Design of Smartphone Application for Farmer

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Abstract— In India most of the population is depending on agriculture and Farmer is the backbone of the Indian economy. The system consists of smartphone applications. The System can be used by farmers on the android application on mobile devices. The paper proposes the use of data mining to provide recommendations to farmers for crops, crop information, and identification of appropriate fertilizer. The smart-phone is used very commonly by everyone who is educated or non-educated. This application can provide different languages, which is Hindi and English this language commonly used and easy to use on the system.

Index terms: *Smartphone, data mining, database, farmer-to-supplier, dealers, retailer, supplier, Crop, Android.*

I. INTRODUCTION

Agriculture is a prime Food source in India and Farmer is the backbone of Indian economy. Today's words now Modern world in that world every person uses a smartphone when which person is educated or non-educated not depending on education be which is related to technology. Now day by day farmer rate are reduce and new farmer not proper knowledge about farming. This application purpose to provide farming related information. Seeds information the most import than farming because when you know about seeds than you can use in farming according to than a farm.

This application provided seeds, soils, fertilizer & crop sealing just like marketing on admin side only. Seeds and soils information most important according to soil the crop is growing on soil. The crop or seeds give more amount of profit so the soil comfortable farming can do and give more amounts of profits. Fertilizers and pesticides these two play the main role in farming. Seasonal food or crops on that particular season give a high amount of profit.

Fertilizers and pesticides are used to increase production on crops but are effected the soli as well as food test.

When that information also provided to that's the application. When you used more amounts of fertilizers and pesticides that reduced the soil efficient probability and next time crop growing capacity slowly reduced. According to research food and vegetables, day by day increases their chemicals and harmful products which are dangers to health that's to reduce the uses of those chemicals.

That's application also gives information about the Animal farming which is commonly known as animal husbandry. The animal husbandry give profit and it's just like side business after that's the farming.

The last point is selling the seeds or fertilizer or pesticides. That authority provides only admin, admin sells the products. It's direct communication to seller and buyers. Reduce the gap between the seller and buyers.

II. SYSTEM DIAGRAM

The system diagram consider as three main parts which is user, farmer application and admin. The Admin and User can be access the application with the help of User ID and Password, which is different to everyone person that's

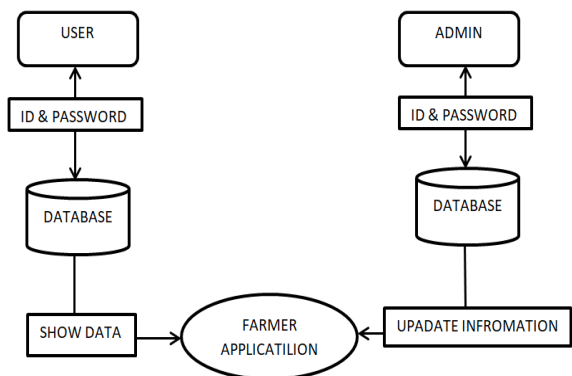providing security and avoid duplication of the User ID or User Name.

Fig 1. System Diagram

The user can open the application by using the ID & password and give information about farming according the seasons. The Admin also open the Dashboard by using admin ID & password. Admin provided the authority to adding, edit or update & delete the data. Application provides the interface communication to user and admin. One more thinks Admin can sell the own products by using the application. That purpose providing marketing interface for admin and user.

III. ADMIN MODULE

The corner stone notation for data modeling is the entity-relationship diagram. All type of authority in the application provided to the admin to handle or manage the application.

All data base management, information management, information insert, information update or information deletes any type of authority on hands of admin. Login, dashboard, customer, item information there are interface provide to the admin. Admin Simple by using Admin ID & password enter the admin dashboards on that's dashboards there is options baseboards, Customer, item information.

In customer, there list of customer which registered in application and all details on list form can see you. Admin can delete someone person information. One option is Item Information on that there is three sub-parts which are item

