DESIGN AND IMPLEMENTATION O F AUTOMATED VECHICLEINFORMATION USING NUMBER PLATE

Dr. B. Karthikeyan, Assistant Professor, Department of IT, CT and DCFS, Nehru Arts andScience College, Coimbatore, Tamil Nadu, India
Mr. Haneesh. S, Ms. Sangeetha. B, Mr. Mohamed Harish. S
Students, III B. Sc IT, Nehru Arts and Science College, Coimbatore, Tamil Nadu, India

Abstract:

In the current scenario, the key issue faced by public while travelling is to deal with the inefficiency and discrepancy in the traffic system and the people involved in managing the same. On being caught by the police, the commuter must submit his driving license, RC Book and/or other vehicle documents for verification. In case the commuter forgets/misplaces the documents, he is unnecessarily fined. In case a vehicle is booked for any traffic violations, the details are uploaded onto a website. The owner is not updated with this information. If he fails to check this website regularly, he may not be aware of any pending traffic violations on his vehicles. In case a vehicle is stolen, the owner must contact the nearest police station. The process to lodge a complaint and subsequent response is slow and inefficient. In this age of science and technology, where the internet is in the palm of everyone's hands, a better system for managing the above process can be set up which would greatly reduce the burden on the daily commuters as we as the traffic police.

Keywords: Introduction, Existing, and Proposed system, Design and Implementation, SystemTesting, Number plate, RC Book, License.

INTRODUCTION

Nowadays increasing public use of vehicles via road. But they have not followed any Rules and Regulation. So, this project is used to public vehicle details stringing the database. Police can view and check those details like (License, Insurance and RC Book) and they can enter their punishment also. These databases are the handled by RTO admin. Admin can only enter this system updated public document details and verify punishment details.

Once police enter public punishment those details are updated to license. Police can only enter punishment detail in the ls and check Insurance Expiry date and RC book validation details.

So, will be l time-consuming I'm consuming for the police. It is a fully automated system application. At anywhere anytime police can view public documents by uploading vehicle Image and the application will recognize the Number Plate vehicle, using this number plate the police get the past FIR record of the vehicle.

EXISTING SYSTEM

In the existing level, due to the population the number of vehicles are growing by increasing problems of vehicle registration, license registration, emission testing and insurance validity for RTO departments and vehicle related documents verification by traffic police. RTO employees having lot of work burden of making registration, license issue, transfer etc., which requires lot of paper work.

Also, the existing system mainly focuses on providing the information only to the traffic police officers. It consists of vehicle information and license information's and It also generates the fine.

DISADVANTAGES OF EXISTING SYSTEM

ISSN: 2278-4632
Vol-13, Issue-04, No.02, April : 2023

- Manual work will not give accuracy.
- It will take more time for traffic police as well as public people to complete the process.

PROPOSED SYSTEM

The proposed system overcomes these issues in the current scenario by implementing a web server which uses a database to store, update and access the above-mentioned documents with a user-friendly front-end web application, tailored to the needs of the appropriate users. The application also allows users to report a stolen vehicle and check unpaid offences on his vehicle, all in the click of a button. The application for the police allows him to review earlier driving offences by the rider and also report any current offence committed by him.

The main theme of this proposed system is to allows users to report a stolen vehicle details to the crime police. This can help notify the police in the nearby locality faster and help track the vehicle in a more efficient manner. It provides a web page to users to update the stolen status of vehicles for investigation purpose.

ADVANTAGES OF THE PROPOSED SYSTEM

- Police can view and check the details like License, and RC Book and also enter theirpunishment easily.
- It will reduce time consuming for police as well as the public people.
- At anywhere anytime police can view public documents.

MODULE DESCRIPTION

- Admin Module
- Police Module
  - Search Vehicle
  - Apply Fine
  - View Fine
- Public module(user)
  - Fine Details
  - View Fine
  - Rise Complaint
  - View Complaint status

