e-ISSN : 2349-9745
p-ISSN : 2393-8161
Scientific Journal Impact Factor (SJIF): 1.711
International Journal of Modern Trends in Engineering and Research
www.ijmter.com

RTO AUTOMATION SYSTEM USING NFC

Neha Jain[1],Sagar Shinde [2], Anuja Hodage[3] , Siddhesh Mankame[4]
[1]*Computer Science Department, SLRTCE*
[2]*Computer Science Department, SLRTCE*
[3]*Computer Science Department, SLRTCE*
[4]*Computer Science Department, SLRTCE*

Abstract—RTO Automation System is basically a digital system to overcome the manual task. It is the system which handles the work based on NFC (Near Field Communication). Many modern smart phones and tablets have an integrated scanner that can read NFC chips. All one needs to do for driver's licence checks is attach a single low-cost NFC chip to the driver's licence. The NFC chip stores a unique combination of numbers. This ID will be read by the smartphone and the NFC to web application with the underlying NFC technology and uniquely associated with the driver's master data in the web application. We are going to develop a mobile application, database and NFC technology that enables the exchange of data between different devices over distances. In our project, we will use the smartphones equipped with NFC can be paired with NFC Tags or stickers which can be programmed by NFC apps to automate this task. We propose and describe a secure mobile payment system. Solution for use in a traditional in-store environment, which contains the NFC secure element. Communication of NFC, and could replace the use of payment or service specific smart cards.

Keywords- Android, NFC, Tagcard, mobile.

I. INTRODUCTION

The need for manual RTO based systems is completely reduced in this method and the RTO system works through NFC. A complete NFC system consists of a transponder (tag), reader/writer and computer host. The transponder, also known as the tag. The microchip contains memory to store a unique data and to receive and send data back to the reader. These tags are powered by the electromagnetic signal received from a reader. Development in technology bring digital world to be border-less. It's proven through a developed technology, when trade and transaction can be done not only using real money but also virtual one.[4]NFC(Near Field Communication) technology provides both way interaction between two electronic devices and make it secure and digital. Tapping two device against each other. It communicate at speed of 106kbit/s.

II. SYSTEM MODEL

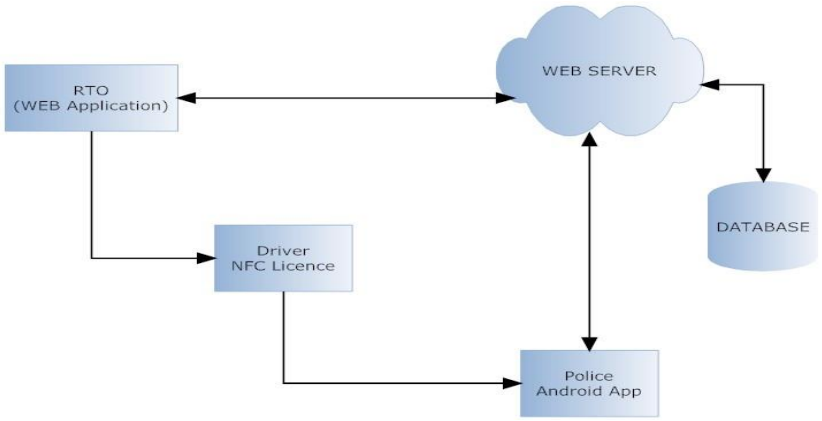

Fig 1.1 Architecture

DATABASE: Database use for storing Driving License Details, balance amount, complaint register against the Drive if any.
POLICE ANDROID APP (Traffic Official's): It is app use for registering the complaint against the driver or for viewing the details of Drive in case of problem or violence of the rules.
DRIVER NFC LICENSE (Card Holder's): It is driving License issued by RTO officials to driver or person who wants the License. License will be NFC enabled.
RTO (WEB APPLICATION) (ADMIN): RTO (Admin) is the authorized person which give the License to other person. Admin is an important person which do's the validation of document submitted by the person for driving license.

