

# **Farming Information and Interactive Technical Assistant using Android Service**

Reeja S.R., PhD  
VIT-AP University

Ishfaq Yaseen  
Prince Sattam Bin Abdul Aziz University, Saudi Arabia

## **ABSTRACT**

This paper assists the personnel in charge of village events. It provides an interface for teams to store their data in order to conveniently organize awareness activities. They can develop event schedules, data needed for events such as power point presentations on seasonal crops, and related paperwork. Villager can send queries and ask suggestions to the professors. The objective is to develop an application which provides the details of various crops provided by government to the user. The goal is to create an application that automates the procedures and allows users to do numerous tasks. This project is mainly developed to provide details of crops and events provided to the users. This allows users to view their event information and its status to help user for better environment and friendly application. The mobile sector is currently one of the fastest expanding businesses. Many competitors in this field are conducting research and development on new platforms and user experiences. Google's Android technology, which is supported by Google phones, is one such example. These handsets are referred to as Next Generation mobiles. This paper is mainly developed for improving the Farmers atmosphere.

## **Keywords**

Android Service

## **1. INTRODUCTION**

Mobile technology have come to penetrate almost every aspect of our lives. The cell phone has not only become the most essential communication technology in the world, but it also provides access to the internet, audio-visual records, and financial transactions. The introduction of smartphones, in particular, has provided customers with a plethora of new services. In literature survey look into the details about the existing system and try to reduce the disadvantages of the existing system. This method try to improve the performance and the efficiency of the new system.

Several authors have investigated the technological trends that are likely to shape the future use of information and communication technologies. Yet, there has been no research of how these developments may be significant for agricultural service provision in underdeveloped nations. This paper discusses mobile technology trends that may be relevant to smallholder farmers and examines their implications for agricultural growth in low-income countries to help close these knowledge gaps. The following three trends are specifically evaluated: (1) the increasing variety of devices used to access mobile information and functions, (2) the Internet of Things, which connects sensors and intelligent items, and (3) the ability to collect data from a big user base and social networks, produce solutions together and foster learning. All three developments indicate a shift in how individuals and businesses

use mobile devices, i.e. From single devices that provide specific services to ecosystems of various networked gadgets that provide many services[1].

## **2. LITERATURE SURVEY**

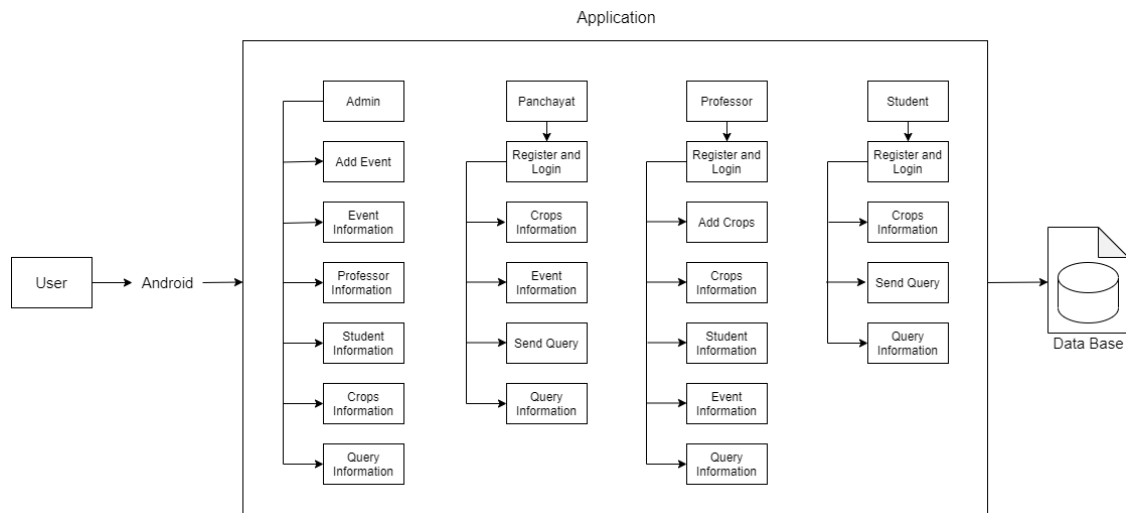
The existing application has details of farmers and panchayat through villagers but it cannot retrieve details of the status accomplished successfully within limited amount of time. Here, it occurs a problem to find out if status requested by farmers is provided or left unfinished which leads to a major problem in emergency conditions.

Increased food supply through technological advancements will be critical in agricultural research and investment's potential to achieve long-term food production and food security[2]. A renewed focus on innovation, as well as investments in research, technology, and capacity building, are essential to boost sustainable agricultural productivity. The phrase Agricultural Green Economy implies an extensive set of dietary diversity, transit, durability, and exploitation rights, as well as nutrition security[7] and [8]. This may improve rural livelihoods while properly managing natural resources and promoting resilience and equity along the entire food supply chain, taking into account the particular circumstances of different nations and individuals.

