

IoT Based Ration Card System Using RFID

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Abstract — This paper gives the overview on the procedure of actualizing shrewd proportion Card. As we probably am aware the primary targets of shrewd proportion cards are giving nourishment grains What's more, such comparable things to poor or the lower white collar class people groups of the general public at sensible (financed) costs and Public circulation system(PDS) which is additionally known as proportion circulation framework should disseminate the apportion to these individuals. In spite of the fact that the PDS considered a vast quarrelsome issue that brings forth defilement what's more, unlawful carrying of such things. These issues can be resolved by creating a unique database of residents in India. Need to keep all information together will result into the best technologies and processes for this purpose. We will be using the Wi-Fi module ESP 8266 and the RFID Reader for reading the unique ID of the customer.

Keywords — PDS, Smart Ration Card, RFID, Wi-Fi

1. INTRODUCTION

Open Distribution Framework (PDS) is an Indian sustenance strategy security framework. It is built up by the Legislatures of India under Ministry of Consumer Affairs, Food and Public Distribution what's more, oversaw together with state governments in India. The customary PDS is utilized to disperse basic need things to India's poor who are substantial apportion card holders. The legitimacy and the assignment of the proportion cards is observed by the state governments. An apportion card holder ought to be given 35 kg according to the standards of PDS. Be that as it may, there are worry about the proficiency of the dissemination procedure In request to make it effective and improve the present arrangement of PDS we are executing SMART Apportion CARD. A few states like Kerala and Gujarat had effectively executed this yet it has a dull procedure which is defeated here.

Here we are going to utilize a card like the Visa or the swipe card for our shopping reason. Utilizing this card the holder can get his/her basic supply things from the Fair Value Shop's (FPS). The principle explanation behind utilizing this swipe card and making this procedure automated is to evacuate the downsides of the present method for issuing item based on apportion card. The fundamental disadvantage in the present framework is that the PDS has been reprimanded for its urban inclination and its inability to serve the less fortunate segment of the populace adequately. The focused on PDS is expensive and offers ascend to much defilement during the time spent removing poor people from the individuals who are less penniless. Additionally many apportion retailers have huge number of counterfeit cards to sell nourishment grains in the open market Many FPS merchants resort to misbehavior since they gain less pay Most of the time Users don't get their legitimate privilege in term of amount. What's intended for them or the ranch produce obtained by the FPS's is occupied to the open

market. So as to stay away from every one of these downsides we are going to utilize the Smart apportion card which will encourages us to dodge the debasement in PDS if not kill it

2. LITERATURE SURVEY

J. Clara1 et al. [1] "Mechanization in Ration Product Distribution" Open Distribution System (PDS) [i.e.] proportion item dissemination is built up by the legislature of India to circulate basic need things at reasonable cost. The controversial issue in this system is smuggling of goods and late delivery of goods. Why it is so, because in the existing system all the work is done manually. In order to overcome this, we have proposed an idea to automate the distribution of production the ration shop. The government maintains a database which is accessed by the proposed system. The database contains the details of people in a locality and the quantity of product allotted to them. Due to this illegal entries are avoided. Because of this, illicit passages are maintained. When the item reached at ration shop it gets refreshed in the database and the framework sends a ready message to the general population utilizing GSM. The general population can get the item by embedding's a shrewd card and verifying utilizing unique mark. The LCD will display the customer details and the list of product available for them. On selecting the product the load cell will automatically weigh the product and dispatch the product. All these are automated using ARM8. Because of this, manual work in the proportion shop can be supplanted via robotized implanted framework.

Dhanashri Pingale et al. [3] "Web Enabled Ration Dispersion and Corruption Controlling System". E-government is dynamically used to upgrade Straightforwardness in the organization part and to fight against debasement. E-government is being executed in more areas of government association for both the close-by and national dimensions far and wide. E-government system made to beat debasement. The purpose of this paper is to orchestrate and shorten existing speculative and observational work on corruption with a view perceiving open entryways for further research. Computerization can help in modernizing the PDS. Here endeavors from our side are done to defeat one of the debasement issue include in proportion dispersion framework through a sort of electrodynamics web format where conveyance of ration items like lamp oil, rice, wheat and so on at provincial and urban zones, will be checked, observed and controlled with sifting the issue of defilement and corruption.

