

## ***Use of an Android App for Farmer Assistance***

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### ***Abstract***

*In India, agriculture employs the majority of the people, and farmers are the backbone of the Indian economy. The system is made up of smartphone apps. Farmers may utilise the system through an Android application on their mobile devices. The article suggests using information mining to provide ranchers with crop recommendations, crop data, and evidence of acceptable manure. Everyone, whether educated or uneducated, uses a smart phone. This programme may offer a variety of languages, including Hindi and English, which are widely used and simple to use on the system.*

***Keywords:*** *Farmer Assistance, Android App, Agriculture, Smart Phone, Programme, Agricom*

### **INTRODUCTION**

Agriculture is India's primary food supply, and farmers are the country's economic backbone. In today's terms, in today's society, everyone uses a smartphone, whether they are educated or not. It is not dependent on education, but it is dependent on technology. Farmers are becoming scarcer by the day, and new farmers lack basic agricultural expertise. This application's goal is to offer

information on farming. Seeds knowledge is more important than farming information because if you know about seeds, you can utilise them in farming.

On the admin side, this application offered seeds, soils, fertiliser, and crop sealing, exactly like marketing. The most essential fact about seeds and soils is that they are based on the soil on which the crop is growing. Because the crop or seeds

provide a higher profit, soil-friendly farming may be carried out and yield higher earnings. Fertilizers and insecticides are the most important tools in farming. Seasonal foods or crops provide a lot of profit at that time of year.

Fertilizers and pesticides are used to boost crop output, but they have an impact on the soil as well as food safety. That is the application when that information is also supplied. When you utilised more fertilisers and pesticides, your soil's efficiency decreased, and your crop-growing capacity gradually decreased. According to studies, the amount of chemicals and hazardous products in foods and vegetables is increasing every day, posing a health risk. The solution is to limit the usage of such chemicals. That programme also contains information on animal farming, often known as animal husbandry. Animal husbandry is profitable and may be considered a secondary business after farming.

Selling seeds, fertiliser, or insecticides is the last step. Only the admin is provided by that authority, and the admin is the one who sells the goods. It's a direct line of contact between the vendor and the customer. Reduce the distance between the vendor and the purchaser.

## **LITERATURE SURVEY**

Forming Assistant is a web-based initiative that will assist farmers in making a significant profit by using mobile devices and computer systems. Consider using communication to help farmers get greater access to information on agricultural and market conditions. According to the data, farmers save energy and time by using their cell phones.

Agricom is an Android application that gives farmers information about various crops and other agricultural goods. Agricom is a breakthrough Android-based mobile application that assists farmers in making decisions by providing access to agricultural data.

Agriculture is one of the most important historical periods for providing essential information such as fibre, energy, and food. Employing modern technologies, such as the internet of things, may help the agriculture sector grow. This paper farm is linked through an IoT system, allowing for smart farming. The primary goal of this initiative is to concentrate on INDIAN farmers who are having problems with market updates in various products. The primary goal of this product is to create a mobile application that aids in

management and therefore increases agricultural profits.

Data mining is the process of gaining access to information about crops and determining the best fertiliser to use. The farmer may utilise the system on the web as well as on an Android device. Single crop and hybrid crop recommendations are made using data mining techniques and algorithms.

A facility enabling uneducated farmers to alter their language. The system has the

capability of providing information in the local language. An application that is easy to use. The farmer inquired whether the administrator had any suggestions.

By utilising an Android application, farmers may get information without having to use the internet, and it is completely free. Agriculture management has been simplified, and records have been made available. All data is kept on the cloud, and data from the cloud is sent to the farmer application.

## SYSTEM DIAGRAM

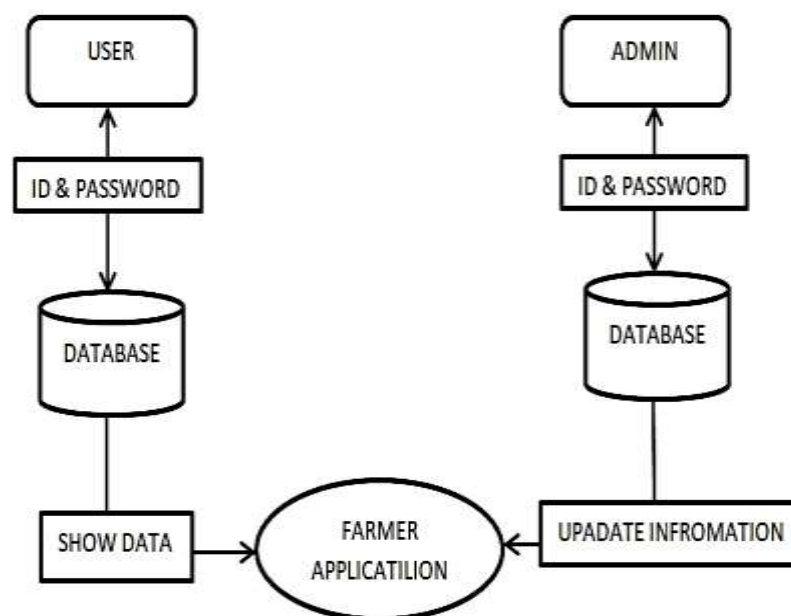


*Figure 1: System Diagram*

The user, farmer application, and admin are the three major components of the system diagram. The Admin and User may access the programme using a User ID and Password that is unique to each individual, ensuring security and preventing duplication of the User ID or User Name.

