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QR Code Authentication Based Goods Delivery System

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Abstract—**This application is for, order checking between delivery boy and the customer. If the customer order some goods in a particular company/ industry means, the order information such as customer name, address, amount, number of items to be purchased details will be sent to both customer as well as the delivery boy using QR code. The Quick response (QR) code was designed for storage information and high-speed reading applications. In this application, we present a new rich QR code that has two storage levels and can be used for verification purpose. First lever QR code is generated for customer and deliver boy, Along with cost information(i.e. customer address, amount, number of items purchased details) once key will be produced for both customer and delivery boy. When delivery boy delivers the goods to the customer, QR code authentication process occur. Only if both keys are matched goods are delivered, then the confirmation QR code which is generated by delivery boy, customer will be sent to the company.**

Keywords: Quick response (QR) code, android, Qpay generator, mobile phone

1. INTRODUCTION

A reliable distributed secret storage system with the QR code can be used in significant applications, such as offering secret management and authorization in e-commerce. Based on our observations, our aim was to design a distributed secret sharing system based on the QR barcode, thereby allowing a secret to be split into pieces and shared among individual QR-tag owners to ensure the privacy of the QR data. The secret data can be revealed when qualified QR-tag owners cooperate. Recently, most QR-related research has used the traditional image hiding manner or the traditional watermarking technique without utilizing the characteristics of the QR bar-code. The image hiding schemes treat the Q R tag as a secret image and then embed the QR image into the special domain or the frequency domain of a cover i mage. Hence, the secret payload of such schemes is equal to the QR data. These schemes do not operate on the QR tag directly, s o t hey are incapable of allowing the practice of hiding/reading the s secret into/from the QR code directly.

Compared with a one-dimensional (1-D) barcode, the two-dimensional (2-D) QR barcode can store a larger data payload and possesses the capability of correcting errors. The barcode data easily can be decoded and retrieved via an automatic barcode system. However, the lack of security of the barcode with private data creates problems for its real-world application. In general, to protect the privacy of the barcode data, the data normally are stored in a back-end database, and the barcode shows the web link f or the database. Only a browser with the right access can log into the database and obtain the private data. However, the web link of the back-end database creates a potential risk in which it may attract the intruder's attention.

2. COMPREHENSIVE REVIEW OF LITERATURE

PAPER: Certificate Authentication Using QR Code and Smart Phone. Dr.N.Revathy Associate Professor, Department of Master of Computer Applications, Hindusthan College of Arts and Science, Coimbatore, India. The degree certificate awarded by the University is of prime importance in the person's life but the production and circulation of fake certificates is cheap because a paper document can easily be forged with the availability of advance printing and copying technologies.

PAPER: QR Code Security and Solution.Sukhjeet Kaur Department of Computer Science Engineering Adesh Institute of Technology, Gharuan, Punjab, India In this paper examines QR codes how they can be used to attack human interaction and automated systems and their different data types, attack via QR codes and security arrangements and some of possible research areas while considering QR codes.

3. PURPOSE OF THE PROJECT

To deliver the goods properly to appropriate customer.It is possible to obtain good pattern recognition results, and therefore a successful private message extraction.

4. PROBLEMS IN EXISTING SYSTEM

In existing system, they use HCC2D (High capacity coloured 2Dimensional) code is a rich QR code which significantly increases the storage capacity of the standard QR code. The HCC2D code encodes information using 4, 8 or 16 module colors. This code inherits all the strong properties of standard QR codes, but it is not readable by a standard QR code reading application and needs to be printed using a color printer.

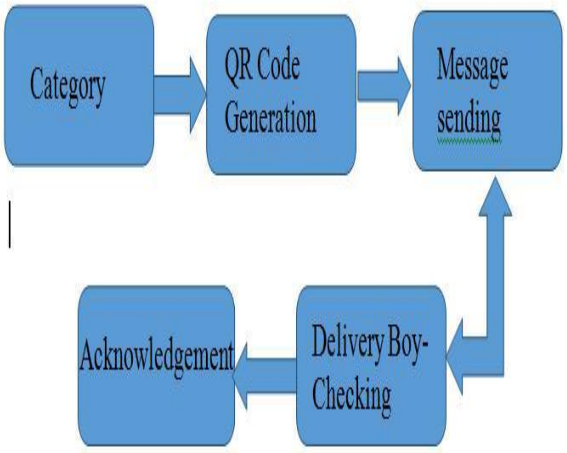
5. PROPOSED SYSTEM

Propose a QR code scheme for goods delivery system. We user QR code for admin and the delivery boy who send the customer details and acknowledgement information.Propose a new rich code called two level QR code. This 2LQR code has two levels: a public level and a private level. The public level can be read by any QR code reading application, while the private level needs a specific application with specific input information. This 2LQR code can be used for private message sharing or for authentication scenarios. The private level is created by replacing black modules with specific textured patterns. These textured patterns are considered as black modules by standard QR code reader. In addition, the private level does not affect in anyway the reading process of the public level. Thus the private level is invisible to standard QR code readers.It proposed a secret sharing scheme f or the QR tag to protect the secret QRcode data. Unfortunately, the con-tent of the QR tags ismeaningless, and the shares can be easily obtained by scanning the QR tags with a barcode reader. It provides 40 QR versions to carry various data payloads. The larger QR version can offer higher data payload. Another significant property of the QR technique is its reliability, which allows the barcode reader to recover data correctly even if portions of the barcode are dirty or damaged. Toachieve reliability, the QR code standard offers four error correction levels, i.e., L, M, Q, and H /for each QRversions. For instance, level H can tolerate approximately30%ofmiscodesorsubstitution errors in the data and error correctioncode words. Code word is a unit in the QR tag thatis equal to eight modules. It sharing with QR codecan be applied for value-added barcode applications, such as the distributed secret sharing,E-coupon, and e-ticket.

