SMART SUPERSTORE MANAGEMENT SYSTEM

surapaneni sai sravya, student ID: 200417389,University of Regina

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PROJECT PROPOSAL

1 Introduction

In this present project, we aim to develop a system which is dealing within the store. The first undertaking, explained by Saddam on circuitdigest.com which only describes the heaviness of that specific thing with the help of a load cell and also HX711 load cell amplifier module. This gives indication through the LCD screen which will display the weight of the product [1].

2 Novel Contribution

The main objective of this project is to maintain the store. In this store management project, they are several ways to handle the items which are empty and this can be refilled automatically. Whereas, few goods should be refilled manually by the people. In a store, there will be numerous racks of a row for a variety of stocks. Each row there will be a use of a sensor which recognizes that some items present in the row and if a row gets empty there will be a suggestion to the screen simultaneously alarm is triggered for the worker. Working people can go to that appropriate row and can refill the items whereas, in the case of loose product items it can be distinguished by the measure of the weight. particular weight is to be arranged, so that if the product weight reduces to the set weight then it causes an indication for refilling the items through the same screen and buzzer rings. whereas the other items which are present inside the container can be identified for refilling it by using a light-based surface and LDR. This particular system can get refilled automatically and it doesn't require manpower.

3 Motivation

This project was recognized by looking at the people who are working in the stores. These individuals need to check the things normally which are available

in the store. This causes a waste of time and furthermore loss of energy. People must be there to refill the items at a row which are vacant in that specific line and also refilling the various loose produce items for example tomatoes, potato etc. Other explicit things like Rice and different grains are additionally should be checked for refilling. So, they will be an immense number of people will be contracted for this specific occupation. There is an expectation that this project will help the staff individuals in a store indicates unfilled items or when it gets empty. so, there is no need to recheck the items every time. Whenever the items display empty on an LCD screen, the person should go to that place and refill the item. By this, the store manager may also get help and can manage the store by hiring only a few working people.

4 Materials Required

As indicated by the project site, the accompanying materials are required:

- Arduino Uno R3
- Load cell
- HX711 Load cell Amplifier Module
- 16x2 LCD
- Connecting wires
- USB cable
- Breadboard
- Nut bolts, Frame and base

In addition, the accompanying materials are required:

- IR sensor
- Buzzer
- LDR sensor
- Light base
- Servo motor

5 Milestones

The ultimate goal of a project is to design and reach the following milestones.

MILESTONE	DATE	DESCRIPTION
Milestone 1	March 10	Gathering required components
Milestone 2	March 15	Work with a servo motor and IR sensor
Milestone 3	March 20	Work with a load cell amplifier
Milestone 4	March 22	Basic store control design
Milestone 5	March 27	Code for Arduino UNO
Milestone 6	March 30	testing
Milestone 7	April 5	An indication to LCD and buzzer

The last achievement is an objective to achieve the project. If there is an indication whenever an item gets empty should be sent to the screen and a buzzer sound.

6 Team Roles

Playing an individual role in this project. In this task needs to gather the item prerequisites, should work with coding, and furthermore finishing undertaking documentation.

7 Summary

The task is an open stage for programming and also equipment usage. The project demonstrated to outreach the activities. It deals with the store and decreases the work for a laborer. A director can employ a few people in a store for maintaining it and this brings out of high benefit. finishing off a plan, as per prerequisites need a great deal of time for effective and achieving the objectives. It should give the best outcome, so this makes interest to work more on some other related projects.

8 References

[1] Circuitdigest.com. (2019). Arduino Weight Measurement Project with Load Cell and HX711 Module Interfacing: Circuit Diagram and Code. [online] Available at: https://circuitdigest.com/microcontroller-projects/arduino-weight-measurement-using-load-cell [Accessed 6 Mar. 2019].