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Increases in transparency and minimization of malpractice in ration card management system using 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.*

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I. INTRODUCTION

Ration card plays a vital role in the household detailssuch as to get household gas cylinder, total no. of family members details and it is mainly used as the proof of address.The presentRation distribution system has the d0rawback like an inaccurate quantity of goods, low processing speed, large waiting time, and material theft in ration shop

We replace the manual work in the ration shop. RFID is used to prevent ration forgeryA very improvised technique is used in this paper which implements smart ration cards. It provides a distinct identity of a person which is useful to update with the government record.

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

II. RELATEDWORK

RFID:

Radio-frequency identification (RFID) system is used which allows only authorized persons to get the material from the ration shop. An RFID consists of an antenna, a transceiver and a transponder electrically programed with unique information. Some of the most commonly used RFID kits are low-frequency (30-500khz), midfrequency (900khz-1500khz) and high frequency (2.4-2.5Ghz). The GSM is used to send SMS to the customer as well as government-authorized person for verification.

In the RFID reader we have the one magnet, in the RFID reader also have the one magnet, whenever we place the card on the reader the magnetic flux will be generate and card number will be read by the reader.We are using the 5-v power supply. the RFID have the two types one is active and another one is passive

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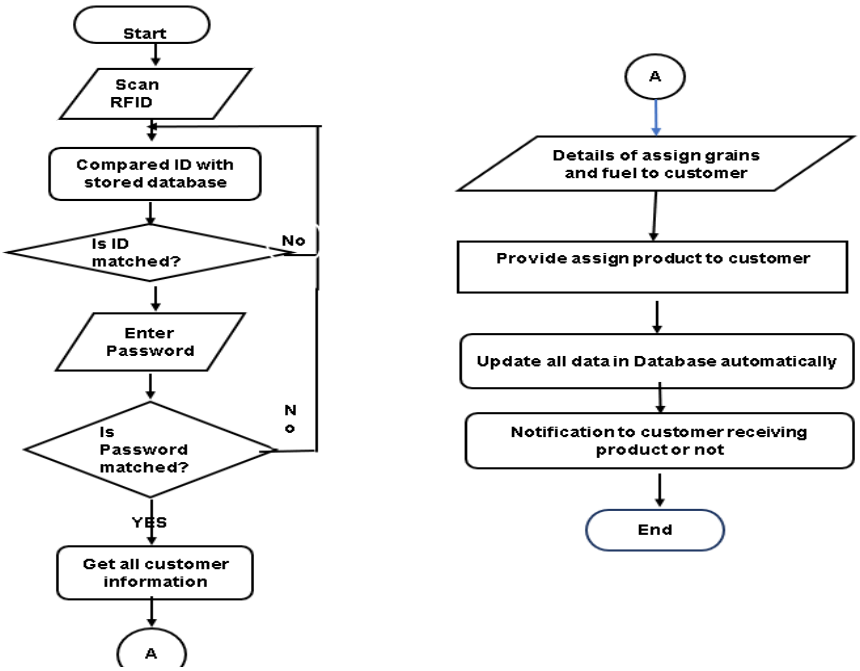
We are using the 5-v power supply. the RFID have the two types one is active and another one is passive. For the active one we have the sometime limit, so we need to complete the work within the time only, but in case passive reader we can don't have any time limit we can use the long. This is used for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

2.RFID Tags

The RFID cards are two types active and passive . the rf tags contains the one number which is there inside the card we can't visible that card number, and it will have one magnetic coil in the card when we place the tag on the reader it will generates a magnetic flux and reads the card number. This card will with the owner and the reader with that particular application. This is used for the security purpose.

4. **WORKING PROCEDURE**

Every customer is supplied with a RFID card which is registered by the authority's authority. On the time of ration distribution at ration keep, first password is provided. User id established with the database supplied through the government authority that is stored .shopkeeper check all details of customer It provides a distinct identity of a person which is useful to update with the government record



