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Swift Shopper the Astute way of Shopping

J Agrasha, R Anitha, E J Savitha, A Ragavan
Department of Information Technology, Anna University, SKP Engineering College, Tiruvannamalai, Tamil Nadu, India

ABSTRACT

The QR code system became popular outside the automotive industry due to its fast readability and greater storage capacity compared to standard UPC barcodes. In direct shopping billing process consumes more time and result to loss of patience among customers. In online market the touch and feel satisfaction will be unreachable. This methodology is the smartest way of shopping where the customer can choose the product directly based on the quality and the size by scanning the QR code on the price tag of the product.

Keywords: QR code, Products, Scanner, Merchant, Billing, Customer

I. INTRODUCTION

During recent years, there are major developments in the adoption of 2D Codes. The use of 2D bar codes/micro codes for various applications in the other sectors. QR Code is a two-dimensional symbol. It was invented in 1994 by Denso, one of major Toyota group companies, and approved as an ISO international standard (ISO/IEC18004) in June 2000. This two-dimensional symbol was initially intended for use in production control of automotive parts, but it has become widespread in other fields. Now QR Codes seen and used everyday everywhere in Japan for the following reasons: Several characteristics superior to linear bar codes: much higher data density, support Kanji/Chinese character, etc. It can be used by anybody free of charge as Denso has released the patent into the public domain. Data structure standard is not prerequisite for current usages. Most mobile phones in Japan equipped with cameras that enable reading of QR Codes can access Internet addresses automatically by simply reading a URL encoded in the QR Code.

A. Objective

In the proposed method the concept of QR code billing system for shop application is created using android. The authentication is done through the scanning of QR-Code through the mobile scanner application. In this method the customer login has to register using the application and scanner application. In this method the customer login has to register using the application and the QR-Code will be provided connection is successful. On scanning the QR-Code the shopping will be asked for the password. Once the authentication is done the buy made to proceed with the shopping process. The main purpose of implementing this concept of time sharing So that the customer is not required to visit the shopping centre to buy product vote and also to avoid fake bill.

B. Scope of the Project

The scope of this project is to propose a real time capturing system for consumer supplies using Quick Response (QR) code in a Android smart phone.

- ✓ Customer login
- ✓ Preparation of shopping list.
- ✓ No of product

- ✓ Product lists have been prepared and are available in a suitable format.
- ✓ Summarized shopping bill

II. EXISTING SYSTEM

Bar Code have been used in the existing System. Bar Code Readings may get unusable if any one side of the code is Rubbed or Deleted. Also, the traditional billing system is based on Queue system which consumes more time for customer to get products. Labor resources are needed and it may cost separately for them. Consume More Time, if any one product gets barcode erased all the other customers have to wait, until the product has to replace the erased product of the same.

III. PROPOSED SYSTEM

In the proposed system, the customers can scan QR code of the products they wish to buy. This applications allows QR code scanning, because it gets scan faster although if camera quality is not good, also the QR code are more relevant than barcode. Customer can update or remove items from the cart. It is time saving process, no needs to stand in long queue. So QR code verifies products by capturing it through the smart phone, then decodes and sends it to the server for authentication. The customer forwards the selected product list to the server that enables the customer to decide based on the products authenticity. The payment can be done as direct payment or it can be done by online transaction.

A. Advantages

Users can save time by entering into priority queue kept for this application user than into the normal queue. This application is very relevant to use as it allows customer to remove items from his/her list by one click. It also displays the total amount of shopping customer had done, which allows customer to choose product according to his needs. People not having internet connection can also make use of this application as the shopping market environment internet friendly. Smart phone can be used for shopping in malls and markets which makes Proper use of mobile technology.

B. Work Flow

In the proposed system, the customer installs the android application and sign ups by creating an account. Then, he/she will login in into the application and scans the QR code of the products of their desire. After completing the shopping, the customer confirms the product by checking the boxes of the appropriate products. Now, the customer can make the payment either as a direct payment or he/she can pay the bill using PayPal which is online transaction. The bills are verified by the security using the bill number. Here the Merchant can check the stock status and payment information using his/her login.

