

Digitalized Ration Distribution System

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Abstract: Considering the limits and loop holes in existing Ration Distribution System we have designed and developed a web portal that will overcome possible frauds in the existing system. Our main goal is to make most of the processes digital that is storing footprints of every transaction made and ensuring that every Ration Card Holder will get required information / details about the quantity of Ration allocated as well as schemes announced by government.

Keywords: ration, government, SMS alert, OTP confirmation, digital, fraud less, website, software application

I. INTRODUCTION

The proposed system includes a website that brings transparency in the ration distribution process, which is done manually from the beginning. The main goal is to overcome the major problem of false distribution of ration. Our system will ensure that every ration card-holder will get an accurate quantity of ration allocated by the government.

The main function of our system is that the ration card-holders will get a SMS containing the information of the quantity of ration they will get in the respective month. This function will surely give confidence to people for raising voice against frauds attempted in the ration distribution stores. Herewith, we will provide a complaint section for ration card-holders to report any suspicious cases. Our system will ensure these complaints will be directly sent to the nearest police station. From the side of the government, a high authority assigned by the government can observe the ongoing process of distribution at any moment to ensure flawless transactions.

II. LITERATURE REVIEW

We have referenced multiple related papers, some of them are mentioned below.

A paper published as 'Automated Ration Distribution System' [1] says that in India, ration shops provide the ration to people at lower prices. For providing ration Ration distributors first take the ration card from the person and give a specific quantity of ration. This whole process occurs manually and with the help of man power.

This system involves lots of challenges like corruption, lack of transparency between distributors and people. In the proposed system Aadhar Card will be used for customer identification instead of ration card and the system will provide a sub-system to measure the weight of ration. So, the system will help to reduce corruption and maintain accuracy.

Another paper we referred is 'Automatic smart ration distribution system for prevention of civil supplies hoarding in India' [2]. This paper also mentions the presence of controversial issues like illegal smuggling of goods, corruption happening at various distribution centers. Additionally, irregular measurements of goods and wrong entries in the manual stock registers are done often.

This system proposes a smart measuring automated electronic device with the help of Arduino microcontroller that will measure goods correctly and from time to time it will update the database as per transactions made. Indeed, it will help to reduce corruption.

As a paper titled 'Smart Ration Distribution and Controlling' [3] says, a large amount of money from the government side is wasted because of corruption happening in the overall process. This paper proposes a simple Personal Data Assistant with RFID Tag in place of the current ration card. A swipe card type machine will be allocated to each ration shop owner as it will be used to read information from the respective RFID integrated card.

Paper ensures that using the proposed system, corruption will be reduced and there will be better management for the Public Distribution System. Also, it will overcome the problem of fake ration cards and illegal supply of goods.

III. EXISTING SYSTEM

According to Wikipedia [4],

“To distribute food and other items like Kerosene to the country's poor families, the Indian government (Ministry of Consumer Affairs, Food and Public Distribution) established the Public Distribution System (PDS), we say Rationing Distribution System. Distribution of food grains to poor people throughout the country is managed by state governments. As of 2011 there were 505,879 fair price shops (FPS) across the country. Under the PDS scheme, each family below the poverty line is eligible for 35 kg of rice or wheat every month, while households above the poverty line are entitled to 15 kg of foodgrain on a monthly basis, redeemable with a Ration Card.”

Now, we discuss limitations or disadvantages of the existing PDS system. As most of the statistics are recorded in hard copy in register books, it becomes so easy to make changes in that for shop owners as superiors above them are not capable of identifying the changes easily. Also, at the distribution time shop owners do not distribute the proper quantity (less quantity) of grains and other items to the card-holders. As the card-holders do not have the idea of how much quantity of grains have allocated to them, they suffer to say anything to the shop owner. In this process shop owners store the illegal stock of grain with fraud resulting in government scheme benefits not reaching the poor families.

Till now the government has not deployed any online system to carry out all the functions of PDS with high transparency so that frauds being done will stop.

IV. PROBLEM STATEMENT

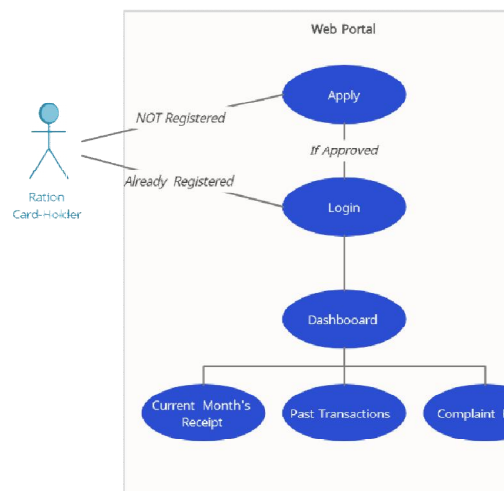
“Developing a formal Web Portal for the current Ration Distribution System to bring transparency about the transactions done at every step of the distribution process. Developing the web portal in such a way that ration card-holders get the accurate information about the quantity of ration allocated to them, eliminating most of the possible frauds attempted in the present system.”

