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SMART PUBLIC DISTRIBUTION SYSTEM

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ABSTRACT: *Public distribution system is the ration distribution process in India which is brought by Government of India to provide daily ration that includes grains like rice, sugar and wheat to the poor people. But in this process the shopkeeper for making their own profits does not give correct amount of ration to the customers. So, to avoid these issues we are creating an application in which the customer will be provided with digitalized card and they have to scan the card, enter the 4- digit PIN and then they will receive the OTP (One-time Password) which they will have to feed in the machine and then they will have to select the quantity of ration and thus they will receive the ration provided to them monthly. Also, the customer will be given access to keep check on the remaining ration. Thus, from this project we are trying to create clear transactions amongst customer and shopkeeper and make this distribution process better.*

1. INTRODUCTION

Public Distribution System (PDS) is the ration distribution system that is made for the poor people of India who takes their daily ration from the ration shops. Mostly these ration shops are available in all states of India. This system is developed by Government of India for people's welfare and betterment.

But these ration shop owners also known as fair price shops (FPS) owners sell the food grains to the customers at higher rates and do illegal marketing of the supplies. Customers has to wait in long queues infront of the ration shops to buy their ration. Personal information related to each member of the family is noted down in a book which is handled by the shopkeeper. Hence each time transaction is made by the card owner, the entry is done manually in the book. But this kind of system provides no authority to the customers. So, to overcome these problems we have made a system in which this whole procedure is done digitally. We have created a desktop application in which all the information related to customers such as their name, mobile number, and the password is stored in the database. Then, the customer has to select the quantity of ration that has to be given for these cards is based on the number of members in the family. And incase of death of any family member or shifting of the person from one city to another then that data is also updated in the database of the server that is government of Maharashtra. So this allows customer to do all the process on their own and know about the details of the stock allotted to them.

2. LITERATURE SURVEY

To acquire more knowledge for making a better system we went for a survey to **NAGPUR GRAMIN TEHSIL OFFICE** which comes under the state government of India. **Ms. AANCHAL BANGDE,** who assisted us and gave a clear view of how the current distribution system is going on, which software government is using at present and what are the issues that are faced by the customers. One of the main concerns was that the ration card was manual and if that card gets turned out or lost then to issue new ration card the customer has to go through some procedures and wait for at least 1 month which leads to causing troubles to the customer. Also, if any family member gets shifted to different state then he cannot use the same card that he used to use at his previous place so he has to issue new card which will again lead to causing trouble to the customers.

Currently, due to bad conditions because of COVID-19, Government of India is providing free ration to the poor sector of our country which is a great initiative taken by them.

3. PROPOSED SYSTEM

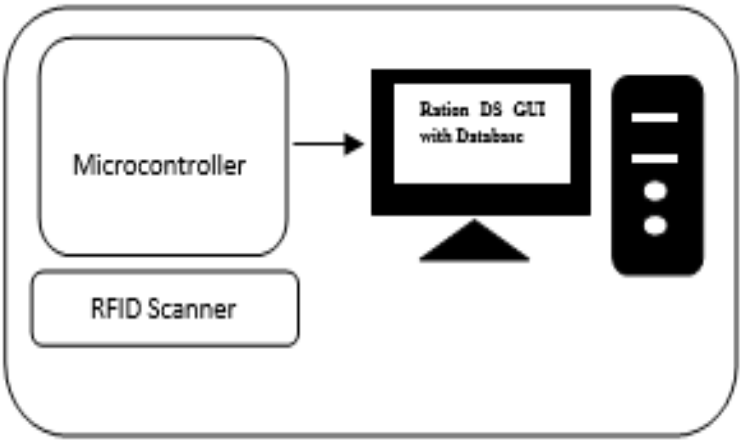

Figure 1. Describes the system in the form of block diagram.

We have used software hardware Co-design Avenue for elaborating our system. Hardware and Software are designed together with the interfacing between hardware and software. The confirmation and authentication of customer is done by RFID cards and password for logging in to account. Also customer will receive a SMS when successful registration is done or when ration is provided to them. This message is sent to customer by using SMS application. For software for the system, we used Visual Studio IDE which, and for reposting a large number of customer's data, MS SQL database management system is used. This section contains a summary overview of all the components used in the system. Smart Public Distribution System have these main four parts, first is microcontroller (used for controlling peripherals connected to it), second is SMS application (used for sending text message to users), third is RFID scanner (used for reading the data stored in a RFID card) and GUI (used for providing interactive software solution for user).

