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Review Article

BLOCKCHAIN BASED UNFORGED LICENSE

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ABSTRACT

Block chain (BC), the technology behind the Bit coin crypto-currency, is alluring and critical for ensuring enhanced security and privacy for diverse applications in many other domains - including in the Internet of Things (IoT) eco-system. The maintainence a database of vehicles for Pan India is the responsibility of the Regional Transport Office(RTO) governed by Indian government .As it issues driving licenses and maintain the collection of vehicle excise duty and sells personalized registrations. It is mandatory that everyone must produce the DL, insurance during verification. This paper proposed an approach to solve such problems by storing all the information related to driving in the block chain and retrieving details by scanning QR code.it is very reliable identification method based authentication for driving. we provide a system that eradicates forging of driving license.

Keywords: Blockchain,, hash function, licence, QR code, Security.

INTRODUCTION

The impingement of traffic rules, driving the vehicle without the proper license results in the accidents. There exist many unsupportives in the verification whether the person driving the vehicle is licensed or not. An Indian government bureau responsible for the registration of vehicles and the issue of Driver's Licenses in India and maintaining records of drivers is Regional Transport System(RTO). 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; thus the strict rules force the person to forge the license details to escape from penalties and fines. The main aim of the present research is to design and develop an advance and robust security in license verification. The system being developed through the present work, block chain and can be made affordable so that it can be used by all people. This paper aims to introduce an architecture which detects the QR code as well as the validity of the license of the driver and takes a robust decision to file charge sheet based on the validity during verification.

Literature Survey

E-verification

E-driving license and rc book verification system using QR code. proposed that the QR code is used for storing the particulars of license and rc book. By scanning the QR code, the system will search the RTO database and verify the user. The drawback of this system is that it is time consuming to draw the datas of the particular user from the centralized database.

Blockchain beyond cryptocurrency "Applications of the block chain technology beyond crypto currency" proposes the possibilities of implementation of block chain and digital ledger technology beyond the cryptocurrency in various domains like internet of things, ecosystem etc

Safe and Secured Vehicles

In smart license based vehicle safety and security system, the user license number is converted into the QR code ,the vehicle must contain the QR code reader, user has to show the QR code before the reader, if it matches with the vehicle ,the vehicle starts ignited. otherwise ignition will not work.it increases the security of the vehicle only.

Aadhar Database

E-verification Of Driving License Through Aadhaar Database. The e-verification is done through the thumb impression of the user using biometric device to retrieve the information from the RTO database in which details has been stored using the aadhar number.

Existing System

The existing system is the manual one and it is the hectic way of approach. Due to the alarming rate of increase in vehicles, the manual calculations becomes difficult and results in error. The details of the verification cannot be stored for further analysis by the traffic police and by the user. Even though the computers find their place everywhere, but there exist a confusion in the installation of the system and the kind of software to be used. The major drawback of the existing systems are erroneous data entry due to human errors, time consuming, reports are not available in the presentable form. Sometimes results in the loss of data due to mishandling and improper storage facilities. And of lately by this proposal, new change has been implemented.

Proposed System

The scope of work to be done, The risk to be incurred the resources and the required tasks to be accomplished must be understood.

Blockchain

Block chain is the data structure in which the dates are stored in the blocks and each block are mined separately by the miners and the data retrievation made possible by the linkage of the block by the hash function. It is the distributed database of records or public ledger of the digital events that have been shared among the participants. Block chain technology finds wide range of applications due it's special features such as collaboration, flexibility, residence, distributed verification, security. The Block diagram of the proposed system in which the storage and the retrievation of data from the block chain is shown below.

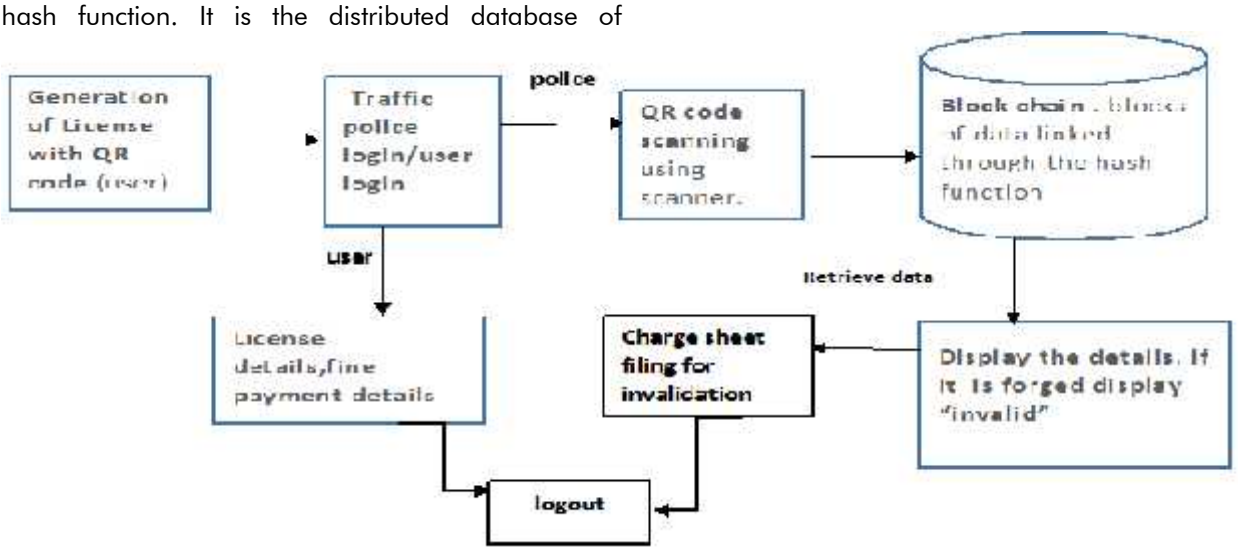

Fig. 1:Block diagram of the proposed system

Modules Of The Proposed System

The working of the entire system is divided into for different modules. Such as

1.Admin module

2.RTO module

3.User module

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4.Checking inspector module

Admin module

Admin adds details about employee and their type of designation and adds details about the charges to be collected incase of forging and during the violation of traffic rules

