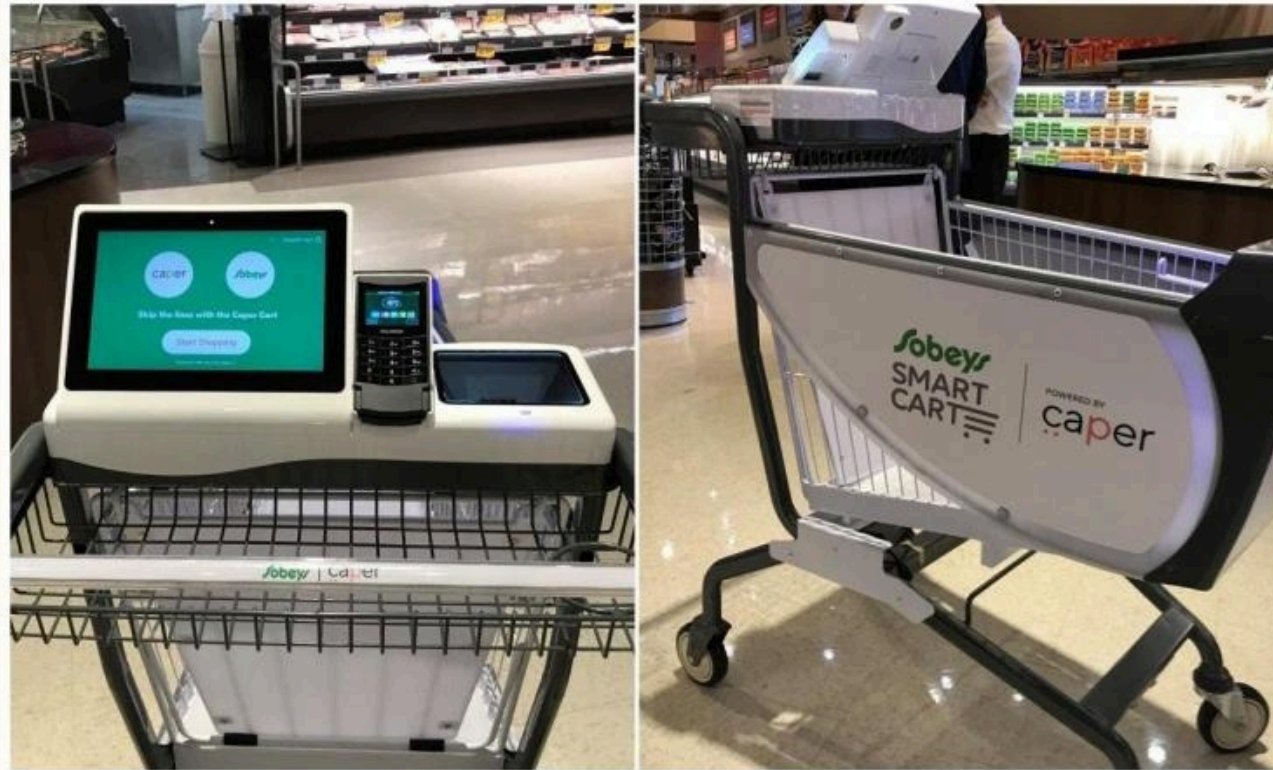


SMART BILLING SYSTEM

Artha Mohan





INTRODUCTION

- We see large queues for billing in Malls .
- Objective of project - prevent wasting time in queues.
- We are proposing a smart trolley billing system.
- RF Id module automatically identify product.
- Bill is counted.
- It will audit the purchased products
- Payment is made online automatically
- Final billing is made from the cart itself .

