QR BASEDPENALTY CHARGING FOR TRAFFIC POLICE

A PROJECT REPORT

Submitted by

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DECLARATION

I affirm that the project work titled **"QR BASEDPENALTY CHARGING FOR TRAFFIC POLICE**" is being submitted in partial fulfilment for the award of "BACHELOR OF TECHNOLOGY " the original work carried out by us. It has not formed the part of any other project work submitted for the award of any degree or diploma, either in this or any other University.

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ABSTRACT

The project titled "**QR BASEDPENALTY CHARGING FOR TRAFFIC POLICE**" is designed using Standard Android 4.0.3 platform. The platform used to develop the application is Eclipse IDE (Mars) with Java 1.7 Standard Edition.

The project is concerned with managing traffic violation penalty information through mobile app. The project contains license details, vehicle details, penalty details, and accident information processing through this app.

The project will also focus on mobile application which will help to know information about the traffic violation penalty tracked by Vehicle No on road. The Quick Response (Vehicle No) system became popular outside the automotive industry due to its fast readability and greater storage capacity compared to standard barcodes. Applications include product tracking, item identification, time tracking, document management, and general marketing.

A Vehicle No consists of black squares arranged in a square grid on a white background, which can be read by an imaging device such as a camera. The required data is then extracted from patterns that are present in both horizontal and vertical components of the image.

This application will received the fine automatically from the owner's bank account according to the rule broken by vehicle driver and its actual fine decided by government. This application will also send the message to vehicle owner about the type of rule broken by them, fine according to that rule, proof of breaking the rule in the form of

image capture by mobile camera, date and time of breaking the rule and accurate amount receiving by their bank account as fine paid for breaking the rule. workload of traffic police and government and also reduction in accidents and corruption too in country.

ACKNOWLEDGEMENT

We feel highly honoured to extend our sincere gratitude to our beloved Chairman, Lion **Dr.K.S.RANGASAMY MJF.,** K.S.R Educational Institutions and our I Managing Trustee **Mr.R.SRINIVASAN BBM., MISTE**., Aarthi Educational and Chairman Trust for providing all facilities to complete this project work.

We would like to acknowledge the constant and kind support provided by our highly Principal **Dr. P.SENTHILKUMAR M.E., Ph.D.(IITM)** we feel highly elated to thank our respectable Head of the Department **Dr.G.SINGARAVEL M.E., Ph.D.** and our project coordinator. **Mr. S. GOWTHAM M.E.,** who guided us and was a pillar of support for the successful completion of the project.

We are the most fortunate in having the opportunity to work under the Supervisor Mr.S.GOWTHAM M.E., express our sincere thanks to him.

Finally, I wish to thank all teaching and non-teaching staff members of the Department of Information Technology and my friends for their support towards the successful completion of this project.

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ABIRAMI S M **AKILA A** **KAMAKLESREE P B**

TABLEOFCONTENTS

LIST OF TABLE

LIST OF FIGURE

CHAPTER 1

INTRODUCTION

1.1 OBJECTIVES

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.

- This work is aimed at developing an android application that depicts smart traffic offence analysis tool.
- To facilitate e-payment using VEHICLE.
- To facilitate authenticated user access.
- To develop an application this is faster, efficient and manageable.
- To prepare complete, integrated solution for traffic offence management.

1.2 SCOPE OF THEPROJECT

- To store the vehicle details in Vehicle No.
- To provide Vehicle No to every registered vehicles.
- To make a quick view of vehicle details during verification..
- This project helps in controlling traffic offence.

- This system is able to read and display the ORcode.

1.3 SYSTEMANALYSIS

- Existing system
- Drawbacks of existing system
- Proposed system
- Advantages of the proposed system
- Feasibility study
- Economic feasibility
- Operational feasibility
- Technical feasibility

1.3.1 Existing System

The existing system is in offline. Traffic violation penalty information is writing in printed charge sheet. Hard copies are maintained in traffic police department. Users need to pay to traffic police on the spot. This increases the time and corruption. The existing system has several drawbacks, such as traffic problems, complexity, cost, etc. 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.

1.3.2 Drawbacks of Existing System

- The existing system has following disadvantages,
- Due to traffic and corruption problem and many other issues are created. All system work manual and does not receive the fine automatically due to this Corruption increases.
- It increases the paperwork.

1.3.3 Proposed System

The proposed system is android based. The proposed system will reduce all the issues related to traffic rule violation on road. In this system there are automatic traffic rules violation fine collection through Vehicle No, message sending and automatic fine receiving from owner's bank account.

In this system, VEHICLE reader will read the VEHICLE tag which is given to the individual vehicle while purchasing or passing the vehicle driving license received by RTO which will be mandatory.

1.3.4 Advantages of the Proposed System

- The proposed system has following advantages,
- The user can view fine details through mobile.
- SMS alert is possible so that user can find information even in busy schedule.

- Past information can be easily retrieved with few key words search.
- This project will reduce the traffic problems and minimize the traffic rules violation on road.
- It make fine collection easy due to automatic fine reduction from owners bank account according to rule broke by vehicle user or owner and the actual fine.
- It maintains the transparency between peoples and government authority due to which there is reduction in corruption in the world.

1.3.5 Feasibility Study

The main objective of the system analysis is to study the existing operation and to learn and accomplish the processing activities. The management of location status update information provision through android application needs to be analyzed well. The details are processed through coding themselves. It will be controlled by the programs alone.

1.3.6 Economic Feasibility

The organization has to buy a personal computer with a keyboard and a mouse, this is a direct cost. There are many direct benefits of covering the manual system to computerized system. The user can be given responses on asking questions, justification of any capital outlay is that it will reduce expenditure or improve the quality of service or goods, which in turn may be expected to provide the

increased profits. The project is economical such that it consumes less memory in the mobile device and so consumes less power only.

1.3.7 Operational Feasibility

The Proposed system accessing process to solves problems what occurred in existing system. The current day-to-day operations of the organization can be fit into this system. Mainly operational feasibility should include on analysis of how the proposed system will affects the organizational structures and procedures.

1.3.8 Technical Feasibility

The cost and benefit analysis may be concluded that computerized system is favorable in today's fast moving world. The assessment of technical feasibility must be based on an outline design of the system requirements in terms of input, output, files, programs and procedure. The project aims to provide the latitude and longitude of current location information to all people having android mobiles through customized android application's activities.

CHAPTER 2

SYSTEM SPECIFICATION

2.1 HARDWAREREQUIREMENTS

Processor	:	Intel Dual Core
Hard Disk Capacity	:	500GB
RAM	:	2 GBSD
Monitor	:	15^{inch}Color
Keyboard	:	102keys
Mouse	:	Optical Mouse

2.2 SOFTWARE REQUIREMENTS FORSYSTEM

Environment	:	Eclipse IDE(Mars).
Front-End	:	Android4.0.3
Coding	:	JDK1.6
Operating System	:	Windows XPSP3
Implementation OS	:	Android4.0.3
Back End	:	SQLite3

2.1 REQUIREMENTS FORMOBILE

Memory	:	32 MB
Processor	:	200 MHz Processor
OS	:	Android

2.2 SOFTWAREDESCRIPTION

FRONT END INTRODUCTION

Android is a mobile operating system (OS) currently developed by Google, based on the Linux kernel and designed primarily for touch screen mobile devices such as smart phones and tablets. Android's user interface is based on direct manipulation, using touch gestures that loosely correspond to real-world actions, such as swiping, tapping and pinching, to manipulate on-screen objects, along with a virtual keyboard for text input. In addition to touch screen devices, Google has further developed Android TV for televisions, Android Auto for cars, and Android Wear for wrist watches, each with a specialized user interface.

Variants of Android are also used on notebooks, game consoles, digital cameras, and other electronics. As of 2015, Android has the largest installed base of all operating systems. It is the second most commonly used mobile operating system in the United States, while iOSis the first. Initially developed by Android, Inc., which Google bought in 2005, Android was unveiled in 2007, along with the founding of the Open Handset Alliance – a consortium of hardware, software, and

telecommunication companies devoted to advancing open standards for mobile devices. As of July 2013, the Google Play store has had over one million Android applications ("apps") published, and over 50 billion applications downloaded.

