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Supply and demand control system for farmer's market

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ABSTRACT

The farmers usually suffer and has to go through all the hassle just to get a poor deal for their hardwork. This is mainly due to the poor marketing strategies and farmers being unaware. Through our project this problem of the farmers will be resolved. Our application will help them to register their product to the market from anywhere.With the help of firebase the information can be stored and retrieved. The layout of the app is created using android studio.

Keywords: *Demand and Supply System, Agricultural Produce, Farmer's Market*

1. INTRODUCTION

India is an agricultural country, almost 58%of India's population depends on agriculture asprimary source of income. Agriculture also has a big impact on country's economy. The share of agriculture in GDP raised upto 19.9% in 2020-21.

This shows that it plays an important role in country's economy by improving the income of farmers. As it is more convenient, farmers take theirproduce to wholesale markets called mandis. Theysell their produce to traders through auction. It is often seen that due to the middleman both theproducers and the consumers get a poor deal. Also due to the transport and storage cost, marketing thisproduce is a major problem. The one who suffers inthis is the farmer. It is seen that there is a need to make an efficient market system so

that it helps the farmers to reduce the post -harvestcost and get a good deal for their hard work. A good market system can also promote foodsafety practices.

2. LITERATURE REVIEW

To understand the problems and find the solutions, we did research by reading several research papers based on our topic. Based on a study on production and marketing on fruits and vegetables in Kerala with special reference to (VFPCK) Vegetable and Fruit Promotion Council,Kerala, we understood that with rapid increase in population, the increased demand for food needs tobe fulfilled. For this, farmers need to be promoted and motivated to participate in group marketing strategies. This will help them in getting good profitand in turn produce more.

Another research based on a study of villages around Wardha, it was found that even after providing the needed amount of food, the issue of low nutrition was spotted in rural areas. To compensate for quantity, the quality of nutrition was at stake. The farmers need to be given subsidiesand insurance so that they can provide with good quality food. A good infrastructure is also needed. The farmers need to understand and implementland management practices. Further quantitativeresearch is required to determine which interventions will be feasible, effective, and acceptable to the communities.

3. METHODOLOGY

The application is created using android studio. Firebase is being used to store and receive data on the display screen. Using firebase we can track themarket status and store data.

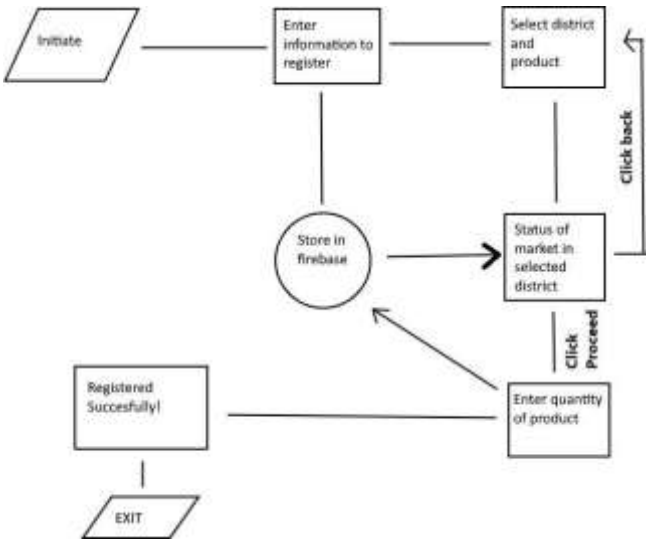
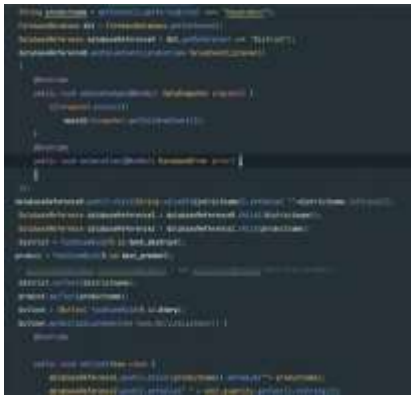


FIG. 3.1 Flow of the application

The firebase will store the date entered by the user and the quantity of the products which will help tokeep track of the market.The user will be able to navigate through the app using the buttons. From FIG. 3.1 the flow of the application can be better understood.



The FIG.3.2 shows the connectivity of the application with firebase.

4. RESULTS AND DISCUSSIONS

After the completion of the project, now theusers will be able to register their products from anywhere to the desired market place.

FIG.4.1 Entering user information.

The customer/ farmer will Enter his nameand mobile number to save his information. The information shared will be visible on the firebase. This will be helpful in keeping the track of all the products and registered users.

FIG. 4.2 Selecting the district and product andRegisterd quantity is displayed.

From Fig. 4.2 you can see that After registering the user will be able to select the required district and the product he wants to sell inthe market. The app will then receive the information based on the selected district.

FIG. 4.3 The entered information stored in firebase.

The received data will then be showed on thescreen. As seen in FIG. 4.2 the user can decide if hewants to register the product in that market orchoose another market. By clicking proceed, the user will then be able to select the quantity of the selected product

The FIG.4.3 shows the information entered by the user in firebase. A user can register multiple products in the application. The entered user information about the all the registered products ina district can be retrieved and seen on the screen.

FIG. 4.4 Registering the quantity

After selecting the quantity the product will besuccessfully registered. Through this application the whole process will be transparent to the users and will help them from all the inconvenience .

5. LIMITATIONS

There are some limitations to the application that should be fixed in the future. Currently there isno counter measure for false data input of products. There is no cancellation process. English language is used throughout the application which can be problematic for people who don't speak thelanguage

6. FUTURE SCOPE

To increase usability and to make the application more user-friendly map feature can be added to theproject. Also, local languages can be included so that all people can access the application with ease.We can also add safety measure so that no false input of information can be entered. We can develop the

app from retailer's perspective so that balanced flow of demand can be ensured.

7. CONCLUSION

To conclude, through the application created with help of android studio, firebase, Java, XML, our project aids farmers to register and sell their product on the market while knowing the current pricing of different products available on the market.

The purpose of our research is to maintain flowof supply and demand in farmer's market with objective of decreasing exploitation of small scale farmers and maximize efforts so that farmers can receive well deserved profits to their efforts.

8. ACKNOWLEDGEMENT

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