Smart Vehicle License & Insurance Authentication

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Abstract: A method for authenticating drivers and identifying vehicles as part of the development of smart cities. It contains a centralized database where all of the approved cars are kept, as well as Unique Id vehicle tags. A vehicle is given the Unique Id tag. Identification of vehicles is simple to perform. The monitoring of the driving license system is a major duty of the government. While the traffic cops are inspecting the paperwork, there are numerous illicit operations. Both sides will commit the crime (people and police). To solve this issue, the traffic police are given access to a further Smart-No module that is coupled with a centralized database that houses the data from person licenses (DLs). If the user selected Smart-No, the software would inform you if they held a valid license or not. This may be accomplished by connecting the centralized database and the vehicle information.

Keywords: AWS S3 Service, Smart No, Unique VehicleID tag

I.   INTRODUCTION

An informed reader is installed to save information about automobile registration, including the car's number, registered owner's name, insurance policy number, license number, expiration date, and information from the government's RC BOOK. The government is then informed using a centralized database after the information has been acquired. The database is easily accessible from the server. This idea makes it possible to effectively manage traffic. The Smart-No is used to detect a person's license, making it very simple for the traffic police to locate a person whether or not they are in possession of a license. The individual does not need to have his license with him. It lessens the workload and time required for verification of licenses for both person and the traffic officers. This Smart-No based licensing system comprises information like the identifying number for a license, the address information a photo of the person, a picture of the authorized vehicle driver. The consolidated database connects the aforementioned information. Therefore, it will make it easier for the person's information to the traffic police. This idea makes our nation more digitalized by effectively controlling traffic and allowing for the simultaneous monitoring of crime.

II.   PROBLEM STATEMENT

Currently, vehicles must stop and wait for a long period before obtaining confirmation from the traffic police. If their documentation is in order, there is no problem. This method has a number of disadvantages, including time consumption, fuel loss, and environmental harm, if their documentation is unclear. By affixing the Unique Id tags to the vehicle, the information about the automobile, such as the insurance, RC BOOK, and pollution certificate, may be quickly recognized. Using Unique Id tags, a specific person's license cannot be validated. since every individual will have a special license. Therefore, they must constantly carry their license. The person feels uncomfortable as a result.

III.   LITERATURE SURVEY

The writers of this page have covered numerous ETC system types used in some nations. Passive RFID technology is used in the proposed ETC system that is detailed in this study, this will ensure more efficiency because RFID is renowned for being a very reliable technology, it can design a better ETC system to be used in Malaysia if all human contact is removed from the toll collection procedure, Additionally, it can considerably increase the effectiveness of toll booths and the toll road's capacity for traffic [1]. One of the crucial components of any nation's transportation infrastructure is the traffic management system, The social insurance sector's use of communication innovation in India has not yet been sufficiently updated to enhance its administrative nature, many nations have created electronic card systems in response to the growing usage of communication technologies Other than Digital locker, there isn't currently another electronic traffic management system in India [2]. In this article, the technology alerts the targeted car when it anticipates an over speeding vehicle, and the vehicle tracking system helps the public users and interior passengers for a certain vehicle using VANET in two ways to save time and reduce waiting in smart cities, the Way 1 keeps track of the position of the car for

a visitor. For interior passengers, Way 2 displays the current position and route map of the car, all of the passengers and the vehicle's luggage are observed when a vehicle's loading is being monitored the resource discovery method uses VANET in smart cities to collect all vehicle information [3]. The system in this study employs near-field communication technology to validate the papers and collect the toll within the allotted time at the toll. Additionally, it logs the car's geographic position and uploads the details of the vehicle to the database for later tracking. As a consequence, this system concentrated on reducing traffic and produces efficient toll collecting and monitoring [4]. The proposed smartcard framework aims to boost the effectiveness and usability of government document and driver verification services. Authorized parties can access one website using the smart card to view all driver information, vehicle information, vehicle history, and previous traffic offences. Utilizing advancement in technology, our suggested approach highlights the advantages of secure shipping to India.