To scale up agricultural innovation, decision-makers and stakeholders from the public and corporate sectors, civic society, and farmer organisations must get a better grasp of actionable channels, new alliances, and commercialization methods[4]. Governments at all levels must work together with civic society, farmer associations, and the corporate sector to provide the circumstances for launched a new initiative to thrive. To do so, they must connect multiple actors, build capacity for agriculture and other interested parties to interact, and offer rewards for creativity. Research and extension services that foster scientific knowledge sharing and digital partnerships within agricultural supply chains are the foundation of agricultural innovations[3].

## **3. METHODOLOGY**

In developed system farmers, villagers and panchayat can view the status of their event and they can also view the status of the previous events and crop information. Once the need for any purpose arises then the student and professor can be availed. This is the way people can be benefited and especially when they are in urge[5]. Fig.1 shows the Admin maintains all the crops and event details. He manages professor, students and schedules to organize the events. He creates the users, user roles and events. Professor creates climate, crops and its files. He/he gives suggestions and reply to the queries posted by villagers. They also maintain student



**Fig.1 Architecture Diagram**

and events details[6]. Students can login into the system and can view the schedule to organize the events. They can also view the reply given by the professor. Villager can ask queries and suggestions to the professor. Can view replies, events and crop details. In this module, the panchayats' can get registered and send request for the awareness program in their village.

#### 4. IMPLEMENTATION CONSTRAINTS

All modules are thoroughly coded in accordance with software organization criteria. The software has been created so that the user may simply interact with the screen. Software is built in such a way that it can be expanded to real-time business operations.



**Fig.2 (a) main Page (b) Home page (c) Registration page (d) login Page (e) Admin Page**

This is the main page that will be visible for a few seconds after the application is opened in emulator. As soon as the app is opened in emulator, Fig.2.(a),(b),(c), (d) & (e) home page will be visible after the main page. In home page two options are available "go to signup page" and "sign in page". On clicking "go to signup page" button, registration page will be displayed. In registration page certain details like user id, password, email id and mobile number are asked for the user to enter and there are also different registrations for professor, student and panchayat. If you are already an existing user by clicking "sign in page" button, user id and password are asked. There are default user id and password for admin. By entering the details, admin home page will be displayed.

As soon as his homepage is displayed, there will be a popup message in the bottom saying "Welcome To Admin Home Page". The options available in admin home page are: add events - admin can organize events for the villagers by providing event name, place of event, organizer name, email address, mobile number and date. event information will be

available for professor, student and panchayat in their respective profiles. event information - admin can also view the event information that he will be organizing. professor information - admin can see the list of all the professors who registered in the app. student information - admin can see the list of all students who registered themselves in the app. panchayat information - admin can see the list of all panchayat members who got registered in the app. crops information - admin can see the information of all crops that are available. query information - admin can see the information of all queries asked by student and panchayat, their status and the reply given by professor. LOGOUT - By clicking this button admin can logout of his profile successfully.



**Fig.3 home page of (a) professor (b) student (c) panchayat**

By entering username and password, professor can log in into the app. As soon as his homepage is displayed, there will be a popup message in the bottom saying "Welcome To Professor Home Page <<Username>>". The options available in professor homepage fig.3. (a) are "add crops", "crops information", "student information", "event information", "query information", "professor profile" and "logout". add crops - professor can add the information of the crops available by entering crop details, place name, suggestions and also by selecting one of the options available for rainfall, soil etc. crops information - professor can also see the crops information that he will be adding. by entering username and password, student can log in into the app fig(b). as soon as his homepage is displayed, there will be a popup message in the bottom saying "welcome to student home page <<username>>". the options available in student homepage are "crops information", "event

information”, “send query”, “query information”, “student profile” and “logout”.

crops information – student can see all the information available about crops. event information – student can see the event details that is being organized. By entering username and password, panchayat can log in into the app fig.(c). As soon as his homepage is displayed, there will be a popup message in the bottom saying “Welcome To Panchayath Home Page <<Username>>”. The options available in panchayat homepage are “crops information”, “event information”, “send query”, “query information”, “panchayath profile” and “logout”. crops information – panchayat can see all the information available about crops. event information – panchayat can see the event details that is being organized.

## 5. RESULTS ANALYSIS

Regarding the availability of mobile computing devices to farmers to interact with smart agricultural innovation in the chosen study location, the study discovered that 89 rural farmers agreed that mobile digital devices are frequently available, 96 farmers agreed that mobile devices are frequently available, 104 agreed that mobile smart devices are rarely available, 46 rural families agreed that mobile devices are occasionally available, and 50 local folk agreed that mobile devices have never been available to them for agricultural implementation.

