

**THE SMART GREEN-GROCERY POINT-OF-SALE SYSTEM**

**BY**

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Due to the technological advancements in several areas and systems being developed into smart systems, we saw the need in systems improvements and innovations in Green-Grocery. This was based on three main reasons;

- Green groceries are meagerly interpersonal businesses this is lost as scales of operation increase hence condemning them to remain small.
- Prices are based majorly on owners’ judgment and not based on exact factual information this limits profits.
- In the informal sector, these businesses (mama mboga) are seen as minial and lack the technological spur to grow.

According to our know-how, no innovator has developed such a system and hence we seek to offer innovations for this sector to facilitate much needed boost to growth. As the name suggest, this system is developed to improve on technology and counter the problems in our Green-Groceries and any other place of great relevance in the application of the system.

The system works by identifying the product in test. It uses two different sensors to make it possible for the identity of the products hence being able to differentiate different products. Weight of the product is identified by the use of 50kg SEN-10245 Load sensor. Identification of the physical product is done by color sensing mechanism withTCS3200 Color Sensor. After the product details have been identified and confirmed, the relevant details are then displayed on the display. Since there are some products which may have close to similar color values, the system has a provision for confirmation with parameters already stored in a database.

Once the weight and the product has been measured, the system automatically calculates the cost of the product by the use of designed algorithm specifically meant for specific products. After a certain quantity of product has been sold, the database of the products is updated automatically and the system admin is then able to monitor the stock inlet and outlet. The system is also expected to be able to print receipts which help in referencing the products sold to the customers. We aim to enable grocery chain stores to be centrally managed economically with ease. The major advantages include;

- Pricing system is wholly based on the stocked weight and intended profits.
- Customer pays for exact amount purchased.
- The proprietor can easily manage the stocks of all products even with an expanded business.
- The system offers alerts when stocks are running out based on stock flow trends