Mobile Application For Agricultural Marketing

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Abstract- *Farming is the Prime Occupation in India in spite of this, today the people involved in farming belongs to the lower class and is in deep poverty. The Advanced techniques and the Automated machines which are leading the world to new heights, is been lagging when it is concerned to farming, either the lack of awareness of the advanced facilities or the unavailability leads to the poverty in farming. Even after all the hard work and the production done by the farmers, in today's market the farmers are cheated by the Agents, leading to the poverty. Agri marketing would make all the things automatic which make easier serving as a best solution to all the problems. This will serve as a way for the farmers to sell their products across their reachable zones just with some basic knowledge about how to use the app. This app will guide the farmers in all the aspects, the current market rate of different products, the total sale and the earned profit for the sold products, access to the new farming techniques through eLearning and centralized approach to view different government's agriculture schemes including the compensation schemes for farming. Through this app the farmers can have direct communication with their customers and also with the government. This app helps the farmers by connecting them with appropriate customers in a way that both the farmer and the customer gets the best price for wide variety of agricultural products. The various compensation schemes offered by the Government can be claimed by the famers by sending a compensation request within the app itself.*

Keywords- Agricultural Marketing ,Agriculture, Product, Farmers, Buyers, Sellers.

I. INTRODUCTION

Government, private agencies and the general public are often interested in the decisions made by the Indian farmers as they have large influences beyond the farm boundary. More than 200 million Indians are agricultural laborers as of 2013. They alone contribute to more than 13.7 % of the GDP growth of India. Agriculture clearly remains one of the most important portfolios in developing the Indian nation's growth.

The upliftment and improvement of rural livelihoods of these communities will lead to farmers being able to pursue some other profession, Over many years, the process of adoption of new technologies and policies in the Indian agricultural sector has received considerable academic attention highlighting the role of many social, financial and other influences on their decision making.

For India, over the last decade, the markets in both developed and developing countries have been flooded bymobile phones, tablets, and other pervasive devices .This system allows the user to login and provide his details in the login page. The users are differentiated either as a seller or a buyer based on the category they opt to. The sellers are required to update their product details frequently. The buyers can search for the products. The search item is mapped to the corresponding sellers and their details are retrieved onto the search page. The buyers can choose the sellers from the list. Once a product is updated the users who have searched it will be notified.

II. EXISTING SYSTEM

Kisansavida is an application launched in 2016 to work towards empowerment of farmers and development of villages and this application offers a user friendly interface. It provides whether information and also forecast for next 5 days, market prices of crop in nearest town, knowledge on machinery, seeds, fertilizers etc.

IFFCO Kisan Agriculture application is launched in 2015.This application help farmers to make informed decisions through customized information related to their needs. This applications allows the users to access variety of modules like whether, market prices, agriculture information library in the form of text, images, audio and videos in selected language. This application also provides helpline numbers for enquire their queries with kisan call centre services.RML farmer is an application for farmers where they can keep up with product prices, using of fertilizers and pesticides precisely, whether forecast and farmer related news.It also provides news about government's agricultural schemes and policies and agricultural advice. This application allows the users to choose from over 3500 whether locations,450 crops varieties and 1300 m and is across 50,000 villages and 17 states of India . It works with the help of specific tools designed to provide or analyse information on different aspects of farming habits. Examples: Crop Doc helps

in identifying problems that affects cropat right time and suggests corrective actions; Farm Nutri Provides personalized and general nutrient recommendations, which are in the form of a fertilizer dosage. The union Agriculture Minister in 2016 launched the application called Pusa Krishi and aim to help farmers to get notification about technologies developed by IARI , which helps in increasing returns of farmers. The information related to new varieties of crops developed by Indian Council of agriculture research (ICAR) will provide to farmer in this app, resource conserving cultivation practices as well as farm machinery and its implementation will help in increasing returns to farmers. AgriApp provides complete information on Crop Production, Crop Protection and all relevant agriculture allied services. It also enables farmers to access all the information related to "High value, low product" category crops from varieties, soil/ climate, to harvesting and storage procedures. An option to chat with experts, video-based learning, the latest news, online markets for fertilizers, insecticides etc. are also available on this app.