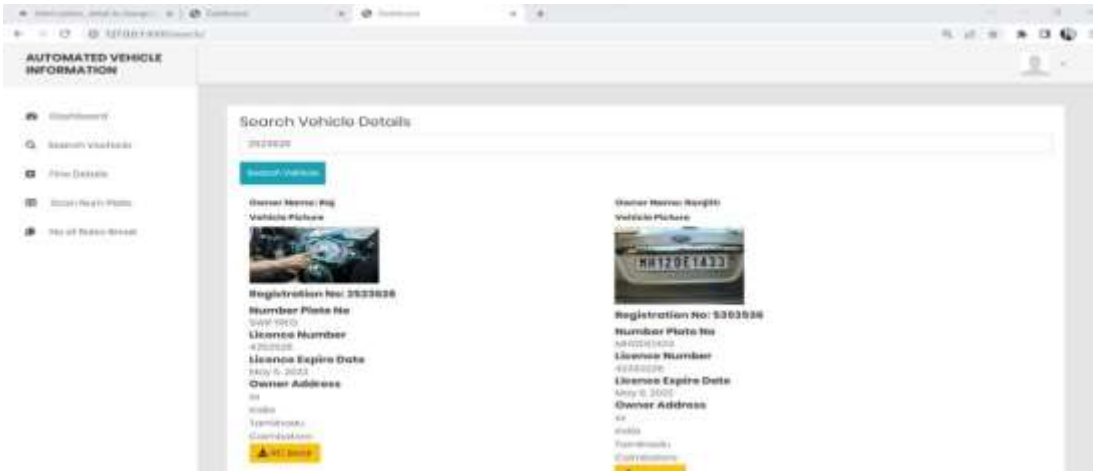
ADMIN MODULE

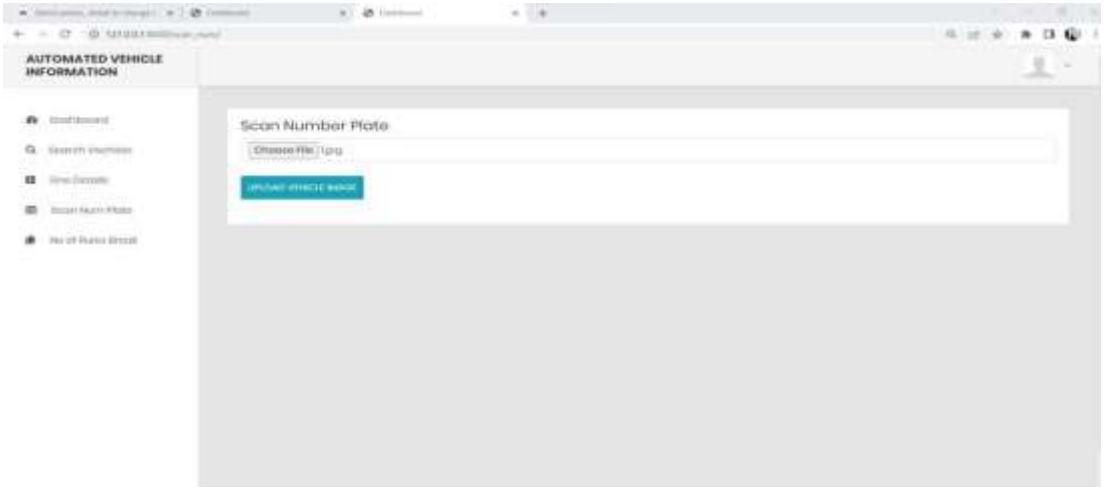
The admin module allows the system administrator to set up back-end systems and basic system configurations and it maintains all the module information and validregistration process.

ISSN: 2278-4632
Vol-13, Issue-04, No.02, April : 2023

POLICE MODULE

The police Module is one of the main modules in this application. Here, the police can only able to login into this module using their respective username and password.





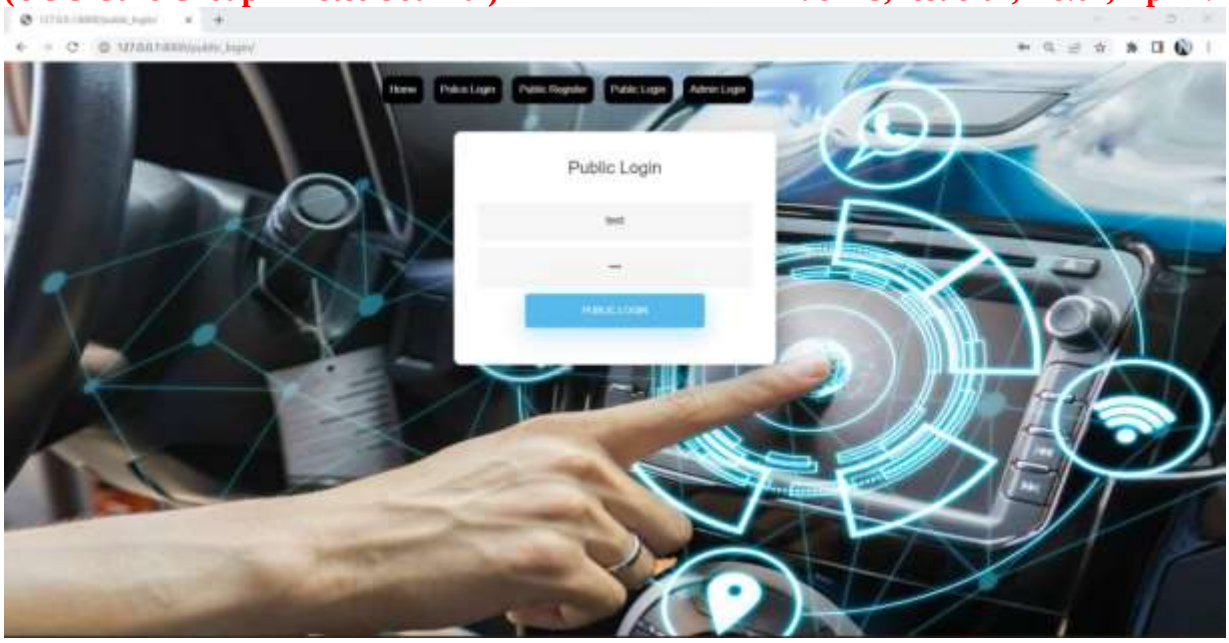
There are several sub processes can be used by the police based on their requirements. The sub processes are Police login, Search vehicle details, apply fine, check the vehicle documents like license and RC book, and view the fine details of the public people.