~~COMPONENTS REQUIRED~~

**RF ID TAG AND
READER**

**NodeMCU
ESP8266**

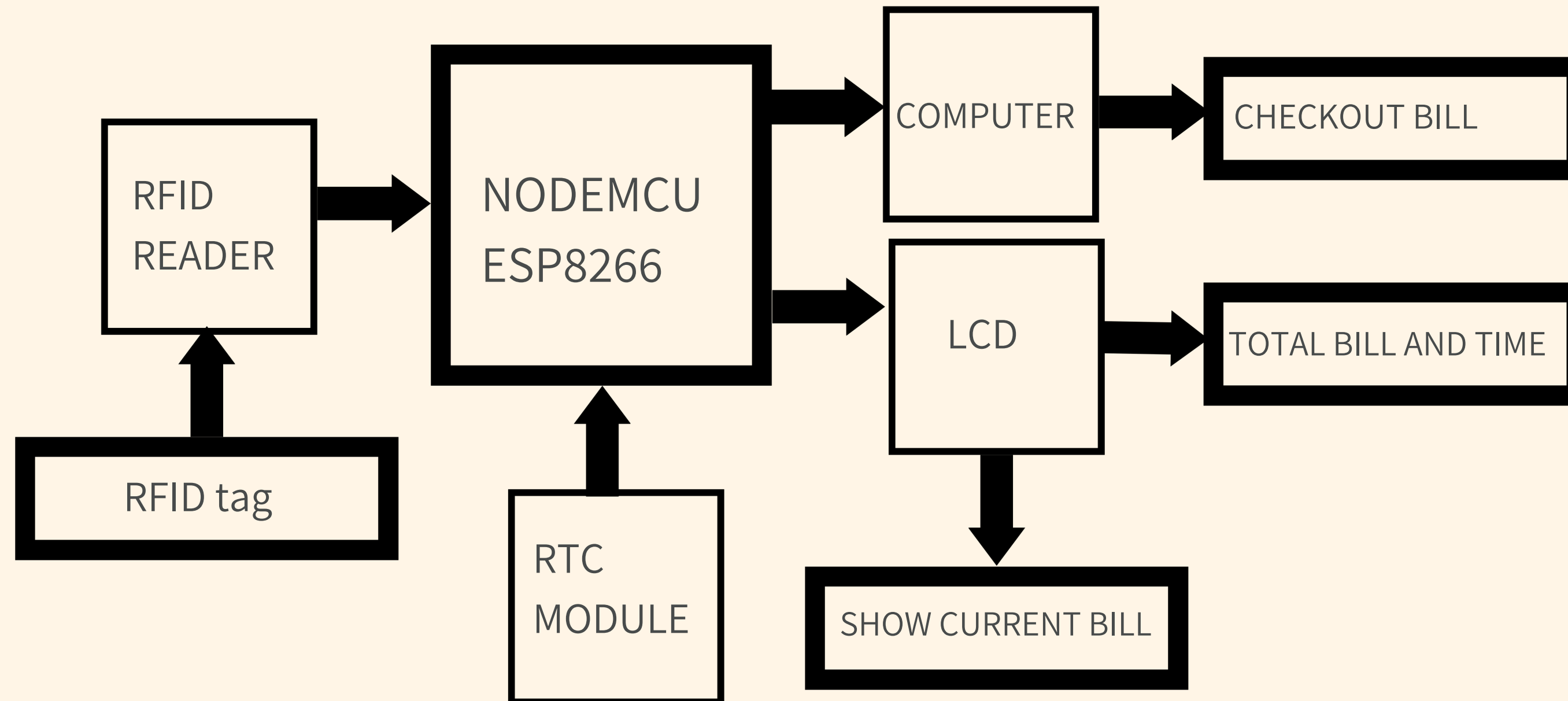
LCD DISPLAY

POWER SUPPLY

RTC MODULE

**TROLLEY AND
PAYMENT QR**

~~BLOCK DIAGRAM~~



~~EXPLANATION OF SYSTEM~~

WHEN PURCHASING START, 'SET SWITCH' ON THE TROLLEY IS PRESSED, THE SYSTEM TURNS ON.

EVERY PRODUCT HAS AN RFID TAG. THESE ID'S ARE SAVED IN THE MEMORY OF THE SYSTEM.

WHEN A PRODUCT IS DROPPED IN THE TROLLEY, THE RFID READER WILL READ THE TAG.

