

AGRONOMY-An Android Application Regarding Farmer Utility

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Abstract- India is an agriculture based developing country. Information dissemination to the knowledge intensive agriculture sector is upgraded by mobile-enabled information services and rapid growth of mobile telephony. It bridge the gap between the availability of agricultural input and delivery of agricultural outputs and agriculture infrastructure. This paper gives details about Android App developed for agricultural assistance to the farmers in their farming activities. This software application is basically for sustainable development of farmers. This system combines modern Internet and mobile communication systems with GPS that are efficient and smooth for farming. This paper is developed on brief study of some of the common problems faced by the farmers across the state. This project aims to bring the spark of 21st century to that 70% population who are land worships. This paper is about an android application, using ICT, promoting e-governance by providing continuous information relevant to agriculture like 7/12 Extract, weather forecast, crop prices, news, Krushi Offices, Fertilizers, Pesticides, Insecticides and even enquiries about the particular information . It is one farmer's friend kind of application. The application has been designed taking Maharashtra into consideration.

Keywords: Android, ICT, GPS, Fertilizers, Crop Prices

1. INTRODUCTION

In recent years, the emergence of smart phones has changed the definition of mobile phones. Phone is no longer just a communication tool, but also an essential part of the people's communication and daily life. Now the Android system in the electronics market is becoming more and more popular. Because of the open source, some of the development tools are free, so there are large number of applications that are developed. This has greatly inspired the people to use the Android system. After studying some previous Android applications, we utilize the Java language, the Eclipse platform, Android ADT and the Android SDK to develop these mobile applications. These systems have a nice interface and smooth operation. These Apps won't steal any personal information, but can exclude useless information and bring a wonderful user experience. Farmers are capable with a low cost smart phone and the particular software to gain facilities which couldn't available on their hands before. The developed project gives a mobile phone based solution that helps in farm's management, leads to agricultural yield improvement and helps in catering the farmers' needs.

2. OBJECTIVE

To make available the 7/12 extract to the farmer. To provide the farmer information regarding manufacturers and dealers of fertilizers, pesticides and insecticides. To keep the farmer updated with news and market prices.

3. EXISTING SYSTEMS

While studying existing system, we came to know that there are various applications providing information to the farmer. The existing applications provide only some basic information to the farmer. The current application are available in India in the different languages of the different state and some of them is available for the all over the India, our project extends affordable by ordinary people. It will helpful for the Maharashtra state farmer. It would provide a specific information and not a bulk of information.

4. SOFTWARE REQUIREMENTS

To describe logical and physical characteristics of each interface between software product and hardware components of the system. This includes the supported device types, the nature of the data and control interactions between the software, hardware and communication protocols to be used.

1. Platform: Android Studio 1.5.1
2. Technique: Android Java
3. Backend:
4. Extra: *wamp

5. HARDWARE REQUIREMENTS

Describe the connections between this implemented system and other specific software components (name and version), including databases, operating systems, tools, libraries and integrated commercial components. Identify the data items or messages coming into the system and going to describe the purpose of each. To Describe the services needed and the nature of communications.

1. Hard disk: 1 GB disk space
2. RAM: 512 MB
3. Processor Speed: 1.5GHz
4. Processor: Pentium processor
5. Interface: Android mobile

6. SYSTEM ARCHITECTURE

The architecture defines the components, their interfaces and behaviors. The deliverable design document is the architecture. The design document describes a plan to implement the requirements.

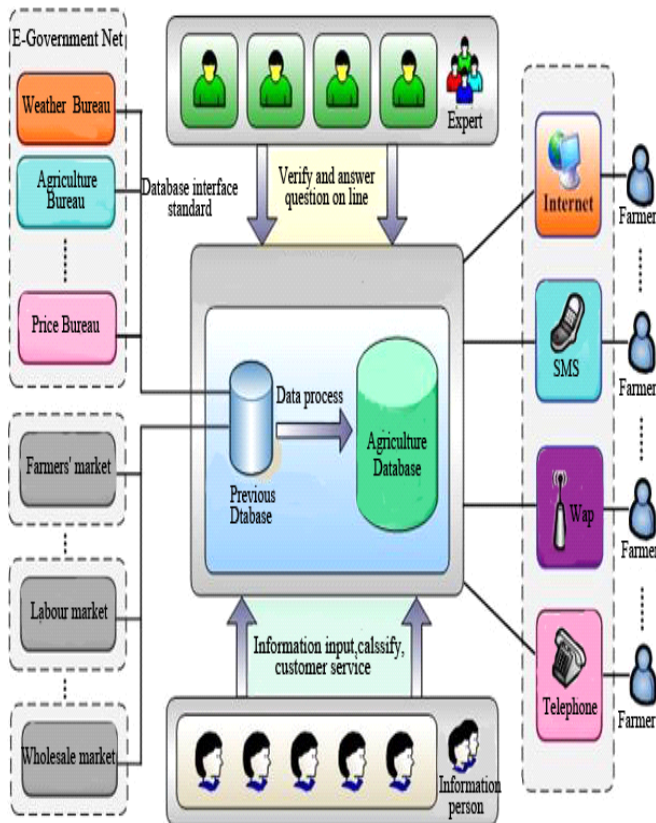


Fig1: System Architecture

7. LOGIN

The user will have to login to maintain his information in the database for further use.

