E-verification Of Driving License Through Aadhaar Database

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Abstract - **Regional transport office (RTO) is the organization of Indian government responsible for maintaining a database of vehicles for Pan India. The RTO issues driving licenses and maintain the collection of vehicle excise duty and sells personalized registrations. It is mandatory that all drivers must and should produce the DL, insurance, RC copy failing which they should pay penalty in case caught by traffic police. This paper proposed an approach to solve such problems by storing all the information related to driving license in the RTO database through Aadhaar number. In this system, traffic police have to take thumb impression of the driver through the biometric device and system verifies driving license. If the driver's verification is not successful then the person has to pay the fine online through POS machine. Experimental evidence shows that this technique is easier and faster than the other methods.**

Keywords - **Aadhaar number, Biometric device, Driving license verification.**

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I. INTRODUCTION

Regional Transport Office (RTO) is an Indian government bureau is responsible for the registration of vehicles and the issue of Driver's Licenses in India and maintaining records of drivers & vehicles. Apart from maintaining records RTO also collects road tax during registration, check for vehicle's insurance, emission test etc. According to Motor act, no person shall drive the vehicle without proper documentation; a driving person should carry Registration Certificate, Insurance Certificate & license. Failing which the person has to pay a certain penalty or face the cases charged against them. As India is turning towards "Digital India" where paper money is replacing by online or plastic money (Cards swipe) debit or credit cards, similarly we have provided facility to collect fine amount through online.

Aadhaar is a 12 digit unique-identity number issued to all Indian residents based on their biometric and demographic data. The data is collected by the Unique Identification Authority of India (UIDAI), a statutory authority established on 12 July 2016 by the Government of India, under the Ministry of Electronics and Information Technology, under the provisions of the Aadhaar Act.

In This paper, we proposed an approach to solve such problems by storing all the information related to the driver in the RTO database through Aadhaar number. The paper is organized into five sections: Section two gives the literature survey. Section three gives the proposed methodology. Section four and five deals with the conclusion and future work respectively.

II. LITERATURE SURVEY

The literature survey is carried out related to technology impact in the "E-verification Of Driving License through Aadhaar Database", as follows.

ALPANA GOPI et.al [1] introduces an Automation of Road Transport Department through Cellular Network, verification of the License and Vehicle documents electronically, and reduces a lot of paper work and manual efforts. NILAV MUKHOPADHYAY et.al [2] proposed a novel method called QR code in Smartphone. With this system, the driver goes through the verification process in a reliable and efficient manner. PRAVEENKUMAR N.HADAPAD et al [3] Developed "Cross Verification of Driver and License for RTO", a system that a facilitates for RTO officers to perform verification of license and vehicle documents through an android application. Prof. Yuvraj Nikam et al [4] provide the facility that by having the image of the number plate and finger prints we can track the owner and vehicle information. Sanjeev Shelar et al [5] Presents an application which will facilitate the digitization of all documents which are required for the vehicle verification.

From the above survey, it is clear, that work based on driving license verification is very less. Hence we are proposing a novel method called "E-verification Of Driving License through Aadhaar Database", and demonstrated its effectiveness for some test data. Experimental evidence shows that this technique is easier and faster than the other methods used in the survey.

III.PROPOSED METHOD
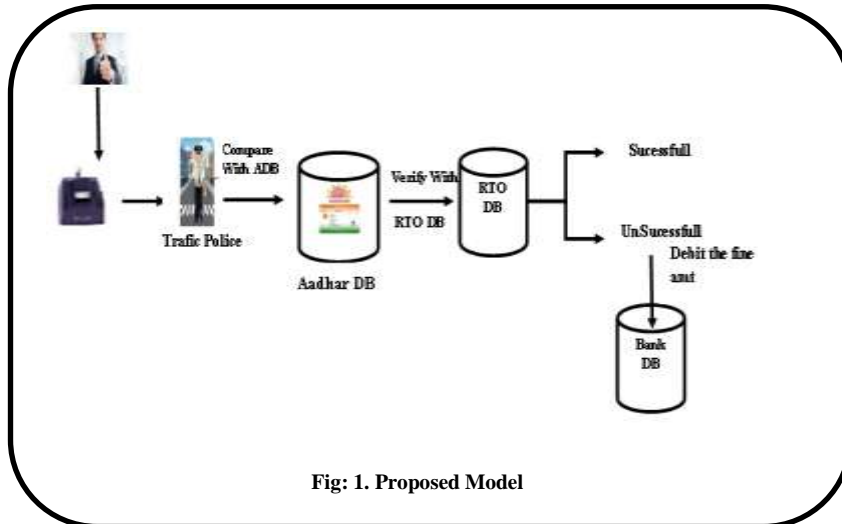
Fig: 1. Proposed Model

