Abstract:

Everyone knows the importance of time in this competition world and no one wants to waste their time in doing regular things. If we consider any shopping mall we have to wait much time for billing even though you purchase little things and we are not aware of the cost of the product that we wanted to purchase.

With the help of this proposed system, we reduce the billing time and customers can know the exact cost of the products that they purchased before billing so that they can do their shopping within their budget. RFID is a key technology that we are using in this project.

The objective of this proposed system is to reduce billing time and to know customers about their billing cost. This proposed system is designed by using RFID system in the shopping trolley.

The proposed system can be implemented in supermarkets, shopping malls for purchasing the products.

Keywords: Shopping Cart, RFID, Zigbee, ARM7(LPC2148), MAX232

INTRODUCTION

It is a new advertisement and shopping guide system for large supermarkets based on wireless networks. The wireless touch panel is integrated in the shopping cart can automatically broadcast the commodities advertisements when the cart moving in RFID tags are given for the each product. So, when tag is placed near the reader, it takes information from the tag and sends the information to the controller. With the help of touch panel we can accept or reject the products.

Zigbee transmitter and receiver are used for wireless transmission. The goods which are selected will be automatically registered in pc of billing section. Now, no wastage of time in billing section. This system will be very easy for the customers as well as for the manpower.

AIM OF THE PROPOSED SYSTEM

The objective of the proposed system is reducing man power effort and saving time to the customers with hi-tech billing system.

It proposes a new advertisement and shopping guide system for large supermarkets based on wireless sensor network. RFID reader integrated in the shopping cart can automatically broadcast the commodities advertisements when the cart moving in the large supermarket.
EXISTING SYSTEM

At present situations, selection of goods based on price list, counting of goods, total calculation of the goods require more manpower efforts and time. It elapse the highly valuable time of human. Customers will select the products and selected products will be dumped in the trolley and finally they will go for billing process.

Here the customers should wait for hours together for billing purpose. It leads to waste of time.

PROPOSED SYSTEM

Consumers can easily search the commodity they need with the help of electronic guide service (led direction) and bar code or RFID reader collect number of goods collection periodically for billing. This is the easy way to purchase goods in any retail stores. Here we will be using RFID technology, lpc2148 micro controller, zigbee module, LCD screen, RFID tags, RFID reader. With the help of all these equipment we are building a new system for easy assistance.

Trolley Section:

PC(Personal Computer) Section:

BILLING SECTION

PROPOSED SYSTEM DESCRIPTION

Here we will be placing the items in a rack and all the items will be tagged by RFID tags and an RFID reader will be placed under the robot. The robot will perform a brute force method search and incase the item is found, the same principal can be used in the supermarkets to make an automated item collector.

In this case, the proposed robot will make the life of the persons a lot simpler and the items can be tagged easily. The essential requirement in this project is the correct designing and fabrication of the lever, connecting Arms, motors, the gripping mechanism and the load bearing capacities.
In our proposed system RFID reader connected to MC p0.0,p0.1 of UART0 to get the items like soap, shirts etc., and to transmit the items information to the billing counter we have to connect Zigbee, MAX232 transreceiver.

Here MAX232 is connected between MC and serial devices(RFID & Zigbee) for the voltage level conversion(TTL<->RS232<->TTL).

Here LCD Register select line connected to p1.16 and chip select connected to p1.17 and data lines of LCD connected to (D4, D5, D6, D7)p1.18,19,20,21.

Two DCmotors are connected to p1.31,1.30,1.29,1.28 of LPC2148 using motor drive IC L293D.

1. Movable Base:

This base houses the entire arm. A motor will be fitted under the base which can be made to move forward/reverse to take this mechanism to all the books in the rack.

2. The Base Shaft:

The base shaft is directly screwed to the rotary base. It gives height to the device. Also, optional movement can be provided to the base shaft so that it can tilted forward or backward by the help of motors.

The proposed design is developed with simple devices. This system can improve by making more flexible to the shopping customers. Touch Screen with huge data base can make flexible. People does not require to search for a product. All the product information with number of items available, cost, route map to get the product. This facility makes more flexible to shoppers.

CONCLUSION

The project is developed with low cost, low power consumption. When the system is ready 5v is provided to microcontroller, RFID module, zigbee, touch panel controller etc. when switch1 is pressed RFID module selected and displaying to access the products(tags).

REFERENCES