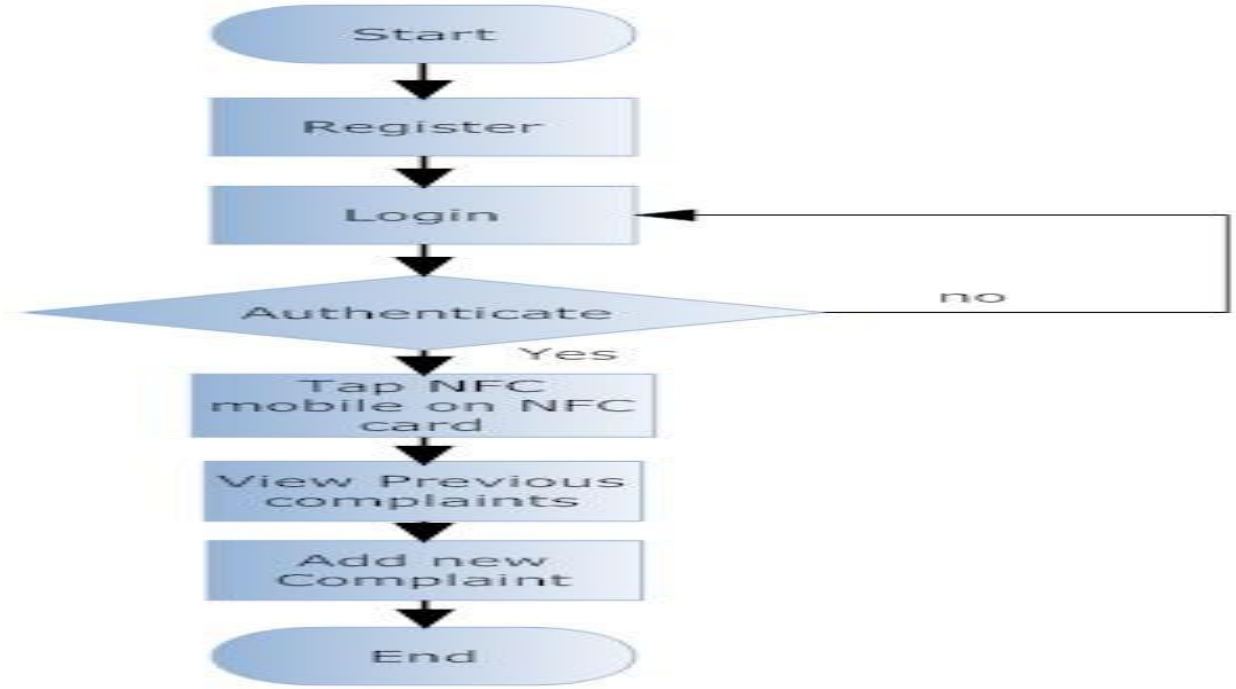

Fig 1.2 Flowchart

III. EXISTING SYSTEMS

RTO Automation System is basically a digital system to overcome the manual task. This kind of system has been existed in Countries like France, Norway and Spain to reduce the manual work and process the RTO automation system so fast. It is the system which handles the work based on NFC (Near Field Communication).
Such system is also introduced in India. Many modern smart phones and tablets have an integrated scanner that can read NFC chips. All one needs to do for driver's licence checks is attach a single low-cost NFC chip to the driver's licence.
The NFC chip stores a unique combination of numbers. This ID will be read by the smartphone and the NFC to web application with the underlying NFC technology and uniquely associated with the driver's master data in the web application. We are going to develop a mobile application, database and NFC technology that enables the exchange of databetween different devices over distances.
In our project, we will use the smartphones equipped with NFC can be paired with NFC Tags or stickers which can be programmed by NFC apps to automate this task. We are basically introducing a new system for RTO using Android app which includes Near Field Communication.