The user may log in with their ID and password and provide information on farming based on the seasons. Using the admin ID and password, the Admin may also access the Dashboard. The ability to add, edit, update, and remove data was granted by the administrator. The application serves as a communication channel between the user and the administrator. Another idea is that the administrator may use the programme to promote his or her own goods. This is accomplished by offering a marketing interface for both the administrator and the user.

## **ADMIN MODULE**

The entity-relationship diagram is the foundational notation for data modelling. The admin is given complete control over the programme and has full power to handle and manage it. Any kind of authority in the hands of admin for data base administration, information management, information insert,

information update, or information deletion. The admin is provided with interfaces such as login, dashboard, customer, and item information. Admin Simply log in with your admin ID and password to access the admin dashboards, which include choices like as baseboards, customer information, and item information.

Customer has a list of customers who have registered in the application, and you can view all of the information on the list form. Admin has the ability to remove a person's information. Item Information is one choice, and it has three sub-parts: item insert, product sale information, and product sale.

Item inserts are used to provide information on farms or products. Product sale information and product sale that is according to marketing add and remove product and also any user may purchase the product that is one notice sent to the Admin and everything about that information.

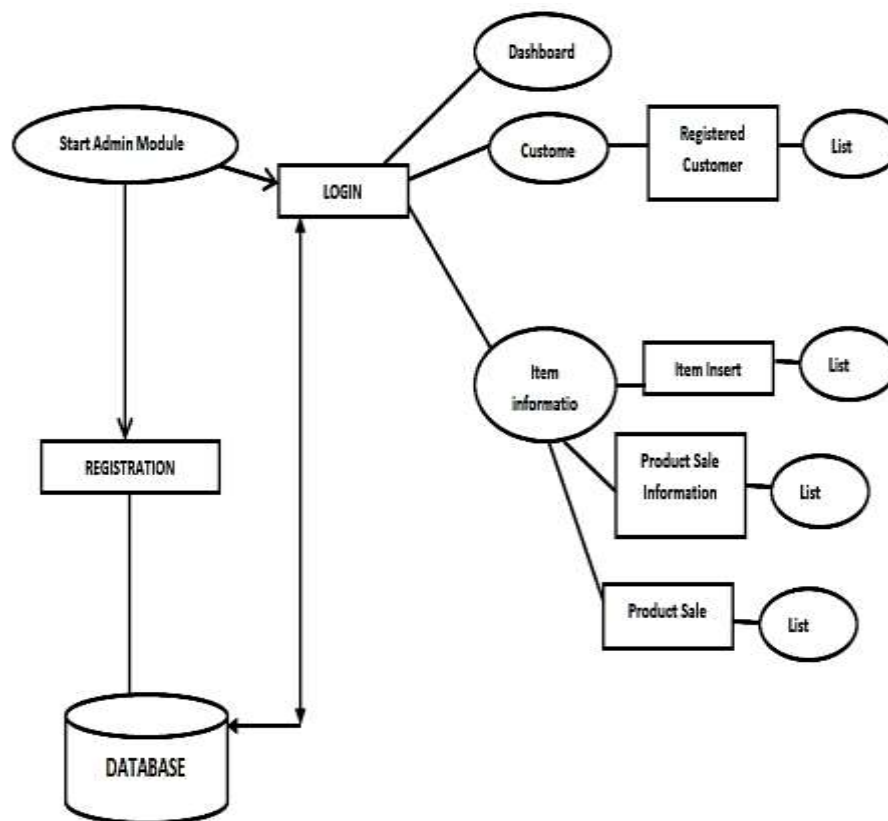


**Figure 2: Admin Module**

## USER MODULE

The entity-relationship diagram is the foundational notation for data modelling. In relational database design, three components are utilised. Entities, Attributes, and Relationships are the three categories. The user is provided with one of the Android application interfaces via the user modules. Login, registration, farming information, seed information, soil information, animal information, weather, item porches, and contact information are just a few of the options available to assist the user. This application is available in two languages:

English and Hindi. All of the information is presented in a list style.