An April–May 2013 survey of mobile application developers found that 71% of developers create applications for Android, and a 2015 survey found that 40% of full-time professional developers see Android as their priority target platform, which is comparable to Apple's iOS on 37% with both platforms far above others. At Google I/O 2014, the company revealed that there were over one billion active monthly Android users, up from 538 million in June 2013.

Android's source code has been used as the basis of different ecosystems, most notably that of Google which is associated with a suite of proprietary software called Google Mobile Services (GMS), that frequently comes pre-installed on said devices. This includes core apps such as Gmail, the digital distribution platform Google Play and associated Google Play Services development platform, and usually apps such as the Google Chrome web browser. These apps are licensed by manufacturers of Android devices certified under standards imposed by Google. Other competing Android ecosystems include Amazon. com'sFire OS, or Lineage OS. Software distribution is generally offered through proprietary application stores like Google Play Store or Samsung Galaxy Store, or open source platforms like Aptoide or F-Droid, which utilize software packages in the APK format.

Android Studio is the official integrated development environment (IDE) for Google's Android operating system, built on JetBrains' IntelliJ IDEA software and designed specifically for Android development. It is available for download on Windows, macOS and Linux based operating systems. It is a replacement for the Eclipse Android Development Tools (ADT) as the primary IDE for native Android application development.

Android Studio was announced on May 16, 2013 at the Google I/O conference. It was in early access preview stage starting from version 0.1 in May 2013, then entered beta stage starting from version 0.8 which was released in June 2014. The first stable build was released in December 2014, starting from version 1.0.

Since May 7, 2019, Kotlin is Google’s preferred language for Android app development.

Still, other programming languages are supported by Android Studio, such as Java and C++. The following features are provided in the current stable version:

- Gradle-based build support
- Android-specific refactoring and quick fixes
- Lint tools to catch performance, usability, version compatibility and other problems
- Pro Guard integration and app-signing capabilities

- Template-based wizards to create common Android designs and components
- A rich layout editor that allows users to drag-and-drop UI components, option to preview layouts on multiple screen configurations
- Support for building Android We are apps
- Built-in support for Google Cloud Platform, enabling integration with Firebase Cloud Messaging (Earlier 'Google Cloud Messaging') and Google App Engine
- Android Virtual Device (Emulator) to run and debug apps in the Android studio.

Android Studio supports all the same programming languages of IntelliJ (and CLion) e.g. Java, C++, and more with extensions, such as Go;[19] and Android Studio 3.0 or later supports Kotlin[20] and "all Java 7 language features and a subset of Java 8 language features that vary by platform version." External projects back port some Java 9 features. While IntelliJ that Android Studio is built on supports all released Java versions, and Java 12, it's not clear to what level Android Studio supports Java versions up to Java 12 (the documentation mentions partial Java 8 support). At least some new language features up to Java 12 are usable in Android.

ECLIPSE

Eclipse is an integrated development environment (IDE) used in computer programming, and in 2014 was the most widely used Java IDE in one website's poll. It contains a base workspace and an extensible plug-in system for customizing the environment. Eclipse is written mostly in Java and its primary use is for developing Java applications, but it may also be used to develop applications in other programming languages via plug-ins, including Ada, ABAP, C, C++, C#, Clojure, COBOL, D, Erlang, Fortran, Groovy, Haskell, JavaScript, Julia, Lasso, Lua, NATURAL, Perl, PHP, Prolog, Python, R, Ruby (including Ruby on Rails framework), Rust, Scala, and Scheme. It can also be used to develop documents with LaTeX (via a TeXlipse plug- in) and packages for the software Mathematica. Development environments include the Eclipse Java development tools (JDT) for Java and Scala, Eclipse CDT for C/C++ and Eclipse PDT for PHP, among others.

The initial codebase originated from IBM Visual Age. The Eclipse software development kit (SDK), which includes the Java development tools, is meant for Java developers. Users canextend its abilities by installing plug-ins written for the Eclipse Platform, such as development toolkits for other programming languages, and can write and contribute their own plug- inmodules. Since the introduction of the OSGi implementation (Equinox) in version 3 of Eclipse, plug-ins can be plugged-stopped dynamically and are termed (OSGI) bundles.

Eclipse software development kit (SDK) is free and open-source software, released under the terms of the Eclipse Public License, although it is incompatible with the GNU General Public License. It was

one of the first IDEs to run under GNU Class path and it runs without problems under Iced Tea.

ARCHITECTURE

Eclipse uses plug-ins to provide all the functionality within and on top of the run-time system. Its run-time system is based on Equinox, an implementation of the OSGi core framework specification.

In addition to allowing the Eclipse Platform to be extended using other programming languages, such as C and Python, the plug-in framework allows the Eclipse Platform to work with typesetting languages like LaTeX and networking applications such as telnet and database management systems. The plug-in architecture supports writing any desired extension to the environment, such as for configuration management. Java and CVS support is provided in the Eclipse SDK, with support for other version control systems provided by third-party plug-ins.

With the exception of a small run-time kernel, everything in Eclipse is a plug-in. Thus, every plug-in developed integrates with Eclipse in the same way as other plug-ins; in this respect, all features are "created equal". Eclipse provides plug-ins for a wide variety of features, some of which are from third parties using both free and commercial models. Examples of plug- ins include for Unified Modeling Language (UML), for Sequence and other UML diagrams, a plug-in for DB Explorer, and many more.

The Eclipse SDK includes the Eclipse Java development tools (JDT), offering an IDE with a built-in Java incremental compiler and a full model of the Java source files. This allows for advanced refactoring techniques and code analysis. The IDE also makes use of a workspace, in this case a set of metadata over a flat file space allowing external file modifications as long as the corresponding workspace resource is refreshed afterward.

Eclipse implements the graphical control elements of the Java toolkit called Standard Widget Toolkit (SWT), whereas most Java applications use the Java standard Abstract Window Toolkit (AWT) or Swing. Eclipse's user interface also uses an intermediate graphical user interface layer called JFace, which simplifies the construction of applications based on SWT. Eclipse was made to run on Wayland during a Google Summer of Code (GSoC) Project in 2014.

MODELLING PLATFORM

The Modeling project contains all the official projects of the Eclipse Foundation focusing on model-based development technologies. All are compatible with the Eclipse Modeling Framework created by IBM. Those projects are separated in several categories: Model Transformation, Model Development Tools, Concrete Syntax Development, Abstract Syntax Development, Technology and Research, and Amalgam.

Model Transformation projects uses Eclipse Modeling Framework (EMF) based models as an input and produces either a model or text as an output. Model to model transformation projects

includes ATLAS Transformation Language (ATL), an open source transformation language and toolkit used to transform a given model or to generate a new model from a given EMF model. Model to text transformation projects contains Acceleo, an implementation of MOFM2T, a standard model to text language from the Object Management Group (OMG). The Acceleo code generator can generate any textual language (Java, PHP, Python, etc.) from EMF based models defined with any meta-model (Unified Modeling Language (UML), Systems Modeling Language (SysML), etc.). It is open-source.

DEVELOPMENT

Android is developed in private by Google until the latest changes and updates are ready to be released, at which point the source code is made available publicly. This source code will only run without modification on select devices, usually the Nexus series of devices. The source code is, in turn, adapted by OEMs to run on their hardware. Android's source code does not contain the often proprietary device drivers that are needed for certain hardware components.

In 2007, the green Android logo was designed for Google by a graphic designer Irina Blok. The design team was tasked with a project to create a universally identifiable icon with the specific inclusion of a robot in the final design. After numerous design developments based on science-fiction and space movies, the team eventually sought inspiration from the human symbol on restroom doors and modified the figure into a robot shape. As Android is open-sourced, it was agreed that the logo should be likewise, and since its launch the green logo has been reinterpreted into countless variations on the original design.

