Automatic Rationing System
Sheetal Pawar¹, Ramakant.S.Gaikwad ², Kapildeo .G.Patil³, Shubham .M.Jadhav ⁴
Assistant Professor¹, B.E Student², ³, ⁴
Department of E&TC
Dr. D. Y. Patil Institute of Technology, Pune, India

Abstract:
Government provides various facilities to poor and people below poverty line but such facilities do not reach up to needy and poor people due to corruption present in the chain. One of such facility provided by government is rationing material distribution. All the people having ration card to buy the various material from the ration shop. This material has to be taken from shopkeeper at one time. If it is not taken by any card holder then there is no monitoring of such unused material so the shopkeepers are doing misuse of these things by selling in the market and doing the fraud. A central monitoring system is required which is to be link with government officers, shopkeeper and ration card holder. In this paper we proposed one such a system which is develop by using IMAGE DETECTOR and PIC Controller. This will take care of all the activity related for avoiding illegal work made by authorized people and help to overcome the problem in this concern area.

1. INTRODUCTION
Public distribution system is one the widely controversial issue that involves corruption and illegal smuggling of goods. One reason of this to happen is because every job in the ration shop involves manual work and there is no specific technology involve in automating the job. Involvement of manual work calls a lot of irregularity. This irregularities or illegal activities are for example wrong entries in the stock register of shop containing wrong stock information of the products that supplied to the public. The information provided by the government to the public regarding the actual available stock quality in the ration shop. In this paper we proposed the concept of replacing manual job in public distribution system by automated system which can be installed at the ration shop with ease. In this automated system we replace the conventional ration card by IMAGE DETECTOR in which all the detail above users is provided. Using such a system, government would have all required control over the transaction at the ration shop. To involve government in the process we proposed connecting the system at ration shop to the central database via GSM Module. Hence it is possible to prevent the corruption and illegal work at ration shop. The most of the people having ration card to buy the material from the ration shop. When get the material from ration shop, first need to submit the ration card and they will put the sign in the ration card depend on the material. Then they will issue the material through weighting system with help of human. But in this system having two drawbacks, first one is weight of the material may be inaccurate due to human mistake and secondly, it’s not buy the material at the end of the month they will sell to others without intimation to the government and customer. In this proposed system we have proposed an automatic rationing material distribution based on GSM and IMAGE DETECTOR technology to avoid the drawbacks. Today we are facing a number of transport related problems. IMAGE DETECTOR technology effectively used to solve some of them. GSM used to communicate the information between the two people or more than two people to operate the information depends on the requirement. The proposed system design and implementation is based on GSM and IMAGE DETECTOR technology. This would bring the transparency in public distribution system as there will be a direct communication between people and government through this.

2. BLOCK DIAGRAM

**BLOCK EXPLANATION:**
- **MICROCONTROLLER**
The LPC2138 microcontroller based on16/32 bit ARM TDMI-S CPU with real time emulation and embedded trace support, that combine the microcontroller with 32/64/128/256/512kb of embedded high speed flash memory due to their tiny size and low power consumption.
- **LCD**
a liquid crystal display is an electronic visual display that uses light modulating properties of liquid crystal. A 16x2 LCD means it can display 16 characters per line and there are two lines. In the proposed system if the database in the tag get accessed by the reader then after processing it will show on LCD display
- **KEYPAD**
In proposed system 4x4 matrix keypad is used. It is serially connected with PIC controller. After detecting the image of authenticated person if material is available in user account
then with the help of keypad can take the required amount of material.

- **LOAD CELL**
  Load cell is described as a weight measurement device necessary for electronics scale that displays weight in digits. However, load cell is not restricted to weight measurement in electronics scales. Load cell is a passive transducer or sensor which converts applied force into electrical signals. They are also referred to as “Load Transducers”.

- **GSM MODULE**
  GSM modem is a wireless modem that works with a GSM wireless network. A GSM is a digital mobile telephone system. We can send short text message to the required authority as per the application.

3. FLOW CHART

![Flow Chart Image]

4. CONCLUSION

The conventional system has drawbacks like malpractices, low processing speed, long waiting time at ration shop to get material and material theft in ration shop without any acknowledgement government and consumer. To overcome above problems, automatic ration shop played important role. The automatic ration shop involved RFID as well as GSM technology to distribute the kerosene or grain material. Ration card is replaced by RFID and information is sent to consumer using GSM module. The proposed system creates the transparency in public distribution system as the work becomes automatic. With the help of this system, it is possible to make public distribution system efficient and free from malpractices. The proposed system has advantages like it is helpful to prevent malpractices at ration shop, maintain data properly, reduces paper work, time saving approach and cost effective.

5. REFERENCES


[4]. Author “K. Balakarthik” has proposed “Cloud-Based Ration Card System using RFID and GSM Technology”.

[5]. Author “Mahammad Shafi” has proposed the “e-Ration Shop: An Automation Tool for Fair Price Shop under the Public Distribution System”.

Figure.2.Flow Chart