BVRIT HYDERABAD
College of Engineering for Women
Department of Information Technology
Mini Project - Academic Year 2022-23

TEAM 11

SMART CART WITH AUTOMATIC BILLING AND ANTI-THEFT

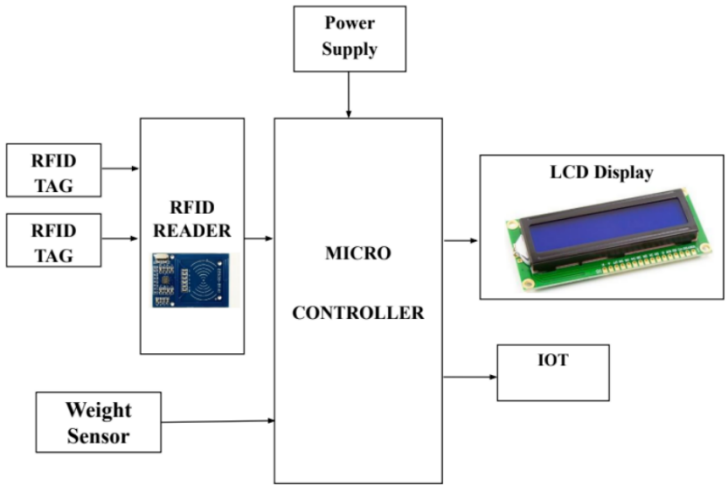
Abstract

Shopping involves getting tired due to standing in a long queue for the bill and payment process. Hence, Smart Cart is designed with Instant Billing and Theft Protection. The automatic shopping cart will reduce the time and effort of the customer thereby helping the customers walk straightaway into the shop, purchase products and walk out of the shop. In order to realize this, a RFID reader and an LCD screen are attached to the cart. The RFID reader scans the RFID tag on the item when it is placed near the RFID reader where the item details will be displayed on the LCD screen. A weight sensor installed on the smart cart for weighting items . During the time of checkout, If the added weight of all items is equal to total weight of the cart, then it is concluded that no theft is detected and the shopper can proceed with a final checkout.

Modules

Power Supply
RFID
Weight Sensor
Billing

Architecture



Components

- **Transformer**
- **ESP-32**
- **RFID Reader**
- **Weight Sensor**
- **LCD**
- **HX711**

Conclusion and Future Scope

The main aim of the project is to reduce the wait time at the billing counter and also detect the theft when the weight is greater than the actual weight of the product. Moving forward, there are few things which we can improve further and tune our model. First we need to add payment gateway to our system by which users can pay the bill after checkout. Second, a delete option should be included to the model to remove items from the cart.

Github links

1. https://github.com/sahithi-muppavaram
2. https://github.com/19WH1A1225
3. https://github.com/preethi1239
4. https://github.com/20WH5A1203-Manasvi

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