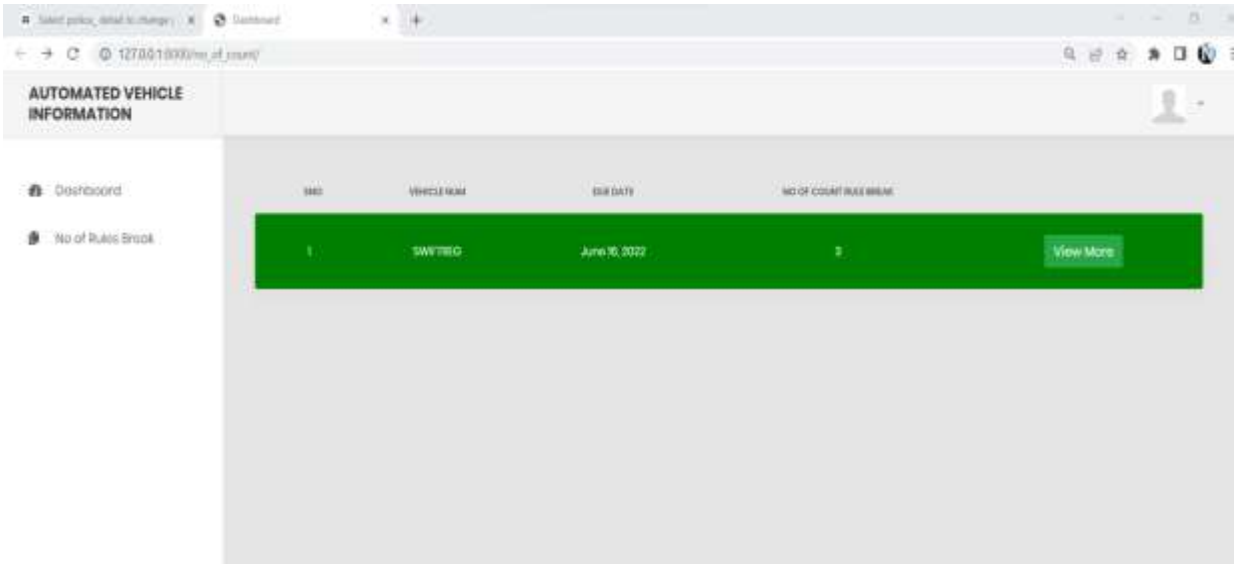
Firstly, Using username and password police can able to login to this application. After the login process police can able to see the dashboard which consist of several options like search vehicle and view fine. Based on the police wish, he can able to choose their option and do the process.

PUBLIC MODULE

Public module is the main module of this application. Using the username and password public can able to login into this application. Before the public login process public should register their details with this application using the option called „Public Register". After the registration only the public can able to get an access to use this application in an essential manner.

ISSN: 2278-4632
Vol-13, Issue-04, No.02, April : 2023





ABOUT THE SOFTWAREFRONT END

HTML

HTML was first created by Tim Berners-Lee, Robert Caillou, and others starting in 1989. It stands for Hyper Text Markup Language. A Markup Language is a way that computers speak to each other to control how text is processed and presented. HTML can embed programs written in a scripting language such as JavaScript, which affects the behavior and content of web pages. Inclusion of CSS defines the look and layout of content. The World Wide Web Consortium (W3C), former maintainer of the HTML and current maintainer of the CSS standards, has encouraged the use of CSS over explicit presentational HTML.

