

QUEUE MAINTENANCE IN PUBLIC DISTRIBUTION SYSTEM USING SMART CARD AND MOBILE APP

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ABSTRACT — *The aim of this paper is to prevent the crowd in ration shops using android application. First, the details like ration card number should be given in the android application, which is then connected to the corresponding ration shop. Then, the product details such as product names with quantity will be displayed in mobile application. This application can connect to respective servers for accessing data which will surely help the customers to reserve their tokens online without waiting on queue.*

KEYWORDS — Public distribution system,Product availability status,Tokenreservation,Android app.

I.INTRODUCTION

Public Distribution System is a government sponsored chain of shops entrusted with the work of distributing basic food and non-food commodities to the needy sections of the society at very cheap prices. Wheat, rice, kerosene, sugar, etc are a few major commodities distributed by the public distribution system. Ration shop is one of the methods of public distribution system. It definitely helps the people, however it has many drawbacks. People who supply products to the ration shop tend to steal a part of it and keep it for themselves. The people need to stand in a long queue to get the commodities which leads to waste of time for the people. This creates crowd in ration shops.

Using this application, people can be able to know the availability status of product. The proposed system provides the customer an easy way of reserving their tokens online without standing on queue through android application.

II.LITERATURE SURVEY

[1]KashinathWakade et.al.has proposed “Smart Ration Distribution and Controlling”.

This paper implements a simple PDA device (personal data assistant) with RFID tag used as an e-ration card in place of a conventional ration card. This PDA device is similar to the ticketing machine used by bus conductor or bank pigmy agent and the e - ration card is similar to swipe card. When an e-ration card is shown in front of PDA device the RFID reader checks its validation. If it is valid then it shows the name of the ration card holder and details of account such as food grains allocated to his family, rates recommended by Government. Then it demands the quantities to be delivered. After entering the quantities it shows the amount to be paid.

Then it prints receipt and delivers a message to customer about the transaction. The stock details will be known to the people only at the ration shop. It may cause crowd in the ration shops.

[2]Mrs.B.Buvaneswari et.al. has proposed “Mobile App for Smart Ration Card System”. In this system, each user has a separate authentication login. The user profile will contain the information about their family members, the materials which are available and has been received and their price list will also be displayed. The buyer can block the materials needed and they can request to the admin and the user will receive a confirmation message. By using this message they can buy their stuff in their corresponding ration shop. The ration shop admin will upload the details which has been delivered to the respective user. Though it reduces corruption, this paper does not take any measures to prevent crowd in the ration shop.

[3]DhanashriPingale et.al. has proposed “Web Enabled Ration Distribution and Corruption Controlling System”. In this system, the commodities are stored in storage tank. When goods are inserted in the ration shop, then that quantity of goods is updated in web server. That website can be accessed by the collector whenever he requires the ration from respective ration shop. The user has to enter the required product and quantity using a keypad and LCD display to the computer on which the information of the every person is already fill in the database then he gets accurate quantity of required goods. Available quantities of goods in ration shop are updated again in web server. Power supply is very important for using computer. In this system, subscriber has to access the website every time they desire to get a ration.

[4]PranjalPedwalet. al. has proposed “Real Time Automatic Ration Material Distribution System”. In this paper, proposed an automatic ration material distribution based on GSM (global system for mobile) and RFID (Radio Frequency Identification) technology instead of a ration card.

To get the materials in ration shops need to show the RFID tag into the RFID reader, then controller check the customer codes and details of amounts in the card. After verification, these systems show the amount details. Then customer need to enter their required materials by using keyboard, after receiving materials controller send the information to government office and customer through GSM technology. In this system provides the materials automatically without help of humans. In this system various sensors are used to measure and dispense the commodities.

III. PROPOSED SYSTEM

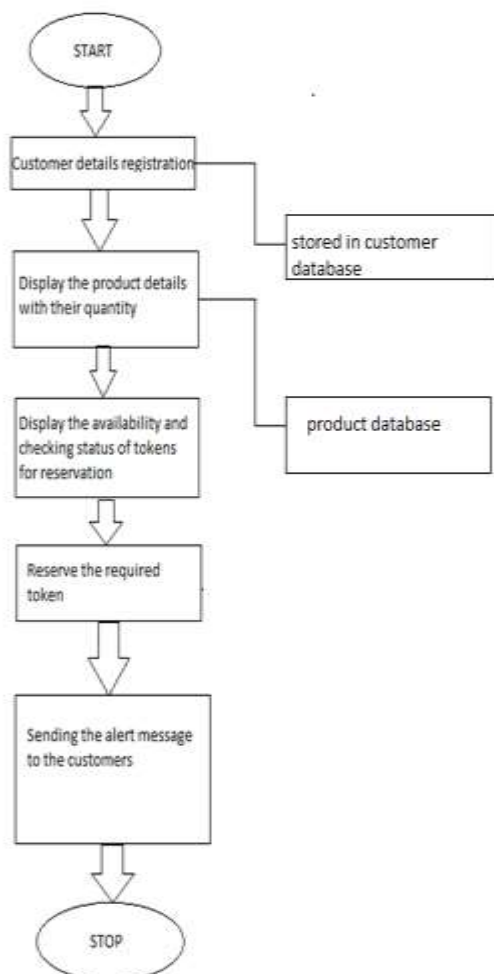
The proposed system provides the customer an easy way of reserving their tokens online without standing on queue through android application. The customer can able know the availabilities of products and their quantity. The reserved token will be marked black and will not be available for anyone else for the specified time and the token in which the customer has received the product will be marked green. The token in which the customer couldn't come at the reserved time will be marked red.

