



## Automatic Billing System Using Smart trolley

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### Abstract:

In today's world, time is one of the most important thing, an individual area unit referring to those things that consume small time. Billings at stores takes a lot of time. Asking for merchandise from the mall is sort of tough as a result, it takes longer as people have to be compelled to protracted time during a queue lines for asking. Looking at future technology, we tend to come out with associate new plan of "Automatic Billing System Using smart Trolley." This project consists of RFID reader, sensing element, LCD, microcontroller and Zigbee module. If the customer desires make use of sensible streetcar functioning, then the start switch ought to be ironed. Once customer places few things in streetcar, next their codes are detected mistreatment RFID reader and price of a product and more listed. The sensing element can and displayed on LCD of the merchandise. if merchandise found false product and desires to get rid of some product then the user ought to place the same RFID tag to remove product and products code are detected by the RFID reader. At the last products list are detected and displayed on the LCD cart. Then, the ultimate final bill is moved to the PC.

**Keywords:** - Microcontroller, LCD, RFID module, Zigbee module, RFID tags

### I. Introduction:

In last few years a huge formative modification has taken place, with significance on profit making procedure and public, particularly such elements are occupied territories, developing areas, households and intellectual patterns. Transformation in communication and data technologies have revolutionized features, having awareness and ideas in every situation of human intuition "Age of data and Knowledge". The market business in these days extraordinarily necessary in world economy, with recent evolution in technological and social terms creating one of the foremost appropriate and various marketing across the world. In this journal "Consumer perception of privacy, security and trust in present commerce" electronic technologies have completely remodeled the business manner that vary from the new mobile technologies to the popularity business strategic edges offered by execution of communication and present computing structures. To disclosure of recent business created potential because of the latest technologies and to the event of recent thrift that may want to perceive and price ever-present business activity. The electronic business created various challenges and opportunities within the offer have source of sharing data between business patterns, support service and design development. Businesses has developed from the divide

and coordination of data to the divide of information and up-to-date association operations. The technologies RFID systems and wireless network systems makes the merchandise processes makes quicker and clear. This automation represents marketing and chance to improve better services, buy products quickly, exactly customized services. Everyone should back provide contrast and within the support of consumer maintenance methods by building up of the relation with the buyer, permitting sufficient responses to the customers' desires changes change in services and selling plans that satisfy customers mostly. RFID tag that answers by wireless sending a serial variety. They track things in retile stores

## II. LITERATURE SURVEY

The main goal of literature survey is to determine the importance of final field of study then establish an area wherever a brand-new contribution will be created. The principle of this survey is to mostly value the various process utilized in the sphere and so on establish the right point of view for investigation analyses queries. This numerous paper contains new abstraction and methodology's are developed thus, absorption to analyze new move of this literature. Thus, we've given preference to analyze. In recent years the idea of assorted technologies is used. This project illustrates the certify analysis in a enlarge field.

### *A. Automatic Billing System using zig-bee module*

This project is supported by the "ZigBee" technology that is modern technology. Anytime retail store customers had to take the tramcar and a loco mote here and there for assembling the things which take plenty of your time. When assembling all the searching, the client should wait within the line for payment at the billing section. Because of the giant queue lime time is misused, to control this they need to develop a sensible method of searching. In this project, the RFID tag are employed by the commutation of barcode kind of procedure. The trolley can carry with it and RFID reader, digital display screen and also the ZigBee module. Once an individual puts goods within the trolley. The entire products are to be added that come up with bill at last. This bill is displayed within the LCD then moved to the main PC with the help of ZigBee.