CSS

Cascading Style Sheets (CSS) is a style sheet language used for describing the presentation of a document written in a markup language like HTML. CSS is a cornerstone technology of the World Wide Web, alongside HTML and JavaScript.

CSS is designed to enable the separation of presentation and content, including layout, colors,

and fonts. This separation can improve content accessibility, provide more flexibility and control in the specification of presentation characteristics, enable multiple web pages to share formatting by specifying the relevant CSS in a separate .

BACKEND

SQLite

SQLite is an open-source relational database management system (RDBMS). A relational database organizes data into one or more data tables in which data types may be related to each other; these relations help structure the data. SQL is a language programmers use to create, modify and extract data from the relational database, as well as control user access to the database. In addition to relational databases and SQL, an RDBMS like SQLite works with an operating system to implement a relational database in a computer's storage system, manages users, allows for network access and facilitates testing database integrity and creation of backups.

SYSTEM DESIGN

Software design is the process of envisioning and defining software solutions to one ormore sets of problems. One of the main components of software design is the software requirements analysis (SRA). SRA is a part of the software development process that lists specifications used in software engineering.

They are,

- **INPUT DESIGN -** Input is any data or instructions entered into the memory of a computer. Two types of input are data and instructions. Data is a collection of unorganized items that can include words, numbers, pictures, sounds, and video.
- **OUTPUT DESIGN -** The system will be designed in such a way that output forms will be designed for displaying outputs to the user. Output will be generally displayed to the user through monitor as visual display.
- **DATABASE DESIGN -** A database is a collection of interrelated data stored with minimum redundancy to serve many users quickly and effectively.
- **FILE DESIGN -** The file design is one of the important features which mainly depend on the performance of the system. The file design deals with the two important elements.

SYSTEM TESTING AND IMPLEMENTATIONTESTING

The most important phase in system development life cycle is system testing. The number and nature of errors in a newly designed system depends on the system specifications and the time frame given for the design. A newly designed system should have all the subsystems working together, but in reality, each subsystems work independently.

TYPES OF TESTING

- Unit Testing
- Validation Testing

SYSTEM IMPLEMENTATION

System implementation is the important stage of project when the theoretical design is tunes into practical system. The main stages in the implementation are as follows:

- Planning
- Training
- System testing and

- Changeover planning

Planning is the first task in the system implementation. Planning is deciding on the method and the time scale to be adapted. At the time of implementation of any system people from different departments and system analysis involve. The line manager controlled through an implementation co-ordinate committee. The committee consists of ideas, Problems and complaints of user department. It must also consider,

- The implementation of system environment.
- Self-selection and allocation for implementation tasks.
- Consultation with unions and resources available.
- Standby facilities and channels of communication.
-

CONCLUSION

The first important outcome of is to improve the efficiency in traffic policing. The work and burden on the police are greatly reduced as they can now check validated vehicle and driver documents with just the click of a button on the application. It also paves way for an easier and better system for handling traffic related violations as the police can now book the vehicles on the road that are breaking the rules from within the application.

The system also enables a simplified system for commuters to handle various vehicle documents as they now no longer have to worry about managing the hard copies of each. With every important document present as a soft copy in their mobiles, the commuters can now just show these to the police for verification. Along with all of the above-mentioned benefits, the system now greatly helps vehicle owners lodge a stolen vehicle report from within the app.

FUTURE ENHANCEMENT

The proposed system can be further enhanced and greatly improved by adding new functionalities and in-app services. By integrating this system with the Google Cloud Messaging (GCM) service, we could enable push notifications which would help notify or send important updates to the police as well as the general users. Push notifications can be used to send stolen vehicle reports to the police as well as bookings or offences on a vehicle to its owner. Also, location tracking (GPS) can be enabled and integrated into the system which would open up a plethora of possibilities to expand the application, with traffic updates and location-based vehicle tracking being a few.

BIBLIOGRAPHY REFERENCE BOOKS

[1] Garima Pandey, Diksha Dani, “Android Mobile Application Build on Eclipse”, International Journal of Scientific and Research Publications, Vol-4, Issue 2, Feb-2014.

[2] Manjunath S. Patil, Basavaraj K. Madagouda, Vinod C. Desai, “E-RTO Management System”, International Journal of Engineering Research & Technology (IJERT),Vol-2 Issue 7, July-2013.

[3] Suhas Holla, Mahima M. Katti, “Android Based Mobile Application Development and Its Security”, International Journal of Computer Trends and Technology, Vol-3 Issue 3, 2012.

[4] Robert W. Sebesta, “Programming the World Wide Web”, 4th Edition, Pearson Education, 2008.

REFERENCE WEBSITES

- www.tutorialspoint.com/index.html
- www.javatpoint.com
- www.w3schools.com