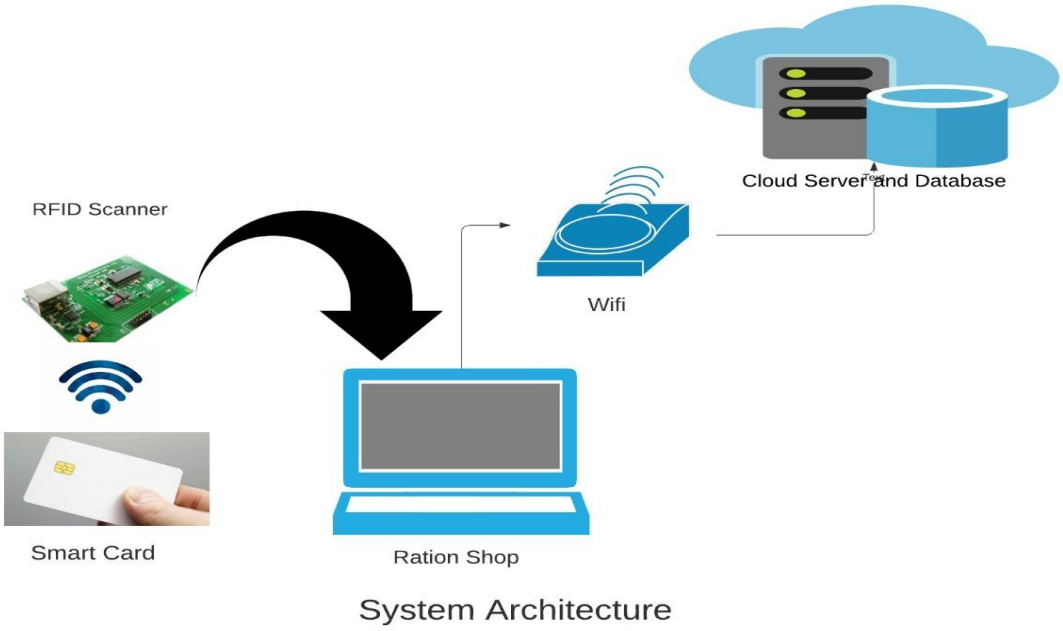
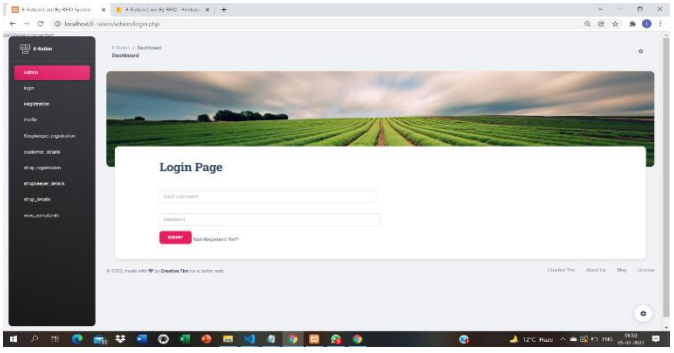


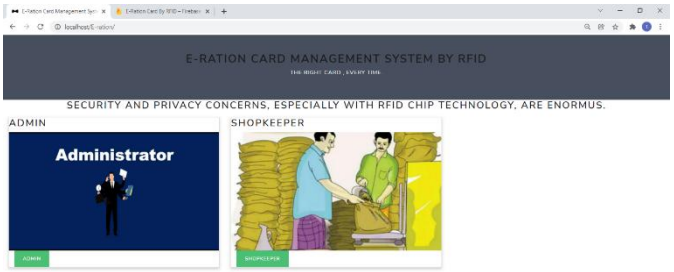
Figure1: Systemarchitecture

1. Registration

Login Module

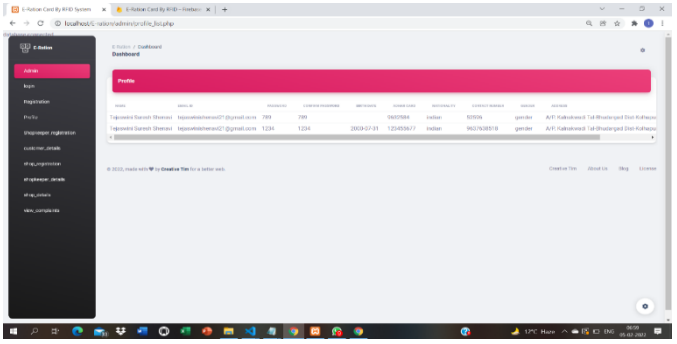
The concept of a user id and password is a cost-effective and efficient method of maintaining a shared between a user and a computer system. In this module, the system registers beneficiaries' details that includes their name, address, date of birth, age, contact number, count of family members and category of the card to which the family belong, with all the information being uploaded in the database





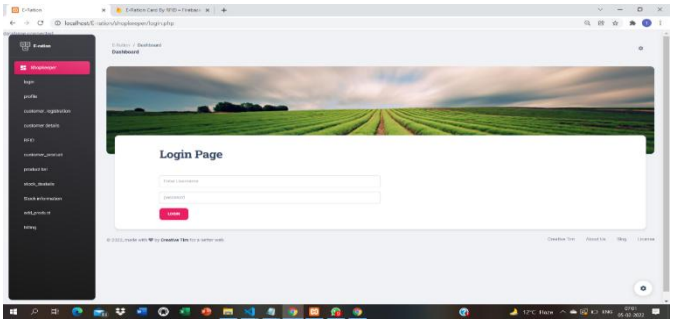
2. Admin Module:

The Project Admin module allows project administrators to manage project members, companies, and services, as well as edit the project profile. After an account administrator creates a project, they can add one or more projectadministrators to handle the administrative responsibilities for the project.