Login and registration are two typical methods for gaining access to application data, as we've previously discussed. Seeds and soil information are sent to the user or farmer as farming information. Whatever kind of seed grows best in which type of soil, and how animal farming may help farmers make more money. Weather reporting is simply information that tells a user or farmer about today's weather in their state and city.

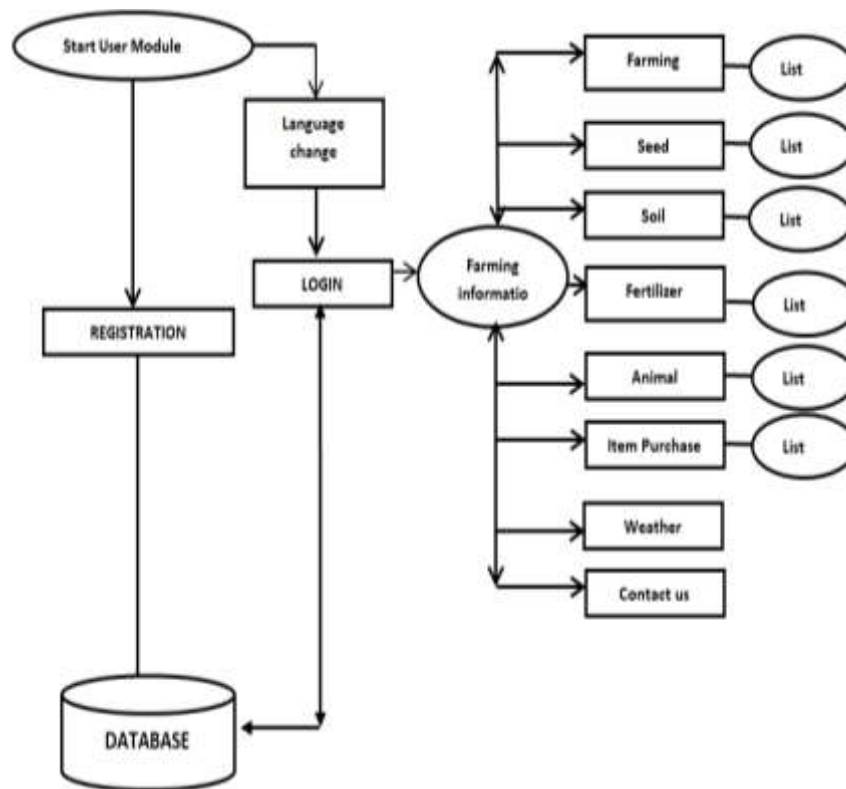


**Figure 3: User Module**

Fertilizer and pesticides are frequently used in farming to enhance profit; however this fertiliser is not dangerous or detrimental because the farmer lacks appropriate understanding, and the applications give information about fertiliser and pesticides. Item buying is similar to shopping or E-commerce side users may acquire the agricultural related goods such as seed, animal, fertiliser, and pesticides, among others. This method bridges the gap between farmers and merchants, and farmers may contact experts directly through phone or chat under the contact us section.

### OBJECTIVES OF NEW SYSTEM

Currently, Farmer Application is done manually with the use of papers, form pens, registers, and other record-keeping tools. This procedure is very time-consuming. There is no data security. All of these processes are extremely time consuming and involve the maintenance and processing of many records and files, which is a lengthy process. As a result, there are many requirements for automated and computerised management:

- To save the system's precious time.
- To persuade workers.

- To make it simple to add and search information.
- To ensure proper record manipulation.
- To improve the system's overall manipulation.
- To produce reports in a certain format.

This provides the records a neat and orderly appearance.

## **ANDROID                      REQUIRED TECHNOLOGIES**

Android Studio is the Android operating system's integrated development environment (IDE). It is compatible with all operating systems, including Windows, Mac OS X, and Linux. It serves as a substitute for the Eclipse Android Development Tools (ADT) as an IDE for developing Android applications. More features include a configurable gradle-based build system, a fast emulator, and built-in support for the Google cloud platform. The APK format is used to build applications created in Android Studio. Android was originally introduced in May 2013 at Google I/O. Android studio offers us the ability to create and code Android applications. It includes powerful editing tools for creating innovative user interfaces, as well as emulators for various Android versions to test applications. Android Studio is a framework that comes

with all of the tools you'll need to create Android apps and games. It contains all of the APIs needed to build an application.

## **MySQL**

SQL stands for Structured Query Language. SQL stands for Structured Query Language, and it is used to access and modify databases. SQL is a free and open source programming language. The American National Standards Institute has standardised SQL. SQL allows you to run queries against a database, build a database, enter data about an item or a collection, update information, and remove the database and its contents.

## **HTML**

HTML stands for hypertext markup language, and it serves as the foundation or frontend of any website. Without any understanding of HTML, no website can be created. If you want a more effective web page, you should utilise CSS instead of html.