V. ARCHITECTURE OF SYSTEM

Following are the general modules in the system:

- Administrator (Government Committee)
- Intermediate Storage Manager
- Fair Price Shop (Distributor)
- Ration Card Holder

Following UML diagrams describes the way the proposed system will work:

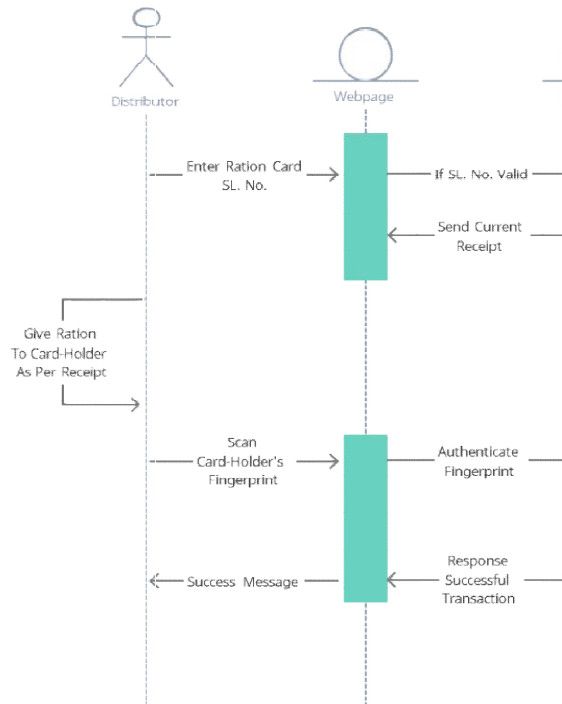


Use-Case Diagram (Describes how Ration Card Holder will interact with website)

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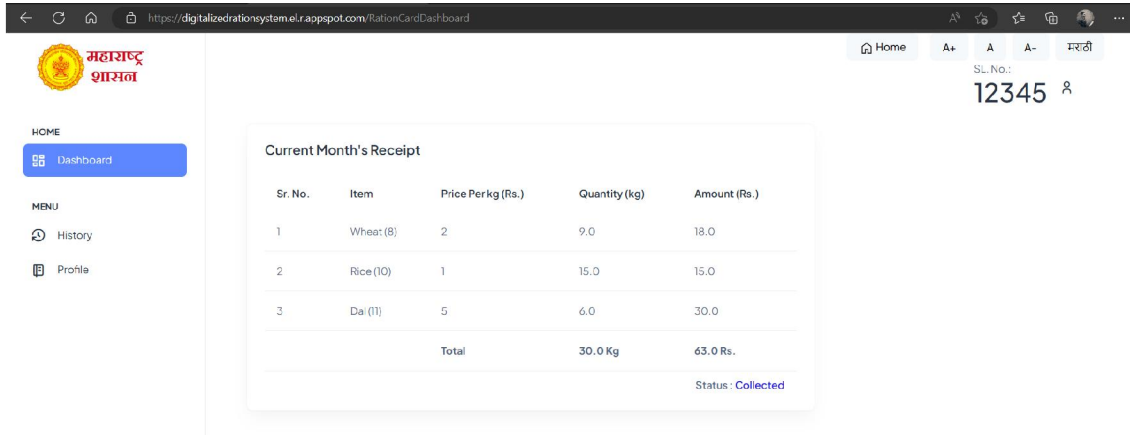
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Sequence Diagram (Describes how the workflow processes)

VI. RESULT

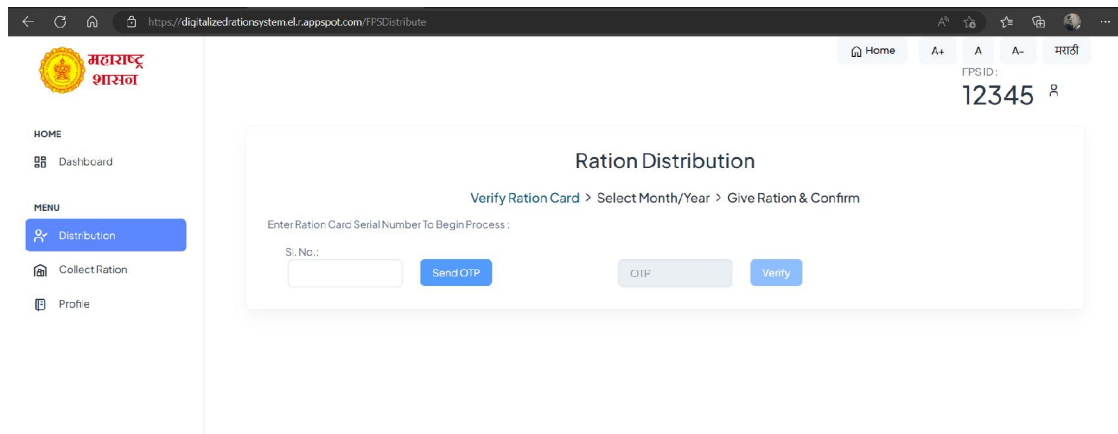
Ration Allocation By Administrator (Result 1)



Sr. No.	Item	Price Per kg (Rs.)	Quantity (kg)	Amount (Rs.)
1	Wheat (8)	2	9.0	18.0
2	Rice (10)	1	15.0	15.0
3	Dal (11)	5	6.0	30.0
Total			30.0 Kg	63.0 Rs.

Status : Collected

Ration Card Receipt (Result 2)



Ration Distribution

Verify Ration Card > Select Month/Year > Give Ration & Confirm

Enter Ration Card Serial Number To Begin Process :

Sl. No.:

FPS ID: 12345

Tahsil Officer Distribution (Result 3)

VII. CONCLUSION

After analyzing the existing problem, we designed a web portal to overcome frauds in the existing system with the help of computer engineering methodologies. We have successfully developed the designed web portal applying Waterfall Software Development Life Cycle model.

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