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## (54) Title of the invention : ESP CAMERA BASED SMART SHOPPING USING RFID AND QR CODE

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## (57) Abstract :

Technology has changed so much, so is the rate of people of all ages who are attracted to electronic gadgets. In many industries, electronic devices such as smart card readers, bar codes, and RFID scanners are increasingly used. Supermarkets also need these kinds of gadgets. Currently, every person in the mall purchases the product placed in the trolley. Upon purchase, the person will have to stand in a queue for billing. In the billing process, an employee scans each product's bar code and bills it to the final. This process can take a lot of time and it can be even worse on holidays, special offers or weekends. To overcome this, a smart way to shop in malls has been developed. Each product has a QR Code logo instead of a bar code. The Smart Trolley features an RFID reader, LCD and IOT module. When a person places any product on the trolley, QR Code read and adds to cart. It is scanned and the product's cost, name, and expiration date are displayed. The total cost will be added to the final check out bill. The bill is stored in the micro controller's memory and also transfer through IoT module for counter checkup through android application. Once the purchase is complete, the purchase details are sent to the customer through the IoT module. This information is also sent to central PC with the help of ESP8266 IoT transmitter at the trolley and IoT receiver at android phone using IoT application. If the customer wants to remove the added product, the product should be scanned again. Then the cost of the corresponding product will be deducted from the bill. Arduino IDE software tool is used for hardware implementation.

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