IV. PROPOSED SYSTEM

The proposed system gathers and stores each person's information in a centralized database. The Smart-No is employed to identify a specific individual. When a person enters their Smart-No, the system will instantly recognize their information, including their license number and expiration date. Therefore, it will undoubtedly lessen the inconvenience associated with carrying a license and other information with you. This idea also allows for the identification of corrupt police. For example, if a person forgets to carry their insurance or license, or if their documents become invalid, they will receive the fine amount in the form of a wallet.

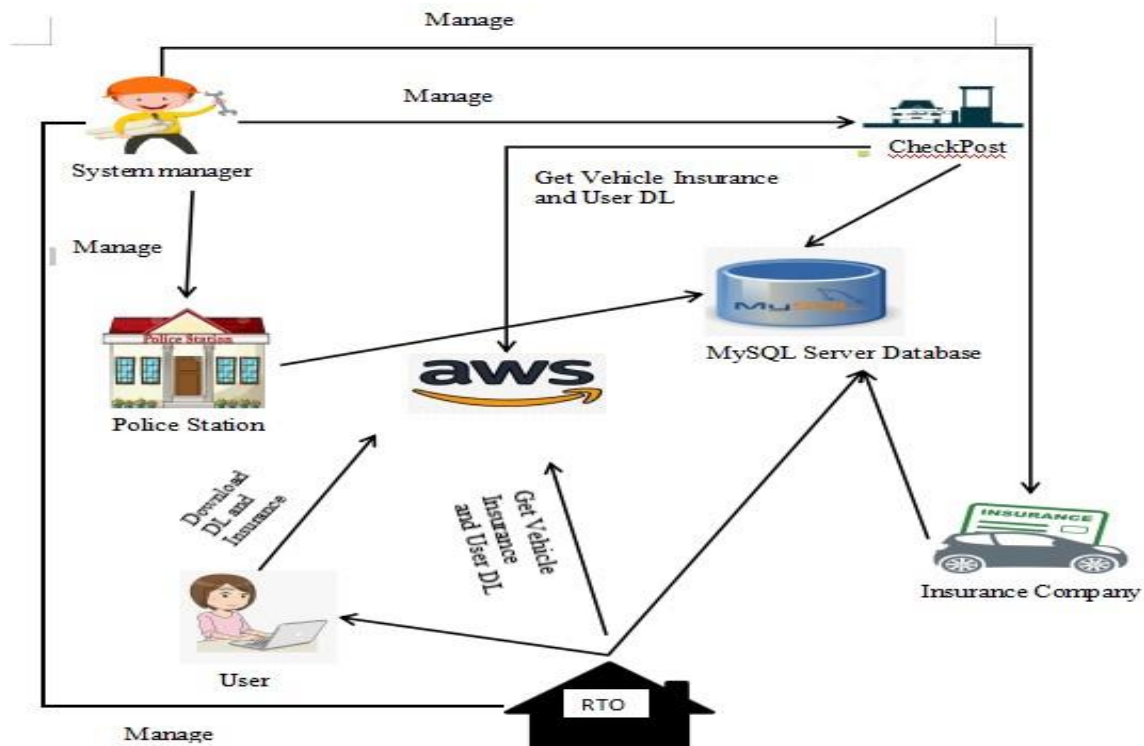### A. SYSTEM ARCHITECHTURE

Figure 1: System Architecture

In this architecture, the system manager or the admin l add the important Actors they are RTO, Insurance Company, Police Station, Check post with their Information. And also add Vehicle type and their Document charges. How much fine will be paid to the particular type of rules. The users Id and Passwords generate Automatically no need to give a manually. Then RTO adds Vehicle user Information such as name, age, father name, address, Email id, Mobile no etc. And also add User Vehicle type such as vehicle RCNO, vehicle name, and give a smart no to the user, and unique id tag for vehicles. In Police station registered complaint on vehicle information. Insurance company add the insurance to the vehicles and renewal the insurance. Check post officers can check the vehicle license and insurance these all the information is sent to the Government Centralized Database is comes under the single roof. And user can view their vehicle insurance and driving license and also, he/she download.