IV. IMPLEMENTATION

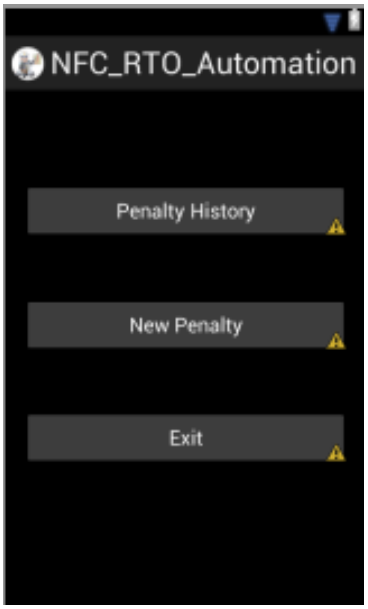

Fig 1.3 Home Page

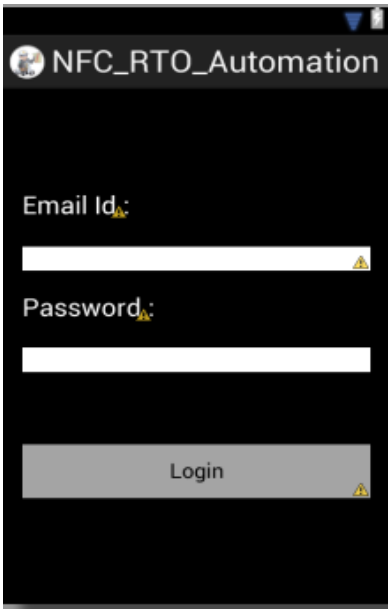

Fig 1.4 Login Page

In this, home page will be displayed on screen of mobile. It will ask the user for selecting Penalty History, New Penalty, and Exit. In Penalty History, history details of penalty will show and in New Penalty, new Penalty can be added to list.

Login Page is used to Login for the authorized person to use this application. This is the registration of identity of users.

V. LIMITATIONS

Starting cost for the setting up the system is higher in longer duration it will be beneficial for the RTO Officer's.
The tag may not read it properly if the NFC tag is tapped proper at the device.

VI. FUTURE SCOPE

NFC could be used for so much more than just data transfer and payments. We can purchaseour tickets, reserve hotel, unlock and lock rooms and cars etc.
The truth is that all of this and more is possible with NFC. As long as vendors get a reader that supports NFC, capable phones can quickly and easily send information to those devices.
With Android, Nokia and Blackberry all in various stages of supporting NFC,the pressure to offer support as well to avoid falling behind in a technologically advanced world.
Some current as well as developing applications of NFC include: **Google Wallet:** Google's smartphone program that allows users to load credit card information and payment. Visa and Samsung have partnered to create a NFC compatible smartphone geared at fans of the Olympics. This smartphone will carry special content and aims to make purchases and other interactions at the Olympic Games faster and easier.As other cell phone manufacturers race to keep up, NFC could grow substantially and being offered on more and more devices. All in all, the future of NFC looks bright.

VII. CONCLUSION

In this we are using NFC technology which the new technology. The smart phone are now enable with NFC using this we are develop the system for the RTO officers. Make the work of RTO digital

and automatic .It will reduce the manuals work and make the easy and fast implementation of the process.

REFERENCES

[1] Shristi Singh andSakshi Nigam, Touch and Go" With Near Field Communication: A Review,AEICT-2014
[2] Hussein Ahmad Al-Ofeishat, Mohammad A.A.Al Rababah, Near Field Communication (NFC), IJCSNS International Journal Of Computer Science And Network Security, VOL.12 No.2, February 2012
[3] Ajay Gore1, Nirvedh Meshram2, Sumit Gadi 3, Rahul Raghatate4,Design of an Automatic Fare Collection System Using Near Field Communication with Focus on Indian Metrorail,International Journal of Engineering Research and Development Volume 10, Issue 4 (April 2014), PP.20-24
[4] Huda Ubaya, Design of Prototype Payment Application System with near Field Communication (NFC) Technology based on Android,Computer Engineering and Applications Vol. 1, No. 1, June 2012

