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AUTOMATIC RATION DISTRIBUTION SYSTEM USING GSM AND RFID

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Abstract *— Automatic Ration distribution system is based on GSM and RFID technology. RFID holds the all details of the consumer as the Ration card and GSM is used to send text message to consumer about the goods consumed. Nowadays many illegal activities are taking place in ration shops, which are meant to distribute the commodities to the people who are in below the poverty line, as the distribution process is manually operated and due to which it consumes a lots of time and also illegally sold to the unauthorized people. To overcome this problem we can use RFID and GSM technology. In this system RFID tags are used, The RFID cards are used instead of ration cards, which consist of all the details about the card holder like family details, type of card and its validity etc. In this paper we are going to discuss different types of automatic ration distribution system implemented for the automatic ration distribution.*

Keywords-component: GSM, RFID.

I.INTRODUCTION

Nowadays ration card is very important for every home and used for various field such as family members details to get gas connection it act as address proof for various purposes. Public Distribution System is one of the widely controversial issues that involve inefficiency in the targeting of beneficiaries and the resulting leakage of subsidies. All the people having a ration card to buy the various materials from the ration shops. But in this system having two draw backs, first one is weight of the material may be inaccurate due to human mistakes and secondly if not buy the materials at the end of the month they will sale to other without any intimation to government and customers. In this project we are proposed automatic ration card system using RFID. To get the material in ration shops need to show the RFID to RFID reader and then particular motor will turn on for material. After collecting material particular message will send to the government office. RFID based access control system allows only authorize or responsible persons to get the materials from ration shops. An RFID system consist of an antenna or coil, a transceiver and transponder electronically programmed with unique information. There are many types of RFID systems available in the market. RFID classified based on their frequency ranges.

II.EXISTING SYSTEM

The classical system of Public Distribution System (PDS) established by the Indian government for provides food security to the people. There are various ration shops in the entire nation where there are employees who give the people various commodities like food grains, oil, kerosene etc. The customer has to go the ration shop and ask the employee to give the commodity and the amount he needs. The employee then manually measures it and gives it to the customer. This transaction also needs to be added in to the ration card. This is the total interaction which takes place.

III.DISADVANTAGES OF EXISTING SYSTEM

This system faces with various problems. As there are many ration shops and the customers coming to buy from ration shops are normally believed to be below poverty line and illiterate, the customers are fooled to a large extent. There are complaints related to the quality of the product they receive, the quantity they receive is many a times less than the quantity demanded by them as the employees steal from it. Moreover, they end up paying more for the quantity they receive. Also the quantity which is added in the ration card is wrong. So they cannot buy more the next time they need. So there is a lot of cheating and fooling of the customers that takes place.