BACK END INTRODUCTON

SQLite is a relational database management system contained in a C programming library. In contrast to many other database management systems, SQLite is not a client–server database engine. Rather, it is embedded into the end program. SQLite is ACID-compliant and implements most of the SQL standard, using a dynamically and weakly typed SQL syntax that does not guarantee the domain integrity.

DESIGN

Unlike client–server database management systems, the SQLite engine has no standalone processes with which the application program communicates. Instead, the SQLite library is linked in and thus becomes an integral part of the application program. The library can also be called dynamically. Due to the server-less design, SQLite applications require fewer configurations than client-server databases. SQLite is called *zero-conf*[7] because it does not require service management (such as startup scripts) or access control based on GRANT and passwords.

Several computer processes or threads may access the same database concurrently. Several read accesses can be satisfied in parallel. A write access can only be satisfied if no other accesses are currently being serviced. Otherwise, the write access fails with an error code (or can automatically be retried until a configurable timeout expires). This concurrent access situation would change when dealing with temporary tables. This restriction is relaxed in version 3.7 when write-ahead logging (WAL) is turned on enabling concurrent reads and writes.

SQLite version 3.7.4 first saw the addition of the FTS4(full text search) module, which features enhancements over the older FTS3 module. FTS4 allows users to perform full text searches on documents similar to how search engines search web pages. Version 3.8.2 added support for creating tables without rowed, which may provide space and performance improvements. Common table expressions support was added to SQLite in version 3.8.3. SQLite with full Unicode function is optional.

2.3 SYSTEM FLOWDIAGRAM

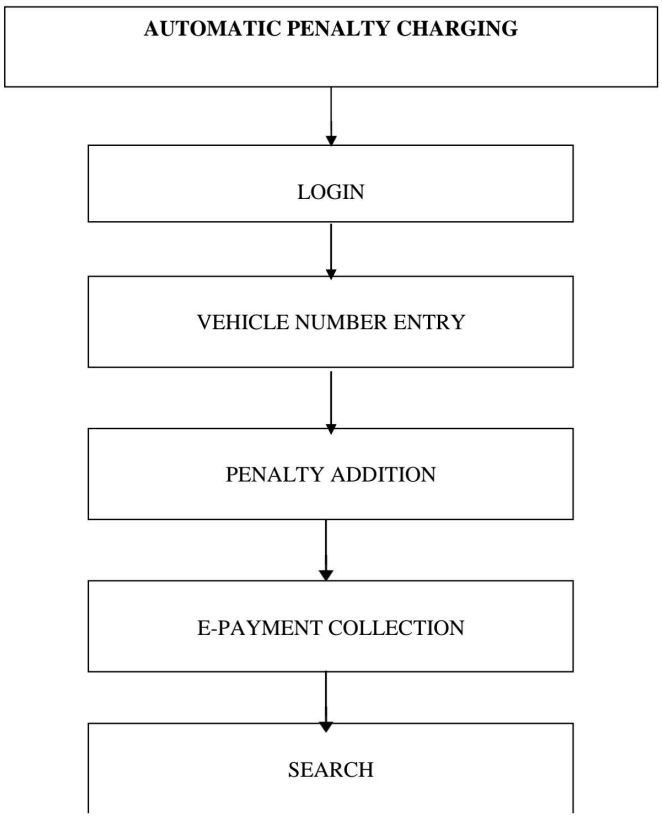


Figure2.1 System Flow Diagram

2.4 MODULEDESCRIPTION

This project contain 5 modules,

- ADMIN
- USER
- RTO
- TRAFFICPOLICE

2.6.1 ADMIN

- Add RTO details
- View RTO details
- Add traffic police
- View traffic police

ADD RTO DETAILS

In this module admin can add the RTO details are RTO id, Office name, address, mail id, mobile no, password. This details are stored in the RTO table, This details user to username and password used to RTO login.

VIEW RTO DETAILS

In this module admin can view the RTO details are RTO id, Office name, address, mail id, mobile no, password. This details are view in the RTO table, This details user to username and password used to RTO login.

ADD TRAFFIC POLICE

In this module admin can add the Traffic police details are Police id, name, address, mail id, mobile no, password. This details are stored in the police table, This details user to username and password used to police login.

VIEW TRAFFIC POLICE

In this module admin can view the Traffic police details are Police id, name, address, mail id, mobile no, password. This details are retrived in the police table, This details user to username and password used to police login.

2.6.2 RTO

- Add vehicle details
- Add vehicle owner details
- View vehicle details
- View vehicle owner details

ADD VEHICLE DETAILS

In this module RTO add the vehicle details are vehicle no, RC number, Type of vehicle, manufacture company, model, specification. This details are stored in the vehicle table.

ADD VEHICLE OWNER DETAILS

In this module RTO can add the vehicle owner details are Vehicle no, owner name, address, mobile no, mail id, other details. This details are stored in the vehicle owner table.

VIEW VEHICLE DETAILS

In this module RTO can view the vehicle details are vehicle no, RC number, Type of vehicle, manufacture company, model, specification. This details are retrieved in the vehicle table.

VIEW VEHICLE OWNER DETAILS

In this module RTO can view the vehicle owner details are Vehicle no, owner name, address, mobile no, mail id, other details. This details are retrieved in the vehicle owner table.

2.6.3 USER

- User registeration
- User login
- Search vehicle details
- Search vehicle owner details
- View vehicle owner details
- View vehicle details
- View post complain issues
- View fine fixing

USER REGISTRATION

In this module user can register the our details are user id, user name, address, mobile no, mail id, password. This details are stored in the user table. The username and password to login the user.

USER LOGIN

In this module, only authorized users can login into our application using their username and password. A number of username and password are saved in the database and of which one of the username, password need to be given.

SEARCH VEHICLE DETAILS

In this module user can search the vehicle details to this module. The search to enter the vehicle id to get the vehicle details.

SEARCH VEHICLE OWNERDETAILS

In this module user can search the vehicle owner details to this module. The search to enter the vehicle id to get the vehicle owner details.

VIEW VEHICLE DETAILS

In this module user can view the vehicle details are vehicle no, RC number, Type of vehicle, manufacture company, model, specification. This details are retrieved in the vehicle table.

VIEW VEHICLE OWNER DETAILS

In this module user can view the vehicle owner details are Vehicle no, owner name, address, mobile no, mail id, other details. This details are retrieved in the vehicle owner table.

VIEW COMPLAIN ISSUES

In this module user can view the complain details are vehicle no, complain title, complain details this details are retrieved in the complain table.

VIEW FINE FIXING

In this module user can view the fine amount in particular user to details are vehicle no, fine amount, fine details. This details are view in the fine table.

2.6.4 Traffic Police

- Post complain issues
- Fine fixing
- View post complain issues
- View fine fixing

POST COMPLAIN ISSUES

In this module Traffic police post the complain details are vehicle no, complain title, complain details this details are stored in the complain table. This details are used to the user can view.

FINE FIXING

In this module traffic police add the fine amount in particular user to details are vehicle no, fine amount, fine details. This details are stored in the fine table. The user can view this details.

VIEW COMPLAIN ISSUES

In this module Traffic police view the complain details are vehicle no, complain title, complain details this details are retrieved in the complain table. This details are used to the user can view.

VIEW FINE FIXING

In this module traffic police view the fine amount in particular user to details are vehicle no, fine amount, fine details. This details are retrieved in the fine table. The user can view this details.