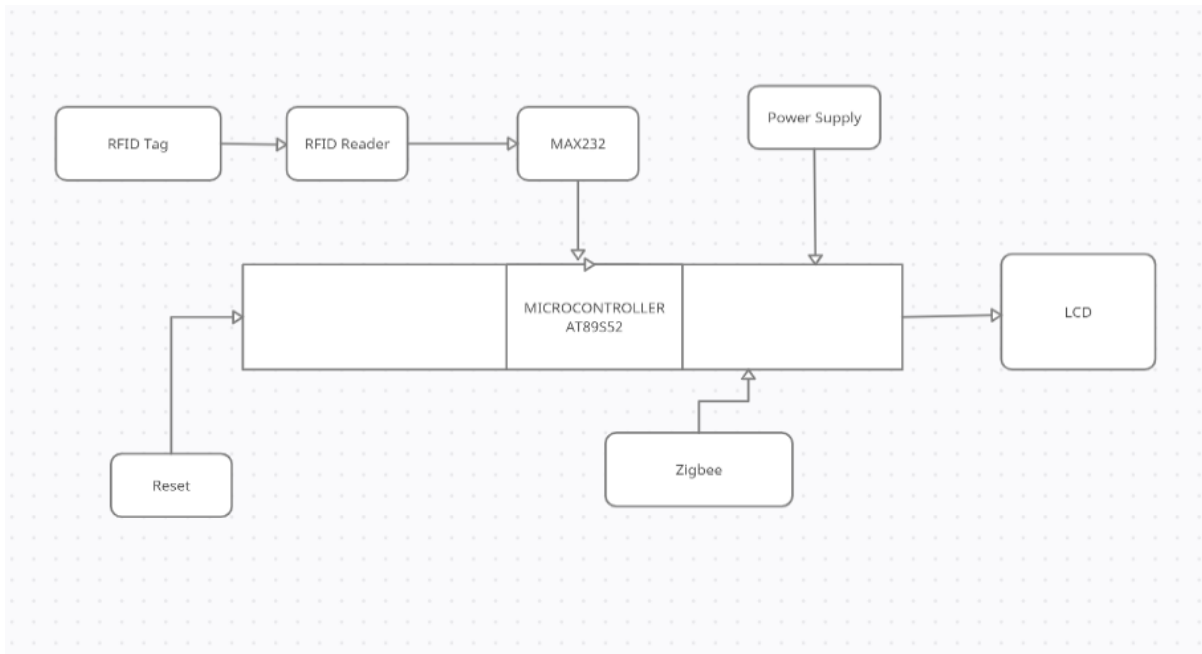
### *B. Smart Shopping Trolley by RFID*

This project is supported by the RFID module primarily with good pushcart. After existence of wireless technology came into the ecommerce started growing in a quicker manner, in today's lifetime ecommerce provide comfort and convenience to the customers. In this, mentioned the construct of RFID reader that are newly constructed. The entire shopping trolley relies on the automated technology. The main aim of this technology is removed long queue at the billing counters. The main focus is to help in shopping in terms of reducing customer's time. The RFID tags are maintained with the smart trolley.