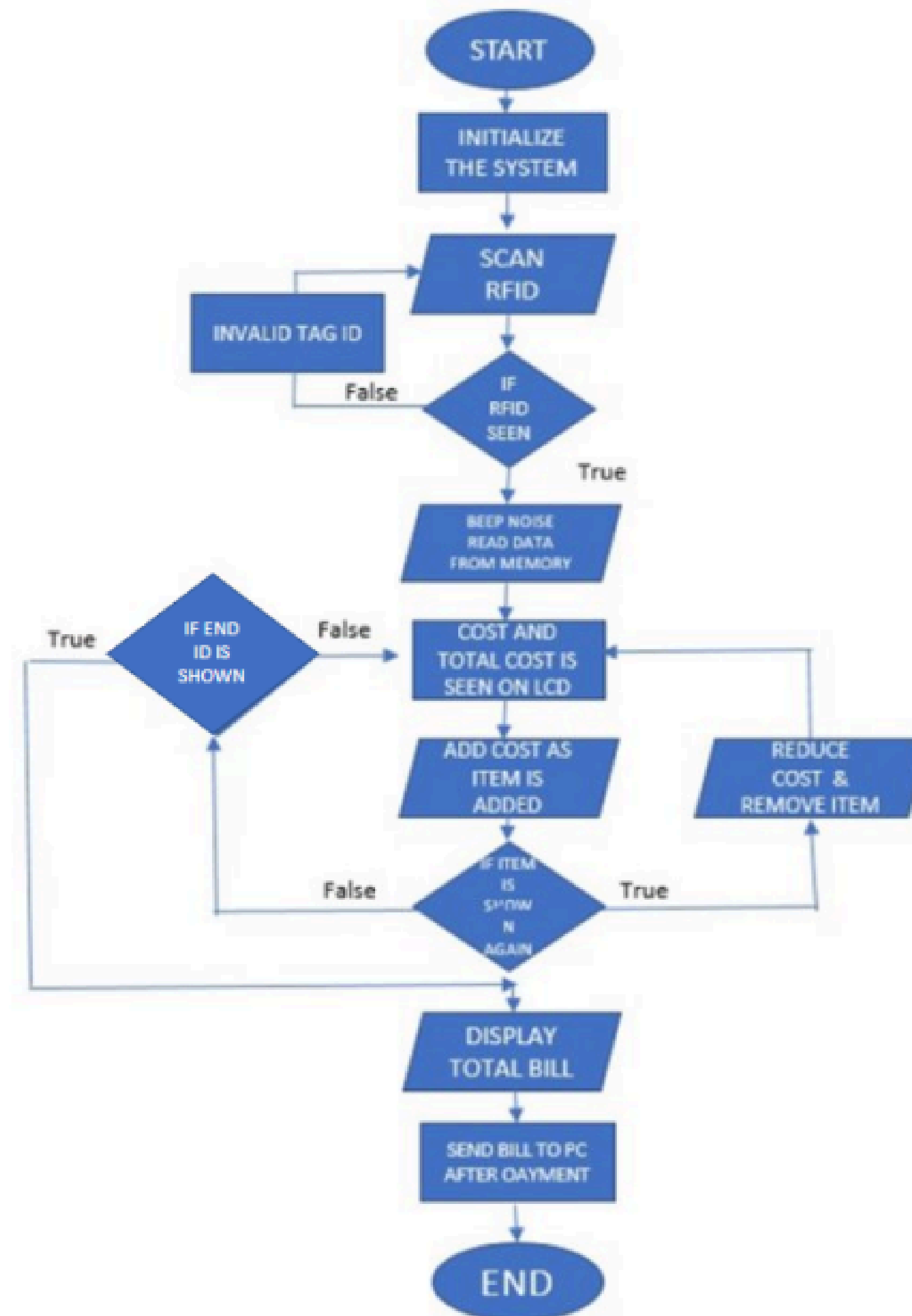
THE INFORMATION OF THE PRODUCT WILL BE DISPLAYED ON THE LCD UNIT.

THE PROCESS WILL CONTINUE UNTIL THE SWITCH FOR ENDING THE SHOPPING IS PRESSED.