## **CSS**

"Cascading Style Sheet" is the abbreviation for "Cascading Style Sheet." Style sheets are used in a cascading fashion. The Web pages are laid out in a grid. Text styles, table sizes, and a grid layout with one row and 12 columns may

all be defined with CSS. It allows you to change the appearance of any element on a web page. CSS allows you to create beautiful, impactful, and customizable web pages in less time and with less code.

### Bootstrap

Bootstrap is a well-known CSS framework. We can build responsive design and UI with the assistance of Bootstrap. Bootstrap 4 is the most recent version. Bootstrap is a framework that allows you to create websites more quickly. The complete HTML and CSS-based design and templates are included. The grid system is utilised in Bootstrap. We utilised Bootstrap to create a design that works on all devices. We can reduce the amount of

code we write using Bootstrap since these classes have already been built. The Content Delivery Network (CDN) that has certain previously generated files that are a mix of classes is utilised to employ Bootstrap in our web page. The advantages of using Bootstrap include its ease of use, mobile approach, and responsive capabilities.

### JAVA

Java is a programming language that focuses on object-oriented programming. It's a platform-independent programming language. You may build any Android frontend application using Java and a SQL database that you create. Additionally, a desktop programme may be used to build.

## IMPLEMENTATION & OUTPUTS

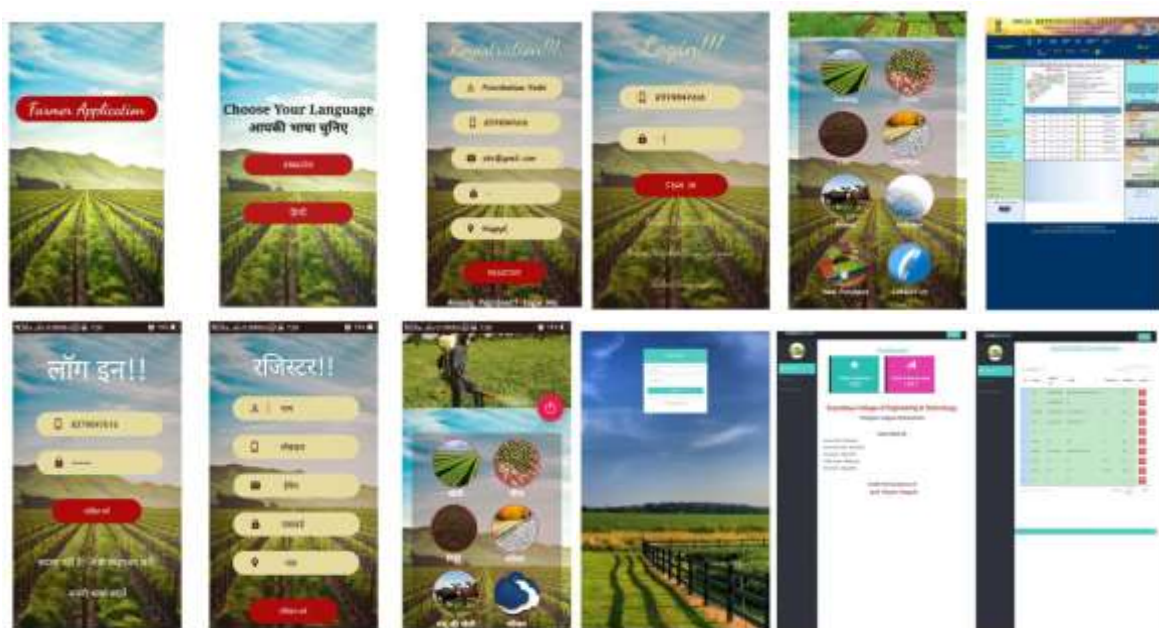


*Figure 4: Implementation & Outputs*

## **FUTURE SCOPE**

Any software, programme, or online application can never be claimed to be complete in every sense at all times since in the area of information technology, most things change more often as the need arises in the changing environment. Similarly, there is room for development in this programme.

For improved performance, the proposed system may need the following modifications:

1. There is potential to offer the ability to take database backups from the suggested system on a regular basis so that data may be recovered.
2. Payment choice at the time of purchase.

## **ADVANTAGES**

- We can simply use and utilise this app.
- Provide information about various kinds of crops, soil, fertiliser, and so forth.
- Professionals offering suggestions for improvement.
- Experts or agricultural officers clarify the farmer's concerns.
- A farm dashboard and report.
- It provides a marketing platform.

## **CONCLUSION**

The article suggests that data mining methods be used to give farmers with information on crops, soil, fertiliser, and pesticides. Another aspect of animal farming is the provision of knowledge about animal husbandry. The payment mechanism in that application will be developed by the end users in the future.

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