Auto Billing Shopping Cart

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Abstract- The advent of wireless technology along with other communication techniques has helped in making electronic commerce very popular. A modern forward looking product is the one that aids the comfort, convenience and efficiency in everyday life. In this paper, we discuss an innovative concept of electronic Shopping. The key idea here is to assist a person in everyday shopping in terms of reduced time spent while purchasing a product. The main goal is to provide a technology oriented, low-cost, easily scalable, and rugged system for aiding shopping in person. Electronic Shopping is equipped with RFID reader for product identification; it also has an LCD display that informs customers about product prices, offers and the total bill. The RFID reader identifies the product and updates the bill. When the customer is done with shopping, he can just press the End shopping button and the details are displaying on display then the customer has to pay just the amount and leave.

These units are integrated into a smart enclosed system and are tested to satisfy the functionality. The customers will be able to scan the items themselves and the LCD screen on the shopping trolley will keep updating the total. This will turn out to be very beneficial for the retail stores as more people will enjoy the shopping experience and come more often to shop.

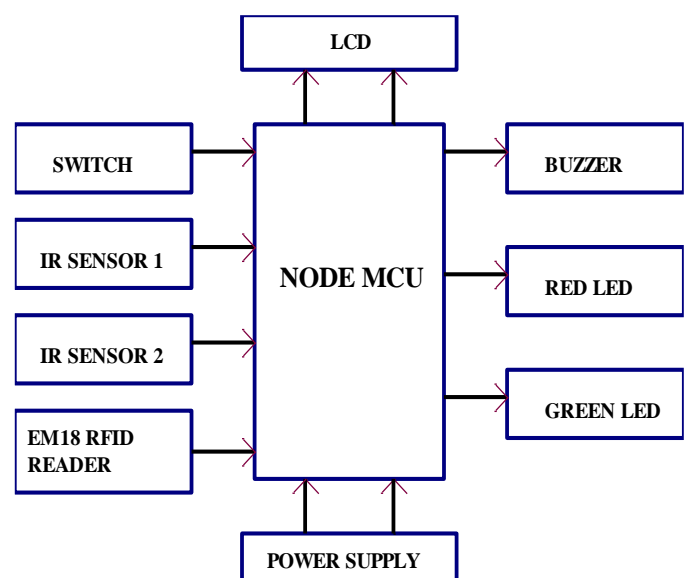*Key Words***:** Electronic Shopping, LCD, RFID

1.   INTRODUCTION

The electronic shopping system intends to assist shopping in person that will minimize the time spent in shopping as well as intended to aid the store management with real-time updates on the inventory. The emergence of new technologies, such as RFID scanner and wireless networks, makes the shopping processes faster, transparent and efficient. Our aim is to develop the shopping system which can be used in shopping malls to solve the problem mentioned above. The Shopping system is equipped with RFID scanner for product identification. Besides, it also has an LCD display that informs customers about product prices, discounts, offers and the total bill. As soon as the object is purchased, the RFID reader identifies the product and updates the bill. When the customer is done with shopping, he can just press the 'End shopping'

button and the details are display and the customer has to pay online just the amount and leave.

The proposed system is easy to use and does not need any special training. In this system there is inbuilt automatic billing system makes shopping a breeze and has other positive spin-offs such as freeing staff from repetitive checkout scanning, reducing total number of staffs required and increasing operational efficiency of the system, excellent way to help customers reduce the time spent in shopping by displaying the list of products, their cost, the best deals/rates on the products and automatic billing. The system helps the store management with an automatic update of the inventory on every purchase of an item shopping system has the potential to make shopping more pleasurable and efficient for the shopper and the inventory control easier for the store management. The shopping system has the potential to make shopping more pleasurable and efficient for the shopper and the inventory control easier for the store management.

2. SYSTEM ARCHITECTURE

3. PROPOSED SYSTEM

- When we tried to analyze the traditional sensor billing systems then we came to know that the customer needs to stand in a long line after buying products in a shopping center for making bills. This took a lot of time.
- To make this task easier we need to make things simpler by using Arduino board and Embedded C Programming.
- The system consists of a shopping cart in which a scanner is situated and it is programmed to scan the price tags (RFID tag) of each product.
- Scanning the tag of each product and then producing the total bill simultaneously is the main output.
- Then making it visible through a web application that will display the bill for the customer.
- The only task for the customer is to make a payment according to the bill.

3. CONCLUSIONS

- This secure smart shopping system utilizing RFID technology is employed in enhancing shopping experiences and security issues.
- The smart carts are able to read and retrieve information of the items inside the carts and finally, the checkout points can validate the purchase made by a customer.

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