REAL TIME ASSISTANCE FOR INDIAN AGRICULTURE

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Abstract: Mobile or smart phones are becoming an essential device for all types of people irrespective of age group and literacy. This can improve the condition of Indian agriculture but also the life and working conditions of the farmer. Advances in Information and Communication Technology (ICT) are promoting agriculture in India. Computational power and interconnection capacities have contributed smart phones and tablets to become an essential tool in agricultural sector. Our agriculture project using mobile application discuss everything about providing notifications on various agricultural updates as per user requirements , crop cultivation based on humidity of the environment , provides experts suggestion during cultivation on his/her mobile phones. The updates varies from rate of product to stocks of other products in the market, this is helpful for farmers around the state. This app updates is mainly concerned about specific group of customers which is farmers, its update status on a particular product is as per the user choice.

IndexTerms **– Mobile application, Information and Communication Technology, Notifications, Rate of Products .**

I. INTRODUCTION

India is a land of agriculture. Agriculture may be defined as an integrated system of techniques to control the growth and harvesting of animal and vegetables [1]. The development of agriculture has much to do with the economic welfare of our country [3]. Agriculture is one of the most important things for a developing country like India. Contribution made by India through agricultural sector in GDP (Gross Domestic Product) is more than any other country, annually. More than half of our country population depends on agriculture either directly [4]. The increasing use of mobile devices has created an opportunity to make useful information more widely available. The main objective for such project is to develop a mobile phone based solution that helps in management, improvement and maintenance of land.

Mobile or smart phones are becoming an essential device for all types of users irrespective of age group [5]. Mobile technology in India has created high possibilities in communication medium to reach out to the masses. Android is the open-source mobile operating system developed by Google is emerging as a choice for developers.Its open nature has encouraged a large community of developers to use the open-source code as a foundation for community-driven projects which deliver updates to older devices, add new features for advanced users [2].

The vast majority of Indian farmers which includes small-scale producers are often unable to access the information and technological resources that could increase the yield and lead to the better prices of their crops and products [9]. Android based application can be widely implemented in the near future this will benefit people in rural areas.

II. EXISTING SYSTEM

The existing system provides suggestion for consumer to buy different products with respect to their requirements[10]. The goal of the project is to help farmers in improvement of agricultural fields by providing suggestion for them.

Small farmers cited market prices, weather information and seed information as their top needs. It also studies stakeholder's interest and willingness to use the mobile apps for their daily activities. Market prices are valuable not only in deciding where and when to sell, but also in deciding the cropping pattern[7]. It proposes android based mobile application which could take care of updates of different commodities and weather forecast updates. Kissan Kerala in its attempt to redefine the services provided to the farming community has introduced a new feature to cater to the needs of the farmers to its full potential[5]. This app provides weather details of the state along with information that contains agricultural news and animal husbandry to farmers.

DISADVANTAGE

It provides help during cultivation through these information. It does not send notification when update to a product is made.

III.PROPOSED SYSTEM

The proposed system gives suggestions to farmers by providing experts advice for cultivation. It also shows updates in various agricultural products for customers and agricultural stakeholders. The application gives update notifications for the users in his/her android devices. This app investigates complex information about the products.

Registration module

Users (i.e., farmers) can register their information in the first phase along with the details of their state, phone number, email id and other necessary details along with their choice of crops for which they need information. These details are stored in database for future reference.

Crop details module

There are information about the crops that user needs to know, which includes name of the crops, type of crops, details of the crops given by the users

Notification module

This application sends notifications about details of the crops and also the weather status of that particular area which is useful during cultivation. It sends precise message with specific information. Reach out to the mobile through notification on mobile device. Weather reports of the location are provided through phone number of the mobile[6].

Database module

Database is a structured collection of data, in general. The data are organized to represent important details. In our project, it is about crops in such a way that it supports process of raw data given by user who are needing this information.

Cloud storage is a model of data storage in which the data is stored in logical pools, the physical storage with multiple servers and the physical environment is typically owned and managed by a company. The cloud storage providers are responsible for keeping the data available and accessible. The cloud storage we are using is “go daddy” cloud storage. We are using about 1GB of memory storage for the application.