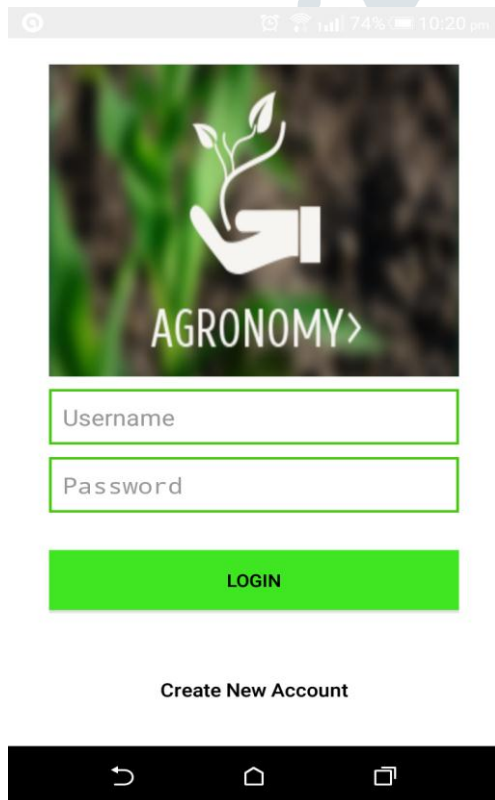


Fig2: Login Window

8. MAIN DASHBOARD

This is the main window where the user will access all the functionalities of the application.



Fig3: Main Dashboard

9. NEWS

News related only to agriculture field will be displayed so as to avoid the data which is not useful to the farmer.



Fig4: News Window

10. FERTILIZER

Farmer will get the details about the manufacturers and dealers of the fertilizers, insecticides and pesticides. Farmers can contact the particular company through the app.

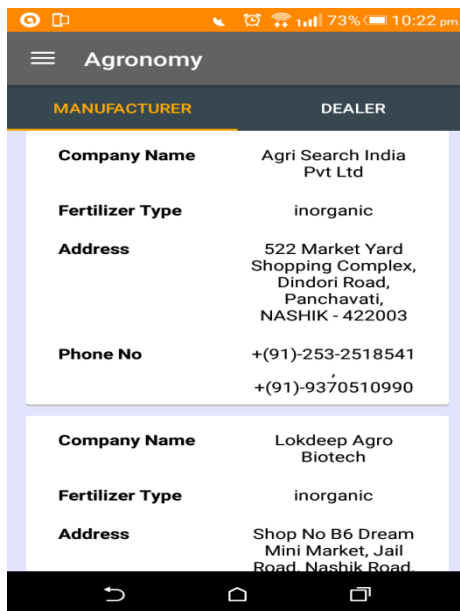


Fig5: Manufacturers and Dealers

11. KRUSHI OFFICES

Any enquiry about the crop, seeds, equipments, policies, etc. can be obtained here .

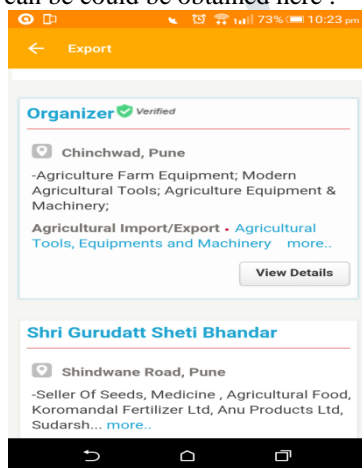


Fig6: Krushi Office Details

12. ENQUIRY

If farmer wants to get information about the fertilizers, crop information, details of the manufacturer or the dealer, etc. he would be able to send an enquiry request to the admin panel and would receive the details in return.

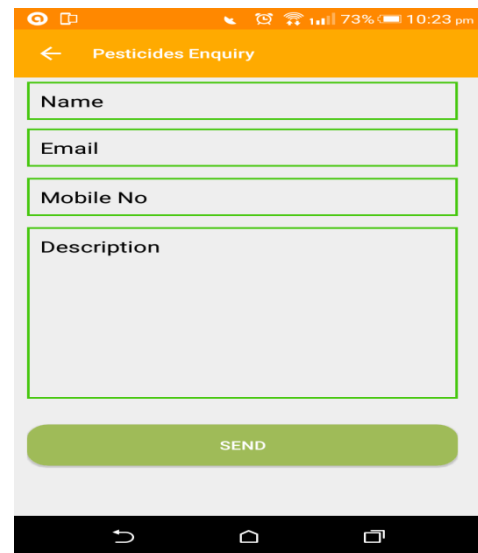


Fig7: Enquiry Window

13. CONCLUSION

The availability of agricultural information directly in a farmer’s hand without him being dependent on neighbors or zamindars or even waiting for a SMS response from the mKisan portal like schemes, will enable the farmers to take better decisions in short time. This will not only foster greater productivity but will improve a farmer’s life reducing stress and also instilling zeal to learn new technology which is essential in this era of Digital Revolution. Some other areas of agriculture whose information is frequently required by farmers are about seeds and fertilizers, the loan schemes, etc. The application currently is offered in 2 Indian regional languages but agricultural data from web services is only in English. Future versions and work on the application will be to incorporate the above features. Future work will be to build a commercial sellable product with possible additional features like harvesting, or a video camera sending live video feed to the farmer’s cellphone via an IP Camera. Use of Radio Frequency (RF) and WiFi Network can increase the operational distance of the vehicle but involves high costs and less accuracy with high risks. Future work will be application of these communication networks.

14. REFERENCES

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