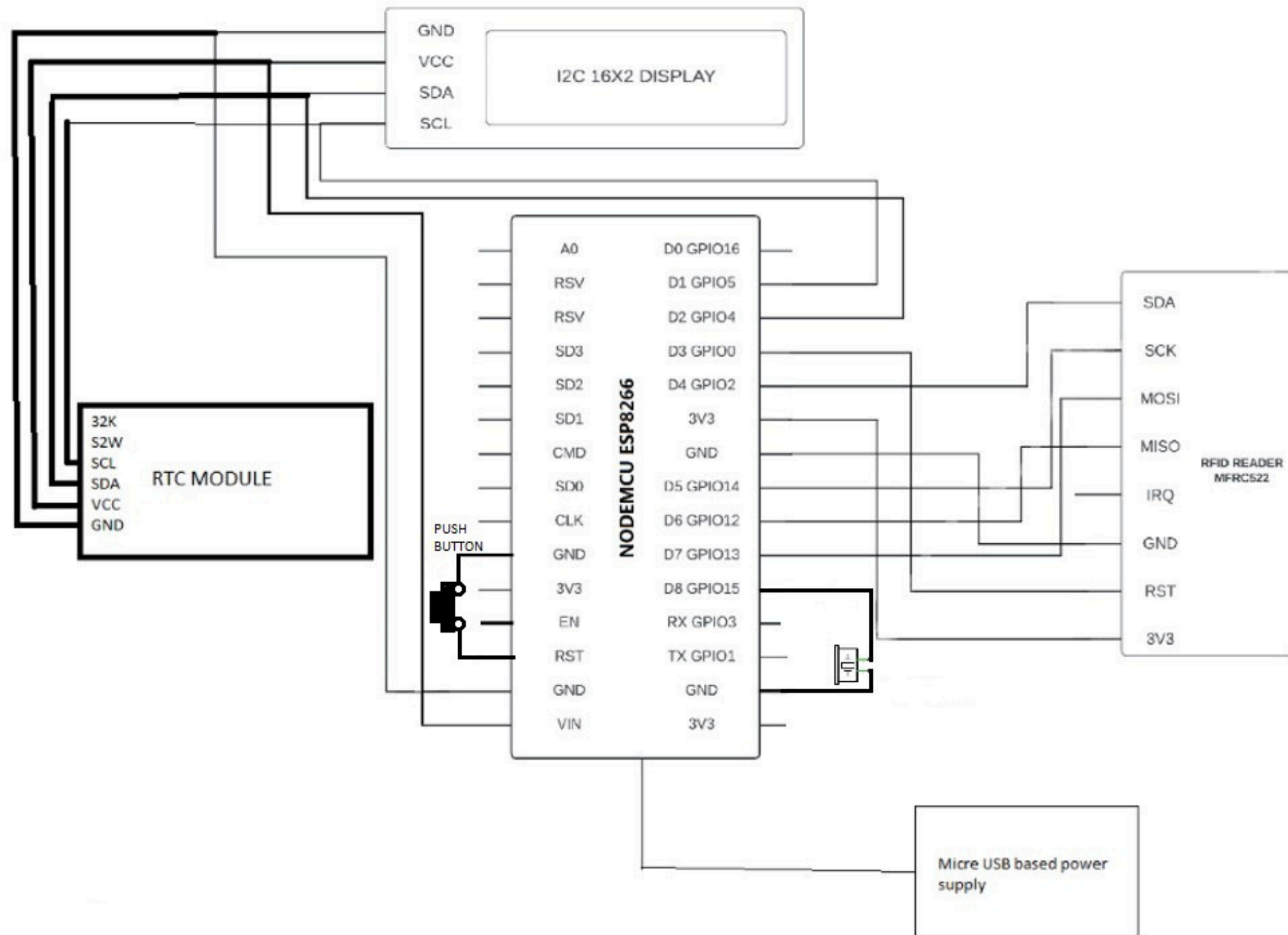
THE TOTAL BILL WILL BE DISPLAYED ON THE LCD.

THE BILL WILL BE SENT TO THE MASTER COMPUTER ALONG WITH PAYMENT STATUS WHEN PAYMENT IS MADE.

