Smart Ration Card Automation 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.*

Key Words: **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. Ration Card is one of the most important document which acts as identity proof for any individual. If people are not having their own Ration card they can also apply for the same. The process to apply for ration card has been facilitated to great extent but now a day this process is online which comes as blessing for the applicants who hate standing for long time in queues for filling the application form and then go to the office again to know the status

The network of the ration shops is spread all over in India to provide food security to the people. This distribution of food and fuel is fully controlled by the government. But it has so many limitations. Most of the ration shopkeepers keep fake ration cards with them. Due to availability of all ration items these items are present with the ration shop dealer so he can falsify the records and use the items to sell in the market loosely. The dealer then does not provide these ration items to the customers. Many a times people are not aware that the items have arrived in the shop. The dealer then sells these items in increased rates in the market.In this way, in the current situation we are facing problem due to lack in transparency. There is no such good system yet developed through which government gets message of usage of grains by the people

1.1 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 consumers 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.

1.2 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. Automation 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

1.3 Problem Statement

To develop a system which can castomize the current offline ration system and establish transparenc the aged who are lonely.

2. Design

The ration allocation system has been in use for many years. It's main purpose is distribution of basic commodities like rice, kerosene, sugar, wheat at affordable prices. This system is a boon for the Indian society however with the increasing population, there is a need for an automation of the rationing system.

The current ration system also lacks security in some regard. As a result corruption is rampant. There is lack of transparency between the consumer and dealers, often ending in the consumer not receiving his dues. Unfair means like offering bribes are often employed by the consumer which sets a viscious cycle of corruption into play.

The main focus of this project is to bring order to the current system by eliminating all these problems and providing a secure environment for transactions to take place. It is also a prospect for Digital India. The automation of the current

ration system will also speed up the process and thus help cope with increasing population

Define abbreviations and acronyms the first time they are used in the text, even after they have been defined in the abstract. Abbreviations such as IEEE, SI, MKS, CGS, sc, dc, and rms do not have to be defined. Do not use abbreviations in the title or heads unless they are unavoidable.

The primary design constraint is the Desktop platform. Since the application is designated for Desktop Systems, effective GUI and well user friendliness will be the major design considerations. Creating a user interface which is both effective and easily navigable is important.We are utilizing the database to store the various information of the users as well as their biometrics so storage space needs to be considered for smooth functioning of system. Other constraints such as memory and processing power are also worth considering. Efficiency needs to be considered since it is one of the major reasons of having an automated system for ration. The input and output generated and their individual working efficiency and its contribution to the overall software application must also be considered. The software will give the desired results only if the specified software requirements are satisfied.
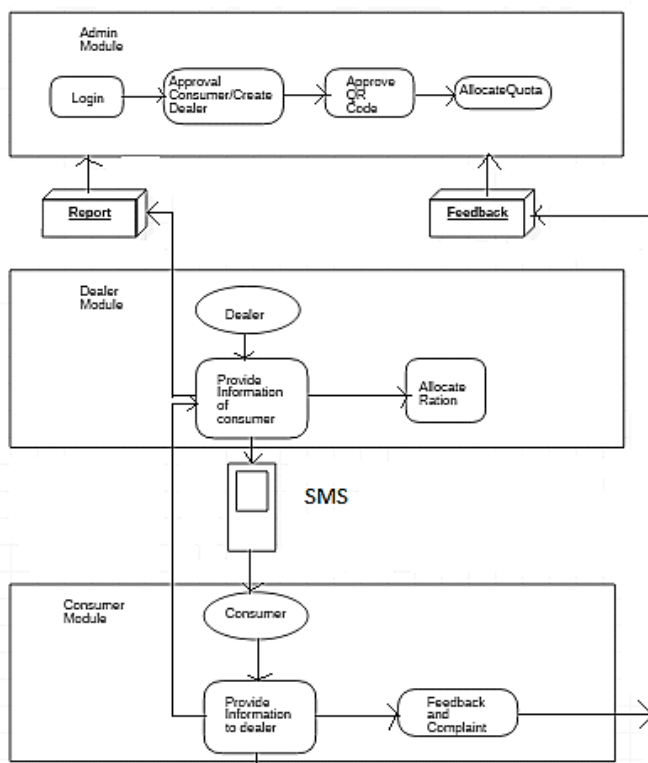
System Architecture

The System works in four steps

Fig: System Architecture

1. Input Part:

In this system each customer has QR Code for each customers Smart Ration Card.

2. Processing Part:

Processing Part: Scanning of QR Code provide data to the System, processes the data and match the with the database which is authenticated by Government.

3. Display Part:

The system process for display the name of the card holder and the monthly allocated ration.

