International Journal of Scientific Research in Computer Science, Engineering and Information Technology
© 2018 IJSRCSEIT | Volume 3 | Issue 3 | ISSN : 2456-3307

Automated Shopping Trolley For Human Guiding Using Android Application

Abhilasha Chichghare*, Ashwini Pounikar, Chandrani Bhede, Harshala Charde , Shrunkhala S. Wankhede
Department of Computer Science & Engineering ,RTMNU/Priyadarshini Bhagwati College of Engineering, Nagpur, Maharashtra, India

ABSTRACT

E-commerce has become very popular because of recent development in wireless technology and newly invented communication technique. The recently developed technologies lead to comfort, convenience and efficiency in everyday life. In this project we are developing an application which is based on android. In this proposed system the customer have to scan barcode of every product with android mobile which they wish to purchase and drop into the shopping card and then proceed to checkout at the billing counter. The billing process is quite tedious and highly time consuming. We have proposed a "Automated Shopping Trolley System For Human Guiding using Android Application" which aims to reduce and possibly eliminate the total waiting time of customer that is other system takes 10 minutes while our proposed system take 5 minutes, lower the total manpower requirement from billing counter and increase efficiency overall.

Keywords : Wireless, Comfort, Convenience, Tedious, Automated.

I. INTRODUCTION

In recent years, extensive research has been carried out on vision-based automatic identification technology that recognizes image codes using smart phones to provide various services that can recognize the authenticity of any product. Using Barcode with special symbols and split the data back to their Barcode pattern where these Barcode pattern can be read by Android smart phones. Standard image codes like one-dimensional barcodes and two-dimensional codes with black and white patterns identifies a product for its value and basic features but does not authenticate it, moreover not every product that is identified, is used for authenticating manufacturer's warranty.

So Barcode verifies products by capturing it through the smart phone, then decodes and sends it to the server for authentication. In particular, we concentrate on the cases where the memory entries and their associations form a binary Hamming space or an infinite square grid. We focus on minimizing the no. of inputs input clues needed to retrieve information with small uncertainty and present good constructions some of which are optimal. The customer forwards the selected product list to the server that enables the consumer to decide base on the products authenticity.

Purchasing and shopping at malls is becoming daily activity in cities. We can see big rush at this malls on holidays and weekends. People purchase different items and put them in a trolley, after completion of shopping, one need Ease of Use to go billing counter for payment. At billing counter cashier prepare the bill using barcode reader, which is very time consuming process and results in long queue at billing counter.

A product "Automated shopping trolley for human guiding using android application'' being develop to assist a person in everyday shopping in term of reduce time spend while purchasing. Low cost easily scalable and robust system for assisting shopping to the customer. When the customer want to purchase an item then customer has to click a picture of barcode. After word then corresponding data regarding product will be displayed on customer smart phone screen. As we put the product the cost will get added to the total bill. Thus the billing will be done in application itself. At the billing counter the total bill data will be transfer to server side pc by proposed system.

Before submitting your final paper, check that the format conforms to this template. Specifically, check the appearance of the title and author block, the appearance of section headings, document margins, column width, column spacing and other features.
At the present scenario shopping means to feel the comfort and ease the steps involved in it. There are various factor to keep in mind when it comes to traditional way of shopping such as product search, billing and payment. An Android application is develop to provide an interactive environment and enhancement the shopping experience.

II. AIM AND OBJECTIVE

The main objective of this project is to reduce and eliminate time taken in billing counter in super markets by designing an Intelligent Shopping Basket which uses Barcode scanners to allow users to self-checkout and increase productivity time. This project is to propose a real time capturing system for consumer supplies using Quick Response Barcode in Android smart phone.

III. LITERATURE SURVEY

RFID Based Intelligent Trolley System using Zigbee [1]. Aniket Wani, Krutika Thakur, Nikhil Vaze, Meeta Vadhel, prof. Rupali Advirkar. “RFID Based Intelligent Trolley System using Zigbee. This is a very advance Zigbee technology .In this technology RFID tag is used by replacing the barcode from the product. It consist of RFID reader, LCD screen and Zigbee module[5][6]. It generate the and store in microcontroller memory. This is a very advance Zigbee technology .In this technology RFID tag is used by replacing the barcode from the product. It consist of RFID reader, LCD screen and Zigbee module[5][6]. It generate the and store in microcontroller memory.

