

E-RATION DISTRIBUTION SYSTEM BASED ON QR CODE

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Abstract—*In a growing and developing country like India specifically, Ration card is one of the important documents which poor people especially the one below poverty line need. All the people having a ration card to buy the various materials (sugar, rice, oil, kerosene, etc.) from the ration shops which are funded by government. But as we know due to increasingly corruption and commercialization, it's becoming challenging day by day for people to get a hold of goods and stuffs what government sends in the same quality and quantity. In current scenario, this system is having two drawbacks. Firstly the weight of the material may be inaccurate and inappropriate due to human manual mistakes and secondly, if we do not buy the goods and materials by the end of the month, they will re-sale to others without any intimation to the government and consumers. In this project, proposed an Automatic Ration Materials Distribution Based on GSM (Global System for Mobile) and QR-code.*

Keywords—*E-Ration, Fraud, QR code, Commercialization, Smartphone.*

INTRODUCTION

In Today's world of fraud and commercialization, it becomes very difficult for common people to get directly the good and stuffs as and when delivered by government. Specifically in traditional ration system, most of the time the quality of goods are not same as given by government. Moreover the quality which common people and consumer get are very degradable. There is no specific measure or means for common people to check the quality which government has sent and by default they have to accept what distributor gives them. They cannot complain or raise once voice against the injustice which happens due to fraud by Distributors. Hence to maintain transparency between government consumers and distributors, we have proposed a new method for goods and material distribution by means of Smartphone using QR code generation. This will also maintain privacy between the consumer and distributor.

Now at present government is offering sugar, rice w heat and edible oil and kerosene for different kind of users like APL, BPL ,and Anthodia people categorized based on annual income. To fulfill the demand of such greedy people government introduced fare price shops that is public distribution systems where in these poverty line people get ration card enlisting their details like name, amount of grains in kg or oils or kerosene quantity, their residence address etc. We in this research introducing use of QR code printed on AADHAR card which is unique identity of each customer .This will help us to minimize fraudulence. The existing systems have drawback that we cannot monitor the distribution plus stock availability with each distributor. We will be tracking this through the application and status can be logged. We have tried to minimize the human intervention as much as we can so as to run the system efficiently and cost efficiency is also considered here.

Literature survey

Title - e-Ration System Using RFID and GSM Technology

Authors: Dinesh Aitwade

Description:

The idea behind this paper is the advanced Ration Distribution System, named as Smart Ration Distribution and Controlling. Enormous measure of Govt. cash gets squandered because of defilement in the traditional Ration Distribution System. This proposed system executes a straight forward PDA gadget (personal data assistant) with RFID tag utilized as an e - ration card set up instead of an ordinary ration card. This device is like the ticketing machine used by transport conductor or bank operator and the e - ration card is like swipe card. The consumer needs to utilize this card rather than a traditional ration card to get ration from the merchant.

Title: DEVELOPMENT OF E - PUBLIC DISTRIBUTION SYSTEM (E - PDS) USING SMART CARD

Author: Mr. Nishant Patel

Description:

The Smart card based programmed ration shop is one of new approach in dissemination framework (PDS) helpful for cost effective ration distribution system. The present ration distribution framework has many disadvantages. Few of them are like mistaken amount of goods, handling speed is low, holding up time is more, and material robbery in shop. Manual work is replaced by this system. The proposed programmed ration look for framework depends on Smart Card innovation that replaces ordinary ration cards. Here using this system, the RFID labels are given rather than ordinary ration cards.

