INCREASING TRANSPARENCY AND MINIMIZING MISCONDUCT IN THE RATIONING SYSTEM USING THE E-RATION CARD WITH RFID

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Abstract: The Indian ration card provides food for the poor people which is distributed by the government along with the fuel. Most of the ration shopkeepers keep fake ration cards with them and use the items to sell in the market loosely. In this way, in the current situation, we are facing a problem due to a lack of transparency. Hence, we have proposed an e-ration card management system that is based on RFID technology that replaces traditional ration cards.

I. INTRODUCTION

The ration card plays an important role in recording household data, such as the gas cylinder, the total number of family members, and it is mainly used as an address record. The current ration distribution system has some disadvantages, such asd0rawback inaccurate quantity of goods, low processing speed, long waiting time and material theft in the ration shop,

We replace the manual labour in the ration distribution shop. RFID is used to prevent the counterfeiting of rations. In this paper, a very improvised technique is used to implement smart ration cards. It provides a unique identity of a person which can be updated with government records. It provides a distinct identity of person which is useful to update with the government record. The basic food items provided by government are rice, sugar, wheat. Ration Card is one of the most important documents which acts as identity proof for any individual. If people are not having their own Ration card they can also apply for the same. The process to apply for ration card has been facilitated to great extent but now a days this process is online which comes as blessing for the applicants who hate standing for long time in queues for filling the application form and then go to the office again to know the status. The network of the ration shops is spread all over in India to provide food security to the people. This distribution of food and fuel is fully controlled by the government.

It provides a unique identity of the person which is useful to update with government records. The staple foods provided by the government are rice, sugar and wheat. The Ration Card is one of the most important documents that serves as proof of identity for each person. If you do not have your own ration card, you can also apply for one. The procedure to apply for a ration card has been greatly simplified, but nowadays this procedure is online, which is a boon for applicants who hate standing in queues for a long time to fill in the application form and then going back to the office to find out the status. The network of ration stores is spread all over India to ensure food security for the people. This distribution of food and fuel is completely controlled by the government.

II.RELATEDWORK

RFID:

A radio-frequency identification (RFID) system is used that allows only authorized persons to access the material from the ration store. An RFID system consists of an antenna, a transceiver, and a transponder that is electrically programmed with unique information. Some of the most commonly used RFID kits are for low frequencies (30-500khz), medium frequencies (900khz-1500khz) and high frequencies (2.4-2.5Ghz). The GSM is used to send SMS to customer and government authorized person for verification.

In the RFID reader, we have a magnet. When we put the card on the reader, the magnetic flux is generated and the card number is read by the reader. We use the 5V power supply. The RFID has two types, one active and one passive Shahid veerpatni Lakshmi Mahavidyalaya Titave-416208, Maharashtra, India.

We are using the 5-v power supply. the RFID have the two types one is active and another one is passive. For the active one we have the sometime limit, so we need to complete the work within the time only, but in case passive reader we can don't have any time limit we can use the long. This is used for the security purpose in the banks , offices and other security places.

2. RFID Tags:

There are two types of RFID cards: active and passive. RFID tags contain a number located inside the card, and this number is not visible. This card is associated with the owner and the reader with this particular application. This is used for the security purpose.


4. WORKING PROCEDURE

Each customer is provided with an RFID card, which is registered by the authority. When the rations are issued at the rationing centre, the first password is assigned. The user ID is stored in the database provided by the government authority. The store owner verifies all the details of the customer and provides a unique identity of a person, which is useful for updating the government database.