Smart Shopping Trolley using RFID [2]. Komal Ambedkar, Vinayak Dhole, Supriya Sharma, Tushar Wadekar “Smart Shopping Trolley using RFID This is based on RFID based smart shopping cart. Rfid tags is used for maintaing the entire database and billing process. A shopping mall or complex is a place where people buy product/s for their regular use. The customers have to wait in long queues to get their products scanned using barcode scanner and get it billed. To get rid of this, we have proposed a new ‘Smart Shopping Trolley using RFID (Radio Frequency Identification)'. This implementation is used to assist a person while shopping and also to avoid standing in long queues and thus saving time.

Arduino Based Smart Cart [3]. Ashmeet Kaur , Avni Garg , Abhishek Verma , Akshay bansal , Arvinder Singh “Arduino Based Smart Cart. This is based on arduino based smart cart. It uses RFID technology and arduino. RFID is used for **Text** shopping & payment. AVR for peripheral interfacing and record management to see customer record. There has been an emerging demand for quick and easy payment of bills in supermarkets. This project describes how to build an automated and time saving system for the world of retail which will make shopping experience impetuous, customer friendly and secure. In this paper, smart cart is proposed that will be capable of generating a bill from the cart itself. The customer will make the payment in no time through a rechargeable credit card which will help to maintain

database and introduce schemes and offers in stores accordingly.

Automated Shopping Trolley using R Pie Embedded Chip [4]. S. Sainath, K. Surender, V. Vikram Arvind, J. Thangakuma "Automated Shopping Trolley using R Pie Embedded Chip" A Rasberry pie embedded chip with two barcode scanner and a battery kit is used in automated shopping trolley to self check out at super markets. The Automated Shopping Trolley is a Smart Trolley which integrates a Raspberry Pie Embedded Chip with two Bar code Scanners and a Battery kit to allow users to self checkout at Super Markets.

IV. PROPOSED METHDOLOGY

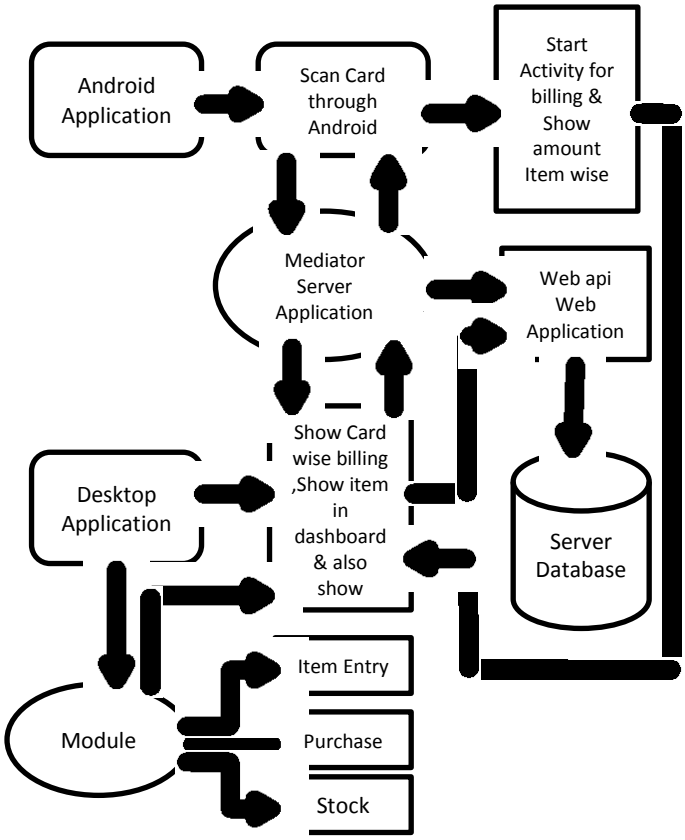

figure 1. Block Diagram of system

A. Android Application

Android is a mobile operating system based on the Linux kernel and currently developed by Google. With a user interface based on direct manipulation, Android is designed primarily for touch screen mobile devices such as smart phones and tablet computers, with specialized user interfaces for televisions , cars , and wrist watches The OS uses touch inputs that loosely correspond to real-world actions, like swiping, tapping, pinching, and reverse pinching to manipulate on-screen objects, and a virtual keyboard. Despite being primarily designed for touch screen input, it also has been used in game consoles, digital cameras, regular PCs and other electronics

B. Android Application

We are using barcode image using smart phones to provide various services that can recognize the authenticity of any product. So barcode verifies products by capturing it through the smart phone, then decodes and send it to the server for authentication. The customer forwards the selected product list to the server that enables the consumer to decide base on the product authenticity.