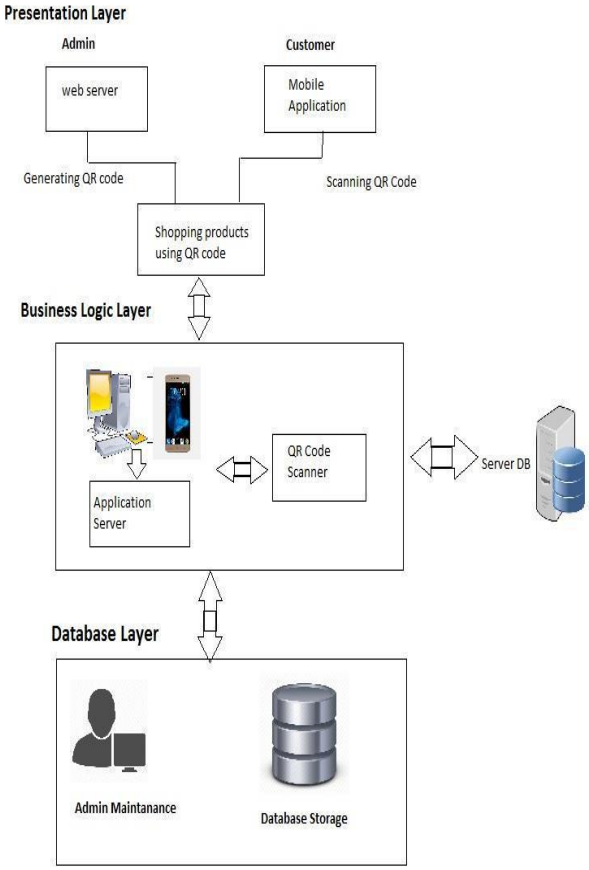

Figure 1. Architecture of the System

C. Technologies Used

The followings are the technologies used to implement the proposed system:

- ✓ Android SDK
- ✓ ADT (Android Development Tool)
- ✓ SQLyog Community

Android SDK- It is the software development kit used for developing android apps. This kit includes-

- ✓ Debugger
- ✓ Libraries
- ✓ Quick emulator
- ✓ Documentation
- ✓ Sample code
- ✓ Tutorials

Android virtual device is used to get a view of an app. This SDK will be included in the android in the bundle called as ADT bundle. This ADT bundle is then extracted to get the above facilities.

Android Development Tool- It is the plugin for the eclipse with the help of which following tasks can be performed-

- ✓ Set up new Android projects
- ✓ Creating a new application UI

In total it provides an environment in which the android projects can be imported, build and run successfully.

SQLyog Community-It is a GUI tool for the RDBMS MySQL with the following prominent features:

- ✓ Visual Schema Designer
- ✓ Visual Query Builder
- ✓ Query Formatter

SQLyog works on Windows platform. It has also been made to work under Linux and various Unix environment.

IV. MODULE DESCRIPTION

In the proposed system, the working of the system is divided into four modules where the entire work is described. The modules are:

- ✓ Generating QR code image
- ✓ Mobile Authentication Module
- ✓ QR Code Scanner Module
- ✓ Web service client module

A. Generating QR code image

In this module are creating QR codes for encoding the information about the products. The product contains name, code, quantity and price. Each pattern is encoded and represented each module in QR code with black and white special symbols. QR code can hold information more than other bar codes. The format of QR Code includes unique Finder Pattern (Position Detection Patterns) located at three corners of the symbol and can be used to locate the positioning of the symbol, size and inclination.

Fig. 2:Sample QR code Image

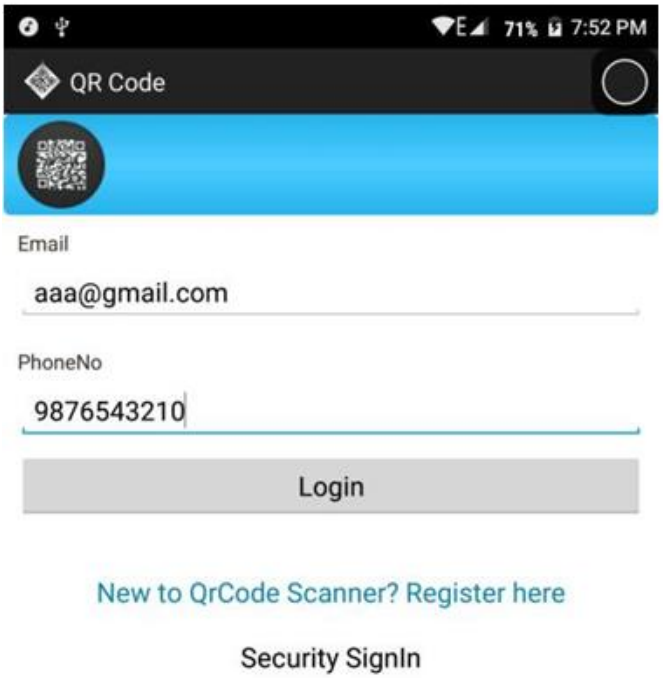

Fig. 3:Customer Login

B. Mobile Authentication Module

This module represents the authentication, which is used for the customer to login their details for the shopping processes. Logged user is redirected to the scanner module. Authentication is used as the basis or authorization determining whether a privilege will be granted to a particular user or process. The validation process is done on the web server.

