A Synopsis for the
ADVANCED TROLLEY WITH ON SPOT BILLING

B.Tech. PBL Report

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1. Introduction & problems in today's scenario

Basically this project is a part of one of my projects, ADVANCED TROLLEY FOR MEGAMARTS.

Nowadays, in mall for purchasing variety of items it requires trolley. Every time customer has to pull the trolley from rack to rack for collecting items and at the same time customer has to do calculation of those items and need to compare it with his budget in pocket.

After this procedure, customer has to wait in queue for billing. So, to avoid headache like pulling trolley, waiting in billing queue, thinking about budget, We are introducing new concept that is “ADVANCED TROLLEY FOR MALL”.

In modern era, for automation of mall I am developing a microcontroller based TROLLEY which is totally automatic.

It follows the customer while purchasing items and “it maintains safe distance between customer and itself”.

2. Objective and scope of the project

This product has an artificial intelligence of tracking the customer path request. So that, if track has been set then there is no need of manual function. That’s why customer needs less effort to pull trolley. Customer gets on the “spot billing facility”.

- Finds healthy food on sale
- Offers healthy alternative suggestions
- Tells about current offers on substitute products
- Saves time
- Saves money

*Adoption by every major grocery store chain in INDIA and other Countries.

*Consumers will live healthier lifestyles through healthier food choices
3. Methodology Used

The spot billing system is the heart of my project, so our main focus was to compress the old bulky billing machines including computer, q-r scanner receipt printer into a small device,

So that it decreases the production cost, and also reduces the man labor needed in malls.

* Users who are unsure which products to choose based on nutrition or cost
* They don’t need to carry that hectic shopping list with them always,

* Advance And Simple U.I
* Barcode Scanner
* Spot Billing Facility
* Voice Navigation
* Weight And Quantity Measurement System
* Personalized Cloud User Database
* I.P.S (Indoor Positioning System), (macro GPS)
* Easy To Introduce Commands.

4. Hardware & Software to be used

* Main platform or microcontroller

According to me Arduino microcontrollers are best for managing all the hardware and software parts of the product, it provides the platform to secure interaction between all hardwares and software

* A Q-R CODE SCANNER,

Every mall will have its own database, in which all the details of products (including their price, weight) will be stored.

Whenever any product is scanned with scanner, it will generate a code, related to the concerned product in the database, and the bill will be generated accordingly to that.
* **Weight And Quantity Measurement System**

Some of the products like vegetables, fruits, floor etc donot have q - r codes on them, so this weight measurement system takes care of those kind of products.

This addon also ensures security, that is mentioned further.

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*I.P.S (Indoor Positioning System), (macros GPS)*

An indoor positioning system (IPS) is a system to locate objects or people inside a building using radio waves, magnetic fields,

IPS systems use different technologies, including distance measurement to nearby anchor nodes (nodes with known positions, e.g., WiFi access points),

It controls the voice navigation part also.

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* **Personalized Cloud User Database**

This online database keeps record of every single customer’s purchase, it predicts that what product, is the user going to buy,

It gives freedom to customer to use any trolley, in any mall, they just have to enter their username and password.

THANK YOU