C. Mediator Server

Mediator Server is a software which virtualizes SQL Database server in such a way that navigational access to database is possible. SQL Database work sing SQL Queries which produce the result sets.

D. Web Application

Web application is a client server computer program in which the client run in a web browser. Common web application include web mail, online retail sales, online auction, wikis instant messaging services and many other function.

E. Desktop Application

An application that runs stand alone in a desktop. Contrast with web base application which, Contrast with web base application which required the web browser to run.In desktop application the bill is show in card wise and is also show the item in dashboard which customer has to perches

F. Billing and Payment

Once the scan product are confirmed the details of the product are send to the database for update the remaining quantity of product. If any modification required in list of products, the customer can modify. Otherwise the customer can pay the billing amount into shop authority.

G. Shop Database Maintenance

The shop authority can add or update the products details to server. the barcode image automatically generate for all product. Each query given by the user will be processed by the server and update the changes in the database. The results produced by the database will be displayed to the user with an help of user interface.

V. SYSTEM FLOW

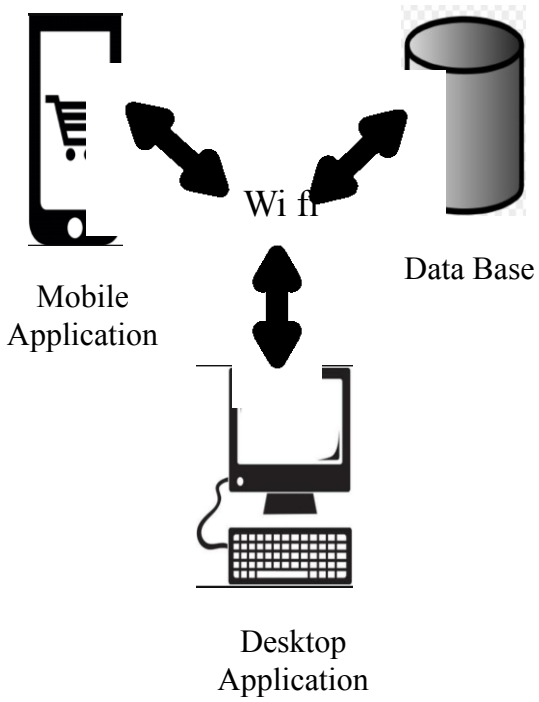

Figure 2. System Flow

- When a customer enter into the shopping mall he get the card and then the customer has to scan the barcode using android device which is available on that card.
- When he/she done with the barcode scanning the unique id is generated after that the customer scan the product one by one
- Then the detailed of scan commodities link with the supermarket back end database and the perches item list is display on the android device with the total no. of product and amount.
- When customer is done with the shopping he/she will move forward along with the card to the billing counter.

VI. OUTPUT

i. Desktop Application Output :

Figure 3. Admin Login Page

Figure 4. Item MasterPage

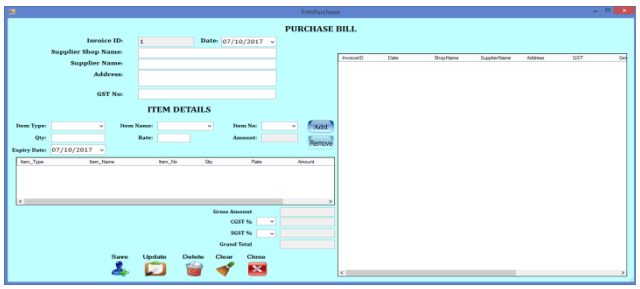

Figure 5. Item MasterPage

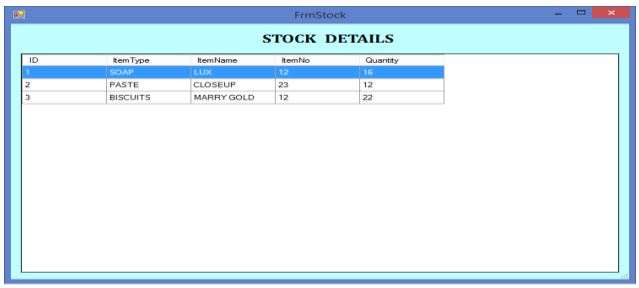

Figure 6: Stock Page

Figure 7. Dashboard Page

ii.Android Application Output :

