An In-depth Review”,2015. [5] Manjunath S Patil, Basavaraj K Madagouda, Vinod C Desai “E-RTO Management System” In IJERT ISSN: 2278-0181 V2IS70177 Vol. 2 Issue 7, July – 2013.