2.5 DATA FLOW DIAGRAM LEVEL0

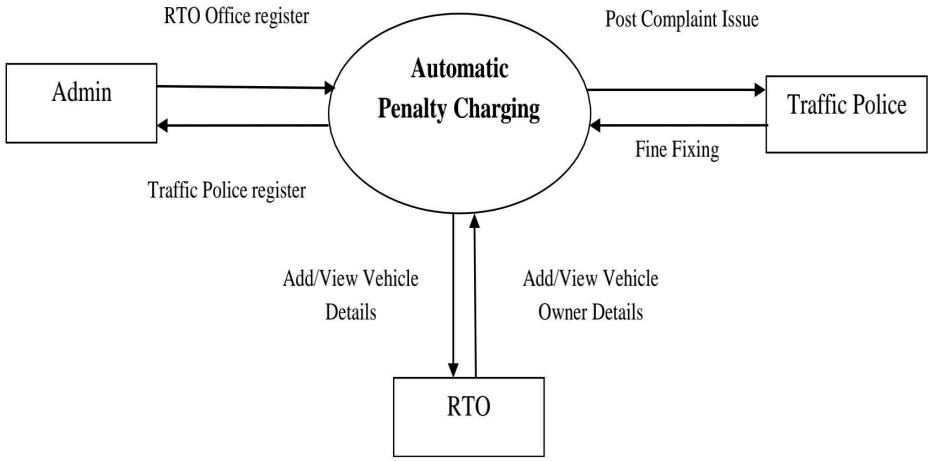


Figure 2.2Data Flow Diagram Level0

LEVEL 1

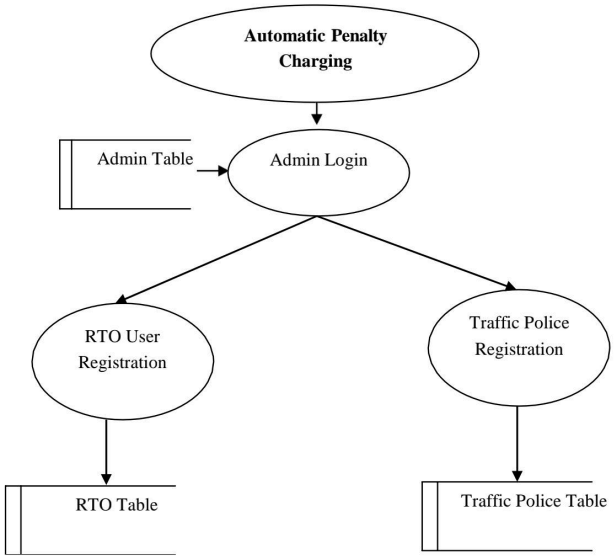


Figure 2.3Data Flow Diagram Level1

LEVEL 2

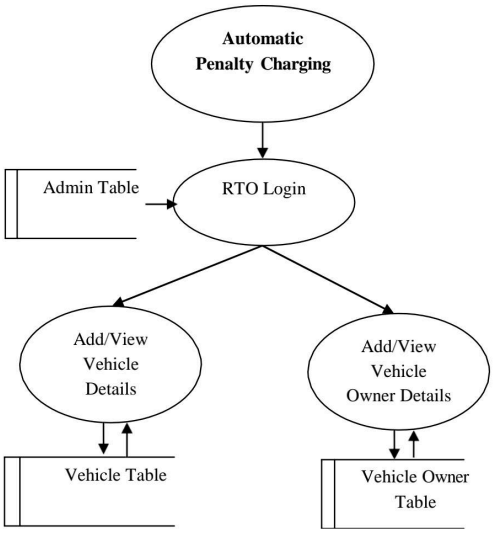


Figure 2.4Data Flow Diagram Level2

LEVEL 3

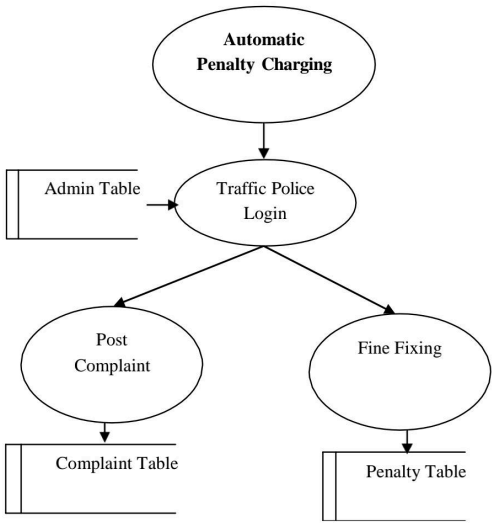


Figure 2.5Data Flow Diagram Level3

CHAPTER 3

SYSTEM DESIGN AND DEVELOPMENT

3.1 INPUTDESIGN

Input design is the process of converting user-originated inputs to a computer understandable format. Input design is one of the most expensive phases of the operation of computerized system and is often the major problem of a system. A large number of problems with a system can usually be tracked backs to fault input design and method. Every moment of input design should be analyzed and designed with utmost care.

The system takes input from the users, processes it and produces an output. Input design is link that ties the information system into the world of its users. The system should be user- friendly to gain appropriate information to the user. The decisions made during the input design are

- ✓ To provide cost effective method of input.
- ✓ To achieve the highest possible level of accuracy.
- ✓ To ensure that the input is understand by the user.

System analysis decide the following input design details like, what data to input, what medium to use, how the data should be

arranged or coded, data items and transactions needing validations to detect errors and at last the dialogue to guide user in providing input.

Input data of a system may not be necessarily is raw data captured in the system from scratch. These can also be the output of another system or subsystem. The design of input covers all the phases of input from the creation of initial data to actual entering of the data to the system for processing. The design of inputs involves identifying the data needed, specifying the characteristics of each data item, capturing and preparing data fro computer processing and ensuring correctness of data.

Any Ambiguity in input leads to a total fault in output. The goal of designing the input data is to make data entry as easy and error free as possible.

3.2 INPUTFORMS

- Add vehicle details
- Add vehicle owner details
- Output design
- View vehicle details
- View vehicle owner details
- Database design
- Data integeration
- Data independence

3.7 ADD VEHICLEDETAILS

In this module, RTO adds vehicle details such as vehicle number, entry date, RC number, vehicle type, manufactured company, model and specifications. These details are stored into vehicle table.

3.8 ADD VEHICLE OWNERDETAILS

In this module, RTO adds the vehicle owner details such as vehicle number, entry date, vehicle owner name, address, mail id, mobile number and other details. These details are stored into vehicle owner table.

3.8.1 Output Design

Output Design generally refers to the results and information's that are generated by the system for many end-users, output is the main reason for developing the system and the basis on which they evaluate the usefulness of the application.

The objective of a system finds its shape in terms of the output. The analysis of the objective of a system leads to determination of outputs. Outputs of a system can face various forms. The most common are reports, screen displays, printed forms, graphical drawings etc.,

3.8.2 View Vehicle Details

In this form the RTO views the vehicle details such as vehicle number, entry date, RC number, vehicle type, manufactured company,

model and specifications. These details are retrieving from the vehicle details table and viewed.

3.8.3 View Vehicle Owner Details

In this module, RTO views the vehicle owner details such as vehicle number, entry date, vehicle owner name, address, mail id, mobile number and other details. These details are retrieved from the vehicle owner table.

3.8.4 Database Design

The most important consideration in designing the database is how information will be used. The main objectives of designing a database are:

3.8.5 Data Integration

In a database, information from several files are coordinated, accessed and operated upon as through it is in a single file. Logically, the information are centralized, physically, the data may be located on different devices, connected through data communication facilities.

3.8.6 Data Independence

Data independence is the insulation of application programs from changing aspects of physical data organization. This objective seeks to allow changes in the content and organization of physical data without reprogramming of applications and to allow modifications to application programs without reorganizing the physic al data.

