

# Smart Ration Delivery

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**Abstract-** Public distribution system (PDS) was introduced before 1960s, around 5,00,000 ration distribution shops are allocated in India, to provide food and nonfood items for poor people. Items are distributed based on their annual income and type of ration card provided to them the major items distributed in ration shops are Rice, Wheat, Kerosene, Ragi and sugar ration card also act as a identification of family members. In this paper, we present a succinct survey on ration card, automated system conventional ration card is replaced by QR code, it store the user details and perspective of this system to do avoid frauds in ration shop. For the ration holder there will be two options they can select home delivery or physical delivery. The distribution process is automated using centralized server and so the government facilities reach people properly. The computerized database maintained avoids wrong entry of the product by the officials and provides authentication transportation and distribution.

**Keywords :** QR code, GPS, PDS, smart ration

## I. INTRODUCTION

Public distribution system (PDS) consists of government, beneficiary as a citizen and government machinery layer and representative of people working as mediator. This system is hierarchic system which is used for distribution of government benefits, which include food grains, to citizens. Government sponsored chain of shops entrusted with the work of distributing basic food and non-food commodities to the needy sections of the society at very cheap prices. It is also an important constituent of the strategy for poverty eradication and is intended to serve as a safety net for the poor people whose number is more than 33 Crores and are nutritionally at risk. The current Public Distribution System has several well documented problems such as lack of transparency, accountability, poor governance and poor service delivery mechanisms. A large number of poor and needy members of society are left out and a lot of bogus cards are also issued. This leads to increase in corruption. Our project proposes the improvised technique of implementing smart ration card system. To

overcome these issues, we propose a web based system for Public Distribution System using QR-code. We are going to use Information Communication Technology which helps in time management, halt to corrupt practices, accountability etc. Customers will also receive an SMS notification of their successful registration and stock allotted to them. Thus providing automated version of the system with smart ration card and ensure smooth, transparent, timely and citizen friendly transactions.

**QR Code** can be read by machine it consist of an array of black and white squares, this are used for storing the information. Two-dimensional digital image sensor is used to detect QR code, and then the code will be digitally analyzed by a processor. Three different squares at the corners of the QR code will be located by the processor, in the fourth corner the smaller square (one or more) will be used for normalizing the image size and viewing angles. Then the small dots will be converted to binary number and then it will be validated by error correcting algorithm. QR code was introduced to overcome the problems like transparency, accountability, poor service delivery, and also problems related to bogus ration card ( duplicate ration card) each and every individual will be provided with unique QR code which will helps in tracking of their respective accounts customer will receive SMS related to their registration number and also the stock allocated to them through this we can maintain proper account of ever consumer so that only the authorized consumer will be benefited

## II. LITERATURE SURVEY

[1] In "SMART RATION CARD USING RFID AND GSM TECHNIQUE" by Mohit Agarwal, Manish Sharma

In this system they have developed a smart ration card using RFID and GSM modem to avoid forgery ration card and also there will be a chance that the shopkeeper may additionally promote the ration to a person this technique is used to save you the ration forgery. The RFID tag act as smart ration card with the ration holder details and ration will be provided according total number of family members

Amount of total ration will be displayed on device. Even ration card holder will get message for their registered mobile number and also delivered ration will be directly send to the government without any manual feeding using GSM (global system for mobile communication). Based on the total number of members in the family calculated and amount will be displayed on device, any authorized person in a family can collect the ration and amount is based on the members in a family.

[2] In "SMART RATION CARD SYSTEM USING QR CODE AND ONE TIME PASSWORD" proposed by kiran nanaware, siyona navgire

This paper they will provide QR code (quick response code) along with smart ration card. QR code contents the identification number of the customer which can easily identify the record of the costumer from the data base smart phone can be used for scanning the QR code. By this personal details of the customer will be displayed on the system. After verification customer has to select the required food grains then he/she as to enter the proper OTP (one time password) in the system. Further bill will be displayed in the system and SMS notification will be forwarded. Authorized persons cannot update the information's unless the password is known to him/his. Database will be updated automatically to the government database which leads to the reduction of corruption.

[3] In "BIOMETRIC ENABLED RATION CARD SECURILTY SYSTEM FOR PUBLIC DISTRIBUTION SYSTEM" proposed by laxman l. kumarwad, rajendra d. kumbhar.

This paper mainly consternates in reducing paper work, corruption, misuse and duplication of ration card. The system is designed mainly for securing the ration card using unique identification like finger print biometric device is used for identification of individual. Once the finger print of an individual has been recorded in the database through biometric it gives high security will distributing the product to the customer.

This system provides good interface and also ease of use for the people with less knowledge about system and also provide secured transaction. By using finger print technique reduce the time to match the image which is present in the database whether it is registered are not.

III. PROPOSED METHODOLOGY

The proposed system aids to power control malpractices which are present in ration shop by superseding manual work with automatic system based on QR code. Every consumer i.e. family head provided QR code identification which acts as ration identity card. The QR code has unique (rival) identification number. The consumer scans the QR code on QR scanner.

Once consumer is validate by details, the system shows customer's product and cost. Based on material chosen by

consumer, appropriate correct circuitry will be activated and consumer gets material.

Advantages

1. User friendly.
2. Access to authorized person only
3. Reduce corruption.
4. Active contribution toward step toward digital india.

Application

1. Similar digitized web applications.
2. On successful authentication SMS is sent to users.
3. Useful in providing transparency to both government and consumers.

IV. BLOCK DIAGRAM

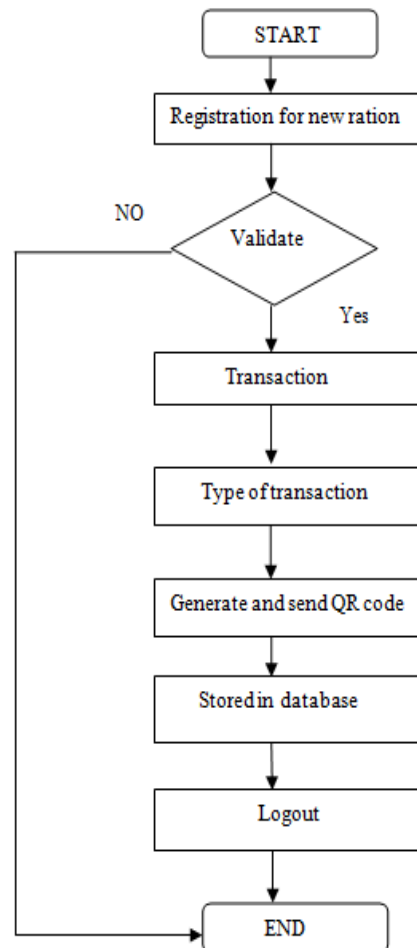


Figure1: Flow chart for new registration ration card

In the above figure 1 the new ration user can register through the website by filling the application. After registration the verification done by the government the user will get ration card based on the income. If the user is verified then we can get ration by select ration shop near its place, there will be two types of transaction home delivery and physical delivery. The user should select type of

transaction which he/she required. The QR code will be generated for authentication propose, if the ration card holder select home delivery the location will be track by gps and ration will be delivered to customer, the transaction data will be stored in database.

## V. CONCLUSION

To conclude, we have proposed a system much smarter we are introducing a website so that the system will become smart and there will be lot of authentication to the cardholder. User can have a two options home delivery or physical delivery. It mainly helps for old age people and even people who have skin disease drawback of biometric, for verification and identification we mainly using QR code.

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