- **Steps to follow:**

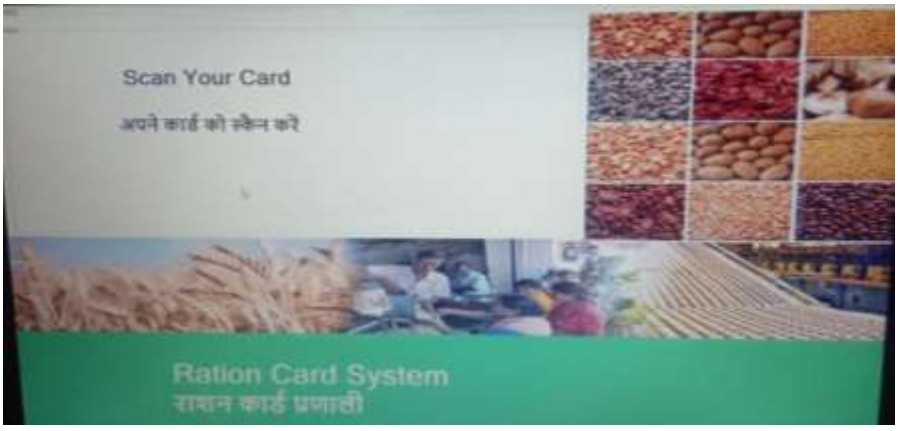

Figure. 2: Snapshot of scanning the digital card

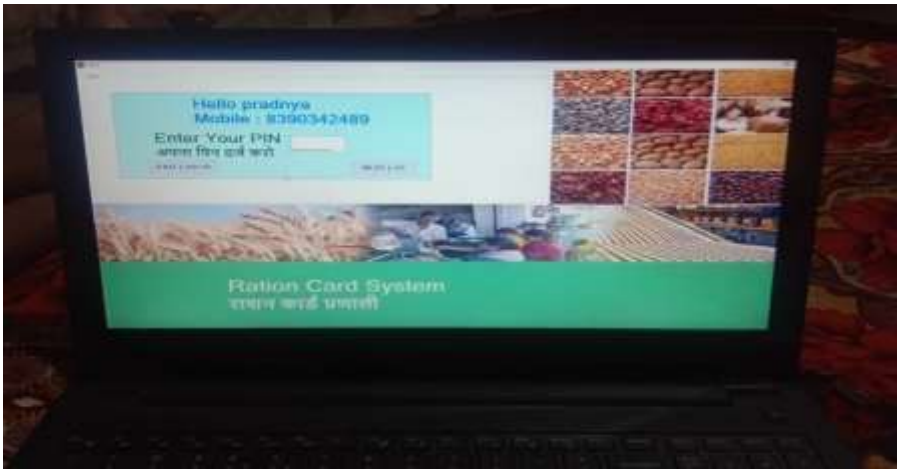

Figure..3: Snapshot of entering the 4-digit pin

Figure.4: Snapshot of selecting the commodities such as sugar, rice and wheat

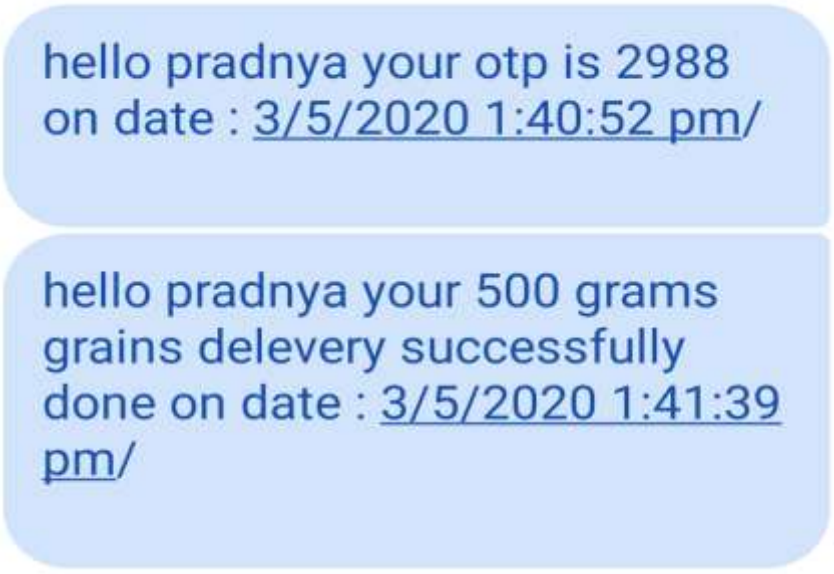

Figure.5: Snapshot of message sent to the customer.

4. WHY RFID?

- Rfid provides unique identification number to the customer through which it provides more security to the customers and keeps them away from frauds.
- By using rfid cards the person who owns the card does not need to be present while receiving the ration, as he will receive SMS notification everytime the ration is received from his account.
- Rfid cards are scanned just in milliseconds by the rfid reader so it consumes less time of the customers.

5. FUTURE SCOPE:

This system can be further developed by implementing weighing system through which the customer can receive the ration in the form of packets of 1kg or 2kg etc. Also we can implement generating receipts from the system. Also, the system can be further developed by using various schemes.

6. CONCLUSIONS:

So, through this project we are trying to reach out to the customers and make this ration distribution process corruption free for the betterment of the people who avail these facilities provided by the government. Through this system we are trying to help the poor people of our country who get fooled by the shopkeepers.

7. REFERENCES

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