



## VEHICLE REGISTRATION & STOLEN VEHICLE DETECTION USING QR CODE SYSTEM

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**Abstract** -Our system is developed for the target users as Traffic police and all the public. Who are facing the challenges like need to carry hard copy of the entire legal document of vehicle and to identify the stolen vehicle? Our product will lead to higher benefits in society for common public and Traffic police. The user does not need to carry the hard copy of document long, instead all the required document are converted into QR Code, so whenever Traffic cop ask for document, he/she has to just show the QR Code provided by the showroom which has the all required details. The traffic cop has the android scanner extendedly developed for our system, just to decrypt the QR Code and fetch the details present in it. Our system will help owner to raise the lost alert, so that Traffic cops can easily find lost vehicle by scanning the QR Code. System has common database for showroom users for registration of vehicle and for Traffic cops to fetch the details.

**Keywords:** QR code, Unique Identity, Document Check System.

### I. INTRODUCTION

In today's world with increasing numbers of automobiles and vehicles, vehicle theft has become one of the most easy and common type of robbery. To report any robbery or theft we follow the traditional approach of registering complains in police station. Police registers a complaint and then in turn start the investigation. But it's very easy in our system to manipulate the stolen vehicle and change its original identity. Thus it becomes very tedious to identify the stolen vehicle. However we do not have any device or sensors in our vehicle which can help us track the live location in case vehicle is stolen. Thus it makes is very easy to carry out this type of theft.

Hence we have developed system, which uses QR code that is very wisely used now days, and helps us uniquely identify any vehicle or can get details of vehicle by decrypting QR Code. The main goal to use QR code is for unique vehicle identification. This is going to help in situations where theft has modified vehicle number plate or GPS tracking system if present any. This system stores the information related to vehicle such as insurance, license, emission testing details, personal details of the applier and registration date. As a part of system, we have android application that would be installed in Android phones of traffic police. And it will allow traffic police to get details like license number and vehicle related information by scanning the QR Code.

### II. RELATED WORK

There are many projects in markets which have implemented traffic police assistance system. But, it only tracks officer who is on duty. It offers no modules regarding the rule violation and fine collection and its maintenance. There are papers which discusses along with app a smart data analysis centre to make systematic evaluation of employee work performance. . New solutions and algorithms for indoor and outdoor location, GPS deviation improvement, and work performance measurement are put forward details regarding to android application, it is very user based not traffic officer based. It discusses a various features of applications which has facilities from towing vehicles, location of police station and traffic rules

### III. PROPOSED SYSTEM

In this system we have develop a software as well as an android application for registration of stolen vehicle complain. This helps in easy and convenient identification of stolen vehicle. It reduces manual mundane work and has proved as more successful as compared to traditional existing system. This system is implemented using latest day to day Smartphone technology i.e. QR code. This unique feature has more accuracy and hassle-free usage. Once registered, each and every vehicle will be associated with unique QR code generated by QR code generator. Data behind QR code would have an additional security i.e. encryption. This encrypted would be done using encryption algorithm. Data behind this QR code would be basically being user's vehicle related data, specifically documents in digital format. This will reduce corrupted and duplication of data. This system has two most important modules functionality wise. They are basically the front end and back end. Front end will act as a point for collection of data, such as vehicle information, location information, tracking and positioning technologies from both users i.e. Traffic police and citizen.

Below are steps that will help you to run the system.

**Step 1:** In this registration phase every retailer and user as well as police has to register themselves.

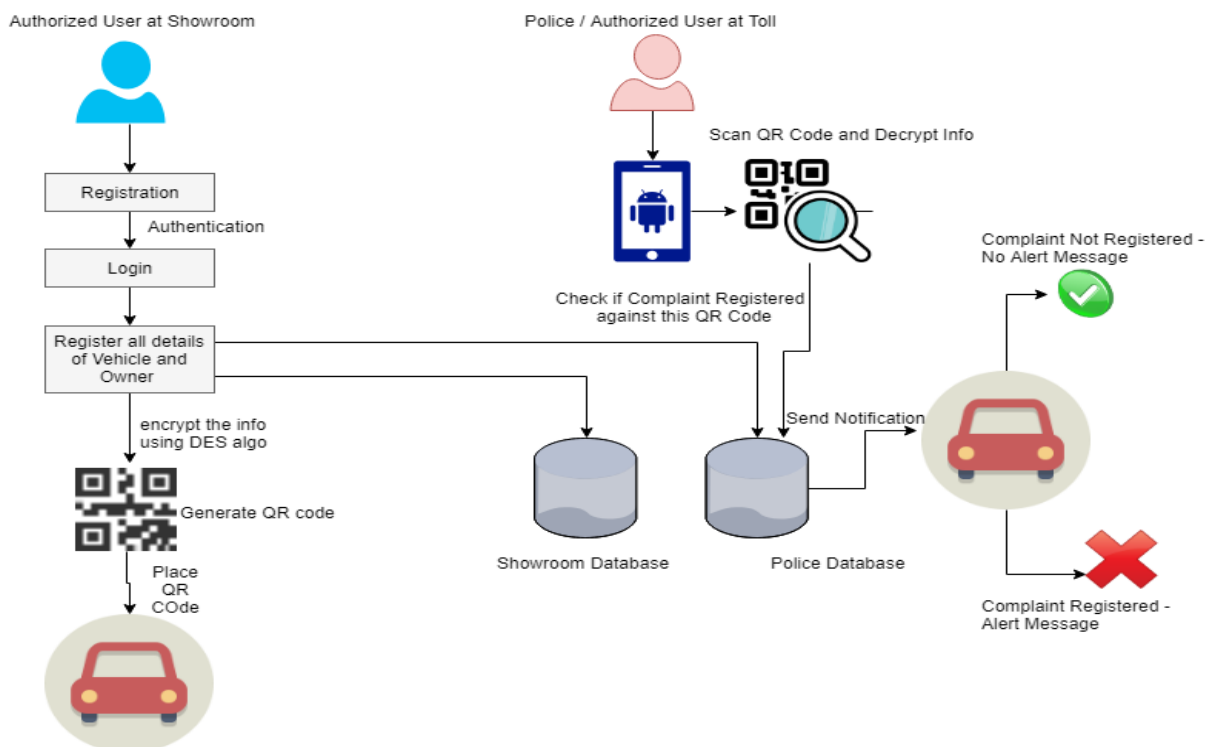
**Step 2:** After registration they will get a QR code image which is encrypted information of user and vehicle detail information. The same set of information will be stored at the server.

