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Agricultural Updates Through Android Application for Farmers: Analysis

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ABSTRACT

Our Agriculture Updates project discuss everything about providing the SMS updates on various agriculture products as per the user requirements on his GSM or GPRS mobile phone.The updates may vary from pricing, availability, stocks and need of various products on the market. Basically, this will be expected to be helpful for farmers around the state. Since it works everywhere with the mobile signal it does not require internet.We are also providing pricing details to the customers. This Agriculture Updates app is mainly concerned about the specific group of customers which is farmers. It updates status on various products as per the user choice on daily or weekly basis.

KeywordsAgricultural traceability, Farmers,Informationandcommunication technologies, Mobile apps, smart farming technologies.

I.INTRODUCTION

These days technology is at its best. People also making the best use of it. Why won't it be the same with the farmers? Usually, they go far away from their native village to the town in order to buy their agricultural requirements. For this, they have to spend time of a whole day approximately. So, we can make use of today's technology in order to save that time for farmers. The application that we came up with enables the farmers to buy their requirements such as seeds, tools, pesticides, fertilizers, etc. online by sitting in one place without even making a plan of travel. This reduces the time consumption and also decreases the price of goods comparatively. This application also gives exposure to a wide range of varieties inparticular categories to the farmers so that they can buy as per their requirements.

II.EXISTING SYSTEM

As of now, Farmers are purchasing their agricultural requirements such as seeds, fertilizers, etc. manually i.e., going to their respective shops and purchasing. This is how the existing system of farmers purchasing their agricultural requirements. In the existing system, purchases are made

manually, which means that the farmer must go for purchase and then select the things he desires from that shop. Since he is purchasing from the storekeeper who is not the actual seller of those products, he obviously charges some extra taxes which also include his profit on that particular product so this makes the farmer buy those products at a higher price than the actual price. It's an absolutely time-consuming process, not giving exposure to a wide variety of products, and also not cost-effective for the farmer. Thus, the system has to be automated. Also, Farmers are not getting a fair price while selling their farm products. Besides, People or customers also are not able to get the products at a reasonable price.

Farmers usually need to spend the whole day getting their agricultural requirements from the shops even sometimes they wouldn't be getting their desired products in a day. They also need to travel all the way from their village to the town to get those products from the shops. They even can't get exposure to the wide range of varieties in the shop as the storekeeper sells only the brands in which he is profitable and available in the shop as of then. At the stores, they've to purchase them at a higher price than the actual price. Also, Farmers are not getting a fair price while selling their farm products. Besides, People or customers also are not able to get the products at a reasonable price.

III.PROPOSED SYSTEM
Our application enables Farmers: To buy all the necessary requirements and products through online on our application platform by sitting at one place rather than going all the way from their native village to the shops in the town. So that the farmers are able to save time and also buy the products cost effectively. To get exposure to the wide range of varieties so that farmers can buy desired products as per their requirements and specifications. This Application also enables: The people buy fruits and vegetables directly from the farmer so that both can get a fair price respectively and be profitable as well, as we are cutting middlemen by connecting the customers directly to the farmers.

IV.MODULES
Login /Register
In this module the user first registers with his/her personal details. If it is an already registered user, then it goes to the login module. Then the user can access the details that he wants after login. If the user is not already registered, the user must sign up and do the registration process. Registration page will take users information such as username, location, and other details. The user can login into the home page if the user is registered.

Market Rates
This module gives the daily updates of market prices of commercial crops which help farmers to know the current market price. Market rates are another basic feature available in this. It provides the entire vegetable's price rates at different places. Admin will update the prices of different crops periodically. Application will provide the updated market prices of crops.

Buy and Sell
Sell and Buy module consist of two services which are useful for both farmers and customers. These services include both sell and buy facilities. If any of the crops wants to be sold, the seller gives details about the crops to be sold, their price, location etc. If any user wants to buy a crop, the crops details such as name and price of crops, location of farmers who want to sell and their location will be shown in the Sell and Buy module. Also, this module can include offers and discounts available

with crops for sale. The crops can be booked as an order by the user, so that the desired crop will not be sold to others.

