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E-Cart Shopping System

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ABSTRACT

In this paper we survey such a shopping system that can be very helpful for the customer and that can also save the time of the customer and make their shopping easy. In this system customer scans the QR Code of the products and add product into the cart. Bill is a generated automatically which saves the time waiting in a queue. In this paper, we focus on a cart in which products put into a shopping cart and the product automatically read and the bill is generated on the monitor of cart which is transfer to the billing counter via online domain. As a result customers don't have to hold up in long lines at checkout. This system brings new innovation than existing shopping system. The main purpose of this paper is to provide centralized and automated billing system using QR code. Along with the automatic billing some special features incorporated are budget setting and Product recommendation based on the special offers and discount along with product details with an anti – theft mechanism. We uses new term in this paper that is Market Basket Analysis.

Keywords: Cart, QR Code, Billing System, Security, Market Basket Analysis, Barcode, Smart Shopping

I. INTRODUCTION

Human beings are always demanding to develop technology which will support and fulfill their basic needs with an easier and faster way. At present, many super market uses the traditional shopping method, they buy the product, add into the cart and then goes to the billing counter. In billing counter the scans the barcode of products and make the bills. This shopping mode can make the customer tired and can waste much more time of the customer by waiting in the queue in the billing counter. So to make the shopping easy for the customer we introduce the E-cart system for shopping using wireless sensor networks.

In this paper we develop such a shopping system that can be very helpful for the customer and that can also save the time of the customer and make their shopping easy. In this system customer scans the QR Code of the products and add product into the cart. Also bill is generated automatically which saves the time waiting in a queue. In this paper, we center around a shopping framework. Smart Shelves that are additionally furnished with QR Code pursuers can screen all provided things and send thing notification to the server At the point when things or products wind up sold out, the server can tell representatives to restock. It ends up being basic for the store to do stock administration as all things can be normally scrutinized and adequately logged. We consider security and protection issues identified with systems as no past research has handled it. When a customer enter in the supermarket he/she had to scan the QR code on the carts monitor and after login successful he/she gets a message that his/her cart is ready for shopping. The customer can be able to view their previous shopping lists in the screen or he /she can create the new shopping list.

In our paper we introduce a new concept which is Market Basket Analysis. It help to reduce the product searching time.

E.g. if a customer buy a milk, in a screen the product associated with the milk is to be shown such as bread and biscuits and the variety of these shown products will also be display. It will easy for the customer to find the product and it shows the shelves where that product are kept. If the new product is introduce in the store it shows the advertisement of that product.

This paper adds to the headway in the current shopping system which can acquire another advancement the field of shopping centers. The main purpose of this paper is to provide centralized and automated billing system using QR code. Along with the automatic billing some special features incorporated are budget setting and Product recommendation based on the special offers and discount along with product details.

II. METHODS

First and foremost customer will download the android application on his cell phone .After this if customer does not have an account or ID for shopping purpose he will register for account after this the customer gets the unique ID that is QR code generate on his cell phone. Or else if customer has account then he/she is ready to shop.

A customer enters into the shopping mall on entering, customer first picks up a his/her shopping cart which has a Monitor on it an also a camera is introduce in the cart for scanning QR Code on each product. The bill of the buy products from the carts monitors to the billing counter is transfer through online process. So by this there is no need to rescan the product at the billing section. All the items in the mall will be equipped with QR Code tags. When person puts an item in the cart, its code will be detected by `camera also each item is added to the cart billing is done at the cart itself.

Simultaneously all details are displayed on carts monitor. And also if we want to remove some inserted item then we press the delete key and remove a particular item. 8 item's cost gets subtracted from total bill and item removal message is displayed on cart screen. Screen of cart also show the way where the product is store in arrange on shelves at mall. At the billing Counter the total bill data will be transferred to PC LCD is used as main output device for the customers; it displays the details of items, price and total bill etc. to indicate the activity made by customer.

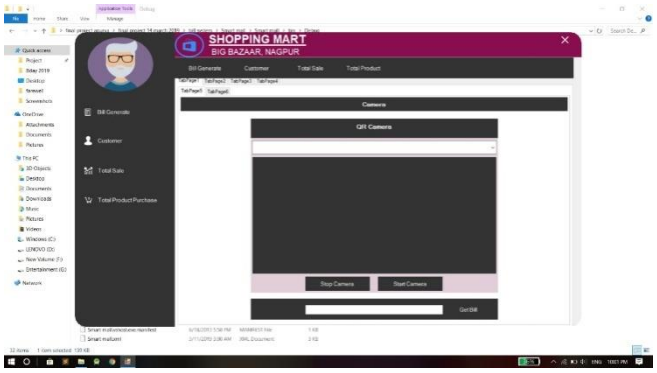
MARKET BASKET ANALYSIS:

In our paper we introduce a new concept which is Market Basket Analysis. It help to reduce the product searching time. The related product is displayed according to category of product. Various category are mention at admin warehouse according to this product are shown.