3.5 TABLES

TABLE NAME: ADMIN

Purpose: This table is used to store the username and password details

Table 3.1 Admin

S.No	FILED NAME	TYPE	SIZE	DESCRIPTION
1	User Name	Varchar	20	User Name Details
2	Password	int	10	Password Details

TABLE NAME: VEHICLE

Purpose: This table is used to store the vehicle details

Primary key:

Table 3.2 Vehicle

S.No	FILED NAME	TYPE	SIZE	DESCRIPTION
1	VehicleNo	Varchar	15	Vehicle Details
2	EntryDate	Date Time	10	Details
3	RCNO	Varchar	20	RC number details
4	VehicleType	Varchar	15	Details about the vehicle type
5	Manufactured Company	Varchar	15	Manufacture details
6	Model	Varchar	10	Details about the vehicle model
7	Specification	Varchar	20	Specifications about the vehicle

TABLE NAME: VEHICLE OWNER TABLE

Purpose: This table is used to store the details of the vehicle owner

Table 3.3 Vehicle owner

S.No	FILED NAME	TYPE	SIZE	DESCRIPTION
1	Vehicle No	Varchar	15	Vehicle Number details
2	Entry Date	Date Time	20	Details about the entry date of the vehicle
3	Vehicle Owner Name	Varchar	20	Details of the vehicle owner
4	Address	Varchar	20	Address details of the owner
5	Mail Id	Varchar	20	Mail id Details
6	Mobile No	Varchar	15	Mobile number details
7	Other Details	Varchar	50	Additional details about the vehicle owner

TABLE NAME: RTO TABLE

Purpose: This table is used to store the registration details of the RTO user

Table 3.4 Rto

S.No	FILED NAME	TYPE	SIZE	DESCRIPTION
1	RTO Id	Varchar	10	RTO Id details
2	RTO Office Name	Varchar	15	Details about the RTO office Name
3	Address	Varchar	50	Address details
4	City	Varchar	50	City details
5	Mail Id	Varchar	50	Mail id Details

TABLE NAME: COMPLAINT TABLE

Purpose: This table is used to post the details of the complaint issues

Table 3.5 Complaint

S.No	FILED NAME	TYPE	SIZE	DESCRIPTION
1	Vehicle No	Varchar	15	Vehicle number details
2	Entry date	Date Time	15	Details about the entry date
3	Complaint Title	Varchar	20	Title of the complaint
4	Complaint Details	Varchar	50	Details about the complaint
5	Mobile No	Varchar	15	Mobile number Details

TABLE NAME: PENALTY TABLE

Purpose: This table is used to post the details of the fine fixing details

Table 3.6 Penalty

S.No	FILED NAME	TYPE	SIZE	DESCRIPTION
1	Vehicle No	Varchar	15	Vehicle number details
2	Entry Date	Date Time	15	Details about the entry date
3	Fine Amount	Varchar	20	Amount details about the fine
4	Fine Details	Varchar	50	Details about the fine
5	Mobile No	Varchar	15	Mobile number Details

TABLE NAME: TRAFFIC POLICE TABLE

Purpose: This table is used to store the registration details of the traffic police

Table 3.7 Traffic police

S.No	FILED NAME	TYPE	SIZE	DESCRIPTION
1	Police Id	Varchar	10	Police Id details
2	Police Name	Varchar	15	Police name details
3	Address	Varchar	50	Details about the address
4	City	Varchar	50	City details about the police
5	Mail Id	Varchar	50	Mail Id details
6	Mobile	Varchar	50	Mobile number details
7	Password	Varchar	50	Password details

CHAPTER 4

SYSTEM TESTING AND IMPLEMENTATION

4.1 TESTING

Testing is vital to the success of the system. System testing makes a logical assumption that if all parts of the system are correct, the goal will be successfully achieved. In the testing process we test the actual system in an organization and gather errors from the new system operates in full efficiency as stated. System testing is the stage of implementation, which is aimed to ensuring that the system works accurately and efficiently.

In the testing process we test the actual system in an organization and gather errors from the new system and take initiatives to correct the same. All the front-end and back-end connectivity are tested to be sure that the new system operates in full efficiency as stated. System testing is the stage of implementation, which is aimed at ensuring that the system works accurately and efficiently.

The main objective of testing is to uncover errors from the system. For the uncovering process we have to give proper input data to the system. So we should have more conscious to give input data. It is important to give correct inputs to efficient testing.

Testing is done for each module. After testing all the modules, the modules are integrated and testing of the final system is done with the test data, specially designed to show that the system will operate

successfully in all its aspects conditions. Thus the system testing is a confirmation that all is correct and an opportunity to show the user that the system works. Inadequate testing or non-testing leads to errors that may appear few months later. This will create two problems

- ✓ Time delay between the cause and appearance of the problem.
- ✓ The effect of the system errors on files and records within the system.

The purpose of the system testing is to consider all the likely variations to which it willbe suggested and push the system to its limits. The testing process focuses on logical intervals of the software ensuring that all the statements have been tested and on the function intervals (i.e.,) conducting tests to uncover errors and ensure that defined inputs will produce actual results that agree with the required results.

Testing has to be done using the two common steps Unit testing and Integration testing.

4.1 TYPES OFTESTING

- o Unit testing
- o Integration testing
- o Validation testing
- o System implementation

4.2.1 Unit Testing

Unit testing verification efforts on the smallest unit of software design, module. This is known as “Module Testing”. The modules such as IP address input, web service accessing and result consolidation are tested separately in this project. This testing is carried out during programming stage itself. In these testing steps, each module is found to be working satisfactorily as regard to the expected output from the module.

4.2.2 Integration Testing

Integration testing is a systematic technique for constructing tests to uncover error associated within the interface. In this project, all the modules are combined and then the entire programming is tested as a whole. In the integration-testing step, all the error uncovered is corrected for the next testing steps.

4.3 VALIDATION TESTING

To uncover functional errors, that is, to check whether functional characteristics confirm to specification or not, almost all the inputs are validated strictly and inform the user if there is any wrong input. The modules are validated such that only after valid input, the web service is accessed. Validation is made during Node IP Address addition and task addition details such that it contains valid data.

4.4 SYSTEM IMPLEMENTATION

In the System development life cycle, the system implementation and maintenance will be occurring after the completion of analysis and system design.

The term implementation is ranging from the conversion of a basic application to a complete replacement of a computer system. In other term, implementation is used to process of converting a new or a revised system design into an operational one.

Implementation is the process of converting a new system design into operation. It is the phase that focuses on user training, site preparation and file conversion for installing a candidate system. The important factor that should be considered here is that the conversion should not disrupt the functioning of the organization.

The implementation process begins with preparing a plan for the implementation of the system. According to this plan, the activities are to be carried out in these plans; discussion has been made regarding the equipment, resources and how to test activities. Thus a clear plan was prepared for the activities.

The implementation phase is less creative then system design. It is primarily concerned with,

- User Training
- Site preparation

4.4.1 User Training

An analyst of user training focuses on two factors, user capabilities and the nature of the system being installed. Users range from the naïve to the highly sophisticated. Development research provides interesting insights into how naïve computer users think about their first exposure to a new system.

4.4.2 Site Preparation

The review team prepares a formal review plan around the objectives of review, the type of evaluation to be carried out and the time schedule required.

4.5 TYPES OFIMPLEMENTATION

There are three types of implementation,

- Implementation of a computer system to replace a manual system
- Implementation of a new computer system to replace an existing one
- Implementation of a modified application to replace an existing one, using the same computer

During the final testing, user acceptance is tested followed by user training. Depending on the nature of the system, extensive user training may be required. Conversion usually takes place about the same time the user is being trained or later.

CHAPTER 5

CONCLUSION AND FURTHER ENHANCEMENTS

5.1 CONCLUSION

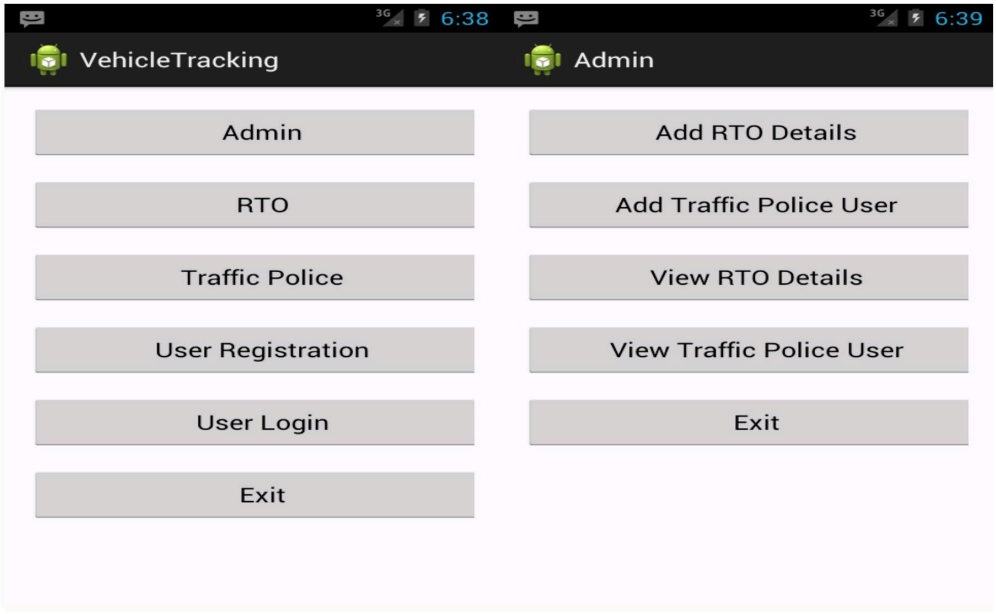
Through this project, the issues related to traffic rule violation on road get reduced. This interface helps not only to control the traffic rule violation but also to control the corruptions. This project includes the feature to collect fine easily by using automatic fine reduction from owner's bank account. Since the application is designed as android application, any user can have the application by downloading or sharing this application. The application is tested well and end users satisfaction is found to be more.