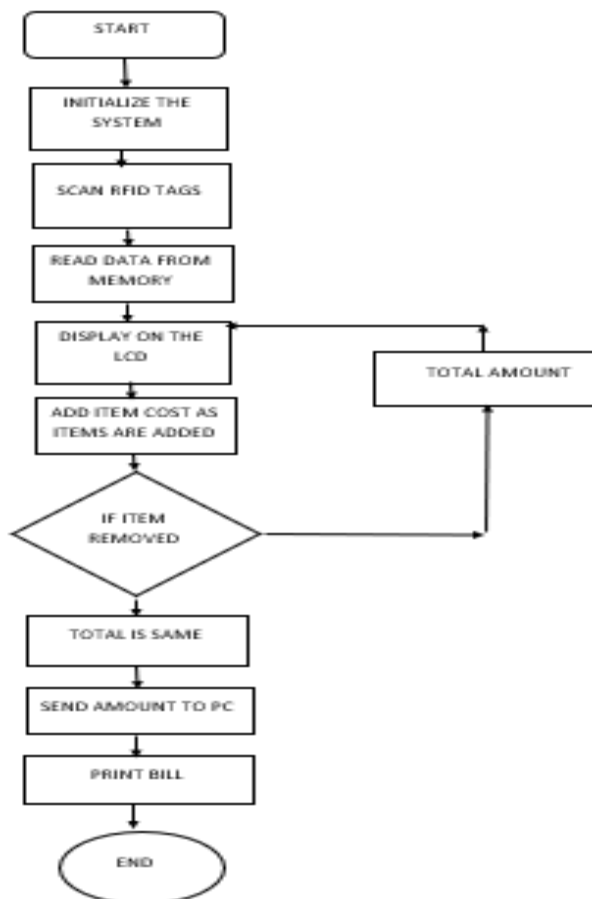
## III. PROPOSED ARCHITECTURE

The proposed architecture of an automated billing system using smart trolley for groceries in shopping mall Using automatic bill trolley, customers can save time at the counters. The system is meant specified products data is transferred to central system, where customers will pay their bills in simple way. The system helps in storing with associate degree economical process of registration on each purchase of an associate item. The automated

cart has the ability to create the shopping quicker and easier. This project contains a RFID tag's scanner which is placed on the trolley. The main points regarding merchandise are square measure out there within the mall square measure already hold on in their server.



### IV. Flow Chart



## V. Working

Wireless devices like digital scanner will track data of the products and therefore, the comptroller method that coupled with a digital scanner. This sensible smart cart will be enforced with below following steps at retail stores.

### Step I

Products from various distributes arrive at retile stores. Retailer provide RFID tags to each of the product, where RFID tags provides the complete information about the products

### Step II

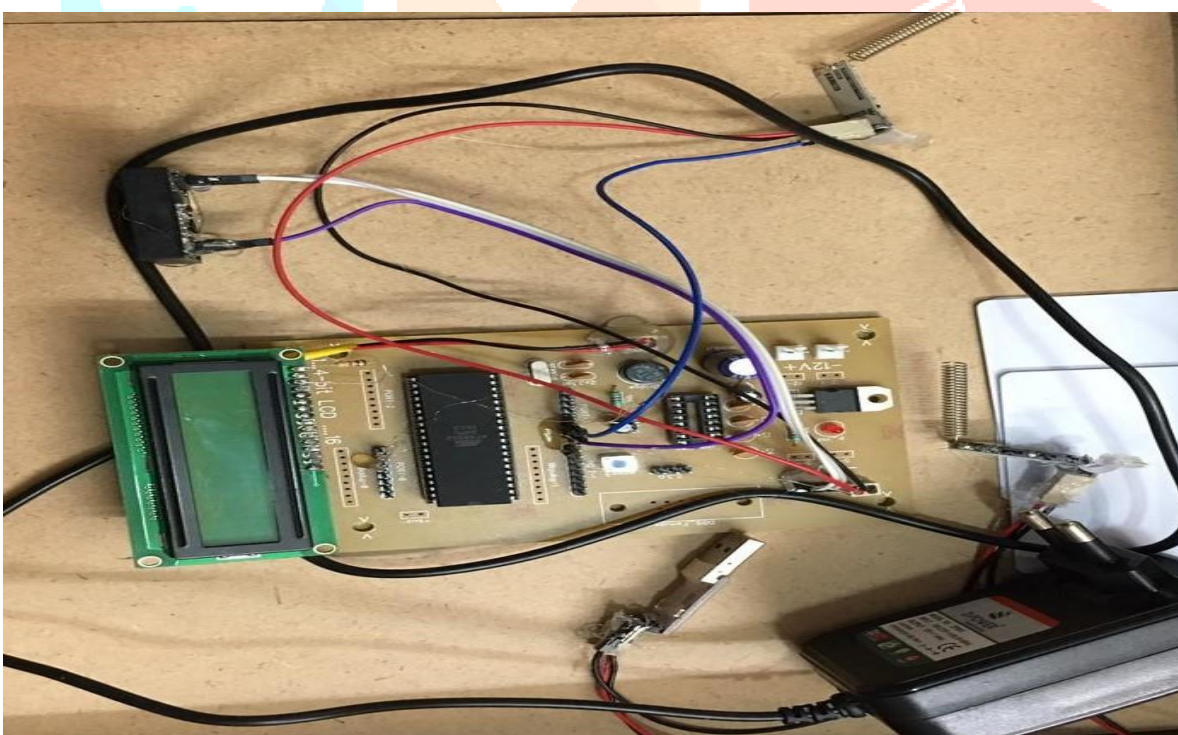
RFID tags are filled with the product name, product price etc... Customer have to scan the RFID tags.

