

# e-Krishakmitra

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**Abstract-** Agriculture is believed to be the backbone of Indian economy. A backbone that has been bent since a long time now as farmers are suffering huge economic losses due to climate change. But the advent of Information and Communication Technology (ICT) to develop agriculture in India shows us promising ways to solve this problem. It is imperative to find an efficient solution for the farmers that can help them in cultivating crops which can give them a better yield and are suitable as per the present weather conditions. In this paper, we propose an android based app, e-krishakMitra intended to address this issue. Further, it will act as a complete farmers friend helping them in taking strategic decision by suggesting them about various issues related with the cultivation of crops such as soils current nutrient status, irrigation needs, pest and disease identification, yield estimation etc.

e-krishakMitra is a cloud based application which provides both Hindi and English interfaces to seek different queries in real time related with the crop cultivation .The unique features of e-krishakMitra are its simple and user friendly interface.

**Keywords-** ICT(Information and Communication Technology), Android, Climate change, app,

IMD (Indian Meteorological Department, Language  
C. Computer Systems Organization  
C.2 COMPUTER-COMMUNICATION NETWORKS  
C.2.4 Distributed Systems

- 1.Client/server
- 2.Distributed applications
- 3.Distributed databases
- 4.Network operating systems
- 5.Distributed \_le systems
- 6.Security and reliability issues in distributed applications

## I. INTRODUCTION

In India today, more people have access to mobiles than to running water. These new apps present an opportunity like no other to revolutionize life for farmers there. Still raising venture capital to roll out SmartAgri across India, his invention eptomizes an accelerating trend in that country, where techinques are taking advantage of the high mobile penetration to help farmers improve their bottom lines.

Growing up in India, first hand how limited access to education and basic crop information kept many farmers locked in a cycle of low productivity and poverty. To combat this situation and capitalize on the fact that India, a nation with 1.2 billion citizens, now has almost a billion mobile subscriber developed , an app that communicates with underground sensors to deliver easy-to-understand data, such as soil moisture and mineral levels, to farmers mobile devices.

- e-krishakmitra is multi-functional application platform designed for Indian farmers. Facilitating sharing of information and knowledge about agriculture.
- Krishi Business and Guidelines, Governmental schemes, crop management, market rates, general updates, answers of farming queries by agriculture professionals and success stories in agriculture.
- Crop diseases and pests, as well as management practices (irrigation, nutrient management) according to real-time weather conditions at the village level.

Modules:

1. Crop
2. Soil Testing
3. weather Report
4. Paste and Disease.
5. Yield and Storage
6. Market Price
7. Fertilizations
8. Transport system

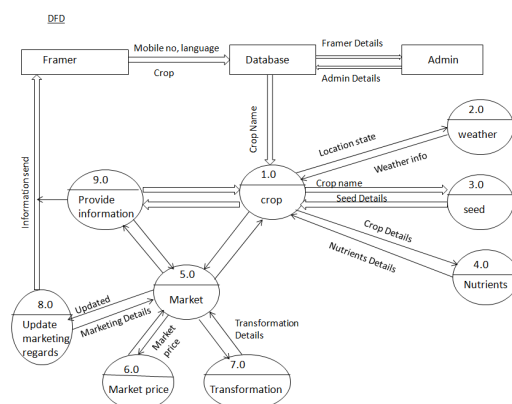


Fig. Flow diagram

**II. LITERATURE SURVEY**

1. **Title:** Intelligent Agriculture Greenhouse Environment Monitoring System Based on the Android Platform

The traditional automated monitoring systems are wired and larger in size. It mostly uses only PC as a surveillance terminal, which works efficiently but does not give portability. This article proposed an intelligent Monitoring System which is based on android platform gives facility to access monitored parameters quickly on mobile handsets anywhere from the world.

2. **Title:** Advanced Networks and Telecommunication Systems (ANTS), 2011 IEEE 5th International Conference

Thailand is developing to fully apply the Internet of things (IoT) into daily life because IoT is a new trend of the technology and it is very popular today. The IoT helps us link objects and mechanisms to the internet for remote control. In addition, Thailand focuses on agriculture because Thailand is an agricultural country and it is also the main occupation of people in the country, which makes agriculture have many formats in Thailand, but hydroponics

3. **Title:** Ubi-media Computing and Workshops (Ubi-Media), 2017 10th International Conference

Water is an essential component for the development of plants in agriculture or irrigation. The paper stresses on the need of an externally hosted cloud computing platform to manage the database, android and the isolated server by the users across the country for irrigation. The system proposed in this paper uses information and communication technologies, allowing the user to consider and examine the information obtained by different sensors.

**III. OBJECTIVES**

The main objective of e-krishakmitra project is to suggest crops to the farmers according to their current location and regional weather conditions.

It helps farmers in major aspects of farming like knowing about their soils current nutrient status, irrigation requirement, pest and disease identification, yield estimation of seeds. The objective of suggesting suitable crops would be successfully developed for Maharashtra State .

e-krishakmitra is an app that integrates various aspects of farming such as crop selection, soil nutrition,

irrigation ,seed selection, pest disease problem and yield estimation.