The Block Diagram of the proposed methodology is as shown in figure 1. It explains the overall working process of the system. The traffic police reads thumb impression of the driver through biometric device. The system searches Aadhaar number for the thumb impression, and verify with RTO database and collects various information related to the driving license. If verification is unsuccessful then the fine amount is deducted from the online bank account of driving person.
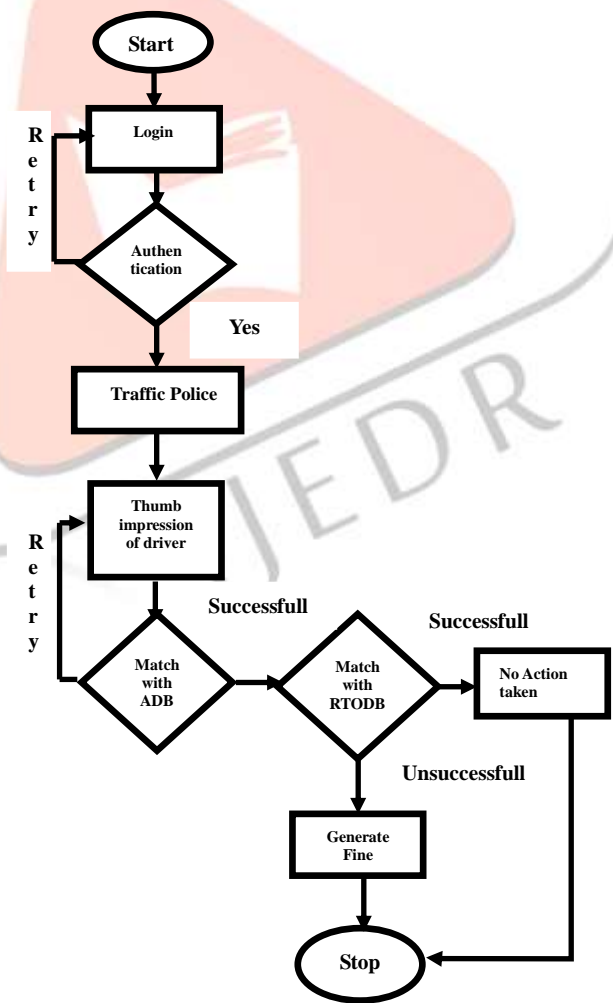
Figure 2. Flow Chart For proposed Model

A. Flow Chart

The flowchart for the proposed model is shown in Fig. 2; a new applier has to provide his document's hard copy to the administrator of RTO. The hard copy contains information such as driving license, bank account details, and Aadhaar number.

RTO officer has to take the thumb impression of the driver through a biometric device. All these details are stored in the database at server through online registration. After police logins into the system, he has to take the thumb impression of the driver, and is matched to the thumb impression present in the RTO database. If it matches then the driver information is displayed, based on this information driving license is verified. If the verification is successful no action taken, otherwise based on the status of the driving license, fine amount is generated and is deducted from the online bank account of the driver.

This system is developed using VB.NET frame work as front end and MySql 5.56 as the back end. This application avoids the corruption in RTO department. Keeps the license documents safely and offer the drivers to bedriving license.

B. Algorithm for driving license verification

Step 1: Start.
Step 2: Login page will be displayed.
Step 3: Authentication is done using RTO database.
Step 4: Read the thumb impression of the driving person.
Step 5: Match the thumb impression with template present in the RTO Data Base.
Step 6:a: If match is unsuccessful generate the fine and
        deduct the fine amount from the driving person's bank account.
        Goto step 7.
Step 6:b: If match is successful then goto step 7.
Step 7: Stop.

IV. SNAPSHOTS AND DISCUSSIONS

Fig 3.RTO login page

Fig 4. Driving License Registration page

Fig 5: Traffic police Login

Fig 6. Driving License verification page

RTO login page is as shown in fig 3.This page will read user id and password of the RTO administrator. If the admin is authenticated then system will open the driving license registration page as shown in fig.4 and admin will enter the driving license details of the person. The traffic police logins through the page as shown in fig.5.Traffic police will read the thumb impression of the driving person through the biometric device. The system will retrieve the driving license details of the matching thumb impression from the RTO data base. The traffic police can verify by viewing the details of driving license. Based on status system will generate the fine and deduct the amount through online banking.

V. CONCLUSION

It can be concluded that "E-verification Of Driving License through Aadhaar Database" effectively verifies the driving license. The system introduces facility for traffic police to perform verification of driving license and take the action accordingly. It also helps the RTO officials to maintain records systematically and reduces a lot of paper work and manual efforts. It avoids the corruption in the RTO. Drivers are not required to rely on driving license.

VI. FUTURE WORK

The application can be enhanced with the different concepts like Face Recognition and Number Plate Recognition through image/camera, send a message to the drivers about the expiry dates of documents, verifying the vehicle-related information such as RC book, emission test, insurance and etc. It is a practical project, it can be dispatched in Real-time Environment.

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