Admin Admins are those who have the privilege to make changes in the main database. They can add the market price of different crops, update and remove information such as news and also, they can give response to user's queries or doubts through website. Here the admin can also act as Experts/ Krishibhavan officer.

V.CURRENT SYSTEM

This application is used for all the farmers, bythis application all the farmers will be benefitedthey will not be cheated because in thisapplication farmers can sell their products directlyto the customers with no broker chargers throughthe online by this farmer also will be havingproper growth.To provide a platform for farmersto sell their agricultural products with nobroker(charges).To provide aplatform forcustomers to buy agricultural products fromfarmers online. To make an environmentto buy & sell their agricultural products usingandroid applications.

VI.SYSTEM DESIGN

(i) System architecture

In this diagram it explains mainly the userwants to buy a product then he searches for theproduct which he wants. If he finds it then he will goto the description andseller location and make a callto him then he will buy the product. If he doesn'twant to buy a product, he will check the productreview and leave the application.

(ii) Data Flow

First if anyone wants to go to theapplication then he needs to login, if it issuccessful, he can upload the product If hecan't login again, he will redirect to thesignup page after product upload customersearches the product and then the productwill be selected for the payment, then thepayment will get successfully then thecustomer will get the product.
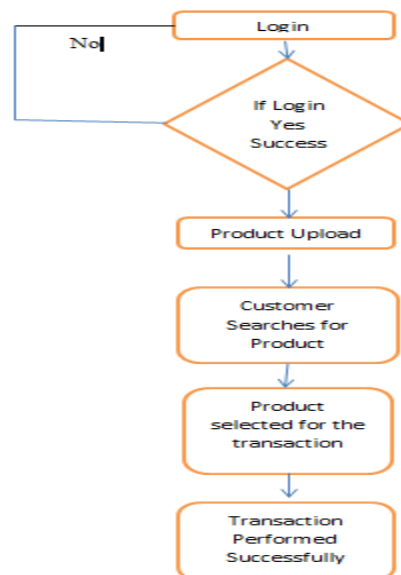

Fig-1 System architecture

VII.Android Application
a. Android Studio

This is used to store frontend data

Android studio is the official IntegratedDevelopment Environment (IDE) for Android appdevelopment, based on IntelliJIDEA.

i. A flexible Gradle-based build system.

ii. A fast and feature-rich emulator.

iii. A unified environment where you can developfor all Android devices.

iv. Apply Changes to push code and resourcechanges to your running app withoutrestarting your app.

v. Code templates and GitHub integration tohelp you build common app features andimport sample code.

vi. Extensive testing tools and frameworks.

vii. Lint tools to catch performance, usability, version compatibility, and other problems

viii. C++ and NDK support.

ix. Built-in support for Google Cloud Platform,making it easy to integrate Google CloudMessaging and App Engine.

b.Fire base

This is used to store the backend data.

1. Create a Database:Navigate to the Realtime Database sectionof the Firebaseconsole. You'll be promptedto select an existing Firebase project. Followthe database creation workflow.

2. Select a starting mode for your FirebaseSecurity Rules

3. Choose a region for the database. Depending on your choice of region, the database

Namespace will be of the formordatabase Name region firebasedatabaseapp.

4. Click Done.

5. Add the Realtime Database SDK toyour app. This will combine the firebase and android studios by using alibrary. Using the Firebase AndroidBoM, declare thedependency for theRealtime Database Android library inyour module (app-level) Gradle file.

6. Add the Cloud Storage SDK to yourapp. This will combine the fire base andandroidstudios by using a library.Using the Firebase Android BoM,declare the dependency for the CloudStorage Android library in your module(app-level) Gradlefile.

CONCLUSION

Created a platform where farmers can sell their agricultural products directly to the customers by using an online platform with no broker (charges), farmers will get benefited and customers will also get the agricultural products at a reasonable rate. Manyapplications have provided agriculture ideas and explain how to achieve well farming; everyapplication proposes many different ideas that helped farmers. The application is an android application that reaches to many hands and it is a very helpful application thatis having valid options like selling products directly to the buyers and getting the product information.

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