CMR College of Engineering & Technology

(UGC Autonomous)

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Centre for Engineering Education & Research (CEER)

SELF CHECKOUT SHOPPING TROLLEY

Project Objective

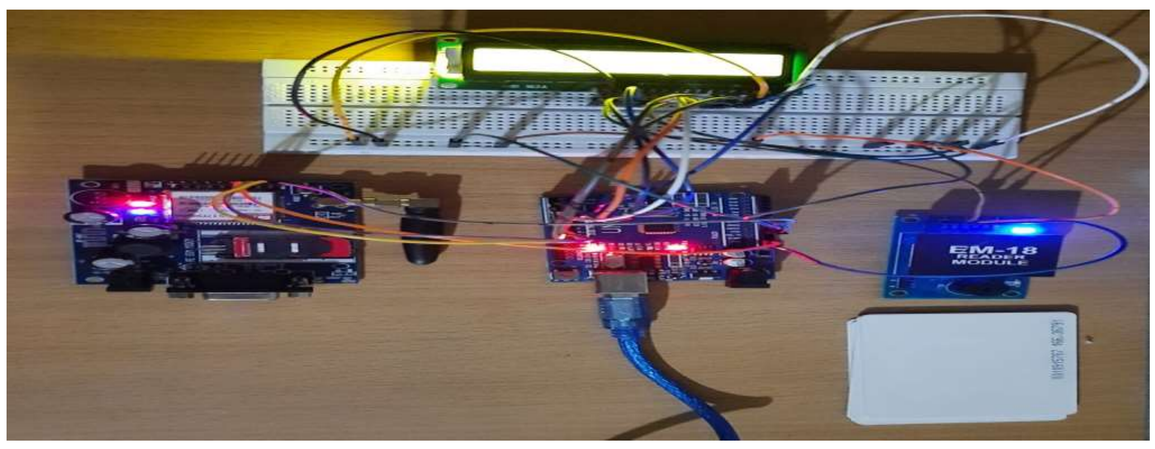
The main objective of this project is to make shopping easier and convenient. It also saves much of the customers time and also reduces the manual power.

Existing systems

- Normal Pushing Trolley
- Carrying Basket
- Carrying Bag

Issue

The Final cross-check of the bill along with the purchased products may be required. The Shopper must get a shopping cart even if he/she wants to purchase a single product from the stores. This may become inconvenient. As it is an electronic smart cart, maintenance and battery replacements must be made regularly. For small scale supermarkets and stores , this technique may be not so cost-efficient.



Gaps in the existing system

Limited storage capacity
Takes longer time to get the products scanned.
We must stand in queues for longer time.
Baskets and bags must be carried by hands

User requirement

- Arduino Uno microcontroller
- RFID Module and Tags
- Jumper wires
- LCD
- GSM Module
- Breadboard

Methodology

Self checkout shopping trolley using Arduino Uno RFID card or tag is scanned the RFID reader fetches all the details from the scanned card or tag, and if the scanning process is successful the product details will be transferred to the microcontroller's memory and then will be transferred to the LCD module to be displayed on the LCD screen. Here the RFID module uses the SPI communication technique to transfer or to retrieve the data from the RFID card or tags. RFID & GSM modules simulation can't be shown because the input to these modules is to be given manually i.e. RFID cards scanning is manually done & after the scanning is completed then the GSM module gets to work & sends a message to the customer's mobile phone. It displays the final bill amount: the amount balance which was present before shopping & balance amount remaining after the shopping bill is paid.

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