5.1 FUTUREENHANCEMENTS

The application become useful if the below enhancements are made in future.

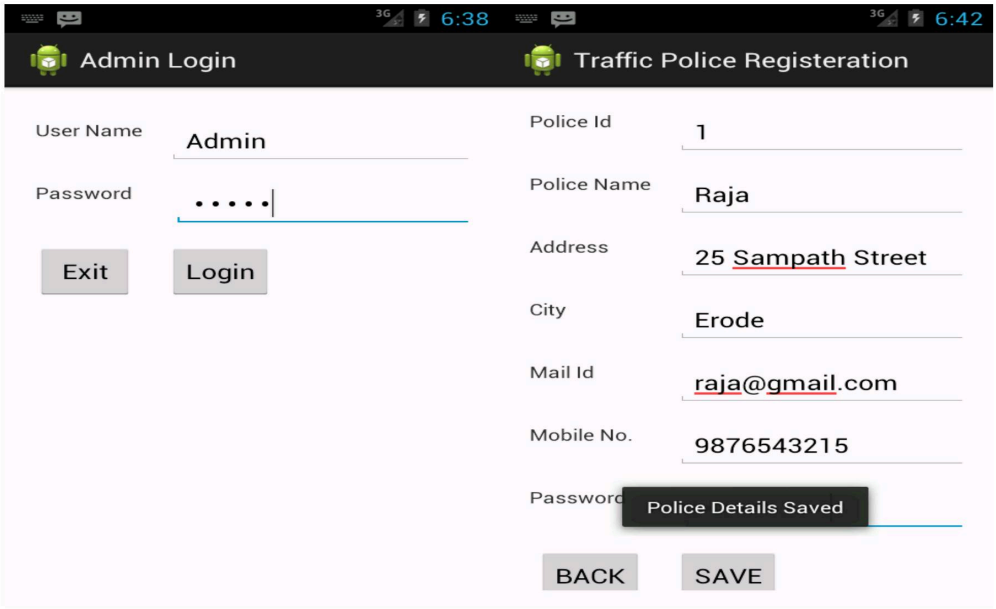
- If the application is designed as web service, it can be integrated in many web sites.
- The feedback details can be sent as mail to admin.
- This facility is now developed only for specific department in feature it can be implemented to many fields
- The application is developed such that above said enhancements can be integrated with current modules.