PROPOSED SYSTEM

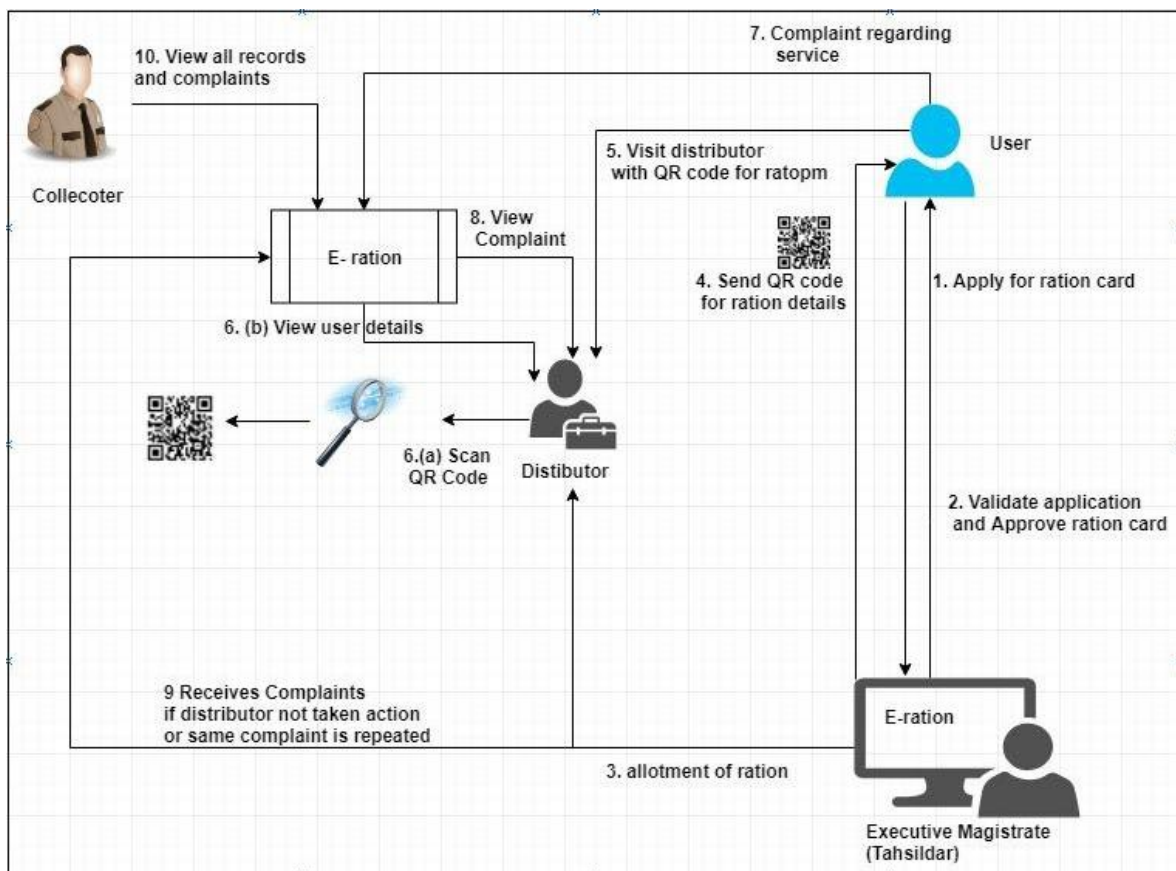
In proposed work is first of all we are going to make use of E-government technology that is being implemented in almost every area of government administration. Corruption and degradation of quality of goods would be using E-Rationing system. User would be registering online using personal credentials and information as registered. Also family information needs to be given as input while registering. Thus each time whenever the person gets notification about goods and services delivered, he needs to go through the verification process to prove he is the authorized person. Once verification is completed successfully, he can collect the quantity as logged into the system. Using QR code, it will be possible to uniquely build a module for each customer.

As well as we are going to develop complaint portal where user can register the complaint against the Distributor if he is providing bad quality food.

ADVANTAGES OF PROPOSED SYSTEM

- Transparency between government, consumer and distributors.
- Using QR code, consumers can view the quality and quantity of goods assigned to them.
- Consumers can register complain if found fraud by distributor.
- Gives more authority to consumer than distributor.

SYSTEM ARCHITECTURE



MATHEMATICAL MODEL

Let W be the set of whole system which consists of the input, process and output of the system.

$W = \text{input, process, output.}$

Where,

Input = is the set of inputs given to the system to achieve the problem statement.

Process = is the procedure or the algorithm applied to the system which gives the expected output.

Output = is the output of the system.

input = S, U, A, R, P, N, Avg.

Let,

Let S is the Whole System Consists:

$S = U, M, E, G, SC, D$

Where,

1. U is the set of number users.

$U = U_1, U_2, \dots, U_n$.

2. Monthly Food Distribution

$T = t_1, t_2, \dots, t_3$.

3. E be the Encrypt Info.

4. G be the QR Code Generation.

5. SC Scan QR Code.

6. Decrypt Info.

$S = (U \cup T)$

Means users who are Eligible for getting monthly facilities from government.

$SC = (U \cup T) (E \cup G)$

Means scan QR code for users who has got QR code by government.

Process:

Step 1: User Will Register and login Into our System.

Step 2: Apply for Ration Card.

Step 3: System will Generate Ration Card as per his/her Financial Condition.

Step 4: System will send monthly Food Distribution item with qty to particular User in the form of QR Code Code.

Step 5: after this, Distributor will Scan QR Code and verify all Details If all details are correct then he will Distribute the Food.

Step 6: If Food Quality is poor - User will Register complaint against that particular Distributor.

CONCLUSIONS

In this paper, we have explained how the influence of distributor can be minimized and more power can be directly given to consumer. This project will provide safe and secure method for consumer and can directly access to the goods granted to them. Introduction to QR code technology makes this more transparent for government and distributor. Moreover users can easily register complaints which are not possible in current scenario.

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