IOT based Smart Shopping Cart Using RFID and NodeMCU

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Relevance of topic

- We all have waited in a queue for payment in shopping malls and other places, its very tiring and wastes a lot of time in the billing process.
- At billing counter customer may face problems like waiting and don’t know even they have sufficient money for the products they purchase.
- So it is relevant to build a smart shopping cart with an inbuild RFID reader module ,NodeMCU and lcd display that not only reduces the waiting time but also makes the process very smooth and easy.

Description of project

- we use RFID cards and RFID readers with NodeMCU to build the Smart Shopping Cart project. The cart information and total value will be displayed on the webpage as well as on LCD. Each RFID card is associated with a certain product and an RFID reader is installed in the cart, which reads the product details like Price and Product details and sends them to NodeMCU ESP8266. Then NodeMCU process the available items and total value in the cart and send them to ESP8266 Webserver, which can be monitored on a web browser.

Objectives

- To bulid a smart shopping cart which helps for shopping according to our budget.
- To build a Shopping cart with inbuild RFID reader module and lcd display.
- To create a web page for displaying total bill details of shopping.

Existing System

- Customer enters into a shopping mall , collect items in the normal cart .
- At the billing counter , by standing in queue , take each item one by one scanned using barcode reader and bill is generated.
- There may be more number of counters , but there will be one person in the counter for doing all the billing process.It takes lot of our time.

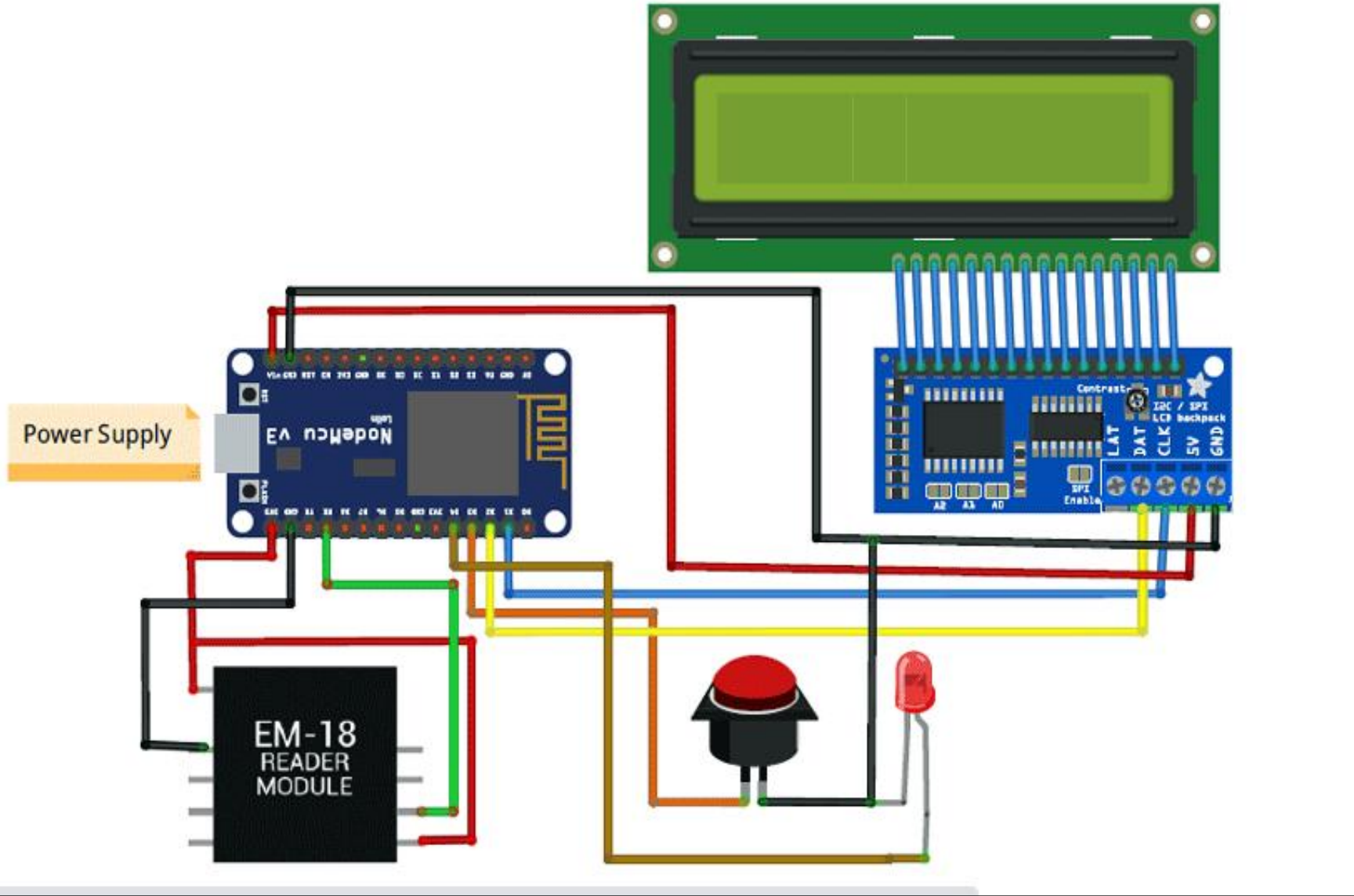
Proposed System

- A smart shopping cart with an inbuild RFID reader module,NodeMCU and an lcd display.
- we use RFID cards and Each RFID card is associated with a certain product .The cart information and total value will be displayed on the webpage as well as on LCD.

modules identified

- RFID reader module
- lcd display module
- web page view module

Circuit Diagram



Electronic components required

- ESP8266 NodeMCU -1
- 16*2 Alphanumeric LCD-1
- I2C module for 16*2 LCD-1
- 4 pin Tactile switch-1
- EM18 RFID Reader-1
- RFID tags

Thankyou