Figure 8. Splash Screen

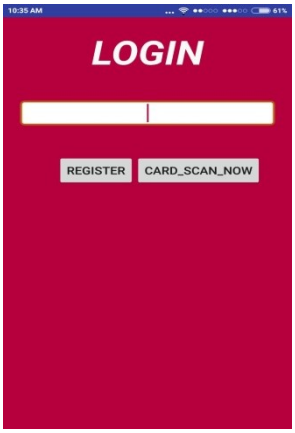

Figure 9. User Login Page

Figure 10. Registration Page

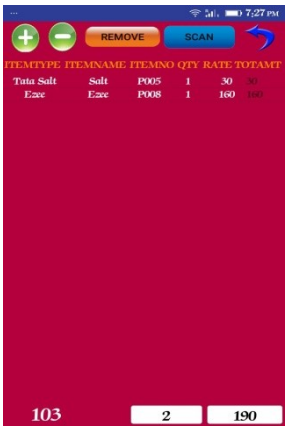

Figure 11. Billing Page

VII. CONCLUSION

According to this project proposed a real time capturing system for customer supplies using barcode in android smart phone. Barcode verifies product by capturing it through the smart phone, then decode and send it to the server for authentication. The customer forward the selected product list to the server and the respose received from the server enables the customer to decide based on the product authenticity. The scope of this paper is to purposed a real time capturing system for consumer supplies using barcode in an android smart phone.

VIII. REFERENCES

[1]. Ms. Shivani Deshmukh Electronics & Telecommunication Engg DMIETR Wardha, India Ms. Deepika Tadas Electronics & Telecommunication Engg DMIETR Wardha,India Ms. Gayatri Girade Electronics & Telecommunication Engg DMIETR Wardha,India International Journal on Recent and Innovation Trends in Computing and Communication IJRITCC | January 2017 (Special Issue)

[2]. V.Padmapriya, R.Sangeetha, R.Suganthi, E.Thamaraiselvi, Electronics and Communication Engineering Department, A.V.C College of Engineering, Mayiladuthurai, India. Mr.S.Bharathiraja M.Tech., Assistant Professor, Electronics and Communication Department,

A.V.C College of Engineering, Mayiladuthurai, India." LIFI BASED AUTOMATED SMART TROLLEY USING RFID", International Journal of Scientific & Engineering Research, Volume7,Issue3,March-2016

[3]. Dhavale Shraddha D.,2DhokaneTrupti J.,3Shinde Priyanka S.,Department of Electronics and Telecommunication Engineering, AISSMS's, Institute Of Information Technology,Pune 411001,India" IOT Based Intelligent Trolley for Shopping Mall" , 2016 IJEDR | Volume 4, Issue 2 | ISSN: 2321-9939.

[4]. Ya-Lin Lee and Wen-Hsiang Tsai, Senior Member, IEEE ,"A New Data Transfer Method via Signal–rich-art Code Images Captured by Mobile Devices", VOL. 25, NO.X, 2015.

[5]. Satish Kamble, Sachin Meshram, Rahul Thokal, Roshan Gakreon "Developing a Multitasking Shopping Trolley Based On RFID Technology" in International Journal of Soft Computing and Engineering (IJSCE) ISSN: 2231- 2307, Volume-3, Issue-6, January 2014.

[6]. Dr.GagandeepNagra, 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.

[7]. D.V.S Chandra Babu, "wireless intelligent billing trolleyfor supermarket", International Journal of Advanced Research in Technology, vol.3, issue 1, Aug. 2012.

[8]. J.Awati and S.Awati, "Smart Trolley in Mega Mall," in International Journal of Emerging Technology and Advanced Engineering Website: www.ijetae.com (ISSN 2250-2459, Volume 2, Issue 3, March 2012).

[9]. Ankit Anil Agarwal, Saurabh Kumar Sultania, Gourav Jaiswal andPrateek Jain on "RFID Based Automatic Shopping Cart" in Control Theory and Informatics ; ISSN 2224-5774 (print) ISSN 2225-0492 (online), Vol 1, No.1, 2011.