**Advantages:**

- No start up costs.
- Great flexibility in relation to fast up and down scaling of resource needs.
- Easier access to new versions.
- Weather updates can be arranged to change after some specific duration so latest updates can be fetched.
- Native language support has been provide

**Application:**

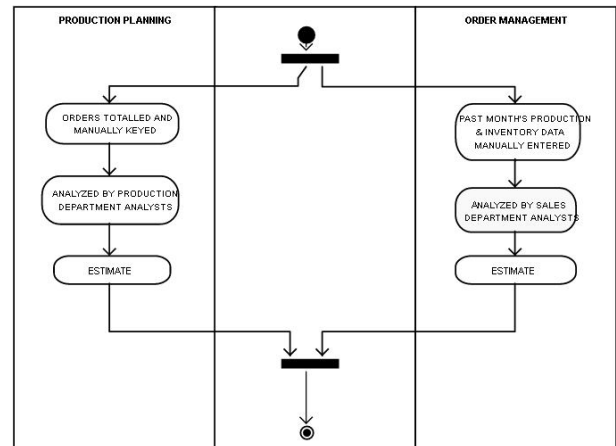
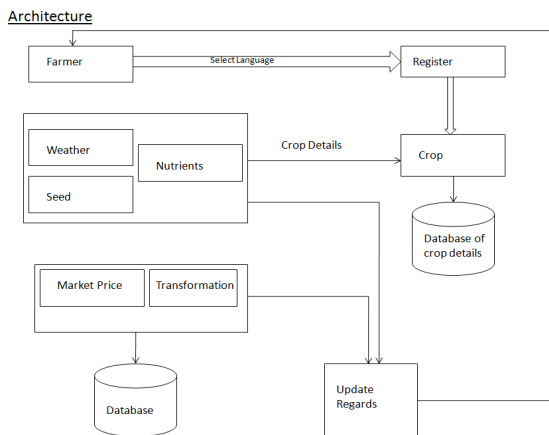
- It provides complete information on Crop Production, Crop Protection and all relevant agriculture allied services.
- It also enables farmers to access all the information related to “High value, low product” category crops from varieties, soil- climate, to harvesting and storage procedures.
- An option to learn the latest news, online markets for fertilizers, insecticides etc. are also available on this app..

**Project Plan**

- Requirement Specification
- Literal survey
- Technology familiarization
- Start design
- Working on the application
- Preparing documentation

| Task Name                     | Q3  |     |     | Q4  |     |     | Q1  |     |     | Q2  |     |     |
|-------------------------------|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
|                               | Jul | Aug | Sep | Oct | Nov | Dec | Jan | Feb | Mar | Apr | May | Jun |
| 1 Requirement Gathering       | █   |     |     |     |     |     |     |     |     |     |     |     |
| 2 Literature Survey           |     | █   |     |     |     |     |     |     |     |     |     |     |
| 3 Mathematical Modeling       |     |     | █   |     |     |     |     |     |     |     |     |     |
| 4 Feasibility Testing         |     |     |     | █   |     |     |     |     |     |     |     |     |
| 5 UML Diagrams                |     |     |     |     | █   |     |     |     |     |     |     |     |
| 6 Database Design             |     |     |     |     |     | █   |     |     |     |     |     |     |
| 7 GUI Design                  |     |     |     |     |     |     | █   |     |     |     |     |     |
| 8 Functionality Implementatic |     |     |     |     |     |     |     | █   |     |     |     |     |
| 9 Testing                     |     |     |     |     |     |     |     |     | █   |     |     |     |
| 10 Reporting                  |     |     |     |     |     |     |     |     |     | █   |     |     |

**IV. SYSTEM ARCHITECTURE**



Fig; Activity digram

**V. CONCLUSION**

This expert system or interface will need to be researched further for implementation. Hence future of this task lies in developing the actual system schema and adding extra new functionalities which may be implementation specific. The proposed interface can overcome the language barrier which are main challenges of growing the ICT(information and communication technology).also cost of development includes in a language translation, speech recognition ,text-to- speech. In future, the scope of this system or interface can be increased by adding extra various functionalities.

**VI. FUTURE SCOPE**

In Future this system will be more native language support and dynamic query resolution. Also, downloading various data and information provided by experts will be possible through the application

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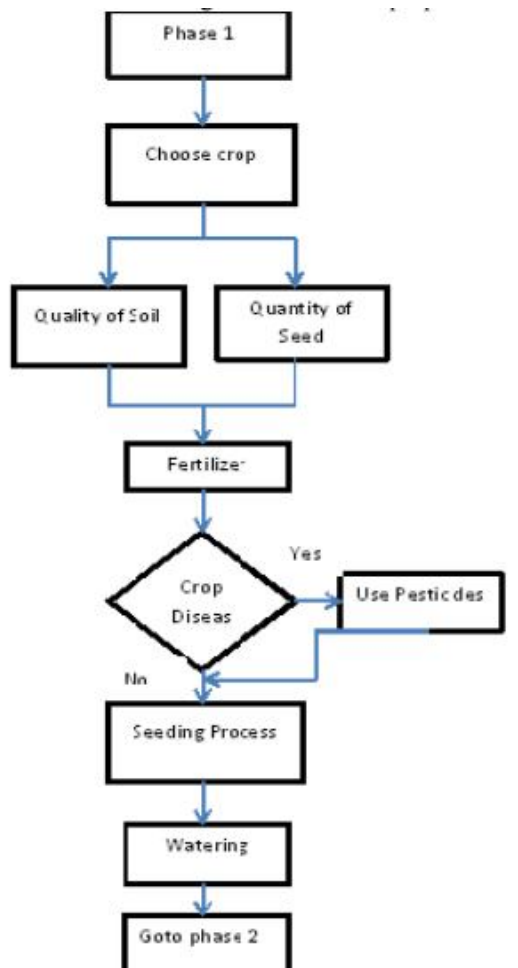


Fig:Flow chart

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