



Smart Shopping Trolley

Ishita Bansal(IBM2015002)

Bharti Saini(IEC2015032)

Neha Kandpal(IEC2015048)

OBJECTIVE


To reduce and eliminate time taken in billing counter in super markets by designing an Intelligent Shopping Trolley which uses QRcode scanners to allow users to self-checkout and increase productivity time.

PRESENT SHOPPING MARKET SCENARIO

- ❖ Shopping trolley necessary tool for shopping in supermarkets or grocery stores.
- ❖ Shopping trolleys may not be kept at the right place after being used.
- ❖ Inconvenient for customers to search for desired products in a supermarket and wait in queues.



Key features of our projects

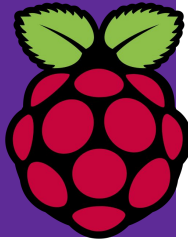


Reduce the chaos in the shopping mall .

Saves the time to stand in Queue

Shows the total amount of products bought

Easy for customer to shop under budget



Key features

Reduces manpower required in billing section.

This can reduce the expenses incurred by the management.

Users can be aware of the total bill amount during the time of purchase.

Reduces time spent at bill

Smart trolley



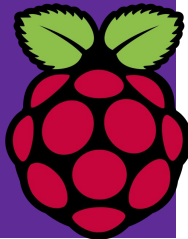
Hardware required

1. Raspberry
pi 3
2. Webcam
3. Display
4. PIR Sensor
5. Customised
Trolley

Software Required

1. SQLITE
2. Python
3. Gpio zero

—



QR code



Scanned QR
code

Webcam



Scanned file sent to raspberry
pi



PIR Sensors

Check if the
product in or out

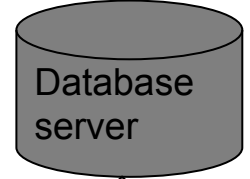


Raspberry Pi

Display the total
amount



Display



Database
server

Send
data to
server

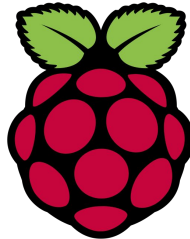



Fig 2 : Schematic Diagram of Smart Shopping Trolley

File Browser Open  transfer.py
~/Downloads/code

camera.py database_main.py out.txt transfer.py emaildb.py emaildb.py



bill.sqlite
camera.py
database_main.py
emaildb.py
emaildb.sqlite
in.txt
inp.txt
mbox.txt
mbox-short.txt
on.txt
out.txt
transfer.py

DB Browser for SQLite - /home/kandu/Downloads/code/bill.sqlite

File Edit View Help

New Database Open Database Write Changes Revert Changes

Database Structure Browse Data Edit Pragma Execute SQL

Table: BILL   New Record Delete Record

	NAME	PRICE_Rs	WEIGHT
	Filter	Filter	Filter
1	SURF EXCEL	120.0	500gm
2	L'Oreal Pari...	225.0	360 ml
3			
4	Total	345.0	

SQL Log

Show SQL submitted by Application Clear



```

58 SELECT type,name,sql,tbl_name,'0' AS temp FROM sqlite
59 SELECT COUNT(*) FROM (SELECT '_rowid_',* FROM 'BILL'
60 SELECT '_rowid_',* FROM 'BILL' ORDER BY '_rowid_' AS
61 SELECT COUNT(*) FROM (SELECT '_rowid_',* FROM 'BILL'
62 SELECT '_rowid_',* FROM 'BILL' ORDER BY '_rowid_' AS
63 SELECT type,name,sql,tbl_name,'0' AS temp FROM sqlite
64 SELECT COUNT(*) FROM (SELECT '_rowid_',* FROM 'BILL'
65 SELECT '_rowid_',* FROM 'BILL' ORDER BY '_rowid_' AS
66 SELECT COUNT(*) FROM (SELECT '_rowid_',* FROM 'BILL'
67 SELECT '_rowid_',* FROM 'BILL' ORDER BY '_rowid_' AS
68

```

SQL Log DB Schema Edit Database Cell

Remote

Identity  

Name	Commit	Last modified	Size

1 - 4 of 4 Go to: 1 UTF-8

Fig no. 3 :- Database produced bill of the scanned products

Goal of Our project

Connecting Raspberry pi to the main server.

Work upon sensors to enable adding and removing items from the cart.

Updating the database.

Increase the safety measures to avoid theft.

Goal for Future

Adding more features so as to ensure security and safety measures.

Implementing the trolley with the simultaneous help of PIR sensor .

Making the trolley more smart by making it autonomous.

HANK YOU

T