Two alert messages will be sent to the customers. If one customer is getting a product, then the alert message will be sent to the reserved eleventh customer from the current customer. If the customer couldn't come at the reserved time, the alert message will be sent to inform the customer that they need to come shortly (within 10 minutes) or else they need to reserve again.

There are several advantages in this proposed system. They are,

1. It saves time for the people.
2. People need not stand in a queue for a long time.
3. People can easily book their tokens online.
4. People can also check the availability status of the products.

IV. FLOWCHART



V. SYSTEM ANALYSIS

Initially, the customers register the ration card number in the application. Then, it will be automatically registered in the database connected to the application. Then, the product details such as product name and their quantity will be automatically stored in the database. After seeing the product details, the customers wish to reserve the tokens. The customer can able to check the current status of tokens. Then, the customer gets to know the status of the ration shop through the alert message and then he/she will go and get the required product at the reserved time.

VI. CONCLUSION

Using this application, we can have better management of the ration distribution system. The customer need not stand in a queue for receiving products in ration shop. This saves the valuable time of the customers. This also avoid the crowds in the ration shop. As the customer s can able to see the availability status of the products, they need not go to the ration shops when there is no stock. This application helps to modernize traditional rationing system.

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Serial No.	Name of the author	Year	Paper Title	Description	Demerits
1	KashinathWakade et.al.	2015	SMART RATION DISTRIBUTION AND CONTROLLING	This paper implements a simple PDA device (personal data assistant) with RFID tag used as an e-ration card in place of a conventional ration card. This PDA device is similar to the ticketing machine used by bus conductor or bank pigmy agent and the e - ration card is similar to swipe card. When an e-ration card is shown in front of PDA device the RFID reader checks its validation. If it is valid then it shows the name of the ration card holder and details of account such as food grains allocated to his family, rates recommended by Government. Then it demands the quantities to be delivered. After entering the quantities it shows the amount to be paid. Then it prints receipt and delivers a message to customer about the transaction.	The stock details will be known to the people only at the ration shop. It may cause crowd in the ration shops.
2	Mrs.B.Buveneswari	2016	MOBILE APP FOR SMART RATION CARD SYSTEM	In this system, each user has a separate authentication login. The user profile will contain the information about their family members, the materials which are available and has been received and their price list will also be displayed. The buyer can block the materials needed and they can request to the admin and the user will receive a confirmation message.By using this message they can buy their stuff in their corresponding ration shop .The ration shop admin will upload the details which has been delivered to the respective user.	Though it reduces corruption, this paper does not take any measures to prevent crowd in the ration shop.
3	DhanashriPingale	2013	WEB ENABLED RATION DISTRIBUTION AND CORRUPTION CONTROLLING SYSTEM	In this system,the commodities are stored in storage tank. When goods are inserted in the ration shop, then that quantity of goods is updated in web server. That website can be accessed by the collector whenever he requires the ration from respective ration shop. The user has to enter the required product and quantity using a keypad and LCD display to the computer on which the information of the every person is already fill in the database then he gets accurate quantity of required goods. Available quantities of goods in ration shop are updated again in web server.	Power supply is very important for using computer. In this system, subscriber has to access the website every time they desire to get a ration.
4	Pranjaldwal	2016	REAL TIME	In this paper, proposedan automatic	In this system various

			AUTOMATIC RATION MATERIAL DISTRIBUTION SYSTEM	<p>ration material distribution based on GSM (global system for mobile) and RFID (Radio Frequency Identification) technology instead of a ration card.</p> <p>To get the materials in ration shops need to show the RFID tag into the RFID reader, then controller check the customer codes and details of amounts in the card. After verification, these systems show the amount details. Then customer need to enter their required materials by using keyboard, after receiving materials controller send the information to government office and customer through GSM technology. In this system provides the materials automatically without help of humans.</p>	sensors are used to measure and dispense the commodities.
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