C. QR Code Scanner Module

This module is used to scan the QR code and read the value of the QR code inside the mobile. QR code is a matrix bar code designed to be read by Smartphone. The code contains of black modules arranged in a square pattern on a white background. The information encoded may be text, a URL, or other data. If the user selects the product, the details will directly forward to the server. This will then ask the customer to enter the required quantity. As soon as the customer scans the needed products those products will be displayed.

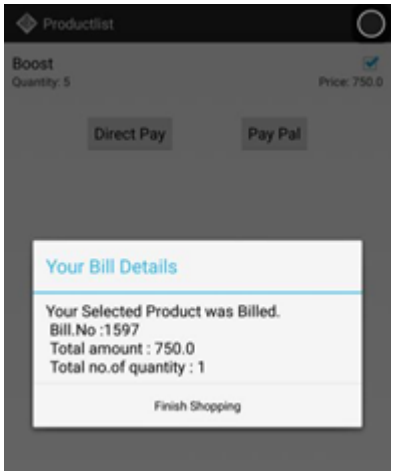

Fig. 4:Screenshot displaying the amount

After finishing the shopping, the customer is asked for confirming the products which were added to the cart. Then, the customer is redirected to payment. The customer can login to the PayPal to do the online transaction or else he/she can do the direct payment at the cash counter.

Fig. 5:Customer paying the bill using PayPal

D. Web service client module

This module has the process of storing the selected product's information from the client, which are send through the web service. All these information will be stored in the database. We are maintaining a centralized server in order to receive the selected product list from the customer through internet. In this module the merchant see the ordered items from the client.

The Merchant will use this list to do delivery the items to the customers. The Merchant can view the stock update, Payment information and also generates the QR code for the products.

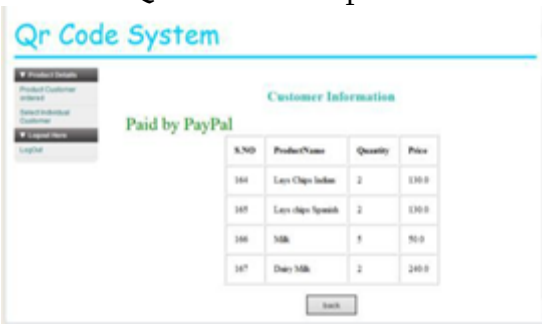

Fig. 6:Merchant viewing the bill

V. CONCLUSION

As the existing Barcode system have many drawbacks and also consumes more time, we switch over to the more convenient and easiest way of billing the products. This system saves lots of time in billing process and also provides more space to encode more data about the product. This also provides security to the information which is encoded in it from accidental damages. This system requires less labor resources and the QR code can be scanned using the imaging devices such as camera. Since smart phones are widely available, this system can be implemented easily. The items which are added to the cart can be removed or updated as per the customer requirements. The transactions that will take place frequently with the shop's database will be made secured. This will ensure no modifications in the shop's database either by the customer or by any unauthorized user.

VI. REFERENCES

[1]. "Smart Trolley Using QR Code", International Journal of Computer Science and Information Technology Research ISSN 2348-120X (online) Vol. 3, Issue 4, pp: (218-224), Month: October - December 2015.

[2]. Dr.Gagandeep Nagra, Dr.R.Gopal, "An study of Factors Affecting on Online Shopping Behavior of Consumer",International journal of scientific and research publications, Volume3,issue 6,June 2013,ISSN:2250-3153

[3]. Max E. Vizcarra Melgar, Luz A,Melgar Santander, "An Alternative Proposal of Tracking Products Using Digital Signatures and QR Codes" ,Aug. 2015.

[4]. "Smart Trolley Using QR Code", International Journal of Computer Science and Information Technology Research ISSN 2348-120X (online) Vol. 3, Issue 4, pp: (218-224), Month: October - December 2015.

[5]. Benny Skogberg, Android application development, School of Technology Malmö University SE820506 Malmö Sweden.