Agri Shop Application

Submitted in partial fulfillment of the requirements

of the syllabus of

Android Apps Development Lab

in

Information Technology

by

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SIES Graduate School of Technology

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CERTIFICATE

This is to certify that the project entitled **"Agri Shop Application"** is a bonafide work of the following students, submitted to the University of Mumbai in partial fulfillment of the requirement of the syllabus of **Android Apps Development Lab** in **Information Technology.**

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Ms. Bushra Shaikh	Dr. Lakshmi Sudha	Dr. Atul N Kemkar
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PROJECT REPORT APPROVAL

This project report entitled **Agri Shop Application** by following students is approved for the requirement of the syllabus of ***Android Apps Development Lab*** in ***Information Technology.***

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Name of External Examiner: ----------

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Date:

Place:

DECLARATION

I declare that this written submission represents my ideas in my own words and where others' ideas or words have been included, I have adequately cited and referenced the original sources. I also declare that I have adhered to all principles of academic honesty and integrity and have not misrepresented or fabricated or falsified any idea/data/fact/source in my submission. I understand that any violation of the above will be cause for disciplinary action by the Institute and can also evoke penal action from the sources which have thus not been properly cited or from whom proper permission has not been taken when needed.

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Project Team

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ABSTRACT

Agri Shop Application is an app that helps farmers to get their Equipment through this app where the app provides Seeds, Fertilizers, Pesticides, Plant Growth Regulators, Irrigation and Farming Tools and Equipment that are required in agriculture. The admin Will Upload the Equipment Photos with the details about it and it will also include the types of crops and also the farming types like for large scale or for small scale. On the Other Farmer can view the product and can add to the Cart, they can place their order even through a call**.** Through these app the farmers can easily order the equipment whatever is required. The developed android application is an ecommerce app which is used by both admin and farmers/Users.

Contents

Introduction

Nowadays, many android applications are available which provides many smart things to the users. This application is useful for farmers and also for the gardening peoples. During these lockdowns most of the people are interested in gardening and these app is the best platform to buy the equipment related to the agriculture.

The user creates an account and is able to access the various crops or services from admin. He/she then can decide to order whatever they prefer, the app studies this specific user action and saves on a machine model which then comes us with a predictive analysis of what specific customers and genders like and at what period and under what conditions.

This gives more insights on the farmers side, they are able to do farming geared towards user preferences based on gender, times and tastes. This gives a further analysis of what the admin should concentrate on more in order to maximize the production value chain. Profits are maximized as customers interact directly with farmers and they can negotiate basing on user preferences. This helps admin to have more confidence in their sales.

Survey on Existing Apps

1.App

The management of small farms, designed and developed to respond to the needs and characteristics of farmers. The basic information need by the farmers are about information of soil, type of seed, required pesticide for the particular crop in all stage of its growth, fertilizer type, crop diseases and its selling. Online Farming becomes easier as we can get current location of agricultural shops and all the requirements for farming will available at one particular place.

It can store database, do farm customization, easy field management, land field data, easy job recording process, employees and equipment.

2. App

Develop Especially for the Indian farmers to assist them in agricultural needs. It is used for botanical species recognition and disease detection using a simple mobile phone with camera.

Used to detect leaf diseases. Also provides online market place, market rate guide, weather report and soil information to the farmer.

Report on Present Investigation

3.1) Problem Statement:

The aim is to design an Android application which contains Agri equipment which will be most useful for farmers and the gardening peoples. There is a Lack of Organized Market There is no transportation facility in every part of the countries. If there is transportation facility, agricultural market can get expanded. Due to the lack of transport facility, it becomes impossible. Although the importance of agricultural market is paramount in every village, there is lack of transport facility.

3.2) Source of Problem Statement:

The problem statement is inspired from day-to-day events. Every farmer comes across a situation where he wants an Agri Equipment but doesn't have the right knowledge from where they can get all the equipment. This project will provide a concrete platform to help farmers to get their equipment.

Design and Implementation of Android Apps Components

4.1) Layouts

The basic building block for user interface is a View object which is created from the View class and occupies a rectangular area on the screen and is responsible for drawing and event handling. View is the base class for widgets, which are used to create interactive UI components like buttons, text fields, etc. The ViewGroup is a subclass of View and provides invisible container that hold other Views or other ViewGroups and define their layout properties. At third level we have different layouts which are subclasses of ViewGroup class and a typical layout defines the visual structure for an Android user interface and can be created either at run time using View/ViewGroup objects or you can declare your layout using simple XML file main_layout.xml which is located in the res/layout folder of your project.

For our application we have used Relative and Linear Layouts in our layout files. We have also used Recycler view to display the image and details of the uploaded product by admin.

We have used Relative Layout as it is a very flexible layout and is thus, used for custom layout designing. It gives us the flexibility to position our component/view based on the relative or sibling component's position. In Relative Layout, you can use "above, below, left and right" to arrange the component's position in relation to component.

We have used Recycler View to display the animals as it is a more advanced and flexible version of ListView. This widget is a container for displaying large data sets that can be scrolled very efficiently by maintaining a limited number of views. RecyclerView widget is also useful when we have data collections whose elements change at runtime based on some user action or network events.

4.2) Intents

An Intent is a simple message object that is used to communicate between android components such as activities, content providers, broadcast receivers and services. Intents are also used to transfer data between activities.

