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Smart Ration Card System

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ABSTRACT: The present ration distribution framework has downsides like wrong amount of products, low processing speed, and large wait in time, material theft in ration shop. The proposed framework replaces the manual work in proportion shop. The principle goal of the planned framework is the robotization of ration shop to give straightforwardness. The proposed automatic ration shop for public distribution framework is based on Smart Card innovation that replaces ordinary ration cards. . In proposed system every customer has given one RFID tag. Then consumer will visit the ration shop that time he/she have to show the RFID tag which is read by RFID reader. And if authentication is done then the required amount of ration, pesticides and seeds for farming that may be solid or liquid will get dispense automatically after giving an input by shopkeeper. The consumer will get the confirmation SMS through GSM. And database will be updated on webpage.

KEYWORDS: Public distribution system,RFID.

I. INTRODUCTION

Most of the all-inclusive community having a ratio card to buy the materials from the Ration shops. Right when get the material from the ration shop, at first need to exhibit the apportion card and they will put the sign in the ration card relies upon the materials To distribute essential commodity at subsidized rate to the general public, who belong to below poverty line, public distribution system has been established by Government of India. But, various malpractices have been carried out in public distribution system namely distribution of inferior quality goods, under weighing of goods, circulation of ghost cards, circulation of PDS articles in open market. As a result, eligible beneficiaries are unable to obtain goods from public distribution shops. Thus, main goal of Government has not been fulfilled as a result of problems prevailing in sssPDS.

Today we are standing up to different security related issues. Aadhar card based access control structure permits just approved or mindful persons to get the materials from ration shops. Overall system for compact correspondence (GSM) is a comprehensive recognized standard for advanced cell correspondence.

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II. BLOCK DIAGRAM

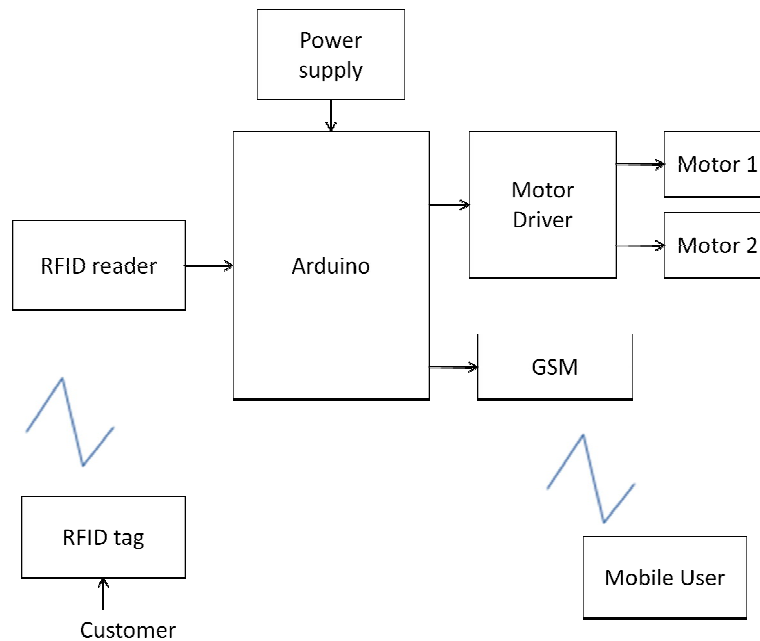


Fig 1 – System Block Diagram

III. HARDWARE COMPONENT

1. Arduino Uno

Arduino is a prototype platform (open-source) based on an easy-to-use hardware and software. It consists of a circuit board, which can be programmed (referred to as a microcontroller) and ready-made software called Arduino IDE (Integrated Development Environment), which is used to write and upload the computer code to the physical board.

2. Motor

The Dc motor or solenoid valve get ON, then it match the weight of the grocery in pot with the entered weight once the enter weight is equal to the weight in the pot the particular relay of either Dc motor closed:

3. Power Supply

A regulated power supply is an embedded circuit; it converts unregulated AC into a constant DC. With the help of a rectifier it converts AC supply into DC. Its function is to supply a stable voltage (or less often current), to a circuit or device that must be operated within certain power supply limits. The output from the regulated power supply may be alternating or unidirectional, but is nearly always DC.

4. Motor driver IC

The L293D motor driver is available for providing User with ease and user friendly interfacing for embedded application. L293D motor driver is mounted on a good quality, single sided non-PTH PCB. The pins of L293D motor driver IC are connected to connectors for easy access to the driver IC's pin functions. The L293D is a Dual Full Bridge driver that can drive up to 1Amp per bridge with supply voltage up to 24V. It can drive two DC motors, relays, solenoids, etc. The device is TTL compatible. Two H bridges of L293D can be connected in parallel to increase its current capacity to 2 Amp.

5. Radio frequency identification (RFID)

RFID readers or receivers are composed of a radio frequency module, a control unit and an antenna to interrogate electronic tags via radio frequency (RF) communication. The reader as shown in powers an antenna to generate an RF field. When a tag passes through the field, the information stored on the chip in the tag is interpreted by the reader and sent to the server, which, in turn, communicates with the integrated library system when the RFID system is interfaced

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with it (Boss 2004). Radio frequency identification (RFID) in a variety of ways including automatic identification and data capture (AIDC) solutions.

IV. FUTURE SCOPE

It will also possible to make this system Aadhar card based instead of RFID based so that installation cost will be as low as possible. Also it is tedious to bring two ID cards one.

V. RESULT

If proper authentication is done consumers data will be visible to shopkeeper, which includes allocated ration as well as seeds, pesticides details to consumer to maintain transparency between shopkeeper and consumer. Then the respective ration, seeds and pesticides that may be solid or liquid will dispense to him/her automatically.

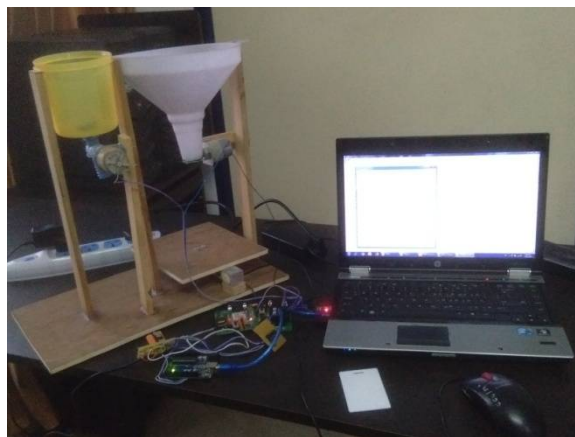


Fig.2. Result

VI. CONCLUSION

This system is more secure and maintain transparent than the normal existing system. Influence of fraud falsity data entry intake in the ration database can be maintained simply with the use of this smart ration card system. Only authorized person (shop keeper, tradesman) can operate the database. Customer can be authenticated using the Aadhar card scan through web camera and can get allocated ration such as grains, pesticides, seeds after barcode authentication. If customer don't need the allocated ration or pesticides then it is given to the customer who really need the ration or pesticides. The consumer will get the confirmation SMS through GSM and database will be updated in real time.

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