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A Survey on Smart Ration Card System

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Abstract: ***The Rationing distribution system also called public distribution system distributes food items to the poor. Major commodities include rice, wheat, sugar and kerosene. In this system QR codes will be provided instead of current ration cards. Users database is stored which is provided by Government. The Smart Card must be scanned by the customer to show the details of items allocated by government, and then it checks customer details with stored data to distribute material in ration shop. Biometric i.e. Fingerprint scanning will be done for security and authentication purpose.***

Keywords: GSM, Public Distribution System, QR Code, Smart Card.

1. Introduction

The Indian ration card provides food for the poor people which is distributed by the government along with the fuel. It provides a distinct identity of person which is useful to update with the government record. The basic food items provided by government are rice, sugar, wheat.

2. Purpose

The current Ration Allocation System is an offline one. Due to this, corruption is rampant. Dealers often falsify records for personal benefit. They also provide the ration items of the poor people at maximum rates which is not justified. There is a lack of transparency between the dealer and consumer. Due to this problem of dealer the poor people do not get the items as stated on their ration card. Moreover, there is no complaint system through which the consumer's interests can be protected. Using the Smart Ration Card Automation System, we wish to do away with all these problems and create a system which would be fair and just for all.

3. Scope

The aim of the project is to developing a better, efficient ration card system using QR Code technology. Our project gives active participation in Step towards Digital India. Automization of distribution system at the ration shop as well as maintaining the database at one main control station and updating the database so that the shopkeeper does not cheat the poor people are what this project aims at achieving.

4. Literature Survey

4.1 Automatic Ration Material Distribution Based On GSM and RFID Technology Authors: S.Valarmathy, R.Ramani, Fahim Akhtar

Automatic Ration Materials Distribution Based [1] uses GSM and RFID. To avail the benefit of government user has to scan the code using the reader to fetch the details of items allocated to the user, and then the microcontroller of system checks user's details and quantity allocated to user. The amount details are shown after authentication. Then customer need to select the necessary materials by using user interface. After receiving order, controller sends the information to authorities and customer through GSM technology.

4.2 Multi-Modality Biometric Assisted Smart Card Based Ration Distribution System Authors: Yogesh Kumar Sharma, K B Shiva Kumar

It uses technique of fingerprint scanning as well as face detection. The database stores the records of users purchase history. They use a centralized cloud system so that transparency is maintained and users can access their details of record at some other fair price shop.[2].

4.3 Automization of Rationing System Authors: Shivabhakt Hanamant, Suraj V. S, Moresh Mukhedkar

It proposes atomization [3] of distribution system at the ration shop as well as maintaining the database at one main control station and updating the database so that the shopkeeper cannot cheat the people. The tags are used for authentication of valid users. For updating, GSM is used.

4.4 Biometric Device using Smart Card in Public Distributed System Authors: S.Kanagasubaraja, K. Arul Ganesh, Mohesh Viswan

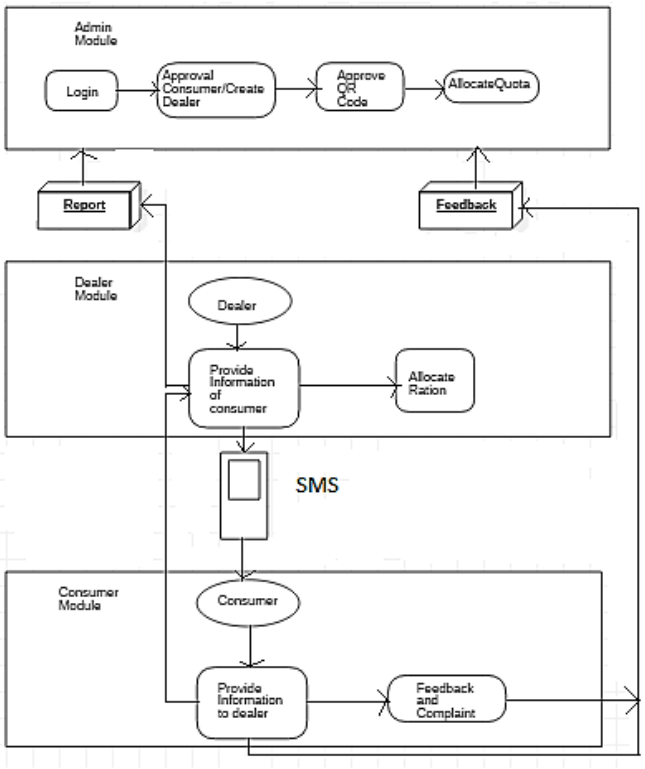
It proposes system using smartcards for all the citizens. The smartcard contains the details of the citizen. Citizen can view the total quantity of the stock available. After each and every transactions the stock get reduced in board and the citizen receives the sms and email from government with the purchased time and number of products bought with the product id and also uploaded in the main database then and there. [4] The cards are verified based on the citizen's fingerprint. To check whether he is smartcard holder, each and every person's finger print in a family are collected during card requesting and accordingly items are allocated.