5.2 SAMPLESCREEN



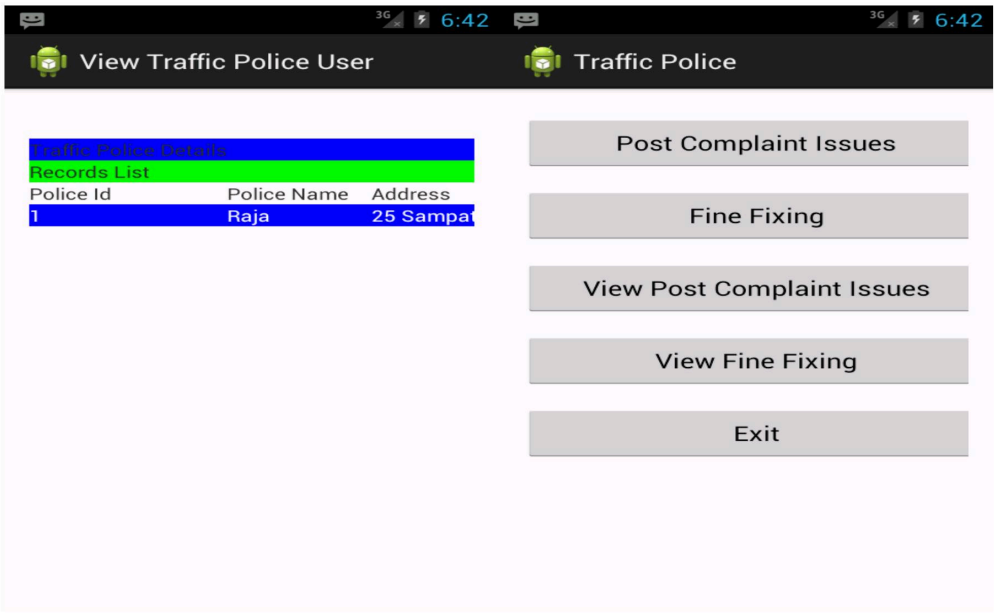
Screenshot5.4.1

Screenshot5.4.2



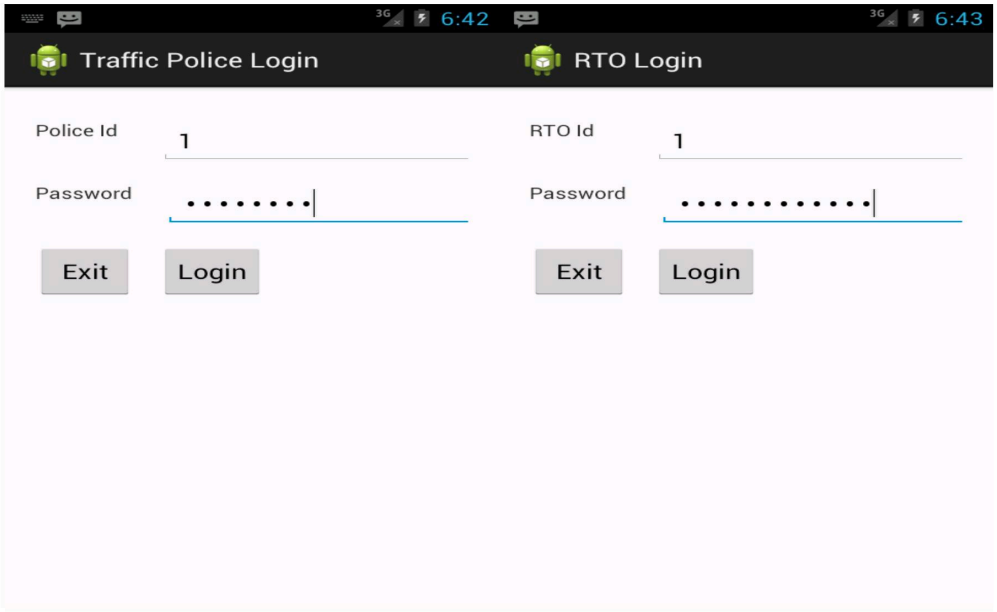
Screenshot5.4.3

Screenshot5.4.4



Screenshot5.4.5

Screenshot5.4.6



Screenshot5.4.7

Screenshot5.4.8

5.4 SAMPLE CODING ADMIN LOGIN

```
packagecom.example.qrvehicletracking;
importandroid.app.Activity;
importandroid.content.Intent;
importandroid.database.Cursor;
importandroid.database.sqlite.SQLiteDatabase;
importandroid.os.Bundle;
importandroid.view.Menu;
importandroid.view.MenuItem;
importandroid.view.View;
importandroid.view.View.OnClickListener;
importandroid.widget.Button;
importandroid.widget.EditText;
importandroid.widget.Toast;
public class AdminLogin extends Activity
{
    Button b1,b2;
    EditText t1,t2;
    SQLiteDatabasemydb=null;
    @Override
    protected void onCreate(Bundle savedInstanceState)
{
```

```
super.onCreate(savedInstanceState);
setContentView(R.layout.activity_admin_login);
mydb=openOrCreateDatabase(cls.dbname,MODE_PRIVATE
,null);
mydb.execSQL("Create Table If not Exists Admin(UserName
Varchar(15),Password Varchar(15))");
Cursor cr=mydb.rawQuery("Select Count(*) from
Admin",null); cr.moveToFirst();
int count=cr.getInt(0); cr.close(); if(count==0)
{

mydb.execSQL("insert into Admin values('Admin','Admin')");

}
mydb.execSQL("Delete From Admin");
mydb.execSQL("insert into Admin values('Admin','Admin')");
mydb.execSQL("insert into Admin values('a','a')");
mydb.execSQL("insert into Admin values('admin','admin')");
mydb.close();
b1=(Button)findViewById(R.id.btnLogin);
b2=(Button)findViewById(R.id.btnExit);
t1=(EditText)findViewById(R.id.txtUserName);
t2=(EditText)findViewById(R.id.txtPassword); myListener1
m=new myListener1();
b1.setOnClickListener((OnClickListener) m);
```

```
        b2.setOnClickListener((OnClickListener) m);
}

@Override

publicbooleanonCreateOptionsMenu(Menu menu)

{

getMenuInflater().inflate(R.menu.admin_login, menu); return
true;
}

@Override
publicbooleanonOptionsItemSelected(MenuItem item)
{
int id = item.getItemId();
if (id == R.id.action_settings)
{
return true;
}
```

```
        returnsuper.onOptionsItemSelected(item);
}
class myListener1 implements View.OnClickListener
{
@Override
public void onClick(View v)
{
switch(v.getId())
{
caseR.id.btnLogin:
String s1=t1.getText().toString(); String
s2=t2.getText().toString();
mydb=openOrCreateDatabase(cls.dbname,MODE_PRIVATE
,null);
Cursor cr=mydb.rawQuery("Select Count(*) from Admin
Where UserName='" +s1 + "' and Password='" + s2 + "'",null);
cr.moveToFirst();
int count=cr.getInt(0); cr.close();
mydb.close(); Toast.LENGTH_LONG).show();
if(count>0)
{
cls.LoggedUserId="0"; cls.LoggedUserType="admin";
Toast.LENGTH_LONG).show();
```

```
Intent i = new Intent(AdminLogin.this,AdminMenu.class);
}
else
{
startActivity(i);
Toast.makeText(AdminLogin.this, "UserName/Password is
wrong.", Toast.LENGTH_LONG).show();
}

break;
caseR.id.btnExit: finish();
break;
}
}
}
}
```

ADMIN ACTIVITY

```
<RelativeLayoutxmlns:android="http://schemas.android.com/a
pk/res/android"xmlns:tools="http://schemas.android.com/tools
" android:layout_width="match_parent"
android:layout_height="match_parent"
android:paddingBottom="@dimen/activity_vertical_margin"
```

```
android:paddingLeft="@dimen/activity_horizontal_margin"
android:paddingRight="@dimen/activity_horizontal_margin"
android:paddingTop="@dimen/activity_vertical_margin"
tools:context="com.example.qrvehicletracking.AdminLogin"
>

<GridLayoutandroid:layout_width="match_parent"
android:layout_height="match_parent"
android:layout_margin="2dp"
android:alignmentMode="alignBounds"
android:columnCount="2"
android:columnOrderPreserved="false"
android:padding="2dp" android:rowCount="4"
android:useDefaultMargins="true" >

<TextView

android:id="@+id/textView1" android:layout_column="0"

android:layout_gravity="left|top" android:layout_row="1"
android:text="User Name" />

<TextView

android:id="@+id/textView2" android:layout_column="0"
android:layout_gravity="left|top" android:layout_row="2"

android:text="Password"/>

<EditText

android:id="@+id/txtUserName" android:layout_column="1"
android:layout_gravity="center_horizontal|top"
android:layout_row="1"
```

```
android:ems="10" android:inputType="textShortMessage"

/>

<EditText

android:id="@+id/txtPassword" android:layout_column="1"
android:layout_gravity="center_horizontal|top"
android:layout_row="2"

android:ems="10" android:inputType="textPassword" />

<Button

android:id="@+id/btnLogin"
android:layout_height="wrap_content"
android:layout_column="1 android:layout_gravity="left|top"
android:layout_row="3" android:text="Login" />

<Button

android:id="@+id/btnExit"
android:layout_height="wrap_content"
android:layout_column="0" android:layout_gravity="left|top"
android:layout_row="3" android:text="Exit" />

</GridLayout>

</RelativeLayout>
```

REFERENCES

[1] Horrey, W.J.andM.F.Lesch ,"Driver - initiated distractions: Examining strategic adaptation forinvehicle task initiation", Accident Analysis & Prevention, Vol.41, no. 1, pp.115-122,2009.

[2] Manubhai M., T. G. Trivedi, J. C. McCall, "Looking-In &LookingOut of a Vehicle: Computer-Vision- Based Enhanced Vehicle Safety", IEEE Intelligent Transportation Systems, Vol.8, no.1, pp.108-120,2007.

[3] McCall, J.C and M. M. Trivedi, "Video- based lane estimation and tracking for driver assistance:survey, system, and evaluation",IEEE Intelligent Transportation Systems, Vol.7, no.1, pp. 20-37,2006.

[4] Handmann U., T. Kalinke, C. Tzomakas, M. Wernerand, and W. V. Seelen, "An image processingsystem for driver assistance", Image and Vision Computing, Vol. 18, no.5, pp.367- 376,2000.

[5] Yulan L., M. L. Reyes, and J. D. Lee, "RealTime Detection of Driver Cognitive Distraction UsingSupport Vector Machines", IEEE Intelligent Transportation Systems, Vol. 8, no.2, pp.340-350,2007.

[6] Escalera, A, J. M. Armingol and M. Mata, "Traffic Sign Recognition and Analysis for IntelligentVehicles". Image and Vision Computing, vol.12, no.3, pp. 247-258,2003.

[7] Amudha, K, Nelson Kennedy Babu, C &Balu, S 2015, „Effectual reversible watermarking method forhide the patient details in Brain tumor image", International Journal of Computer, Electrical, Automation, Control and Information Engineering of World Academy of Science, Engineering and Technology, vol. 9, no. 7, pp. 1713- 1717.

[8] Horrey, W.J., M. F. Lesch, and A. Garabet, "Assessing the awareness of performance decrements in distracted drivers". Accident Analysis & Prevention Vol. 41, no.1 pp. 675– 682, 2008.

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QR based Penalty Charging for Traffic Police

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Abstract

The "QR BASEDPENALTY CHARGING FOR TRAFFIC POLICE" project was created utilising the Android 4.0.3 Standard platform. The platform used to develop the application is Eclipse IDE (Mars) with Java 1.7 Standard Edition.

The project's focus is on using mobile apps to manage information about traffic infringement penalties. Through this software, the project processes accident information as well as licence details, car details, penalty details, and accident information. The project will also concentrate on a mobile app that will aid in learning information on the fines associated with traffic infractions as tracked by Vehicle No. on the road. Due to its quick readability and larger storage capacity compared to normal barcodes, the Quick Response (Vehicle No) system gained popularity outside of the automotive industry. Applications include document management, general marketing, product tracking, item identification, and time monitoring. According to the completed procedure, there will be a decrease in the burden of the government and traffic police, as well as a decrease in accidents and corruption throughout the nation.

According to the rule broken by the car driver and the actual fine decided by the government, this programme will immediately deduct the fine from the owner's bank account. The owner of the vehicle will also receive a message from this application detailing the type of rule they broke, the fine associated with it, a photo taken by their mobile device as proof of the violation, the date and time of the violation, and the precise amount they will be receiving in their bank account as payment for the violation.