insert, product sale information, and product sale. Item inserts to inserts the information about farming or product related. Product sale information and product sale that's according to marketing add and removing product and also any user can by the product that's one notification give the Admin and all about that information.
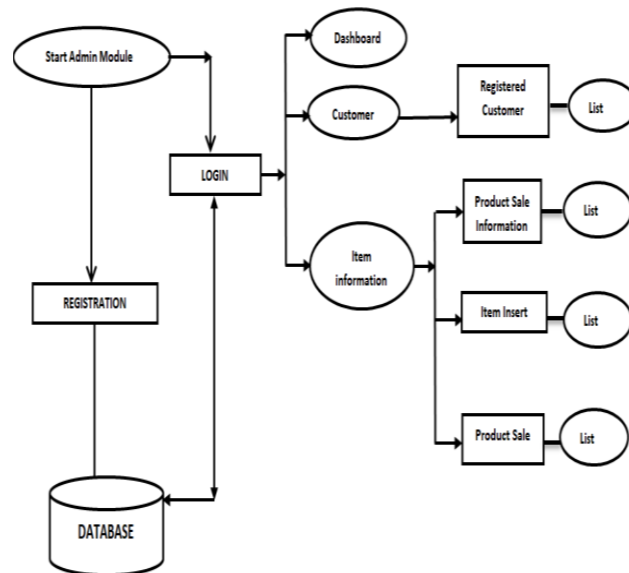

Fig 2. Admin Module

IV. USER MODULE

The corner stone notation for data modeling is the entity-relationship diagram. Three components are used in relational database design. Those are Entities, Attributes and Relationships. The user modules having one of the android application interfaces provide to the user. This application many option for helping the user just like login, registration, Farming information, seed information, Soil information, Animal information, Weather, item porches and last one is contact information. This application provides two languages which is English and Hindi. All about the information provide in listed form.

Login and registration is the common process accessing application information which is already discussing. Farming information is that seeds & soil information provide to the user or farmer. Which type of seed grow better way in which type of soil and side by side Animal farming give more profitability to the farmer. Weather

reporting is just information providing user or farmer today weather according to state and city.
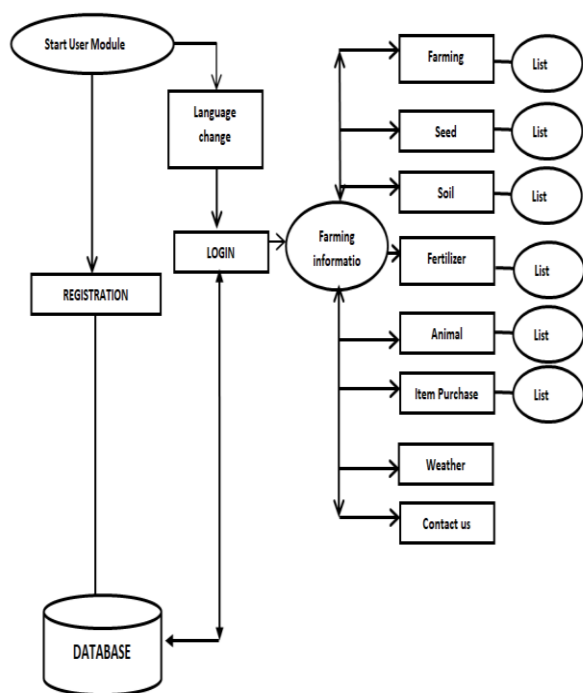

Fig3. User Module

Fertilizer and pesticides are commonly use to increase profit in farming but this fertilizer not-harmful or harmful that's proper knowledge not in farmer, that's applications provides the information about the fertilizer and pesticides. Item purchasing is just like sopping or E-comers side user can porches the farming related products for example seed, animal, fertilizer and pesticides etc. this system reduce the gap between the farmer-to- Merchant and Farmer can directly contact by using calling or by chat with expert in contact us block.

V.   OBJECTIVE OF NEW SYSTEM

Present Farmer Application is conducted manually by using papers, form pens, registers and so on to keep records. This process is very lengthy and wasting the time. There is no security of data. All these process under the manual system is very tiresome and require keeping and manipulation of many records and files whish are quite slow process. So that the needs for automatic and computerized management include:

➢   To save valuable time of the system.

➢   Convincible for employees.

➢   Easy to add and search information.

➢   The correct manipulation of the record.

➢   An overall better manipulation of the system.

➢   To generate reports in a desired manner. This gives a systematic and a clean look of the records.

VI.   TECHNOLOGIES REQUIRED

A.   ANDROID

Android studio is an integrated development environment (IDE) of Android Operating system. It is available on all the operating system like Windows, mac OS, Linux. It is replacement to eclipse android development tools (ADT) as an IDE for android application development. Android studio offers more features such as and a flexible gradle based build system, fast emulator, built in support for Google cloud platform. Applications built in android studio are compiled into APK format. Android was first announced at Google I/O in May 2013.Android studio gives us a power for developing and for coding android application. It has strong editor tools for developing creative UI and emulators for different versions to test android application. Android studio is a framework that includes every tools necessary to develop Android Application and Games. It consists of all API required to create an application.