System Architecture
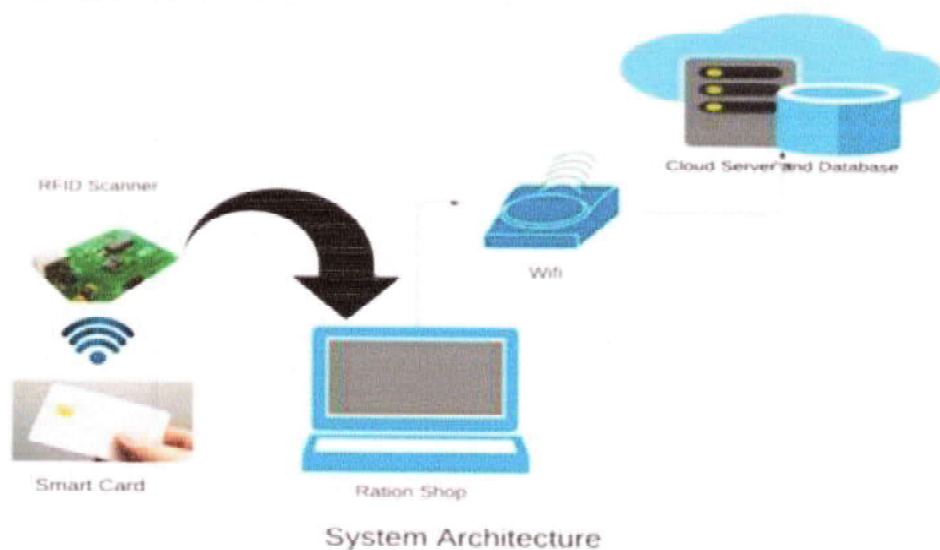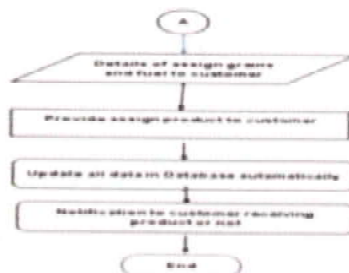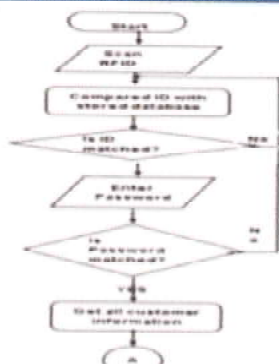
1. Registration

Login module

The concept of a user ID and password is a cheap and efficient way to maintain the connection between a user and a computer system. In this module, the system registers beneficiary data, including name, address, date of birth, age, contact number, number of family members and category of the card to which the family belongs.
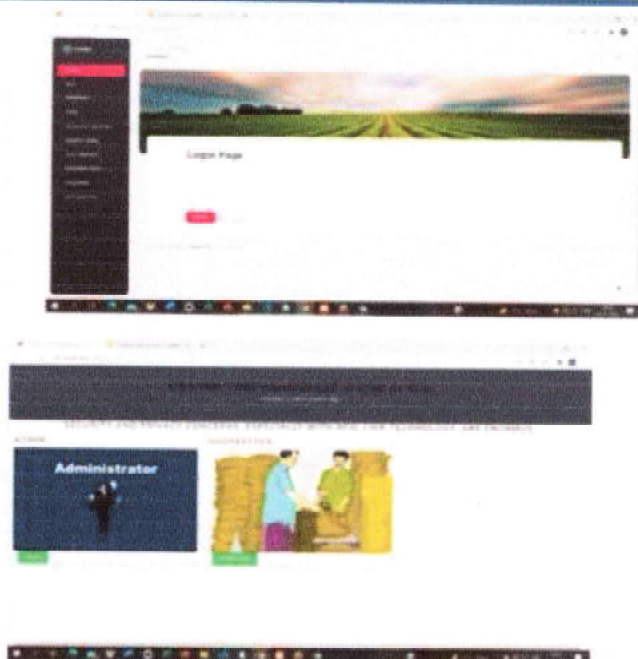
2. Admin module:

The project administration module allows project administrators to manage project members, companies, and services, and to edit the project profile. After creating a project, an account administrator can add one or more project administrators to perform administrative tasks for the project.
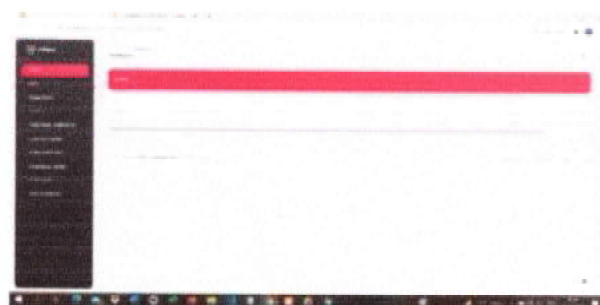
3. Shopkeeper Module:

The shopkeeper logs in with his ID and password, the administrator takes all inventory data, scans the customer's RFID data and shows the customer his product data. The store owner gives the product to the customer. Charge the product, search customers, view and answer complaints, add products.
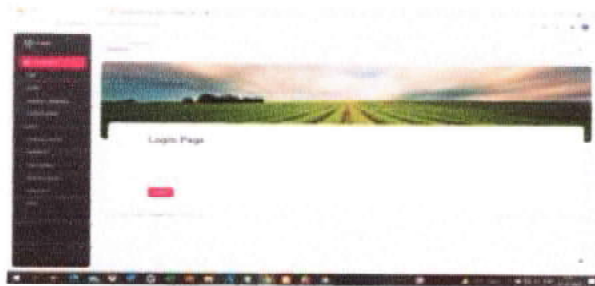

4. Customer module:

The customer gives all personal data to the administrator. The customer logs in with his card number and code number. The customer sees his products and can also complain about the product.
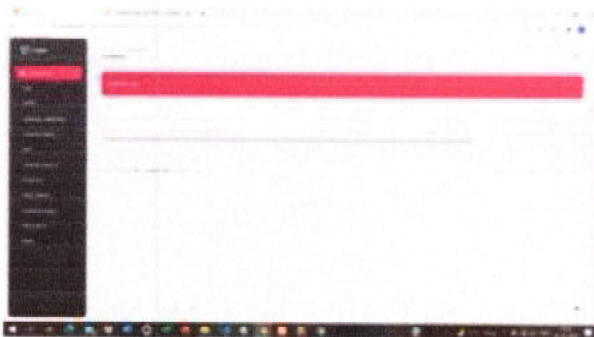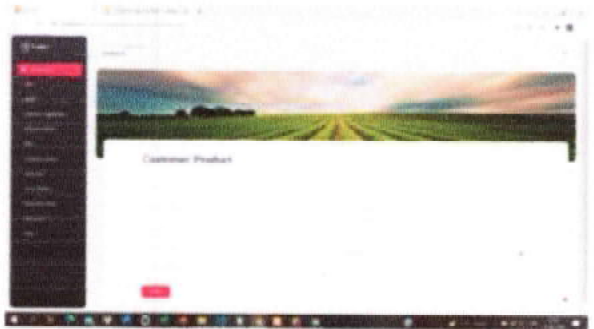
5. Firebase

Firebase is a product from Google that helps developers easily create, manage and extend their apps. It helps developers build their apps faster and more securely. No programming is required on the Firebase side, so you can use its features more efficiently. It offers services for Android, iOS, web, and Unity. It offers cloud storage.
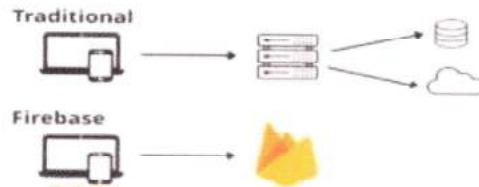
It uses NoSQL as a database for storing data.

iii CONCLUSION

The proposed system is more secure and transparent than the normal existing system. The influence of fraudulent data entry into the ration database can be easily maintained by using this smart ration card system.

An authorized person (store owner) can manage the database. Customers can be authenticated using RFID swapping and thumb recognition. IN According to the plan, the proposed system is more transparent and reliable than the existing ration card system.

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