According to this whole process done, there will be reduction in the workload of traffic police and government and also reduction in accidents and corruption too in country.

Keywords: Traffic Violation Penalty Charging, Vehicle Number, Reduction in Accidents.

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Introduction

The goal of this project, which is being developed as an Android application, is to assist the traffic police in keeping track of all traffic infractions committed by road users. The goal of this study is to provide a smart traffic offence analysis tool for Android. The suggested system is based on Android. The suggested solution will eliminate all problems associated with roadside traffic rule violations. This system includes automatic fine collection for traffic violations using the vehicle identification number, message delivery, and automatic fine receipt from the owner's bank account. Studying current operations and learning how to carry out processing tasks are the major goals of system analysis. It's important to thoroughly investigate how Android applications manage providing location status update information. The specifics are coded and processed by themselves. The only ones in charge will be the programmes. A keyboard and mouse-equipped personal computer must be purchased by the company; this is a direct expense. Covering the manual method with a digital system has numerous immediate advantages. Any capital investment is justified on the grounds that it would lower costs or boost the quality of services or goods, which can then be anticipated to result in higher profits. The user can ask questions and receive answers. The project is cost-effective in that it uses less memory on the mobile device, using less power as a result. Currently being developed by Google, Android is a mobile operating system (OS) that is based on the Linux kernel and is primarily intended for touchscreen mobile devices like smartphones and tablets. The user interface of Android is based on direct manipulation, using a virtual keyboard for text input and touch gestures that ostensibly mimic real-world motions, such as swiping, touching, and pinching, to manipulate on-screen items. Google has also created Android TV for televisions, Android Auto for automobiles, and Android Wear for wrist watches in addition to touchscreen devices. Each of these products has a unique user interface that was built on JetBrains' IntelliJ concept software and created especially for Android development. Android device manufacturers who complied with Google's guidelines granted these apps licences. Two further competing Android ecosystems are Fire OS from Amazon.com and LineageOS. APK-formatted software packages are often released through closed-source platforms like Google Play Store or Samsung Galaxy Store or open-source ones like Aptoide or F-Droid.

Related Work

Keeping the car information in the Vehicle No. Providing the vehicle number to all registered cars to quickly view car information while verifying. This project aids in reducing traffic infractions. Other electronic devices like laptops, game consoles, digital cameras, and others run Android-based operating systems. Android has the largest installed base of any operating system as of 2015. It is the second most frequently used mobile operating system in the US, behind iOS. Android was introduced in 2007 along with the establishment of the Open Handset Alliance, a grouping of hardware, software, and telecommunications businesses committed to developing open standards for mobile devices.

Android was initially developed by Android, Inc., which Google purchased in 2005. Over a million Android programmes ("apps") had been published and downloaded over 50 billion times as of July 2013 in the Google Play store. Android's ASCII text file has served as the foundation for a number of ecosystems, most notably Google's, which is connected to a collection of proprietary programmes called Google Mobile Services (GMS), which is frequently pre-installed on the aforementioned devices.

This includes essential programmes like Gmail, the online store Google Play and its companion development platform Google Play Services, as well as frequently used apps like the Google Chrome browser. These apps have been granted licences by Android device makers who have attained Google-imposed standards certification. Amazon.com's Fire OS and Lineage OS are two other Android ecosystems in competition. Software is typically distributed via open source platforms like Aptoide or F-Droid, which use APK-formatted software packages, or through proprietary application shops like Google Play Store or Samsung Galaxy Store.

Existing Work

- The current system is not operational.
- Information on fines for moving violations is written on the printed charge sheet.
- The department of traffic police maintains hard copies.
- Users must immediately pay the traffic police.
- The time and corruption are increased. The current system has a number of flaws, including costly, complex, and traffic-related issues.
- Using the spot billing machine (SBM) now in use makes it harder to maintain the traffic offence management system and adds to the amount of paperwork.

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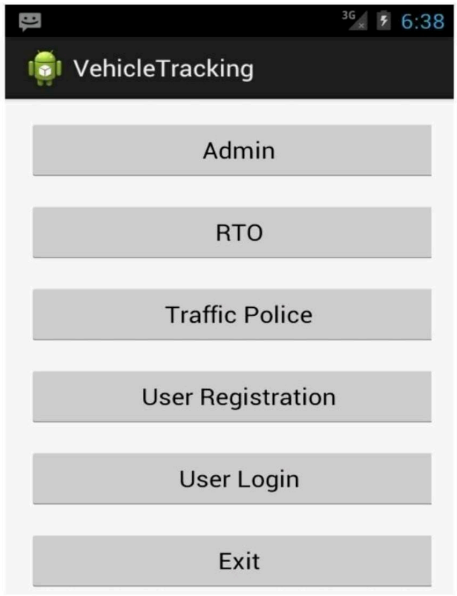
Drawbacks

- There are a lot of problems produced because of the traffic, corruption, and other factors.
- Due to increased corruption, all systems are manual and do not automatically collect fines.
- The amount of paperwork grows.

Proposed Work

- The suggested system is based on Android.
- The suggested approach will eliminate all problems associated with roadside traffic rule violations.
- This system includes automatic fine collection for traffic violations using the vehicle identification number, message delivery, and automatic fine receipt from the owner's bank account.
- In this system, the vehicle tag that is supplied to each vehicle when they purchase or pass the necessary vehicle driver's licence test received by RTO will be read by the vehicle reader.

Proposed Diagram



Advantages

Through a mobile device, the user can observe fine details. One option is an SMS alert. It supports interpersonal openness so that users can find information despite their busy schedules. With a few key words, past information can be quickly and readily recovered. This project will lessen road traffic violations and traffic congestion issues. Due to the automatic fine reduction from the owner's bank account in accordance with the rule broken by the vehicle user or owner and the real fine, it makes fine collection simple. Government power is the reason that corruption has decreased globally.

Conclusion

The problems associated with roadside traffic rule violations are lessened as a result of this effort. This interface assists in preventing corruption as well as violations of traffic laws. This project offers a function that makes it simple to collect fines by automatically deducting them from the owner's bank account. Any user can have the programme by downloading or sharing it because it is created as an Android application. The application has undergone thorough testing, and more end users appear to be satisfied.

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References

Horrey, W.J., & Lesch, M.F. (2009). Driver-initiated distractions: Examining strategic adaptation for in-vehicle task initiation. *Accident Analysis & Prevention*, *41*(1), 115-122.

Trivedi, M.M., Gandhi, T., & McCall, J. (2007). Looking-in and looking-out of a vehicle: Computer-vision-based enhanced vehicle safety. *IEEE Transactions on Intelligent Transportation Systems*, *8*(1), 108-120.

McCall, J.C., & Trivedi, M.M. (2006). Video-based lane estimation and tracking for driver assistance: survey, system, and evaluation. *IEEE transactions on intelligent transportation systems*, *7*(1), 20-37.

Handmann, U., Kalinke, T., Tzomakas, C., Werner, M., & Seelen, W.V. (2000). An image processing system for driver assistance. *Image and Vision Computing*, *18*(5), 367-376.

Liang, Y., Reyes, M.L., & Lee, J.D. (2007). Real-time detection of driver cognitive distraction using support vector machines. *IEEE transactions on intelligent transportation systems*, *8*(2), 340-350.

De la Escalera, A., Armingol, J.M., & Mata, M. (2003). Traffic sign recognition and analysis for intelligent vehicles. *Image and vision computing*, *21*(3), 247-258.

Amudha, K., Babu, C.N.K., & Balu, S. (2016). Effectual reversible watermarking method for hide the patient details in brain tumor image. *International Journal of Computer and Information Engineering*, *9*(7), 1762-1766.

Horrey, W.J., Lesch, M.F., & Garabet, A. (2008). Assessing the awareness of performance decrements in distracted drivers. *Accident Analysis & Prevention*, *40*(2), 675-682.

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Is hereby awarding this certificate to

S.M. Abirami, A. Akila, P.B. Kamalesree, S. Gowtham

In recognition for the publication of the paper entitled

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