

## DIGITAL TOKEN GENERATION AND NOTIFICATION SYSTEM FOR PUBLIC DISTRIBUTION SYSTEM

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### *Abstract*

*Public Distribution System (PDS) is an Indian food security system. Public Distribution System Selling of Minor Millets through Fair Price Shops run by Cooperatives / Civil Supplies Corporation. It is established by the Government of India under Ministry of Consumer Affairs, Food, and Public Distribution and managed jointly with state governments in India. Fair Price Shop does not open every day, nor do they keep regular hours. Even on the days that the Fair Price Shop is open, ration card holders have to stand in long queues. But due to delay in supply all citizen needs to come to the fair price shop and ask them whether they are providing the items today. SMS notification is sent to customer giving prior date and time for the collection of products on stipulated time for every card holder, saves time by logging online and views product details. If the card holder missed the first slot allocation, gives another chance to get the products by providing two re-slot allocation for the next purchase of products, in case not able to deliver products on first slot. Evaluations show that the algorithm decreases queuing delay for dynamic traffic with more planning.*

**Keywords :** Public Distribution System, Fair Price Shop, Ministry of Consumer Affairs

## **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. The goal of the Public Distribution System in Tamilnadu is to ensure food security to all citizens, particularly poor people, by making available essential commodities of good quality at affordable prices every month, through fair price shops which are easily accessible.

## **LITERATURE SURVEY:**

### **1. IOT BASED SMART RATIONING SYSTEM**

This process eradicates forged ration card users and prevents them from participating in any further transgression. Picking the goods and quantity by the means of android application.

### **2. DYNAMIC JOB SHOP SCHEDULING ALGORITHM BASED ON DEEP Q NETWORK**

This article guide each machine to complete production and processing tasks autonomously, thereby enhancing the production efficiency of the entire workshop.

## **EXISTING SYSTEM:**

The Civil Supplies Department has issued coupons to the beneficiaries, mentioning the date for them to avail food grains, commodities and relief fund. Here are some existing virtual queue management systems are

- Virtual Sign-up
- Online Channels
- Mobile Apps
- QR Code
- Traditional Channels
- Virtual Waiting/Queues
- Multi-channel Remote Queuing Information Updates
- Traditional Queue Management Components

- Counter Plates
- Digital Signage Screens
- Ticket Dispensing Kiosk/Terminal (Optional)
- Audio-Visual Announcements and Customer Calling
- Administrative Control Panels and Agent Dashboard
- Server Application or Queue Management Server
- Third-party System Integration
- Customer Feedback Module/System

#### **DISADVANTAGES:**

1. Existing techniques are full of complications and queues tend to have long waiting hours.
2. The model of waiting in lines is very inefficient, customers have to be in line in order to be served even if the line may have more than a hundred customers ahead.
3. Regional Disparities.
4. Urban Bias.
5. PDS dealers are sometimes found resorting to malpractices like diverting the grains to open market to get better margin.
6. The irregular opening of the shops.
7. The drawbacks i.e., manual process, time consumption, stock corruption etc.

#### **PROPOSED SYSTEM:**

The proposed system is basically divided into two subsystems the web server and the distribution system. The proposed system uses real time tokens over the web servers for managing the queues. The users can conveniently use the system with a web or android based application which allows a card holder to virtually join a queue. The service providers or organizations can manage the queues in real-time

using the web server and queues can get real-time updates regarding current status of queue using personalized notification.

Proposed an RL-based framework that takes a QoS constraint as input, and provides a dynamic service-rate control algorithm that satisfies the constraint without overuse of the service resources. Proposed a Deep Q Learning Model within the queuing framework to investigate equilibrium strategies in terms of capacity and number of Slots.

## IMPLEMENTATION :

### 1. RATION SHOP ADMIN

In this module the ration shop admin can enter with their login credentials. The shop admin has a live dashboard to generate time slot and token id. The shop admin also keeps track of queuing numbers, wait times and service times. Schedule, reschedule and cancel appointments digitally to manage customer traffic and reduce operational costs. The shop admin can have unique registration id to maintain their details in database. Admin logged in to their page, they will verify the stocks are available or anything to order from the government and maintain the product, employee and customer records.

### 2. CONSUMER

In this module, consumer can login into his account to see the collected ration details. consumer can also request to make changes in his account details to distributor through his login. Customer can view the available products in their home page. This module consists of the details of the customer who gets the notification of date and time to buy the stock from the ration shop. The consumer can then set the possible time options and also request for reschedule the date and time. They can able to view the purchase history by simply logged with their card number.

- Purchase details: This module provides the history of the item purchased by the Consumer.

### 3. TIME SLOT GENERATOR

In this module, the time slot generator generates the time slot for each and every consumer with token ID. E-Token will generate a token ID that helps to keep track of the queue from anywhere in the world using internet. In E-Token We have a feature such as provide a token, view a token status, update a token, cancel a token, delete a token and many more. With these features we can easily manage the online queue system in any suitable domain without any hassle. The tokens will have a specific day and time when the ration cardholders can collect their share. Consumers notify by SMS and email they can collect them from their ration shops on the specified day and time, including the extra rice and relief fund announced as part of COVID- 19 relief measures.

### 4. AUTOMATIC NOTIFICATION SYSTEM

This module generates the OTP for consumer login these OTP send throughby SMS and Email of the consumer. Another SMS and Email with the Date and Time to buy the ration commodities sent to the consumer mobile number and mail id provided. Auto generated SMS are

- OTP
- Time Slot
- Reschedule Time Slot
- Relief Fund

#### CONCLUSION:

Physically queuing is a reality on many industries that provide services or sell goods. Waiting in a queue can be stressful and exhausting for the clients because of the enforced idle time, and may lead to decreased customer satisfaction.

This system will be helpful to save time and efforts of standing in long waiting queues, the application will also be helpful for organizations to serve better the customers without making them wait in queues this in turn can boost profit and increase the quality of Service.

This system can be successfully implemented in environment where crowd management is difficult and thus help in the elimination of physical lines and waiting time all over the country in service-based institutions and organizations.

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