3. PROPOSED SYSTEM

Remembering the end goal to defeat the above issues in the present system, an automated embedded structure is proposed. The customer will enter into the system with the unique ID tag i.e. RFID tag is unique for every customer. RFID tag is scanned with the assistance of RFID reader and this reader will update into the system. The admin will then get the whole information of the user. The admin can then distribute the ration to the particular customer and will send the message for successful distribution.

Recipients need to examine the RFID Smart Card to RFID peruser and after that businessperson checks for legitimate recipient's data in the database, after effective confirmation of the recipient, businessperson will give the material to client. The system will able to find duplicate entries and ghost cards which will help to avoid illegal and bogus claims and fraud in distribution of ration.

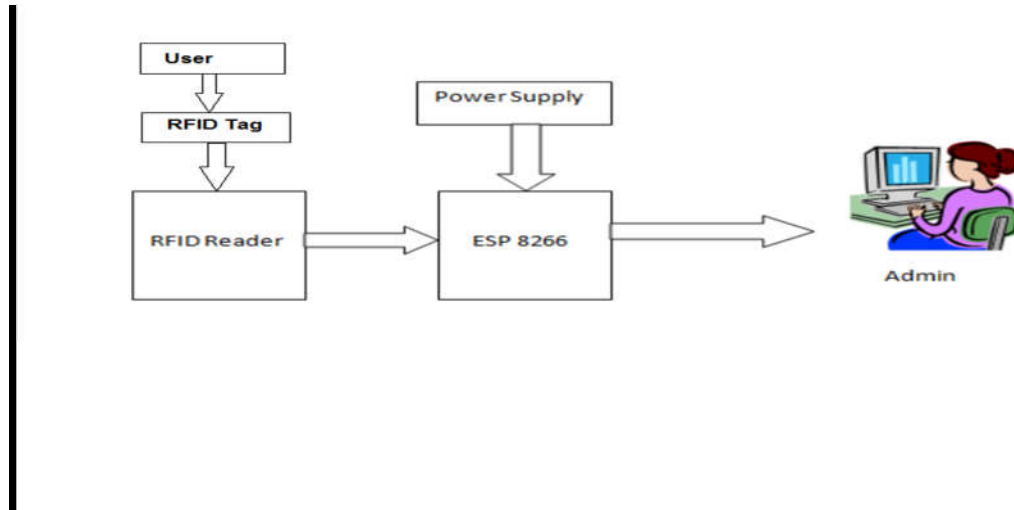


Figure 1: Block Diagram

This system will be replacing the manual work in the apportion dissemination framework. RFID Tag is assigned to every Indian citizen from government offices. This RFID Tag is provided instead of conventional ration cards. With the assistance of IoT all the transaction will perform by our system. The IoT based framework makes the straightforwardness in open conveyance framework as the work winds up programmed and it is conceivable to make open appropriation framework productive.

The proposed system has following phases involve

1. The Customer:

The customer needs to show the tag id in front of the RFID reader for validation.

2. The Admin:

The admin will get all the required data of the respective customer and the admin can distribute the ration to the customer.

3. RFID Reader:

The RFID reader will read the unique tag id and validate with the database information, only then the customer will be identified and will get the ration.

4. Wi-Fi Module:

We are using ESP 8266 Wi-Fi module which will send the OTP and confirmation message on successful delivery of the ration to the customer.

3.1. Objectives and Scope

The projects aim is to provide ration to the needed people and to provide them their right of getting subsidy.

3.2. Advantages

The system will be able to find duplicate entries and ghost cards which will help to avoid illegal and bogus claims and fraud in distribution of ration.

4. CONCLUSION

Numerous difficulties are looked by the sustenance appropriation division is apportion fraud. The framework will be increasingly secure and straightforward when contrasted and the existing system as the direct communication has been established between the customers and the government and hence forbidding the irregularities encountered. Using Smart Card one can entry into the system where malicious activities can be hardly possible. Maintaining the database can be proven helpful in sending messages to the customers regarding the ration delivery after successful ration delivery.

Future work

Project can be further extended by making the payment to the purchased commodities can be done online. Thus it will make system more automatic. Distance of communication between client and server can be increased using internet.

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