III. PROPOSED METHEDOLOGY

The proposed system is a mobile app for market analysis of agricultural products. The application is included with features like the buyer will be notified about the sudden fluctuations about the prices. The buyer will be able to contact the seller with the provided details by the seller. This application accepts the user's details while they login and classifies them to either seller or a buyer. All the user details are stored in a database. The seller can update the product details like the type and quantity. The search item of the buyer is mapped to the sellers having that item. The seller details are extracted based on their products. The database is frequently updated with the prices from government portal

When a product detail is updated by the seller the buyers who searched are notified. There are different modules in this application

3.1 USER REGISTRATION AND LOGIN MODULE

Application allows two types of users Farmers (Sellers) and Customers (Buyers). Registration and login process is same for both farmers and customers. After successful login to the application user is allowed to access the modules where the user can check market prices and can post the require or available products.

3.2 PRODUCT PRICE MODULE

In this module, after successful loginthe user is allowed to see the minimum, maximum price of product given by the government and product prices in different markets in their nearest location. This minimum and maximum price of product will be fixed by the government and will update the prices in database through the government portal. From database the product prices fixed by the government will be displayed in this module.

3.3 PRODUCT UPDATE MODULE

In this module, Farmers can update the products with the quantity that they have and expecting price. This update will go to customer as a notification. Suppose the customer is looking for some product, if farmer updates such type of product then it directly notifies to the customer with the farmer details.

3.4 NOTIFICATION MODULE

In this module, whenever the farmer updates the product that the farmer has, then notification goes to all customers in the nearest locations. These notifications can be seen by the customers in the notification list, notifications contains the details such as product name, price of the product and contact details of the farmer. As well as, customers can post the requirement of products that they need, this notification goes to all the farmers in the nearest location, if farmers have product they can contact with customers. This notification contains the same details as farmer notification.

IV. IMPLEMENTATION OF PROPOSED SYSTEM
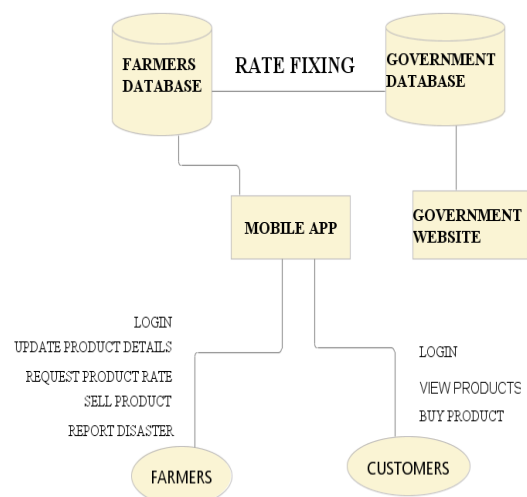
This mobile applicationis connected to the firebase backend. All the data entered through this application will be stored in firebase storage. Since the firebase database stores all its data in JSON tree format which is used to represent data in JSON document. The data stored in JSON document has well

formatted structure. If the stored data is in well formatted structure then it is easy to write the data as well as to retrieve data and also on the structured data querying becomes easy. The structure of the database should be construct before reading and writing the data into the firebase database. In this application all the user details entered during registration stored in database and whenever the user need to login to the app then it checks in the database whether the user is registered already or not. Whenever the government updates the prices of each product then it will update in firebase database. One of the better feature of firebase is data synchronisation is used in real time ,whenever the data updates through the application from Farmer interface that will reflect immediately on customer interface. Suppose farmer post the product that immediately notifies in customer notification module.
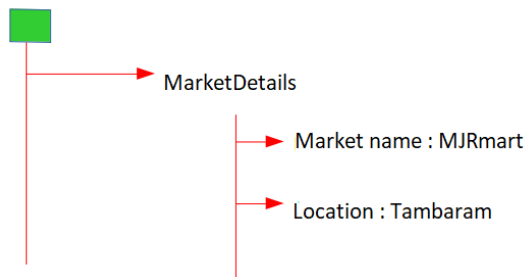
The above diagram is the example structure of how the firebase database stores the data that is updated from the application. And this data will be showed to the user based on the module that is being used by the user.

V. FUTURE SCOPE

This application can be further enhanced to raise the complaints by the user to the government if any illegal activity happens and can report about the disaster from application.

VI. CONCLUSION

The Big Data environment is a massive tool with the potential for creating various applications for researches, farmers and policy makers. Agricultural domain is a context rich environment. It possesses several distinct requirements due to variety of land, weather and crops all over the world. The collected information can be effectively utilised only when it could model the situation in a well mannered way. The main focus is to create a quantum change in the agricultural community by harnessing digital technology.

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