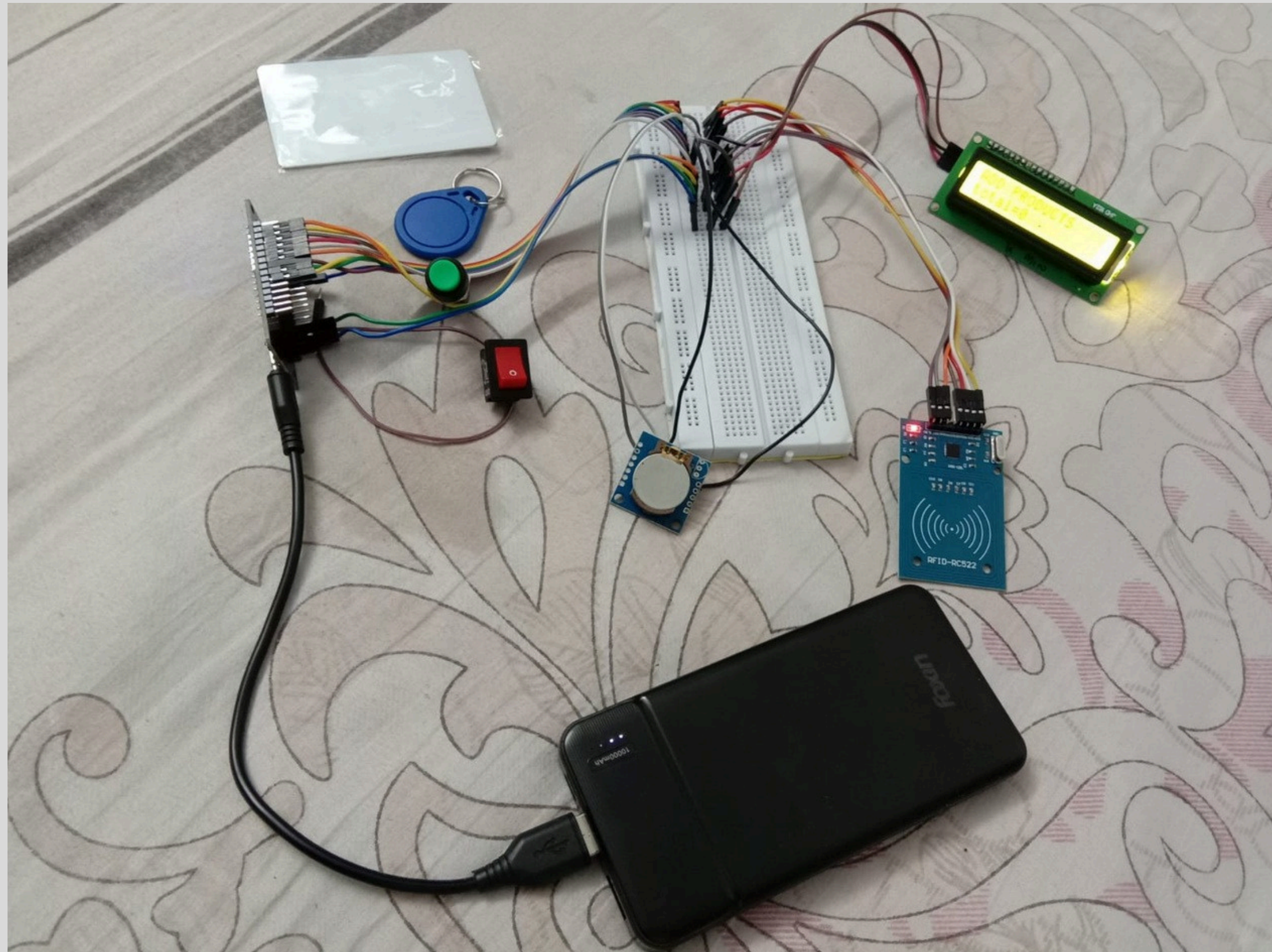
FLOW CHART



CIRCUIT DIAGRAM



CIRCUIT ON BREAD BOARD



~~EXPECTED OUTPUT~~

1. Bill calculation is done at the trolley itself.
2. Low chance of traffic & mismanagement.
3. Staff will be reduced as its automation is brought in place.
4. It is easy to use and is of low cost.
5. Increases the speed of billing by using RFID.

FURTHER IDEA

- Position of products can be displayed on the trolley so that customers can reach their required products by searching on the trolley itself.(we are not including it due to time limitations)

~~REFERENCE~~

- Hubert, M. blut, C. Brock,C.Backhaus and T.Eberhardt —Acceptance of smart phone based mobile shopping: mobilebenefits, customercharacteristics, perceived risks and the impact of application context”,IEEE 2018. Chandrashekhar P, Ms.T. Sangeetha —Smart shopping cart with automatic central billing system through RFID and zigbee||,IEEE,2014. A conference paper on —Iot Based Smart Shopping Mall|| by 1 Ashok Sutagundar, Masuda
- Ettinamani, Ameenabegum Attar. A conference paper on —Internet of Things (IOT)Based Smart Shopping Center " RFID, by Ajay Kumar, shlok Srivastava and U. gupta. A conference
- paper on —IoT Applications on Secure Smart Shopping System "by Ruinian Li, Tianyi Song, Nicholas Capurso, Jiguo Yu, Jason Couture, and Xiuzhen Cheng.
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