E.g. if a customer buy a milk, in a screen the product associated with the milk is to be shown such as bread and biscuits and the variety of these shown products will also be display. It will easy for the customer to find the product and it shows the shelves where that product are kept. If the new product is introduce in the store it shows the advertisement of that product.

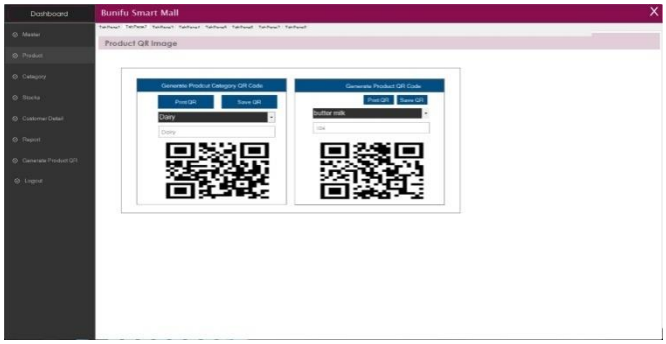
Figure 1. Flow Diagram of Shopping System

III. RESULTS AND DISCUSSION



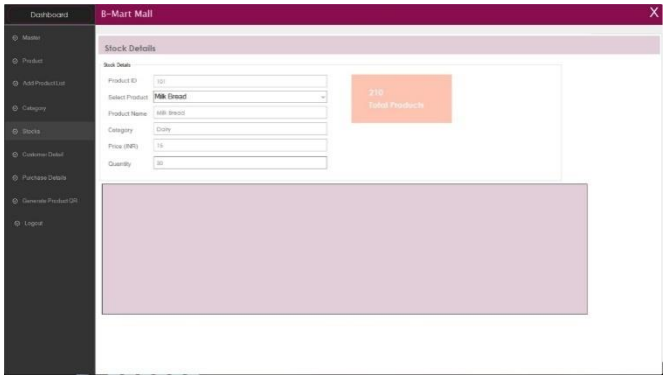
SCR 1. Billng Centre GUI

After adding the product into the cart we went to the billing section, In billing centre, the QR code from the phone is again scanned and then the bill is generated. The Generated bill is to be paid by the customer by cash and then the SMS of the bill is send to the registered mobile number.



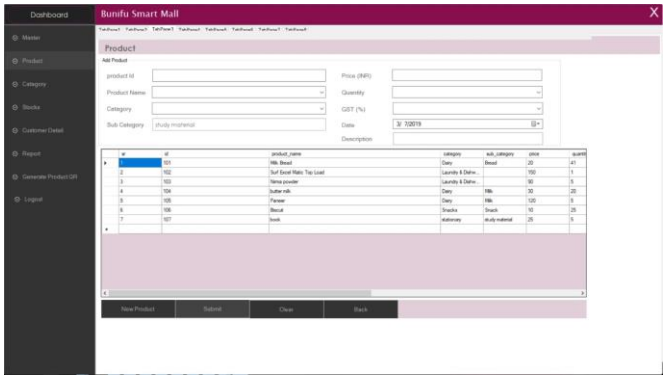
SCR 2. Generating QR Code for product

In this we generated QR code for the product and for the Category of the product that we print and paste on the product.



SCR 3. Show the stock details in warehouse

In this it shows the how many no of stock is available in warehouse and when the stock is not in stock it gives the notification to the admin



SCR 4. Adding new product in warehuse

In this we add the new product which is arrived in the mall administrator have to add the details like gst details, quantity, price, etc

IV. CONCLUSION

In this paper, we propose a secure smart shopping system utilizing QR code technology. This is the first time that QR code is employed in enhancing shopping and billing experiences and also Market basket Analysis are examined with regards to a keen shopping framework .We detail the structure of a total framework and construct a model to test its capacities. We structure a protected correspondence convention and present security examination and execution assessments. We trust that future stores will be secured with QR code and GSM technology and our exploration is a spearheading one in the advancement of a shopping framework. Our future research will focus on improving the current system, for example movement of cart is automated is also implemented in future. Also the misplace product detection from shelves.

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