V. IMPLIMENTATION

The goal is to create a system that is more precise, secure, and transparent. The fundamental goal is to implement the proven planned system with the fewest expenditures, risks, and adverse effects on people as possible. During the implementation stage, the designs for both the hardware and the software are complete. Testing might begin once the software or application has been completed. We must first collect the requirements in order to develop the level flow idea before beginning the implementation process to build new software from scratch. In Smart License and insurance Authentication System in all departments such as RTO, Police station, check post, Insurance company Collected data is store in a Government Centralized Database using AWS S3 Services when it is needed can easily access and retrieve the data and information from the Database and Download the Documents.
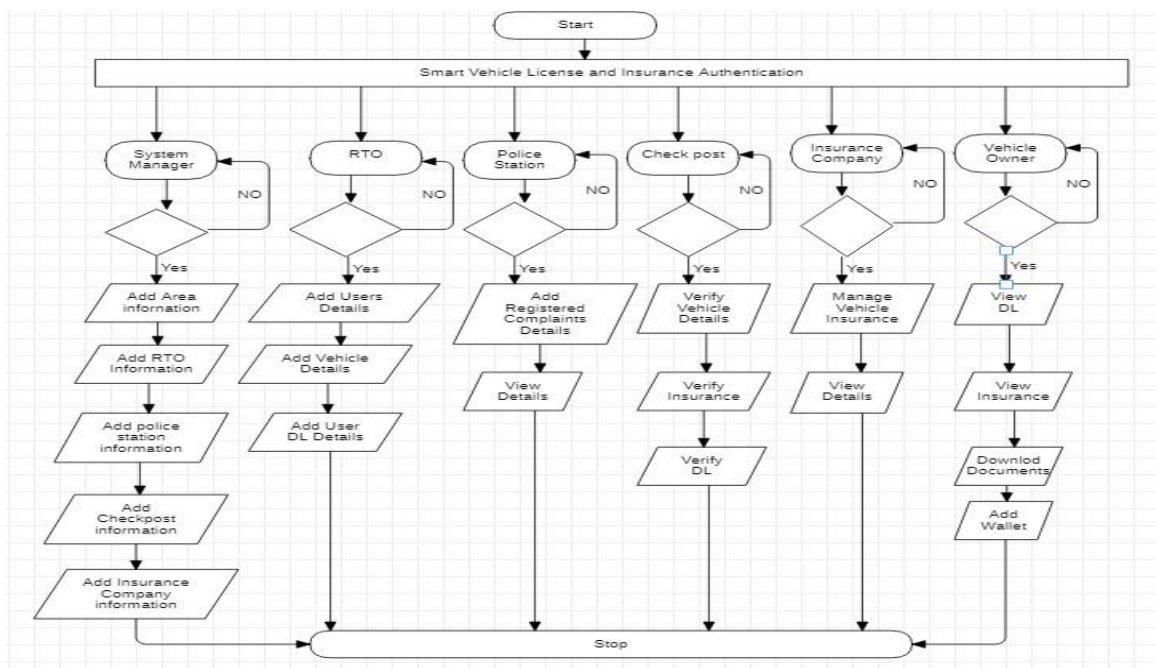

Figure 2: Workflow diagram

A. AWS S3 Services

Performance, security, and scalability offered by an object storage service known as Amazon Simple Storage Service (Amazon S3) are unrivalled in the industry. Customers of all sizes and sectors can use Amazon S3 to store and preserve any amount of data for a number of use cases, such as data lakes, websites, mobile applications, backup and restore, archiving, business applications, IoT devices, and big data analytics. Amazon S3 offers management solutions that let you organize, optimize, and configure access to your data in order to meet your particular business, organizational, and regulatory needs.

CONCLUSION

The project has a section for unique ids. When the Unique id is installed on the car, we can quickly identify the details of the vehicles, such as RC BOOK and Insurance, with the aid of the Unique id reader. Finally, this approach lessens the workload of those who are carrying the documents with them. It lessens corruption while increasing the nation's digitalization. Details about people are gathered and kept in a consolidated database here. Additionally,
when a unique ID is used to identify a specific person, information about that person, such as their driving record and license expiration date, is immediately recognized. Lessen the inconvenience of a license holder. If theft-related complaints have been made about a car, it can be quickly identified. Usability, dependability, maintainability, efficiency, and reuse are the projects' impacts. This method aids in ensuring driver safety in this project. This strategy can lessen accidents brought on by inexperienced and young drivers. With criteria including valid age, identity, and avoiding license abuse, it will assist the traffic control authority in keeping an effective eye on the drivers. It will be challenging and user friendly.

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