

# E – RATIONING

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## ABSTRACT

*There are many problems with the Public Distribution System(PDS), ration system in India, such as millions of ineligible and fraudulent ration cards, millions of poor families have no ration card, PDS shop owners in collusion with government officials divert the subsidized food supply to the black market, card numbers are inflated and many others. Thus we intended to put a halt on these problems by bringing in ERation system, that involves every family to hold a "Smart Ration Card" and will be made secure using biometric system. Whenever the user will go to the shop for receiving the ration he will be validated through his Smart card and his thumb impression. If the user is valid then all the data related to user (name, address, image, previous ration details etc.) will be shown. If the thumb is not matching then proper error will be displayed. The bank account of the user will be linked to a RFID card, whenever user buys ration the amount will be deducted from his bank account. After the transaction is complete the ration related detail (how much ration is left for this month, amount of purchase, date) has to be sent to the user in his mobile as SMS. The user family member detail can be added or deleted at ration card registration office. Through this project we hope to give a short contribution to "Digital India" by providing good way for Anna Suraksha Yojana and a more transparent and reliable system than the existing ration card system.*

**Keyword :-** Biometric, RFID, Public Distribution System(PDS), Fair Price Shop, Smart Card, Thumb Scanner.

## 1. INTRODUCTION

The main idea of this project is to give a short contribution to "Digital India" by providing good way for "Anna Suraksha Yojana" and propose a more transparent and reliable system than the existing ration card system. The user will be validated using his/her thumb impression and allotted RFID card. Bio-metric R305 will be used for scanning the thumb impression, which can scan upto 256 fingerprints. RFID reader EM18 will be used to scan RFID card. These both machines, bio-metric and RFID reader will be interfaced with Arduino UNO. This Arduino board will be connected to the computer system. Bio-metric scans the thumb and sends the thumb impression to the Arduino. Similarly RFID reader scans the RFID card and sends the unique RFID number to the Arduino. The Arduino further passes this data respectively to the computer system. Then the computer system validates the user and the details of the user are displayed (if user is valid else error is displayed) and then the further purchase of ration as per the allotted quantity begins. The total purchase amount is deducted from the user's bank account and the purchase details are sent to user via SMS and Email.

## 2. LITERATURE SURVEY

- We had surveyed in the rural area of our Nashik City where we came to know or recognized, which problems are being faced by the BPL (Below Poverty Line) people due to the traditional PDS (Public Distribution System).
- Also the problems regarding whether the Government is satisfying the needs or not are recognized.



Figure 3.1: Literature Survey



Figure 3.2: Literature Survey

- We recognized that the people are being provided with limited ration which is sufficient only for 3 heads irrespective of the family size.
- Since no availability of any electronic media to conserve their rights , they try to suffice with the provided ration itself.
- Sometimes even if there is ration at the fair price shops they pretend that there is no ration.
- These are the problems being faced by people due to traditional PDS.

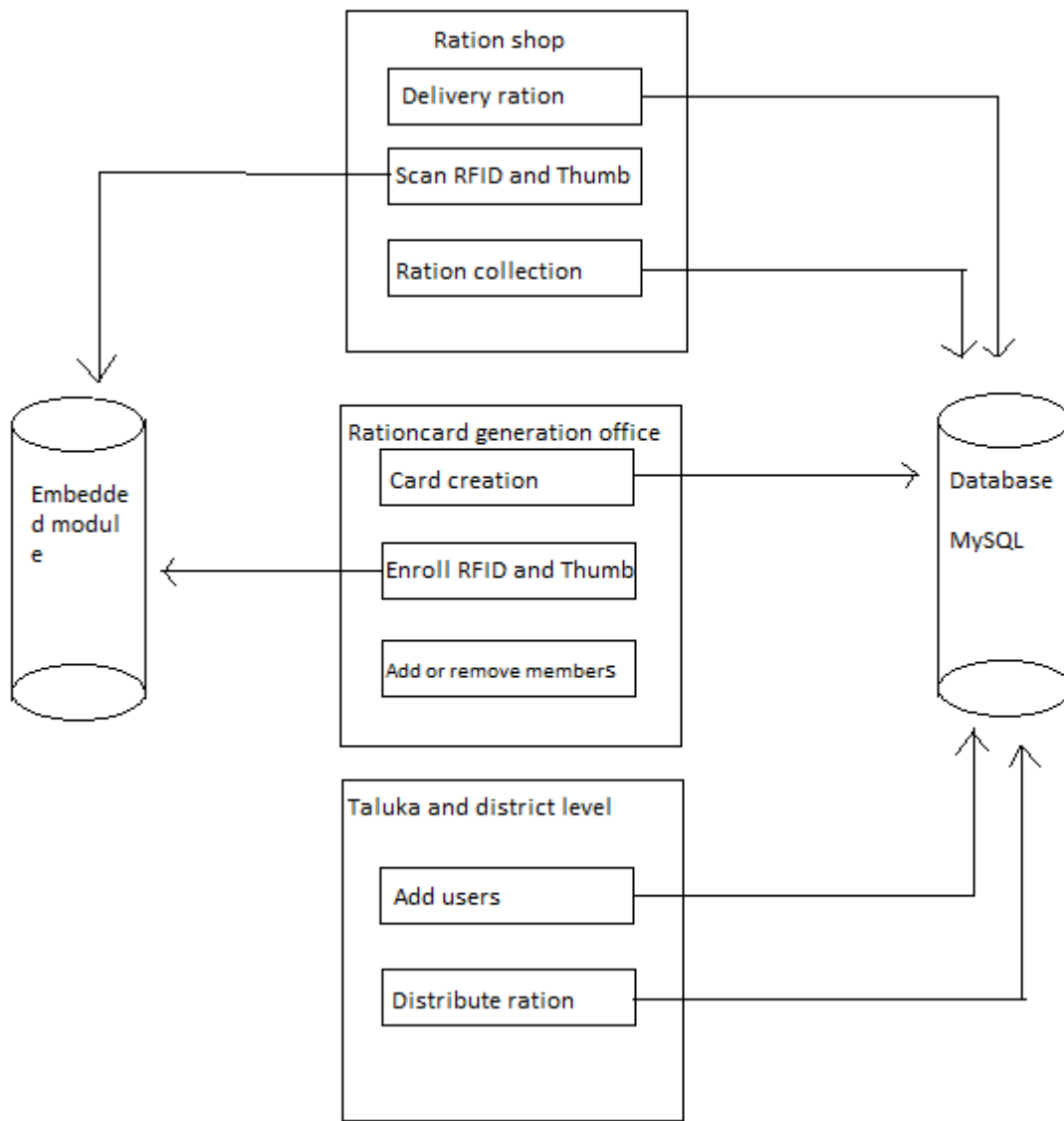
### 3.PROPOSED SYSTEM

The proposed system is more secure and transparent than the normal existing system. Influence of fraud data entry in the ration database can be maintained simply with the use of this smart ration card system. Customer can be authenticated using RFID swapping and thumb detection. It is expected that the proposed system will be more transparent, reliable than the existing ration card system.

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Our system will be intelligent because, it will tell the District Admin and Food Supply ministry that which region should receive which product in more quantity as it is required more in that region.

Also depending upon this and the previous records the system will also generate charts.



**4.SYSTEM ARCHITECTURE DIAGRAM**

**5. CONCLUSIONS**

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