# Charusat

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**OBJECTIVE:**

Nowadays Shopping mall is a place where people get their daily necessities. In mall for purchasing number of items it requires trolley. Every time customer has to do calculations of those items & need to compare it with his budget in pocket. After this procedure, customer has to wait for billing. So to avoid headache like pulling trolley, waiting in billing queue we are introducing new concept that is “SMART SHOPPING USING SMART TROLLEY”. In this system we use RFID tags will be on the product. Whenever the customer puts a product into trolley it will get scanned by RFID reader and product price and cost will be displayed on LCD display. Like this the process goes on. 16x2 LCD display will be used to display products names, products cost etc. Total billing will be displayed at 16x2 LCD display.

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**SYSTEM ANALYSIS:**

* 1. User Characteristics
* In this system we are using RFID tags instead of barcodes. This RFID tags will be on the every product in the shop or a mall.
* Each trolley will have RFID Reader implemented on it, used to scan product. There will be a counter System.
* 16x2 LCD display will be used to display products names, products cost and expiry date etc. If product is remove from trolley, first press the deduct switch, amount of that product deducted from total bill too.
  1. Tools & Technology
* Software:
* Arduino Web App
* Hardware:
* Arduino
* 16\*2 LCD Display
* RFID EM-18 Reader

**ADVANTAGE AND DISADVANTAGES:**

2.1 Advantages

• It saves customers time.

• It also reduces the payoff given for workers.

• It is possible to rewrite the RFID tags.

• It doesn’t need line of sight.

2.2 Disadvantages

• Easy to damage.

**FUTURE ENHANCEMENT**

* ZigBee module is operating at the same frequency can easily intercept the transmitted data . This issue will have to be resolved to promote consumer confidence. Further, a more micro-controller(ArduinoUNO) and larger display system can be used to provide better consumer experience.

**CONCLUSION**

We would like to conclude that if this project used in daily life then there will be easier to shopping to mall, small market etc.