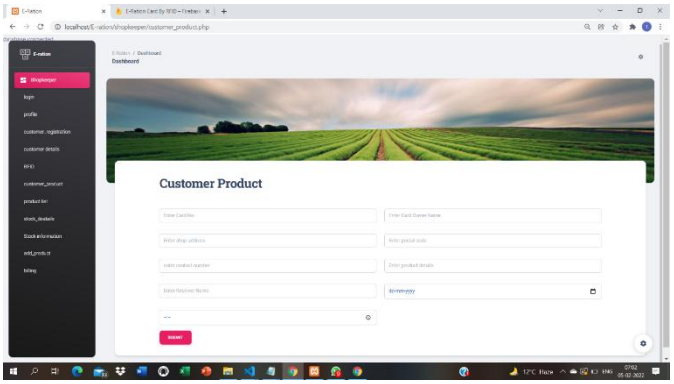
3. Shopkeeper Module:

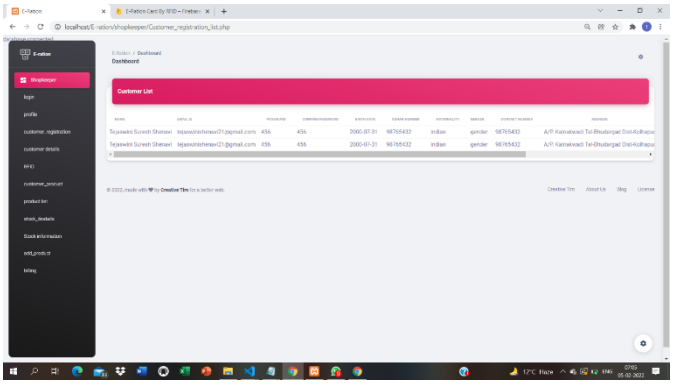
The shopkeeper login his id and password, admin take a all stock details. scan the customer RFID show the customer his product details. Shopkeepers give the customer product to customer. Billing the product, search customers, viewing complaints and response it, add product.



4. Customer Module:

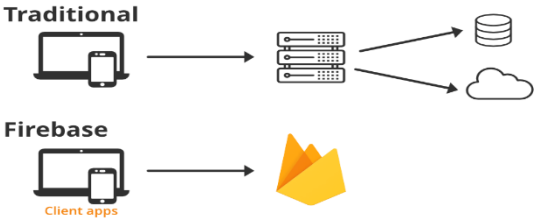
Customer gives all personal details to the admin. Customer login by his card number and code number. customer see his products. and also complaints about the product. customer gives the bill from shopkeeper.

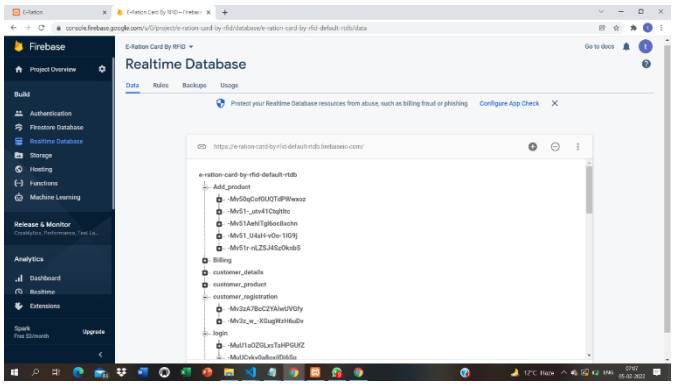




5. Firebase

Firebase is a product of Google which helps developers to build, manage, and grow their apps easily. It helps developers to build their apps faster and in a more secure way. No programming is required on the firebase side which makes it easy to use its features more efficiently. It provides services to android, ios, web, and unity. It provides cloud storage. It uses NoSQL for the database for the storage of data.





III. CONCLUSION

The proposed system is more secure and transparent than the normal existing system. The influence of fraud data entry in the ration database can be maintained simply with the use of this smart ration card system. An authorized person (shopkeeper) can maintain the database. Customers can be authenticated using RFID swapping and thumb detection.IN the plan, it is expected that the proposed system will be more transparent, and reliable than the existing ration card system.

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