Smart Shopping Trolley

Mahesh Panjwani, Neha Shriwas, Prachi Datir,
Shubhangi Mangate, Yukta Sharma and Sayli Sawarkar

February 10, 2020

SMART SHOPPING TROLLEY

Prof. Mahesh Panjwani[1]

Neha Shriwas[2], Prachi Datir[3], Shubhangi Mangate[4], Yukta Sharma[5], Sayli Sawarkar[6]

[1,2,3,4,5,6] *Dept. of Computer Technology, Priyadarshini College Of Engineering, Nagpur, Maharashtra, India*

--***--

Abstract - Smart Shopping Trolley is basically a project which conventionally comes under the IOT sector. IOT has boosted the technology in our day to day life. Almost everywhere the IOT has its hands such as industries, locomotion, education, accommodations (smart buildings & smart cities) , security, shopping , etc. Easy & efficient work execution is the main objective of this technology. This project comes under the application area of shopping. Shopping is one of the trending area which has customers everyday. But yet the traditional way of shopping in malls and marts or any grocery shops are very time consuming . As it is said time matters, the proposed project will not only helps the costumers but also the retailers or a shopkeeper in calculations of bills of the inventories as fast as possible. This trolley is cheapest & easy to be handled by anyone. Trolley basically consist of the two main features which are , firstly , the overall calculation of the total bill of the inventories inside the trolley & secondly, budget reminder buzzer facility .Components such as RFID module, RFID tags, keypad, lcd display, arduino mega are used here for the smart shopping trolley implementation & design. RFID module , RFID tags , lcd display arduino mega are used for the calculation of total bill & buzzer, keypad, arduino mega works together in providing the budget buzzer facility. The working of smart shopping trolley is in such a way that whenever the user keep its product inside the trolley the RFID reads the RFID tag and provides its diplay on the lcd along with its total calculation. If the user wants the reminder of its budget , the keypad is the way through which user will enter its own budget. If the budget exceeds the buzzer will starts alarming. If the user wants to change its budget he or she may change it by using the change option provided in keypad. Hence this project is very useful and will have a great demand in future.

Keywords:- RFID tag, RFID reader, IOT, Central Billing Unit, Automation Business Analysis.

1. INTRODUCTION-

The electronic shopping system is helpful for a person while shopping. The time which is wasted in a billing of product by the seller is reduced. This smart shopping trolley system also helps not only the seller but also the customer by affiliating the provision of budget buzzer in the system. If the customer wants to purchase products which are beyond his budget then he will directly be getting an alarm like buzzering from buzzer, which would be helpful for him in managing his money. The project of smart shopping trolley is being implemented in the domain of IOT. As we all know that IOT is a trending and cost e, Implementation Of Smart shopping Through Automated Billing Trolley effective technology, that's why the project of smart shopping trolley would be easily affordable for the seller. The smart shopping trolley can be acquired right from the stores to the super market or malls. The main technology that place a vital role in this proposed system is RFID system. RFID tags are used for the identification of product and its billing. In this system, If we put any product into the trolley then the product has RFID which reads the product and generate the bill. If we scan the product at one time and it will be calculating the bill. If the user don't want to buy or take that product then with the help of facility provided it can remove the product and generate the reduce bill automatically. The trolley in the shopping is automatic bill producing of all the product which are being kept inside it and display it on the LCD.

The block diagram of this system is given below.
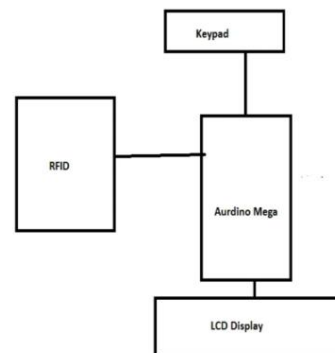
Block Diagram

It consist of RFID Module, Keypad, Aurdino Mega & LCD display. RFID stands for Radio Frequency Identification. It is a form of wireless communication. It uses electromagnetic or electrostatic coupling in the Radio frequency portion of electromagnetic spectrum.

2. PAPER REVIEWED-

i. SmartSmart Trolley System For Automated Billing Using RFID And Zigbee:

This system has designed for various shopping mall . This system is one of the smarter way of shopping mall. They have RFID in the place of Barcode reader, also they have used Zigbee for transmission of data. The overall bill of the product inside the trolley is being calculated and displayed on LCD screen. It has been done wirelessly. Disadvantage of this system is that, The user is not able to recognize the excess of budget if the budget exceeds.

ii. Smart Trolley And Automatic Billing:-

This system is kind of system where it comprises of Display, Power supply, Switch, IR, RFID, ARM7,sensor pair and Barcode Reader . Here Both RFID and Barcode Reader is used .Here, the RFID reads the values of products & if the Barcode Sticker is present then it reads the values of that Sticker & calculates the Bills.After calculation of bill it is displayed on the screen. Switch is used to remove the products from the Trolley. Credit Card & any other facility of product in the system & also provides the hardcopy of the bill through serial communication. This advantage of the system is that the user is not able to recognize the excess of budget if the budget exceeds.

iii. Implementation Of Smart shopping Through Automated Billing Trolley:-

This System comprises of GSM, RFID, OTP, Zigbee, PIC, Automatic Billing ,OTP.The RFID is used to read the product value, calculate the bill & display it on the screen.

The current mobile number for the GSM is required for generation of OTP to pay online for Net Banking . We can add & remove the product according to our need.

5. Implementation Of Smart shopping Through Automated Billing Trolley

3. <u>REFERENCES-</u>

1. Janhavi Iyer, Harshad Dhabu, Sudeep K. Mohanty "Smart Trolley System For Automated Billing Using RFID And Zigbee" IJETAE, ISSN: 2250-2459, Volume-5, Issue-10, October 2015.

2. Mrs.Meenakshi M.E,Joshiba Amali.S, Divya P.M "Smart Trolley And Automatic Billing," IJARBEST, (ISSN 2395-695X(Print))(ISSN 2395-695X(Online)), Volume 1, Special Issue 3, 28 August 2015.

3. S.Premanand,R.Satheesh,C.Vijay Kumar "Implementation Of Smart Shopping Through Automated Billing Trolley,"IJMTES,ISSN:2348-3121, Vol 4, Issue 3,2017

4. Smart Trolley System For Automated Billing Using RFID And Zigbee: