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SMART CARD BASED PUBLIC RATIONING SYSTEM

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Abstract — Presently a day ration card is critical for each home and utilized for different field, for example, relatives subtle elements, to get gas association, it go about as address confirmation for different purposes and so forth. Every one of the general population having an apportion card to purchase the different materials (sugar, rice, oil, lamp fuel, and so on) from the proportion shops. In any case, in this framework having two disadvantages, initial one is weight of the material might be erroneous because of human errors and furthermore, if not purchase the materials toward the end of the month, they will deal to others with no implication to the legislature and clients.

Keywords- Public distribution system, rationing system. Smart card, MATLAB, ARM 11, IOT etc.

I. INTRODUCTION

The point when get the material from the ration shop, initially need to present the ration card and they will put the sign in the ration card relies on upon the materials. At that point they will issue the materials through weighting framework with help of human. Be that as it may, in this framework having two downsides, initial one is weight of the material might be off base because of human missteps and furthermore, if not purchase the materials toward the end of the month, they will deal to others with no hint to the administration and clients. The utility of Addhar for conveyance of the different government plans was imagined at the very begin of the venture. On account of this 'enormous picture, the whole venture on Aadhaar empowered PDS was partitioned into four phases. In this exploration paper, the proposed idea is to supplant the manual work in broad daylight circulation framework. The ration dispersion framework is computerized by utilizing PLC, which is like the ATM. This robotized apportion framework replaces the traditional proportion card framework by shrewd card. What's more, the unique mark finder is put in the machine in request to check the right client get to. On the off chance that the client is right client, the following procedure happens and the info can be given in the touch screen.

II. PROBLEM STATEMENT

In this project we are going to execute rationing framework. In existing framework same thought executed through GSM and RFID innovation .yet in present framework we deal with this venture utilizing IOT innovation. In this project we first check client one of a unique smart card by camera. Camera will catch savvy card, after that picture will get handle utilizing picture processing. If client demonstrate substantial card, then he access enter one of a kind password by .keypad is only arrangement of no. keys. If both level of security is right, then client will give apportion as indicated by smart card. Apportion will disperse utilizing dc motor and after circulation through IOT innovation message will send to approve individual. Individual will see that message on Mobile/PC in graphical way utilizing web. If any level fizzles, buzzer will ready as sign and picture of brilliant card will send to approve individual PC/Mobile.

III. LITERATURE REVIEW

A.N. Madur, Sham Nayse [1] "Automation in Rationing System using Arm 7", this framework depends on radio frequency recognizable proof of client. Here every client is given RFID cards. In this framework, by utilizing RFID and by entering the secret word we can get to. Initially client is verified, then framework demonstrates the balance of individual. Client need to enter the measure of Kg he need to pull back. Framework checks his record. In the event that the client will have adequate adjust to pull back the present sum.

Dhanojmohan, Rathikarani, Gopukumar [5],"Automation in ration shop using PLC', proposed a technique for proportion shop computerization utilizing embedded PLC. Assist the updating to the legislature database about the stock accessible and the client points of interest were notcarried out. In this framework, by utilizing RFID and by entering the secret key we can get to. To start with client is confirmed, then framework demonstrates the balance of individual. Client need to enter the measure of Kg he need to pull back. Framework checks his record. On the off chance that the client will have adequate balance to pull back the present sum.

SR.NO	YEAR	PAPER NAME	AUTHORS	DESCRIPTION
1.	2014	Atomization of Rationing System	Shivabhakt Mhalasakant Hanamant1, Suraj V. S.2, Moresh Mukhedkar3	IN PURPOSED SYSTEM RFID tag is utilized for confirmation and the programmed appropriation is finished with microcontroller. For updation GSM is utilized.
2.	2014	Smart Ration Card Using RFID and GSM Technique	Mohit Agarwal1, Manish Sharma2, Bhupendra Singh3, Shantanu	In this framework, a RFID tag is utilized that conveys the relative subtle elements .The microcontroller associated with the reader will checks for the client validation. On the off chance that the client is discovered true then the amount of proportion to be given to the client &will be shown in plain view device.
3.	2016	Smart Ration Card System Using Raspberry-pi	Kumbhar Aakanksha1, Kumavat Sukanya2, Lonkar Madhuri3, Mrs. A.S. Pawar4	The principle focus of this paper was to bring straight forwardness among government and client, and this straight forwardness is given by website page. At the point when any exchange is finished by client he/she will get a message on his versatile through GSM innovation.
4.	2016	Fully Automated Ration Shop Monitoring and Controlling System Based on Embedded Processors and Controllers	M.S.Manivannan1, Dr.P.Kannan2, Dr.M.Karthikeyan3	Public Distribution System (PDS) presents the Fair Price Shop (FPS) for appropriating the grains to the poor people groups. Here rather than a Ration card, a smart card will be utilized with the end goal of approving and accordingly the individual's finger Vein will be Scanned afterward administer the materials in light of ARM Processor.
5.	2016	Smart Rationing System By Using GSM And QR-code	Sayali Shinde1 , Harshada Tagtode2 , Anita Palle 3& Prof.Ruchika Singh4	Automatic Ration Materials Distribution Based on GSM (Global System for Mobile) and QR-code on Aadhar card innovation rather than apportion cards. QR-code examining client dialing secret word on keypad then controller check the client codes and subtle elements of sums in the card.

IV. ALGORITHM

Step 1:-Power up hardware
Step 2:-Initialize LCD.
Step 3:-First camera will scan smart card.
Step 4:-After scan capture image get process using Image Processing
Step 5:-We make database of authorize user in Raspberry Pi.
Step 6:-If capture image match with database system allow to enter unique password using keypad.
Step 7:-If smart card no. & password both are valid then only user can access system.
Step 8:-According to data base grains will distribute to user.
Step 9:-If user show invalid smart card, or if wrong password enter by user, buzzer is activated & system is lock.
Step 10:-All actions will continuously update on Webpage through IOT module.
Step 11:-All actions display on LCD.

A. FLOWCHART

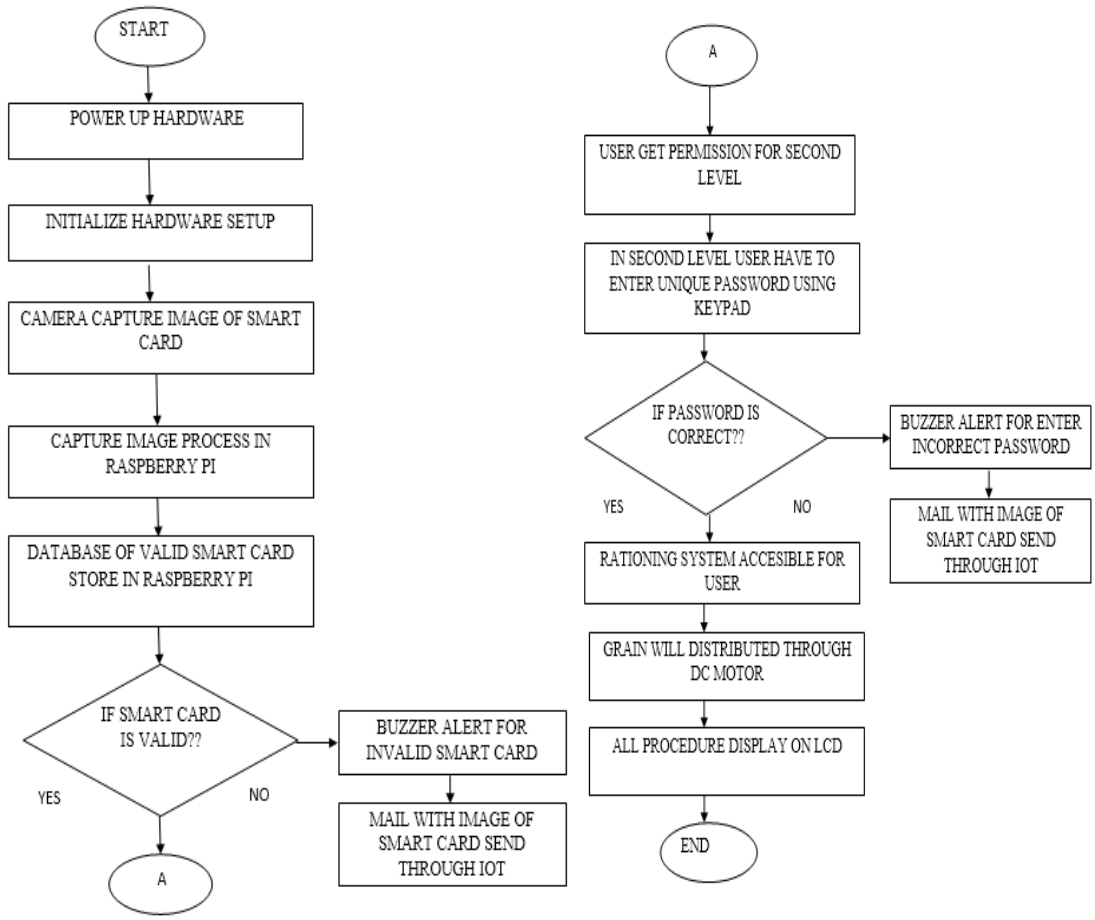

Figure 4.1. Flowchart

B. BLOCK DEIAGRAM OF SYSTEM

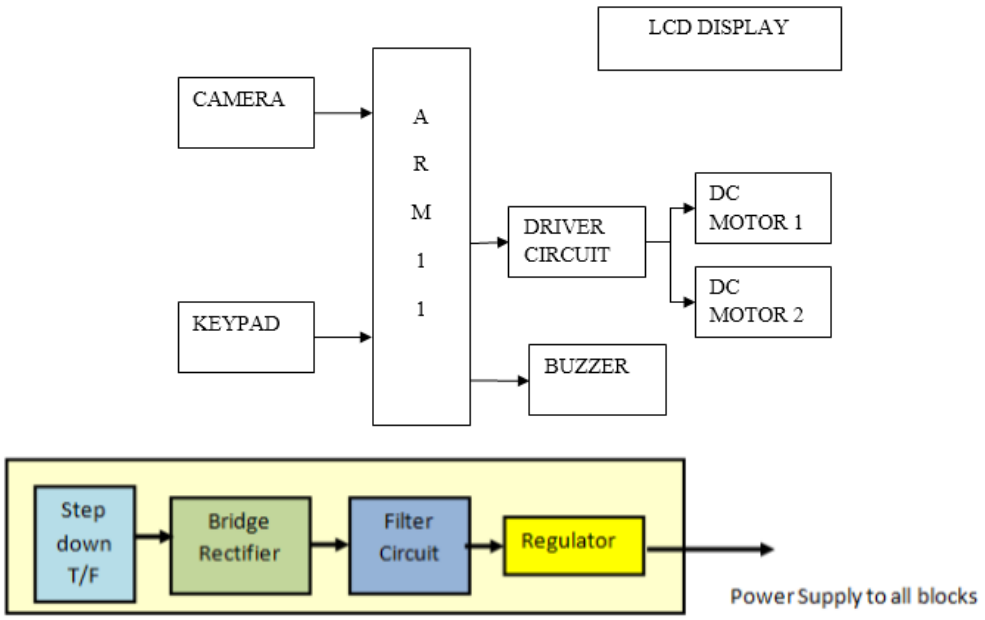

Figure 4.2. Block diagram of system with power supply

This block diagram of an Automatic Ration Materials Distribution Based on IOT Technology is appeared in the Fig. above. This framework comprises of different parts, for example, KEYPAD, microcontroller, motor driver, LCD and a camera. In this project we indicate smart card to camera ,as soon we demonstrate keen card to camera catch picture of card and process that picture into MATLAB utilizing picture preparing .if client brilliant card is substantial then client need to enter exceptional secret word by squeezing switches on keypad.

In the event that card is legitimate and secret word is right client can give related grains the assistance of dc engine. After grain dispersion through IOT mail will send to client and proportioning shop approve individual. On the off chance that card or password is not coordinate around then buzzer will ready that unapproved individual attempt to get to framework. Furthermore, that individual picture of smart card will send via mail to approve individual.

C. HARDWARE REQUIREMENT

i. Camera:

To get the materials in apportion shops need to demonstrate the CAMERA tag into the CAMERA peruser, then controller check the client codes and subtle elements of sums in the card, and give the points of interest to the ARM11.

ii. ARM11:

Microcontroller is the heart of the proportion materials dissemination system.ARM11 is 32 bit microcontroller. Elite framework, with 32-bit direction interface and 64-bit interface to the information cache i.e two level store memory. The ARM11 take the caught picture from the camera and show it into the LCD.

iii. LCD Display:

A liquid-crystal display (LCD) is a level board show, electronic visual show, or video show that uses the light tweaking properties of fluid gems. Fluid precious stones don't transmit light specifically. The LCD is utilized as a part of an extensive variety of utilizations including PC screens, TVs, instrument, air ship cockpit showcases, and signage. The most widely recognized in shopper gadgets, for example, video players, gaming gadgets, timekeepers, watches, adding machines, and phones, and have supplanted cathode beam tube (CRT) shows in many applications. The LCD screen is more vitality effective than a CRT. The power utilization is low while contrast and different devices.

V. ADVANTAGES

Increased defilement in the Govt. And additionally advertise segment can be counteracted if framework gets to be mechanized. Singular Ration Card look in view of relatives' Aadhaar number/portable number. Covers the procedure of AADHAR Card issuance at the Panchayat level in towns and MC in urban zones fully mechanize framework in this manner Reduces human endeavors. Data section of Ration Card information into the e RCMS at region level all through sourcing.

VI. APPLICATION

Replacement for existing Ration Distribution System It can supplant the current Government of India's Ration Distribution System which is in charge of dispersing crucial products to an expansive number of individuals through a system of FPS (Fair Price Shops) on a repeating premise. Our framework additionally plays out similar capacities in a mechanized way.

VII. CONCLUSION AND FUTURE SCOPE

This proposed project can give a protected, secure and effective method for open appropriation framework. By utilizing this method proportion shops takes care of the issue of an excessive amount of manual process in Public Distribution System (PDS). This proposed extend certainly clears route for a debasement diminished India later on. This new innovation gives arrangement and this work will roll out an awesome improvement out in the open dispersion framework and gives advantage to the administration about current stock data and decrease the labor.

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