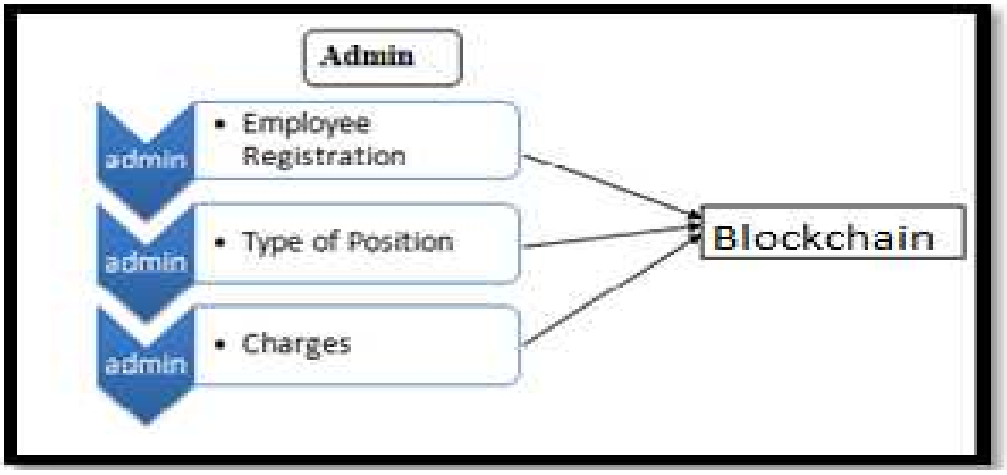

Fig.2:Admin Module

RTO module

Adds details about the customers and vehicles which are used for the customer license form, this module allows adding the details of driving license category based on the type of vehicles and the encrypted license number in the form of QR code is added to license. charge sheet has been created for the user.

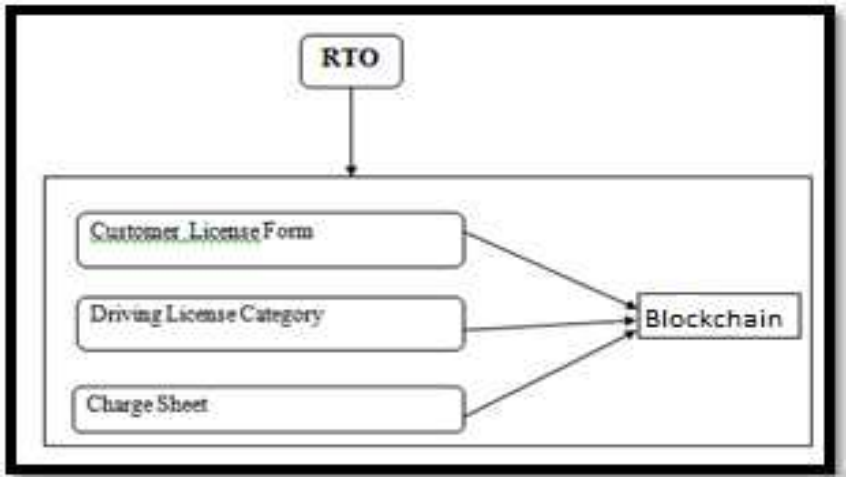

Fig.3:RTO Module

User module

User have individuals username and password for their login account . It's includes license details and also view their paying fine details. The fine details are noticed in the charge sheet.

Checking Inspector Module

It includes the scanning of the QR code in the license using the scanner and viewing of the charge sheet details and the allowance of updation of charge sheet incase of forging and violation of rules user.

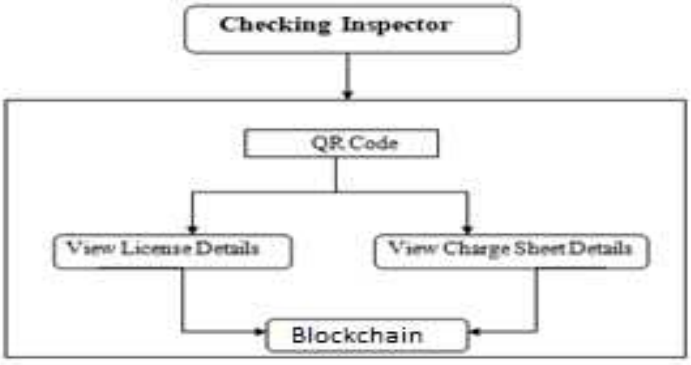

Fig.4:Checking Inspector Module

Conclusion

The application of block chain has grown. The properties of its security, privacy, traceability, inherent data provenance and time-stamping has seen its adoption beyond its initial application areas. Though implementation of the proposed system may not take time, it would be of great use for the safety of drivers

Future Work

There is a wide scope for future development in the block chain technology. Further enhancements can be done in efficient manner. The applications has been enhanced with different concepts like face recognition and number plate recognition through image, and verifying the working of the block chain, sending the information message to the user about the expiry of date, collection of fine through the automatic online transfer in case of forging.it is a practical process and can be implemented in the real time environment

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Flowchart