

E-DRIVING LICENSE AND RC BOOK VERIFICATION SYSTEM USING QR CODE

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Abstract— Quick Response (QR) are the codes that are quite similar to the two dimensional barcodes which are basically used for storing data efficiently. These QR-Codes are being vastly used in current scenario with the growing smart phone users using QR code scanners with the help of their devices. QR codes have gained vast recognition since it provides a lot of benefits. Driver needs to carry license or other documents at the time of driving and also feels the need to carry his RC book of his vehicle and other vehicle related documents but when rider forgets to carry his documents and is stopped by the traffic police then driver has to pay certain fines. In this paper we provide a system that eradicates the need of carrying several original documents driver can carry the QR code in his device. Using QR code the rider along with his documents gets authenticated

Index Terms— QR code.

I. INTRODUCTION

Many accidents are happened due to infringement of traffic rules, driving the vehicle without proper license. The authorities unsupportive of verifying the identity of every driver on a road and whether the person driving a vehicle is licensed or not. Hence defiance of traffic rules has become more common. Many techniques are used for verifying the driver, namely-Smart Card Based License Management using Iris Scanning Approach and Improving Fingerprint Based Access Control System Using Quick Response Code (QR Code). In Smart Card Based License Management using Iris Scanning Approach the Iris Scanning technology of biometrics is used. The biometrics is a much reliable technique than any other technology present for authentication. The system is to be mounted in a helmet (two wheelers) and on windshields (four wheelers), the driver's iris pattern is scanned continuously and processed in a specially designed system. A smart driving license is integrated with the driver's iris pattern which is already registered in the provided system. The system design is such that the engine is started only when driver matches with the iris pattern on the license. When the iris pattern does not match with the patterns in the provided database the system shutdown the engine. As the pattern is continuously scanned, a license cannot be used by another personality. That's why it's become risky to rely on single authentication technique. QR code is generally used for encoding information such that people can conveniently use mobile phone's camera to scan the encoded QR code and decode information through a QR code reader. In this paper, we have improved the verification method of the driver. In this new method, we simply store the driver and RC book information in a QR code. And the users need to carry only this

QR code in her/his Smartphone. And when they show their QR code to the Traffic police, traffic police scans this code and send to the RTO. Then RTO verifies the user through the provided QR code. After that RTO sends verification result to the traffic police.

II. LITERATURE SURVEY

E driving license system is a trending topic in driver identification and document verification by traffic police. Refining Fingerprint Access Control System to QR-Code we improve the traditional fingerprint based access control system with an additional verification process and a remote identification scheme, both of which are based on Quick Response Code (QR code). The second authentication process leverages the one-time password (OTP) and the personalized response to a challenge contained in the QR code to enhance security. The authorization scheme assists a remote manager to grant temporary access to otherwise unauthorized personnel using the time-stamped authorization information stored in the QR code. In Secure QR-Code System and authentication system exists for the QR codes which handles both users and generators security concerns efficiently. The system can be backtracked with current excellence used for encrypting QR-codes. The system is implemented and tested using an Android-based Smartphone application. It was found that the system introduces a little overhead in terms of the delay required for integrity verification and content validation. In Smart Card Based License Management by using Iris Scanning This approach uses Iris Scanning technology of bio metrics which is evident to be a more reliable one. A helmet can be used by a two wheel drive and a glass
Windshield is used by a four wheel drive; the iris pattern of the driver is continuously scanned and

processed by a specially built system. A smart driving license which is enabled with the iris pattern of the driver is already placed in the working system. The creativity of the proposed design is that the vehicle can only be operated when the iris pattern recorded during the license database matches with the pattern of the driver in case an authentication failure occurs the engine stops functioning and comes to a halt. Since the pattern is scanned, a license cannot be used by another personality. In Future, driving the vehicle without license can be completely eradicated using the proposed design.

III. IMPLEMENTATION

Implementation Details:

We aim to build a prototype system which is shown in Figure, which is used for identifying the driver. System contains following working of a system.

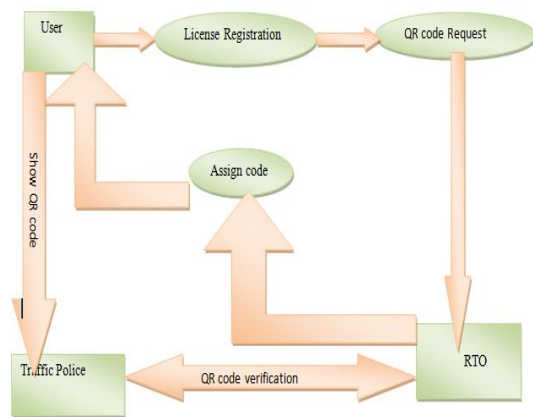


Fig 1. Data Flow Diagram

As mentioned in the diagram the three main modules are User, Traffic officials and RTO. Here user is responsible for registration to get the QR code and show this QR code to the traffic officials. The traffic officer is responsible for login and taking QR code from user and scan this QR code, The system will search the RTO database and verify the user. The RTO is responsible for generating QR code, verify QR code and assign traffic police with the users Information stored in the database.

Mathematical Model:-

E-driving license Mobile application uses the QR code for storing particulars about driving license and RC book. Via this paper, we proposed a tackle for E driving license which is helps to traffic police for identifying whether or not the user is an authentic user.

System $S = \{U, T, R\}$

Input = $\{U, L, Q\}$

Output = $\{L, Q\}$

Where

U – Set of users

T - Set of Traffic Polices

L – Set of license

Q – Set of QR codes

R - RTO

Consider a set U consisting of various users,

$U = \{U_1, U_2, U_3, \dots, U_n\}$

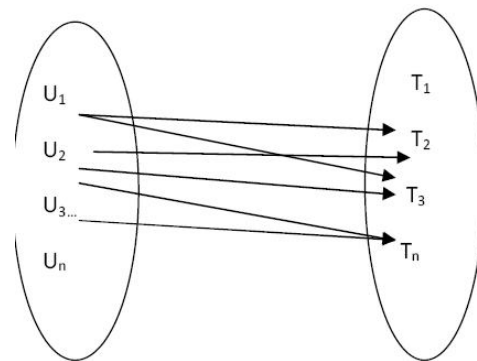
Consider a set T , which is a set of Traffic police registering with our system.

$T = \{T_1, T_2, T_3, \dots, T_n\}$

Consider R that is the RTO

$R = \{R\}$

The relation between User Set and Traffic police set can be represented as follows, which is one to many relationships.



CONCLUSION

By using this application it is not necessary to carry all the documents and license every time. Simply you have to carry QR code in your Smartphone. By using our system the driver goes through the verification process through a reliable and efficient manner. QR code is being widely used for implanting messages such that people can easily use their Smartphone's to capture the QR code and gain relevant data from QR code reader. User can get QR code by simply registering with the system.

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