4.5 Smart Ration Distribution and Controlling Authors: Kashinath Wakade, Pankaj Chidrawar, Dinesh Aitwade

This paper uses the technique of PDA devices and the tags instead of current booklet of ration card. The device that is provided by government in this case is used as authentication card, and the e cards are used as bank credit cards to swipe and fetch the details

5. System Architecture

The System works in four steps



1. Input Part:

In this system, each customer has QR Code as his/her Smart Ration Card.

2. Processing Part:

Scanning of QR Code provide data to the system, processes the data and matches it with the database which is authenticated by Government.

3. Display Part:

The system displays the name of the card holder and the monthly allocated ration.

4. Messaging Part:

Messaging system is proposed here to avoid forgery. It helps the customer to take action against ration forgery.

6. System Evaluation

6.1 Advantages

- User Friendly.
- Access to authorized person only.
- Reduce Corruption
- Active contribution towards step towards digital India.

6.2 Disadvantages

- Without Proper QR code system cannot display details.
- Power failure will suspend the system.

6.3 Application

- Similar digitized web applications.
- On successful authentication sms is sent to user.
- Useful in providing transparency to both Government and consumers.

7. Conclusion

In the existing system having two drawbacks, first one is weight of the material may be inaccurate due to human mistakes and secondly, if the materials are not bought at end of the month, they can be sold to others without any intimation to the government and customers. The above drawbacks can be rectified by the proposed method. In this system, ration materials (sugar, rice, oil, kerosene, etc.) are distributed through an automatic mechanism without any help of humans. After receiving the materials, information is sent to government and customer through GSM technology. This system is very accurate, which is used for the real time applications. Thus, on the basis of literature survey and by analyzing the existing system, we have come to a conclusion that the proposed system will not only aid the government agencies but will also help to digitize the system and in turn help to deploy resources efficiently to the citizens.

9 . References

[1] S.Valarmathy, R.Ramani, Fahim Akhtar., "Automatic Ration Material Distributions Based on GSM and RFID Technology", Published in Intelligent Systems and Applications, 2013, 11, 47-54, October, 2013.

[2] Yogesh Kumar Sharma, Dr K B Shiva Kumar, Srinidhi G A and Dr Manoj Kumar ,"Multimodality Biometric Assisted

Smart Card based Ration Distribution System", Published in International Journal of Application or Innovation in Engineering & Management Volume 3, Issue 6,June 2014 .
[3] Shivabhakt Mhalasakant Hanamant, Suraj V. S., Moresh Mukhedkar,"Automization Of Rationing System", Published in IJCE International Journal of Computational Engineering & Management, Vol. 17Issue 6, November 2014 .
[4] S.Kanagasubaraja, K. Arul Ganesh,G.Mohesh Viswanath ,R Prabha ,"Biometric Device Using Smart Card in Public Distributed System ",Published in 22nd IRF International Conference, 29th March 2015, Chennai,
India, ISBN: 978-93-82702-83-2.
[5] Kashinath Wakade, Pankaj Chidrawar, Dinesh Aitwade, "Smart Ration Distribution and Controlling", Published in International Journal of Scientific and Research Publications, Volume 5, Issue 4, April 2015 1 ISSN 2250-3153.
[6] Vinayak T. Shelar, Mahadev S. Patil,"RFID and GSM Based Automatic Rationing System Using LPC2148 ", Published in International Journal of Advanced Research in Computer Engineering & Technology (IJARCET) Volume
Issue 6, June 2015.
[7] Bhalekar Swati D., Kulkarni Rutuja R., Lawande Akshay K., Patil Varsharani V. ,"Online Ration Card System by Using RFID and Biometrics ",Published in International Journal of Advanced Research in Computer Science
And Software Engineering 5(10), October- 2015, pp. 849-851.
[8] Poonam N.Jadhav, Supriya U.Sawant, Reshma T.Patil, Poonam M.Patil ,Ankush S.Chougale , ".A Step Towards Digital India Using Smart Ration Card ",Published in International Journal of Modern Trends in Engineering and Research (IJMTER) Volume 03, Issue 02, [February 2016] ISSN (Online):23499745; ISSN (Print):2393-8161.
[9] Bharati Chilad, Sanjana Desai, Ashwini Jadhav,Kartiki Dhamanekar, "Smart Ration Distribution System Using RFID ",Published in International Journal of Engineering Research and General Science Volume 4, Issue 3, May-
June, 2016.
[10] Sana A. Qader Perampalli, Dr. R.R. Dube," Smart Card Based e-Public Distribution System ",Published in International Journal of Advanced Research in Computer and Communication Engineering Vol. 5, Issue 5, May 2016

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