Advantages:

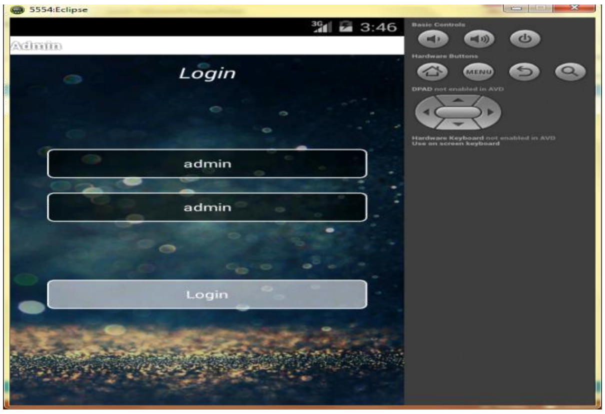
- Easy to use.
- It is possible to obtain good pattern recognition results, and therefore a successful private message extraction.
- Need less memory space.
- Identifies the vulnerabilities.
- Create the awareness of permissions to the user.

System architecture



Modules

Category: Category contains two categories such as admin, delivery boy. Admin directly access the customer details. For delivery boy, login and registration process is must. If the delivery boy already register means no need to register again. We also implement splash screen for front page. For storing login details we use Sqlite date base which stores the information get from registration. For checking login details we match the name, password which is already stored in registration database.



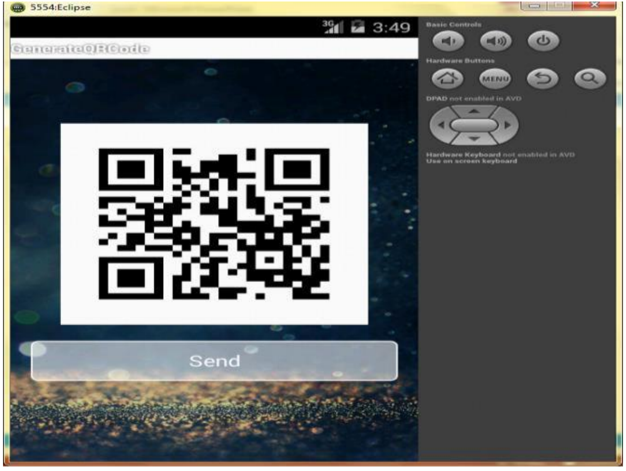
admin

admin

5.1. QR code generation

Quick response code – QR codes is a 2 dimensional bar code technology consists of black modules arranged in a square pattern on white background that enables the user to scan the codes and link with the mobile device to the Web address and access the information.

The proposed generation method is applied with characterization patterns (mean and median) for the message sharing scenario and with the original patterns for the authentication scenario. Zxing library ("zebra crossing") is an open-source, multi-format 1D/2D barcode image processing library implemented in Java, with ports to other languages.

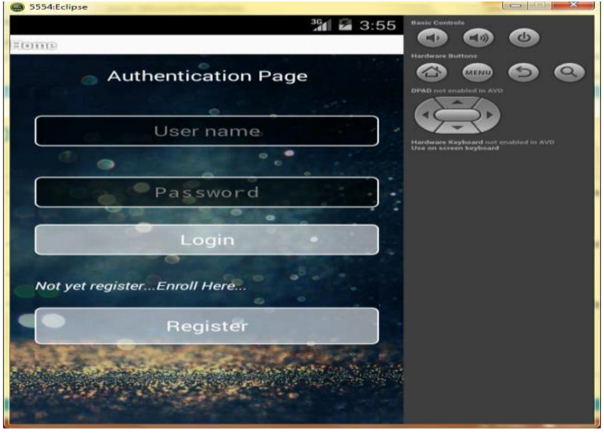


5.2. Message sending

Using the generated QR code, send QR Code image to the delivery boy, customer via whatsapp.For doing this, we already store the resultant QR code in JPG/PNG format in external directory.Getting read and write permissions from mobile device we have to send image to both delivery boy and the customer.

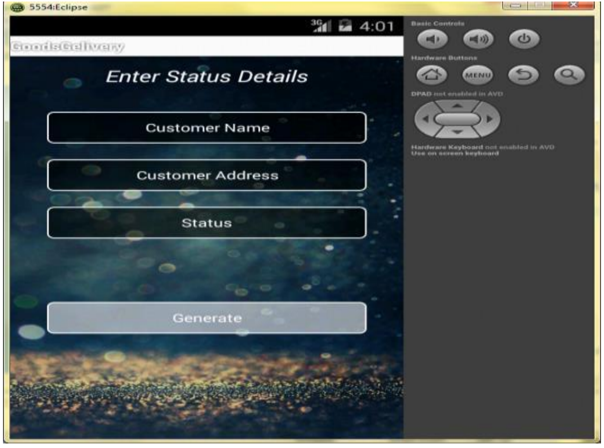
5.3. Delivery Boy Checking

When the key and customer details is correct it will allow the delivery boy to getting the collection from the customerAfter getting collection, the delivery boy will send the resultant QR code to the admin. The QR code id generated by deliver boy with date and time. The generated QR code contains customer name, address, acknowledgement message and date time.



6. ACKNOWLEDGEMENT

In acknowledgement phase we read the secret key and customer details which are already generated in QR code generation module.We apply the unscrambling operation using key K to the sequence of numbers, which corresponds to detection patterns.When the customer details and the key matches it allows the user to read the process else it toast authentication failure message.



7.CONCLUSION

Thus our proposed private verification process or for authentication scenarios provide better security.Our system provides goods delivery process in an efficient manner.

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