Table.1. device usage for agriculture

Device Model	Frequency	Percentage
Non-Smart Phones	200	51.94805195
Smart Android Phones	150	38.96103896
PDA& Portables	20	5.194805195
Tablets	10	2.597402597
Laptops	5	1.298701299
Total	385	100

Fig.4.(a)ADD EVENTS - Admin can organise events for the villagers by providing event name, place of event, organizer name, email address, mobile number and date. Event information will be available for professor, student and panchayat in their respective profiles. Fig.4.(b)ADD CROPS – Professor can add the information of the crops available by entering crop details, place name, suggestions and also by selecting one of the options available for rainfall, soil etc. Fig.4.(c)Professor can see the query information such as query id, query and status. By clicking on the query, professor can give reply for that particular query asked and post it. Fig.4.(d) PROFESSOR PROFILE – Professor can see his information such as user id, password, email id and mobile number by clicking this button.



Fig.4(a)admin(add events) page (b) professor(add crops) page(c) professor(reply query) page (d) professor profile

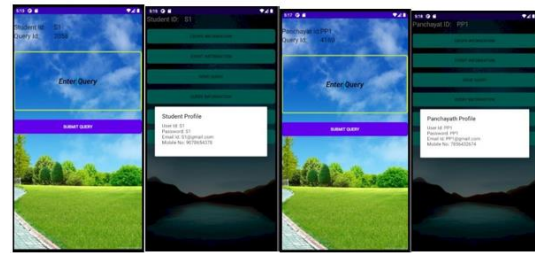


Fig.5.(a)student(send query) (b) profile (c) panchayat send query (d) panchayat profile

Fig. 5.(a) SEND QUERY – In case if the student has any doubt and wants clarity, he can type in his query by clicking this button and send it which will be directed to the professor for reply. Fig.5.(b) STUDENT PROFILE – Student can see his information such as user id, password, email id and mobile number by clicking this button. Fig.5.(c) Panchayat SEND QUERY – In case if panchayat has any doubt and wants clarity, he can type in his query by clicking this button and send it which will be directed to the professor for reply. Fig.5.(d) PANCHAYATH PROFILE – Panchayat can see his information such as user id, password, email id and mobile number by clicking this button. The device coordinates are shown in fig.6.

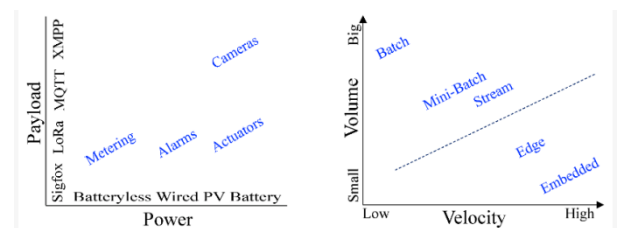


Fig.6. Device coordinate

## 6. CONCLUSION

At the end of this application, the users can perform various operations. Panchayat, Professor and Student can operate their respective options. This application will be helpful for the villagers to clarify their queries through Panchayat. They can also gather more information regarding crops, events etc. This initiative of making every sector run online may help for the development of the country. In future, with the help of this app, people can get the clarification of their queries online from the agriculture office and from all the expert of crop managers.

## 7. REFERENCES

- [1] Baumuller, Towards Smart Farming, Mobile Technology Trends and their Potential for Developing Country Agriculture. Handbook for ICT in developing countries: 5G perspectives. Delft: River Publishers, pp. 191-201,2017.
- [2] Onyebuchi Amaonwu et.al, Adoption of Android IoT Smart Technologies for Rural Agricultural Innovation and Implementation of Green Economy Reforms, International Journal of Applied Agricultural Sciences. Vol. 8, No. 4, 2022, pp. 162-173
- [3] D. Pauschinger and F. R. Klauser, "The introduction of digital technologies into agriculture: Space, materiality and the public–private interacting forms of authority and expertise," Journal of Rural Studies, vol. 91, pp. 217-227, 2022.
- [4] J. Alanya-Beltran, S. R. Reeja, T. S. Rajeswari, C. Valderrama-Zapata, S. Akram and D. Kapila, "Smart

- Loading System of Bi-Directional Wireless Network," *2022 International Conference on Innovative Computing, Intelligent Communication and Smart Electrical Systems (ICSES)*, Chennai, India, 2022, pp. 1-7, doi: 10.1109/ICSES55317.2022.9914139.
- [5] G. Muneeswari and R. S. R., "Agent Based Queue Aware Scheduling for Distributed Multicore System," *2022 IEEE 7th International Conference on Recent Advances and Innovations in Engineering (ICRAIE)*, MANGALORE, India, 2022, pp. 1-6, doi: 10.1109/ICRAIE56454.2022.10054343.
- [6] S. Terumalasetti and D. R. S. R., "A Comprehensive Study on Review of AI Techniques to Provide Security in the Digital World," *2022 Third International Conference on Intelligent Computing Instrumentation and Control Technologies (ICICT)*, Kannur, India, 2022, pp. 407-416, doi: 10.1109/ICICT54557.2022.9917931.
- [7] Reeja, S. R., Kumar Abhishek Gaurav, Ladly Patel, and Rino Cherian. "Garbage Management Using Internet of Things." *International Journal of Computer Sciences and Engineering* 6, no. 10 (2018): 56-59.
- [8] George, Chinnu Mary, and S. R. Reeja. context of source and end node privacy perpetuation techniques in wireless sensor networks.