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SMART RATION CARD SYSTEM USING RFID, BIOMETRIC AND SMS GATEWAY

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Abstract— In this system, we proposed smart ration card using RFID, Biometric technique and SMS gateway technology. The system should prevent ration forgery. A RFID tag is used to carries family details and customer needs. The distributor sends the SMS of stock availability to customers. Customer should have two options for authentication, first is biometric and second is RFID card scanning. Customer should give the OTP to agent which is send by the distributor while customers registration process. If customer is valid person then the agent supply the commodities to the particular customer.

Keywords— RFID, Biometric, SMS Gateway

I. INTRODUCTION

A. Background –

Ration card is one of the very important documents in India. The ration card is used for purchasing commodities like rice, wheat, fuel, etc. Our proposed system eliminates the drawbacks of existing system by making use of RFID and biometrics techniques. RFID uses electromagnetic field to track and identify objects. Biometric technique will be used to authenticate the customers. The RFID tag will contain all details of customer and his family. This card will be provided to every registered customer. Each ration shop will have RFID reader which can read unique code generated by RFID tag. The distributor sends the SMS to the customer to inform commodities are now available in ration shop. Any user who want ration will have to read/scan their card through the RFID reader. Whenever any user scans the card it will check in the database whether the user is valid or not. When a valid user will scan through the RFID reader, the amount of ration taken by him will be displayed on monitor screen. User should give the OTP to distributor which is available on registered number

for authentication and also deducted from his monthly ration quota. Further, all details will also get updated in admin database at each level. To show transparency in the system, transaction detail will be sent to the customer's registered mobile number via SMS.

B. Application in general form in different areas –

Our proposed system eliminates the drawbacks of existing system by making use of RFID and biometrics technique. The distributor sends the SMS to the customer to inform commodities are now available in ration shop. Any user who wants ration will have to verify their card or give thumb impression on biometric machine. Whenever any user verifies the card it will check in the database whether the user is valid or not. When a valid user will verify through the RFID reader, the amount of ration taken by him will be displayed on monitor. User should give the OTP to distributor which is available on registered number for authentication and also deducted from his monthly ration quota. Further, all details will also get updated in admin database at each level. To show transparency in the system, transaction detail will be sent to the customer's registered mobile number via SMS.

II. LITERATURE SURVEY

A. Existing work –

Ration card is one of the most important documents in India. The ration card is mainly used for purchasing subsidized foodstuffs and fuel and also used in identification process while making passports, PAN card, Aadhar cards and acts as an address proof for citizens of India. In the existing system government provide the details of customer to distributor agent. Agent will supply the commodities to the beneficiary. On the ration shop first beneficiary verify it's biometric for authentication purpose then agent will supply food stock to them, but sometimes there is problem occur during biometric

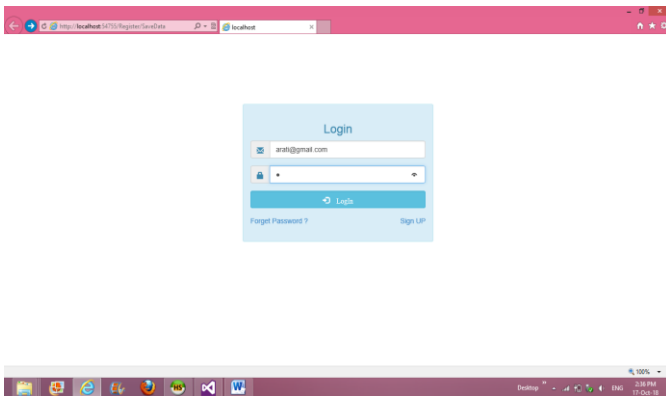


Fig. 2. Sign In

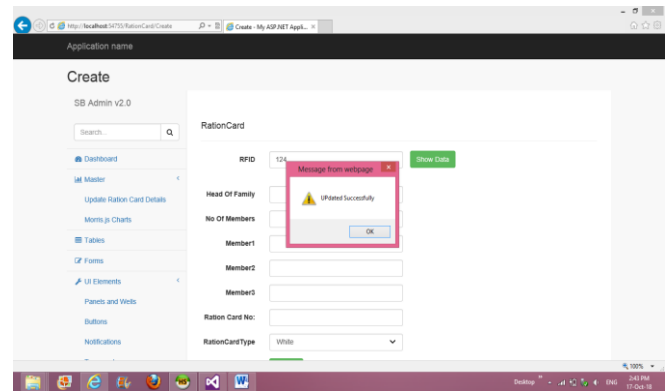


Fig 5. Update Data

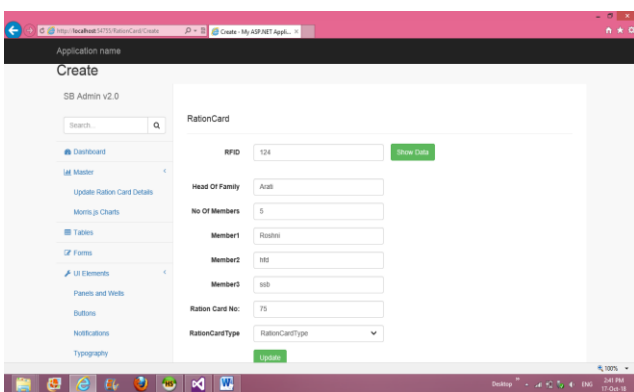


Fig. 3. Data Display

IV. CONCLUSION

Data accuracy is maintained. Provide high security. Execute all components properly. Automatic report generation. Efficient result generation.

V. REFERENCE

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Fig. 4. Update Ration card form

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