Project on

SMART TROLLEY

Submitted by

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PROBLEM STATEMENT

To develop Aruco – PICAM based scanning system for mall in order to expedite billing process.

INTRODUCTION

- Now a day's shopping at big malls is becoming a daily activity in metro cities. The huge rush at malls on holidays and weekends.
- After purchase, at the billing counter the cashier prepare the bill using bar code reader which is a time consuming and not precise and results in long queues.
- The aim is to develop a system that can be used in shopping malls to solve the rush at billing counter.

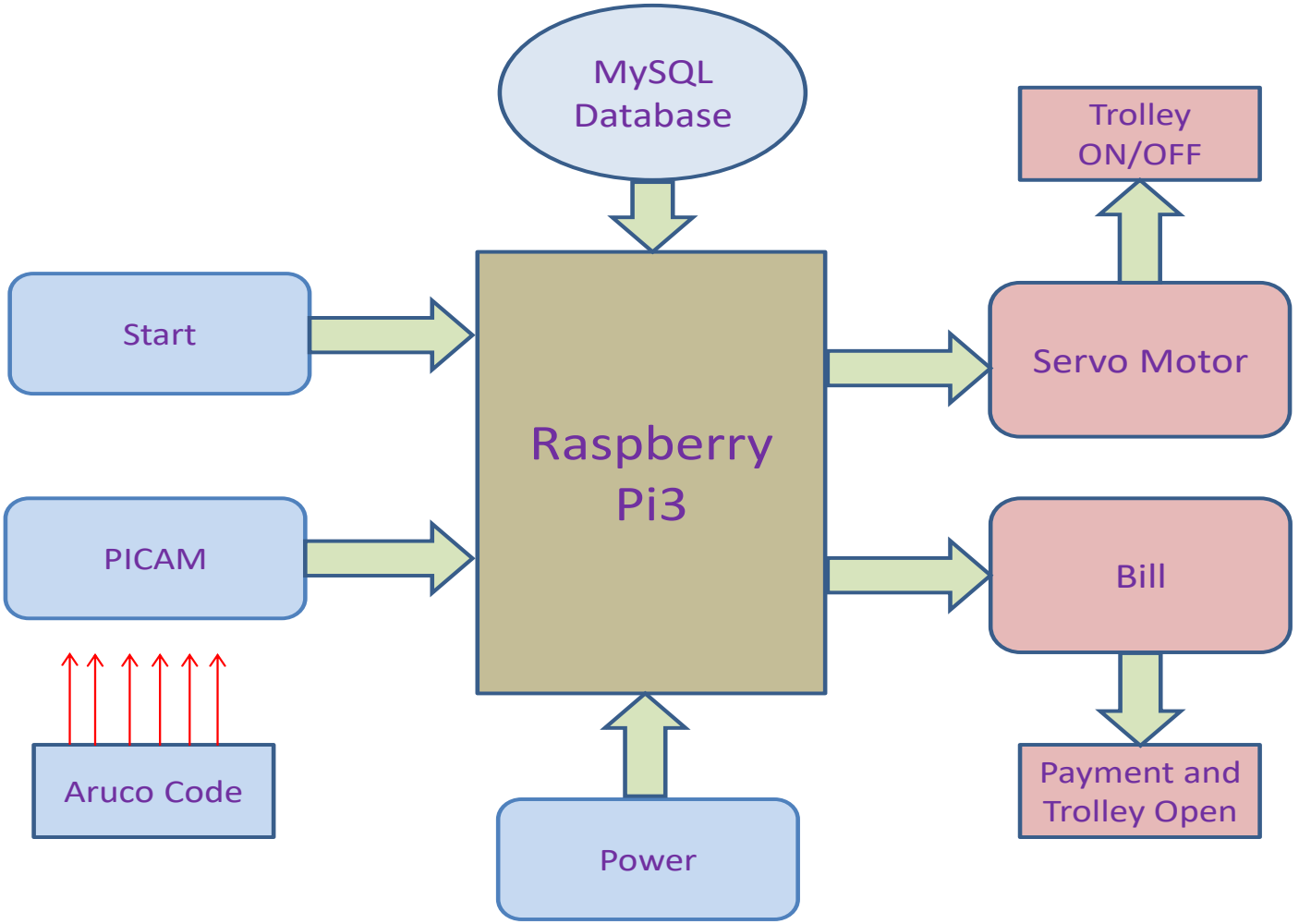
EXISTING SYSTEM

- Manual billing.
- Use Barcode for billing.
- Human staff is needed for billing.
- Low product cost but over all expenses are much higher.
- Getting product information is difficult and time consuming.

PROPOSED SYSTEM

- Automatic billing.
- Use Aruco code for billing.
- Less need of human staff for billing.
- One time investment gives much high profit.
- Getting product information is easy and no extra time needed.

SYSTEM ARCHITECTURE



METHEDOLOGY

- Every product has an Aruco code instead barcode which acts as a Unique code.
- These ID’s are fed in the database assigned to the corresponding products.
- If there need to be purchase done, then that product can be droped the trolley where PICAM scan the code & open the trolley with specific angle.
- These scanned ID then check with database ID’s.

METHEDOLOGY

- If ID matches with one of the element then whole row in front of that ID in database is retrieved.
- Each row contain Name, price, angle, weight, count.
- After that servo motor turn with retrieved angle so that customer can drop the element in trolley.
- At the same time the billing information is updated internally in R-Pi.
- These steps are repeated till user want to shop.

REQUIREMENTS

➢ Hardware Requirements

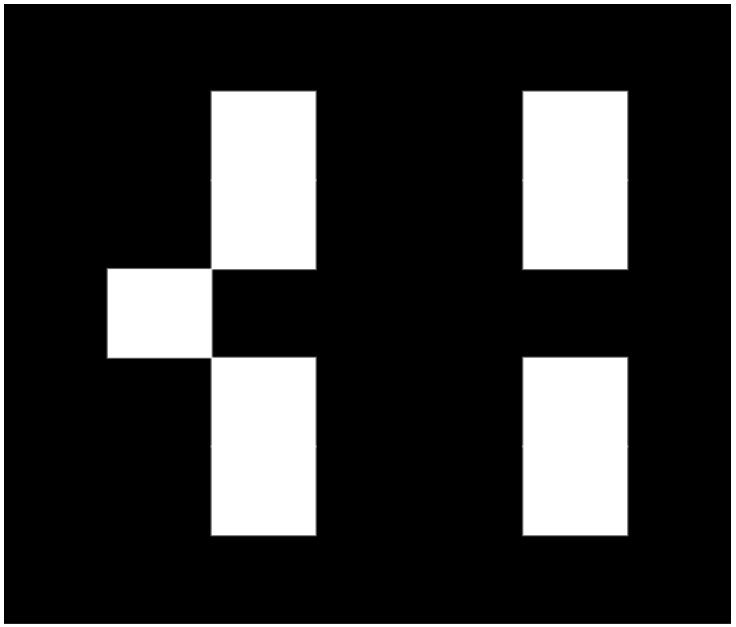
- Aruco Code
- R-Pi3
- PICAM
- Servo motor
- Buzzer

➢ Software Requirements

- Programming languages
  - ❑ Python
  - ❑ SQL
- Database : MySQL

ARUCO CODE

- Let us consider the number 650. It's binary representation is 1010001010. There are two data bits in each row.



CONCLUSION

- Easy to use, more profit.
- Aruco is better than barcode.
- Enhance the shopping experience to a new level.
- Waiting time of customer due to queue reduces.

Thank You…!