https://www.youtube.com/watch?v=kQ_4XepzUL4

Smart Shopping Cart using RFID

This project aims in designing a user friendly, automatic shopping trolley and data storing system of the number of goods on trolley in big shopping malls using RFID technology along with cost details and display on the LCD (Liquid Crystal Display).

The RFID reader is interfaced with the Arduino nano microcontroller and RFID tag is attached to each and every good package. When the goods are placed in the trolley the RFID tags attached to the goods are decoded by the RFID reader interfaced to the microcontroller and the information is stored and displayed on LCD. The system sends the number of goods in trolley along with total bill to the predefine mobile number in the form of SMS using GSM technology. When person put any item in the trolley its code will be detected and the price of that item will be stored in memory. As we put the items the costs will get added to total. Thus, the billing will be done at the trolley itself. The entire data related to goods are stored in the microcontroller and also displays on LCD along with buzzer and also it will send to the user mobile through SMS using GSM technology. The Microcontroller is programmed using Embedded C language which provides effective environment for performing the task of the project.

Features of this project:

1. User-friendly interfacing.
2. Information related to the goods display on LCD.
3. Audible alerts using Buzzer
4. RFID based Wireless Communication.

This project provides exposure to the following technologies:

1. Behavior of RFID module.
2. Interfacing RFID module with the PIC.
3. RFID reader and Tags.
4. Interfacing geared LCD and driver with microcontroller.

5. Embedded C programming.

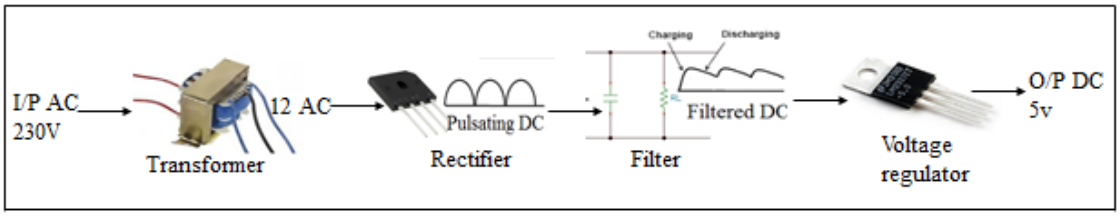
The main building blocks of the project are:

1. Regulated Power Supply.
2. ARDUINO NANO Microcontroller.
3. RFID reader.
4. RFID tags.
5. LCD display with driver.
6. Buzzer with driver
7. GSM.

Software's used:

1. Arduino IDE studio compiler for Embedded C programming.
2. Express SCH for Circuit design.

Regulated Power Supply:



Block Diagram:

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