4. Messaging Part:

Messaging system is proposed here to avoid
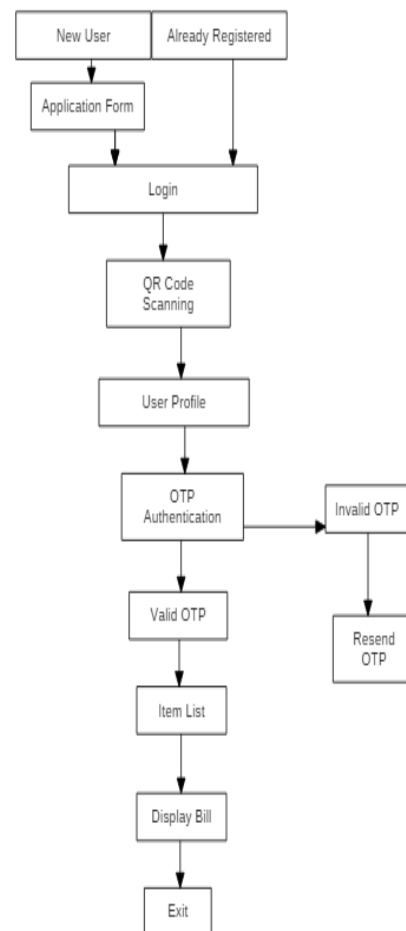Forgery helps the customer to take an action towards ration Forgery.

System Flow

Fig: System Flow

System Evaluation

➤ **Advantages**

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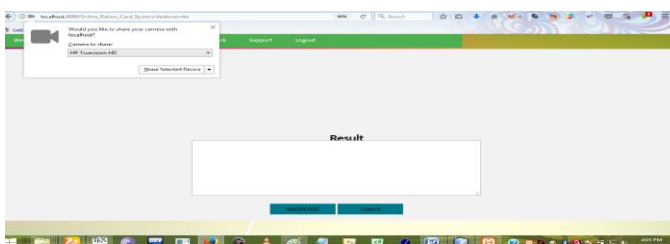- Active contribution towards step towards digital India.

➤ **Application**

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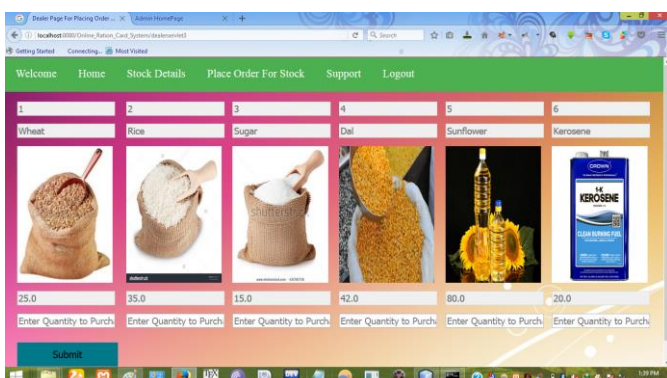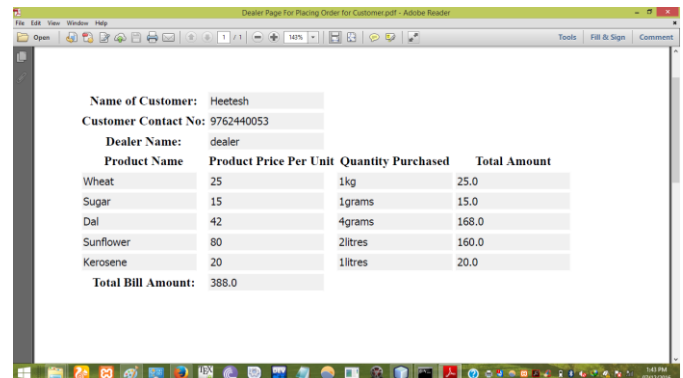
3. Result Set

3.1 Login Page:

3.2 QR Code Scanning:

3.3 Item List:

3.4 Bill:

4. CONCLUSIONS

In the existing system having two draw backs, first one is that the weight of the material may be not correct due to human mistakes and the other drawback is that, if consumers do not purchase the materials at end of the month, they will sell these items to others people which are not actually the real customers of that items without any proof provided to the government and customers. The above drawbacks are removed by this method. In this system, ration Materials (sugar, rice, oil, kerosene, etc.) is available by software through automatic mechanism without any help of humans. After receiving the materials, information is send to government office 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 came 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.

Future Scope

For author/s of more We would like to add partial payment feature through credit cards debit cards etc all transactions online for the ease of the customers because currently we are using the cash payment feature only.In the present system we have used limited items in the database so in the future new items can also be added in the databases.A mobile app can also be developed so the the users need not every time visit the shop for knowing whether the items are available at the shop or not.

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