**Step 3:** User is Registered complain against that QR Code which is stolen.

**Step 4:** Traffic Police or authorized user will scan and decrypt the data using QR code scanner. It will scan that QR code image to check whether authenticated user and vehicle details are there or not for verification process.

**Step 5:** If vehicle is stolen and complain is activated against particular QR code it will generate an alert message and alert message. .

### IV. ARCHITECTURE - PROPOSED SYSTEM



#### **Advantages:**

- Find stolen vehicle in easy way suing QR code.
- Need not to carry hard copy of documents.
- Data would be stored in encrypted format.
- More accurate as compared to current method being used.

### **V. HARDWARE REQUIREMENTS**

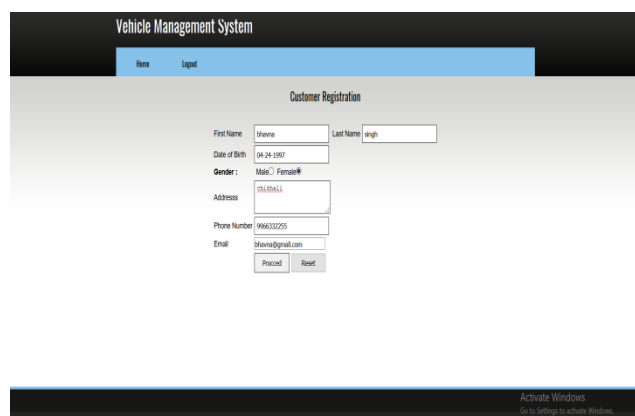
- System : Intel I3.
- Hard Disk : 40 GB.
- Monitor : 15 VGA Colour.
- Mouse : Logitech.
- Ram : 3 GB.

### **VI. SOFTWARE REQUIREMENT**

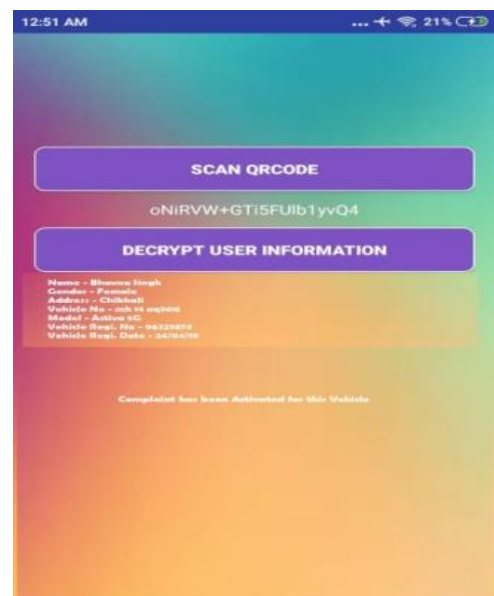
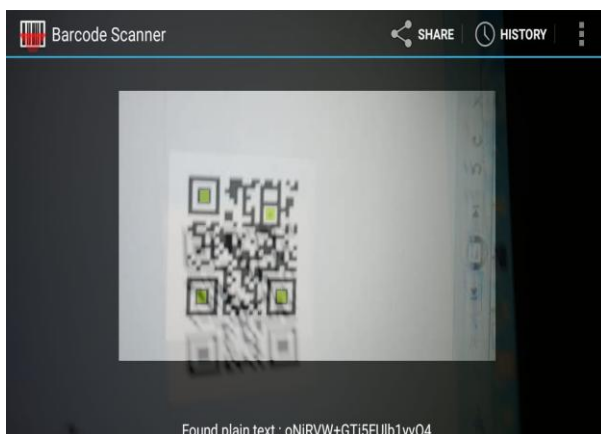
- Operating system : Windows 7 and above.
- Coding language : JAVA, ANDROID
- IDE : Android Studio.
- Database : MYSQL/XAMPP DATABASE

### **VII. RESULTS**

#### **Web Portal:**



### Android Application:



### VIII. CONCLUSION

As the Smartphone's with camera is getting more advanced, recognition of barcode based on Smartphone is getting more important and practical, the term here that is mentioned new high-speed, high accuracy automatic recognition method for recognizing QR code symbols any conditions for vehicle identification. The recognition test also showed the proposed method is effective for the vehicle identification using QR code image recognition based system

**IX. REFERENCES**

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