ISSN (Online) 2394-2320

International Journal of Engineering Research in Computer Science and Engineering (IJERCSE)
Vol 3, Issue 9, September 2016

# Pick Perfect

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***Abstract:* — the key objective of Pick perfect is to save the waiting time for people while billing in supermarkets, malls, etc. This project lets the customer to scan the barcode from the desired products, specify the quantity required and manage his own billing. As the customer scans the barcode, automatic generation of e-bill will be done and it will be notified to the store manager. A separate copy will also be generated and sent across to the supermarket as well, thus providing a hassle free service for customers and supermarket by eliminating the traditional cash counter system and queuing. Additionally, this app also comes with two modules, one module that inspects the freshness of fruits and vegetables by using a plastic sensor circuit that measures conditions like acidity levels of the food and the process continues to test the freshness of the food using a sensor, an amplifier, an ADC and a radio transmitter. Also, RFID radio is used to detect the direction in which the food is damaged. The other module helps the customer to reserve a parking slot five minutes before reaching the supermarket thus avoiding parking congestion**

***Keywords*— ADC, RFID**

## I. INTRODUCTION

The customers in today's world are on the move and they're using mobile application platforms to get there. Whether they use mobile phones, tablets, or other mobile devices they have all the information they need. That's why mobile apps are so much important in today's market. Mobile apps allow customers to have all information at their fingertips. At a glance they will be able to see and open this app and purchase from your shop.This app resolves three significant issues :

- ***Shopping Assistant*** -minimises queues while billing.
- ***Freshness detector*** - detects freshness of food, thereby minimising food wastage.
- ***Parking finder*** - indicates whether the parking spot is free,thereby avoiding parking congestion.

In Chapter I we propose Shopping Assiatant system. In Chapter II we propose methods for booking Freshness detector. In Chapter III we propose methods for Parking finder. In chapter IV we propose Conclusion of PICK PERFECT.

## II. THE SHOPPING ASSISTANT

The Shopping Assistant can be deployed as a system software or a mobile app. This module enables the user to scan barcodes on the desired products and generate an ebill which can be shared with the supermarket billing system wirelessly using beacon technology. iBeacon uses Bluetooth low energy proximity sensing to transmit a universally unique identifier picked up by a compatible app or operating system[6][7][8][9]. The identifier and several bytes sent with it can be used to determine the device's physical location, track customers, or trigger a location-based action on the device such as a check-in on social media or a push notification. The user can pay their bill online or directly which eradicates the traditional cash counter system.Fig.1.Shows the people waiting in a queue for long time.

- This module saves a lot of productive time for the buyer and the seller by eliminating the queues and congestion while shopping.
- It can be used to track shopping data for the buyer and seller, as the customer is allowed to manage his billing.
- Storage space is minimized as only sample of items are kept in showpiece in order to scan the item.
- Saves paper since the bill is generated electronically, hence environment friendly.

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*Fig. 1 People waiting in long queue for billing*

## III. THE FRESHNESS DETECTOR

This module helps in detecting the freshness of the food without even unwrapping it by sensing the food's 'environmental vitals' and various constraints pertaining to the freshness of the food, using a'plastic sensor circuit'. The circuit works as follows: A tiny sensor measures conditions like acidity levels. For example: The acidity levels of under ripe , ripe and overripe of fruits can be sensed.[1][2][3] The sensor produces an analog signal that is converted into a digital signal and broadcast over an RFID radio. A sensor circuit consists of four components: the sensor, an amplifier, an ADC to digitalise the signal and a radio transmitter that sends the signal to a base station. Some phones are already equipped to pick up an RFID signal, and many more will be in the future.Fig.2. showa the model of Freshness Detector using RFID. With the help of the acidity level we could use the fruit before it gets damaged. Thus this application helps in alerting the users before the fruit gets spoilt.[4][5]

- Assists customer and the seller to buy fresh food.
- Saves a lot of money spent on damaged food.
- Helps people in maintaining good health by making right choices.
- This module also lets the seller know when to restock.

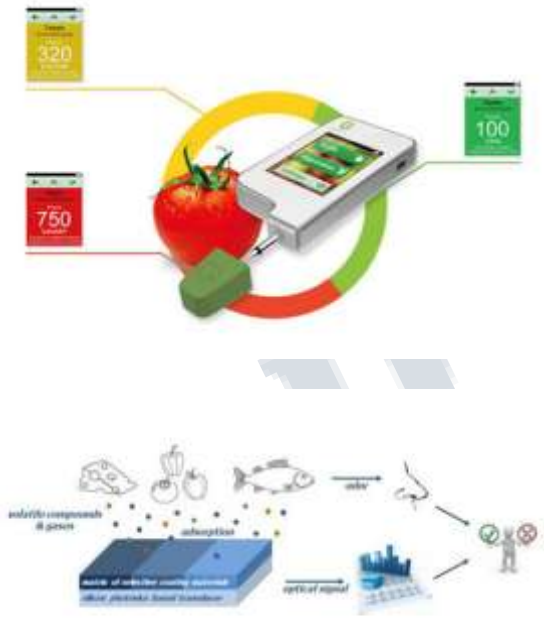


*Fig.2.Freshness Dtector using RFID*

## IV. THE PARKING FINDER

As mentioned earlier, there are so many complicative issues in parking vehicles. This module is optional. This application uses the sensor to inform about the free space in the parking lot. When the sensors are been implemented in the entry and exit gates of the parking slot, the available space can be detected by the number of cars accommodated in the parking lot. The sensor gives this information to the base [10][11][12].

Station from which the user who requests for the free space will be notified via this app. The user can pre book the slot before 10 minutes of his arrival and the payment should be made online. This module is available only to the parking slots who have installed sensors on their parking space. This application is successfully used in western countries where they have placed sensors on each and every bay. But this application requires sensors to be installed only in gates as per our economic status. Fig.3.Shows The testing Model of this app.

- Saves time.
- Helps avoid parking congestions.

ISSN (Online) 2394-2320

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- Prevents physical damage caused to vehicles due to
- congestions.
- Parking spot can be tracked using this module.

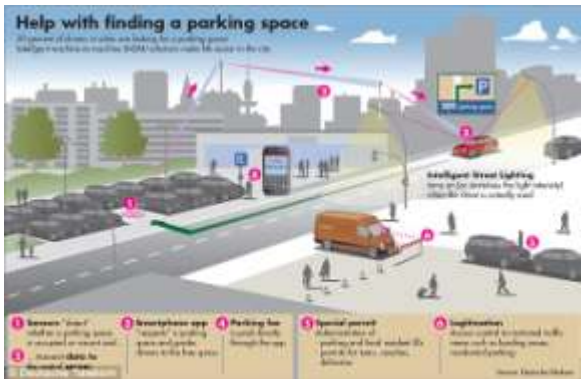


***Fig. 3 Model of Parking Finder***

## V. CONCLUSION

Thus the Pick Perfect application is useful in facing real time problems with the help of a phone. It makes your life easier just by picking up right things at right time near you.

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