IV.BLOCK DIAGRAM AND DESCRIPTION

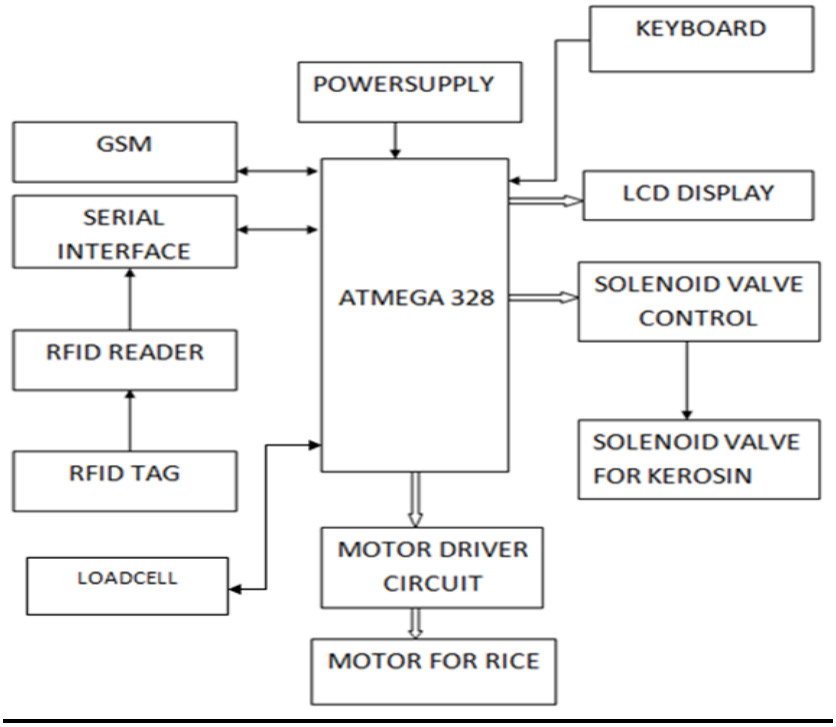
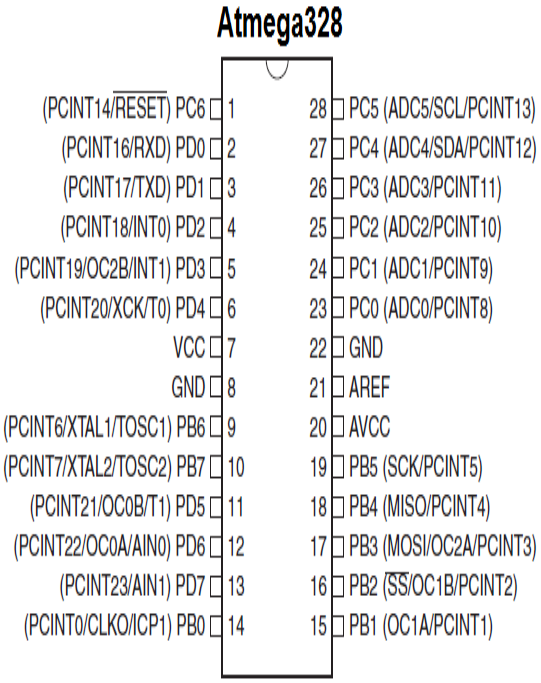


Fig. block diagram

A. ATMEGA 328



The Atmel 8-bit AVR RISC-based microcontroller combines 32 kB ISP flash memory with read-while-write capabilities, 1 kB EEPROM, 2 kB SRAM, 23 general purpose I/O lines, 32 general purpose working registers, three flexible timer/counters with compare modes, internal and external interrupts, The device operates between 1.8-5.5 volts. The device achieves throughput approaching 1 MIPS per MHz.

B. GSM MODULE

GSM MODEM is a class of wireless MODEM devices that are designed for communication of a computer with the GSM and GPRS network. It requires a SIM (Subscriber Identity Module) card just like mobile phones to activate communication with the network. Also they have IMEI (International Mobile Equipment Identity) number similar to mobile phones for their identification. A GSM can perform the following operations:

1. Receive, send or delete SMS messages in a SIM.
2. Read, add, search phonebook entries of the SIM.
3. Make, Receive, or reject a voice call.

C. RFID MODULE

Radio-frequency identification (RFID) uses electromagnetic fields to automatically identify and track tags attached to objects. The tags contain electronically-stored information. Passive tags collect energy from a nearby RFID reader's interrogating radio waves. Active tags have a local power source (such as a battery) and may operate hundreds of meters from the RFID reader. Unlike a barcode, the tag need not be within the line of sight of the reader, so it may be embedded in the tracked object. RFID is one method for Automatic Identification and Data Capture .

V. ADVANTAGES AND DISADVANTAGES

ADVANTAGES:

[1]. No Corruption
[2]. No illegal process
[3]. Time Saving Process.
[4]. System is very Accurate

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DISADVANTAGES:

[1]. High cost
[2]. System is very complex
[3]. Need trained staff to operate.

VI. CONCLUSION

As the system ,we have made intent to introduce a new technology which helps to improve the existing system and also has its own advantages which are useful for other applications. It acts as an anticorruption tool as it reduces corruption to a great extent, which was one of the primary reasons we thought of while coming up with the idea. This proposed method can provide a safe, secure and efficient way of ration distribution system.

VII. REFERENCE

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