### Step III

After successful scanned by the RFID tags automatically product name, product price, no. of items are displayed at the counters

## VI. IMPLEMENTATION RESULTS:

The automatic billing system using smart trolley is successfully implemented



1. By giving power supply kit will switch on, and HAPPY SHOPPING will display on LCD . Which shown below



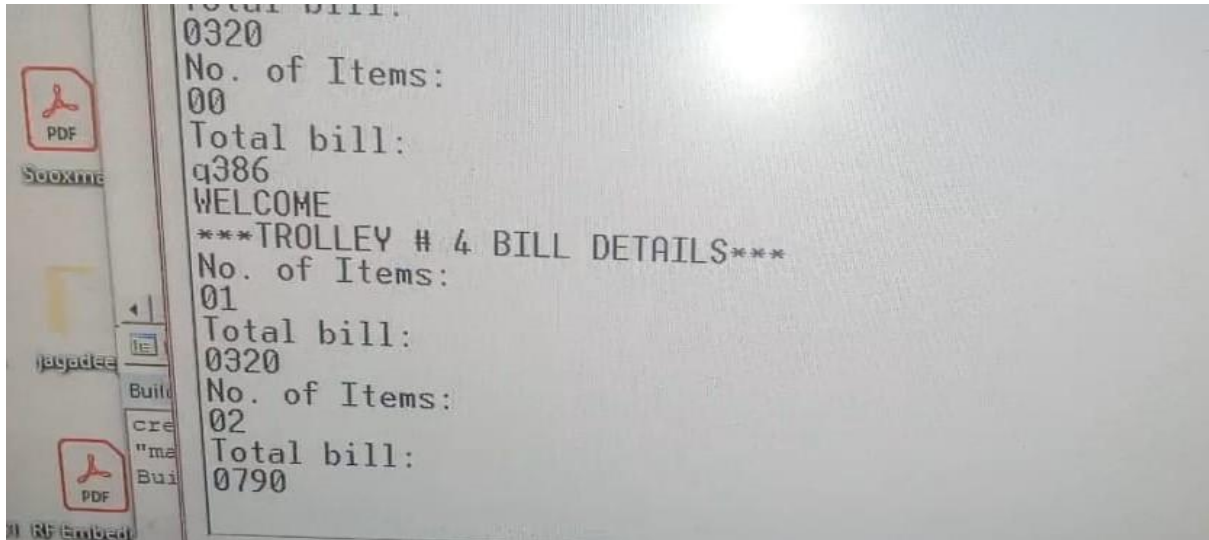
2. When customer scans with RFID tag with the RFID reader, LCD will display no.of items, product cost and the total amount.



3. Again we have taken another product-2 RFID tag ,then product-2 name, cost and total cost will display



4. At last, all product will be displayed individually on the pc for billing



## VII. FUTURE SCOPE

The automatic billing cart are often created automatic by implementing the sensors. By using this method there will be no compelled to pull heavily pulled trolley's. The trolley with the liquid crystal display screens provides discounts and offers and that tally to merchandise automatically. conjointly liquid crystal display is often supplied searching by that client get the precise data, merchandise gift totally at individual locations. so, in future this communication system will replace with the Li-Fi technology that oversized space and transforming data makes it eco-friendly.

## VIII. CONCLUSION

The project can demonstrate the likelihood of employing a wireless system for developing wise searches System that automates the whole request process. This technique is developed by extremely honest, and low-cost. It's reliable and genuine due to productive use of Wireless system. The technique is system is additionally associate in nursing energy constraint because it uses passive sensing an element, and it reduces the communication demand. This increases security using RFID technique.

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