Cloud storage services may be accessed through a co-located cloud computer service, a web service application programming interface (API), for example cloud desktop storage, a cloud storage gateway or Web-based content management systems.

IV. ARCHITECTURE DIAGRAM

Farmers can login to the app by first registering their information which is then stored in a database along with user’s requirements as shown in figure (a). Crop details are then retrieved from database after which they are moved to the weather status of the state that is given by the user. Farmers can help themselves by knowing the crop details [8]. Notifications are not mandatory for every user.

The details of the selected crops are given through notifications. Notifications are sent to only users who have opted for it. Data are stored using cloud storage provider. All information regarding users, crops, weather and details of notification to be sent.

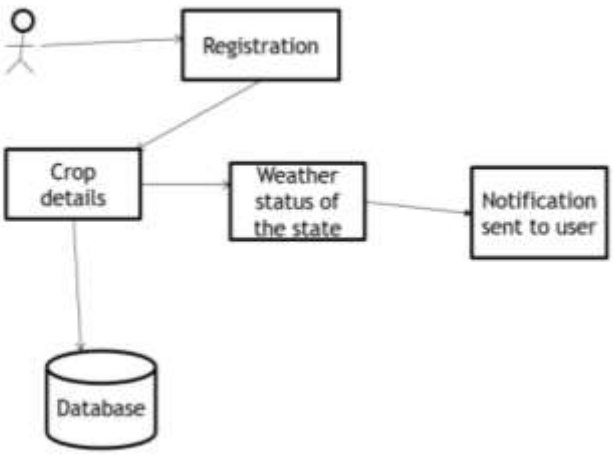

Figure (a) Architecture diagram of the process

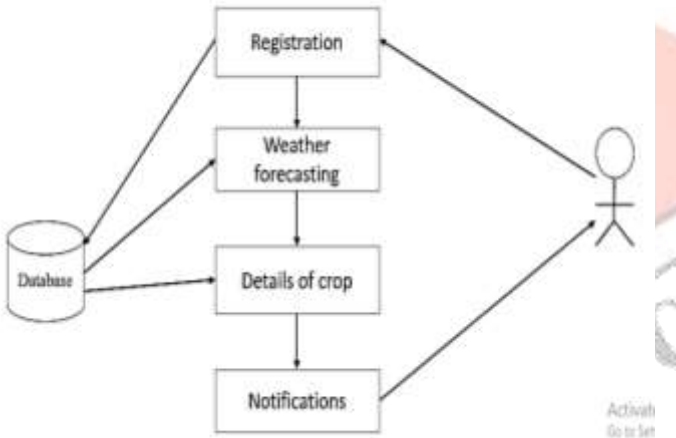

Figure (b) Use case diagram

Figure (b) shows the use case diagram which describes the procedure by which the application works. User can give their personal details through registration module which is stored in database.

Climatic conditions of the area are also given by database along with details of the crops[6]. That information is given to the users who have registered.

V. SCREENSHOTS

Registration

The user needs to create account for using the application as shown in figure (c). User needs to enter their mail id and password to start the registration.

Figure (c) screenshot of registration page

Figure (d) shows the further details such as name, registered mail id along the password are entered to continue the process.

Figure (d) other details required

Details of the crop with its name, type and other details are given by the user or farmer in crop registeration page[1]. More crop details can be added by add button as shown in figure (e). By using show all records user can view the crops they have selected.

Figure (e) crop details are entered

The details are displayed for the user to confirm whether the information given are correct as shown in figure (f). If information needs to be modified we can use edit this record. User can also delete the crops if not needed.

Figure (f) displays information about crops

VI. CONCLUSION

The application would provide convenience for the users to get details about crops, weather details and sends notification to the users who have opted for it. The speed of data that will be received is based on user's network bandwidth.

Future enhancement can be made for this application by making it as an offline application also with agricultural news and suggestions or advice from experts from every corner of the country.

VII. REFERENCES

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