B.   MySQL

SQL stands Structured Query Language, SQL is used to access as well as manipulate databases. SQL is open source language. SQL is standardized by American National Standards Institute. With the help of SQL you can execute queries against a database, create database, insert data about item or contain, update information, delete the database and information.

C.   HTML

HTML stands hypertext mark-up language which is in reality a backbone or frontend of any website. Any website can't be built without the any knowledge of html. If you

make our own web page only by using the html, if you want more effective web page then used CSS.

D. CSS

CSS Stands for "Cascading Style Sheet." Cascading style sheets are used Grid layout of the Web pages. CSS can be used to define text styles, table sizes, and grid layout which is in one row 12 column provided.it customize element available in web page. By using CSS you can creating attractive and affecting and customize web page in less time and less code.

E. Bootstrap

Bootstrap is one of the popular CSS Framework. With the help of Bootstrap, we can create responsive design And UI. The current version of Bootstrap4. Bootstrap that helps you to design website faster. It includes all the HTML And CSS based design and templates. In Bootstrap of the grid system is used. To make the design which is proper in all the devices we used Bootstrap. With the help of Bootstrap, we can minimize the code because in these classes is already created. To used Bootstrap in our web page the Content delivery network(CDN) that contain some already created file which is a combination of classes. Bootstrap features are easy to use, mobile approach and responsive features.

F. JAVA

Java is object oriented programing language. It's a platform independent language. By using Java you can design any Android Application of frontend and by using SQL database created. Desktop application can also create.

VII. IMPLEMENTATION & OUTPUTS

With the implementation of above technologies, output of the Farmer Application is obtained and are shown in following figures.

Fig.4. Opening, language selection & registration.
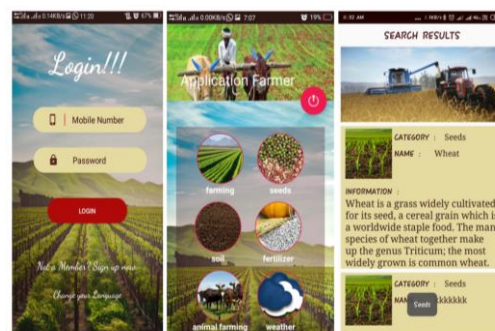

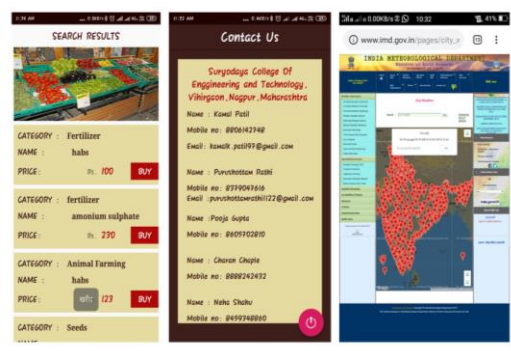Fig.5. Login, Information type & Information.

Fig.6. Marketing, Contact information & weather report

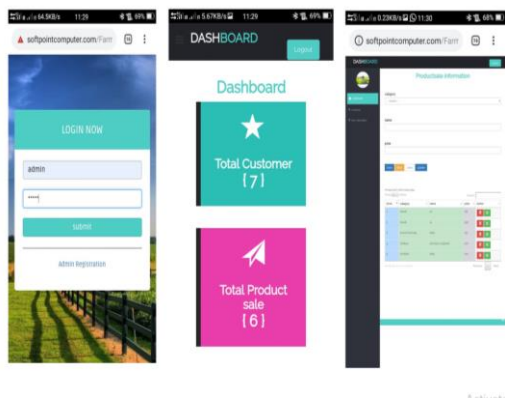Fig.7. Opening, registration & Information in Hindi

Fig.8. Admin side interface dashbord

VIII. FUTURE SCOPE

Any software, any program or any web application can never be said complete at all times in all sense because in the field of information technology most of the things changes more frequently according to the need arises in the changed condition. Likewise in this program also there is a scope for improvements.

Proposed system may need following modification for better performance:

1. Sale the product also forms farmer side.

2. Online Payment.

IX. ADVATAGES

- We can easily handle this app and easily access.
- Give information about different types of crops, soil, fertilizer etc.
- Expert people giving there suggestion for improvement.
- Expert people or agricultural officer clear the doubts of farmer.
- Dashboard and report about farms.
- It provide platform for marketing.

X. CONCLUSION

The paper proposes the use of data mining techniques to provided information to the farmers for crops, soil, fertilizer and pesticides. One more animal farming that's means animal husbandry information also provided. Future work will be focused on the Payment system in that application to designed by the end users.

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