Use of Intent

- For Launching an Activity
- Fill Details Intent
- Camera Intent
- Gallery Intent
- ListView Intent is of two types:
- Implicit Intent

● Explicit Intent

Implicit Intent

The implicit intent is the intent where instead of defining the exact components, you define the action that you want to perform for different activities. An Implicit intent specifies an action that can invoke any app on the device to be able to perform an action. Using an Implicit Intent is useful when your app cannot perform the action but other apps probably can and you'd like the user to pick which app to use.

Explicit Intent

An explicit intent is an Intent where you explicitly define the component that needs to be called by the Android System. An explicit intent is one that you can use to launch a specific app component, such as a particular activity or service in your app.

4.3) Activity

An Android activity is one screen of the Android app's user interface. In that way an Android activity is very similar to windows in a desktop application. An Android app may contain one or more activities, meaning one or more screens. The Android app starts by showing the main activity, and from there the app may make it possible to open additional activities. Any Android activity goes through a certain life cycle during its life inside the Android app. When an Android app is first started the main activity is created. The activity then goes through 3 states before it is ready to serve the user: Created, started and resumed.

Activity Lifecycle:

Activities in the system are managed as activity stacks. When a new activity is started, it is usually placed on the top of the current stack and becomes the running activity -- the previous activity always remains below it in the stack, and will not come to the foreground again until the new activity exits. There can be one or multiple activity stacks visible on screen.

4.4) Database

Firebase is a Backend-as-a-Service (BaaS) for mobile and web to build powerful apps. It was launched by Google to support web-based backends. Initially developed as a YC11 start-up, it further developed into a next-generation app on Google Cloud Platform. Firebase aims at offering a real-time database as well as backend as a service. It stores JSON data in a real-time database. The BaaS provides application developers an application programming interface (API), enabling app data to coordinate via clients stored on the Firebase cloud messaging server. If there's a change in the database, that is also synchronized across the clients and devices using the same database. Firebase liberates developers to focus on making impressive client experiences. You do not have to manage servers or write APIs. Firebase is like your server, your API, and your data store, where

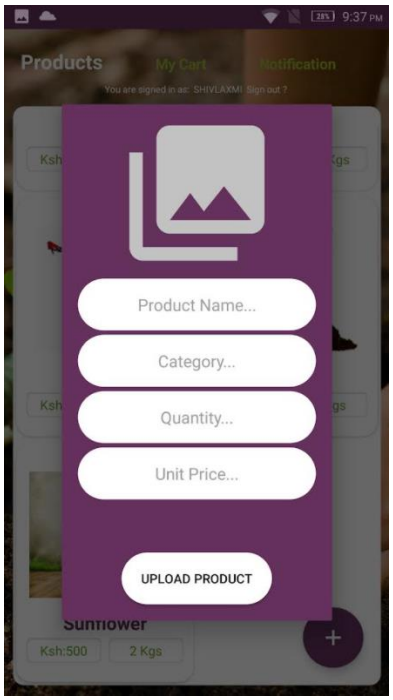
everything that is written can be modified or changed as per your needs. Firebase Realtime database is a cloud hosted database that supports multiple platforms Android, iOS and Web. All the data is stored in JSON format and any changes in data, reflects immediately by performing a sync across all the platforms & devices. This allows us to build more flexible real-time apps easily with minimal effort.

We have used firebase instead of SQLite as it provides better functionality. It provides a dynamic view and is also available on different platforms such as mobile devices.

4.5) Camera

The Android framework includes support for various cameras and camera features available on devices, allowing you to capture pictures and videos in your applications. This document discusses a quick, simple approach to image and video capture and outlines an advanced approach for creating custom camera experiences for the students or teachers.

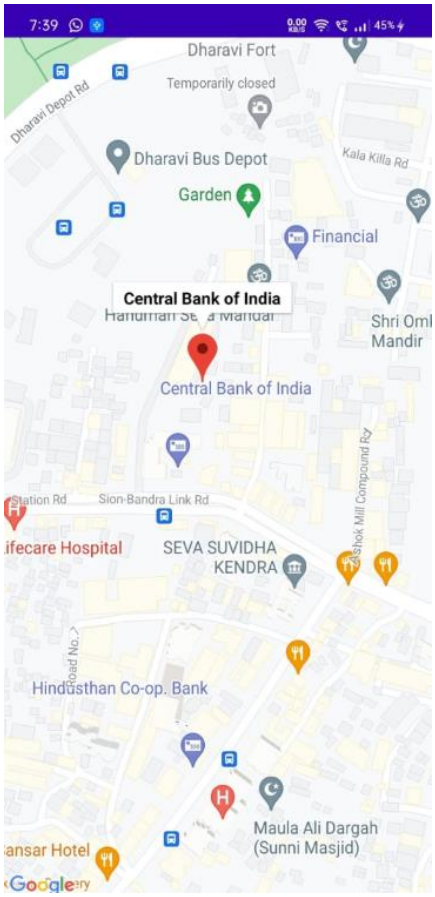
For our application we used upload photo service to upload the documents of the product.



4.6) Location API

One of the unique features of mobile applications is location awareness. Mobile users take their devices with them everywhere, and adding location awareness to your app offers users a more contextual experience. The location APIs available in Google Play services facilitate adding location awareness to your app with automated location tracking, geofencing, and activity recognition.

For our application we used location api to efficiently locate the current location of the users.



4.9) Security features/ any other additional Android components used in app

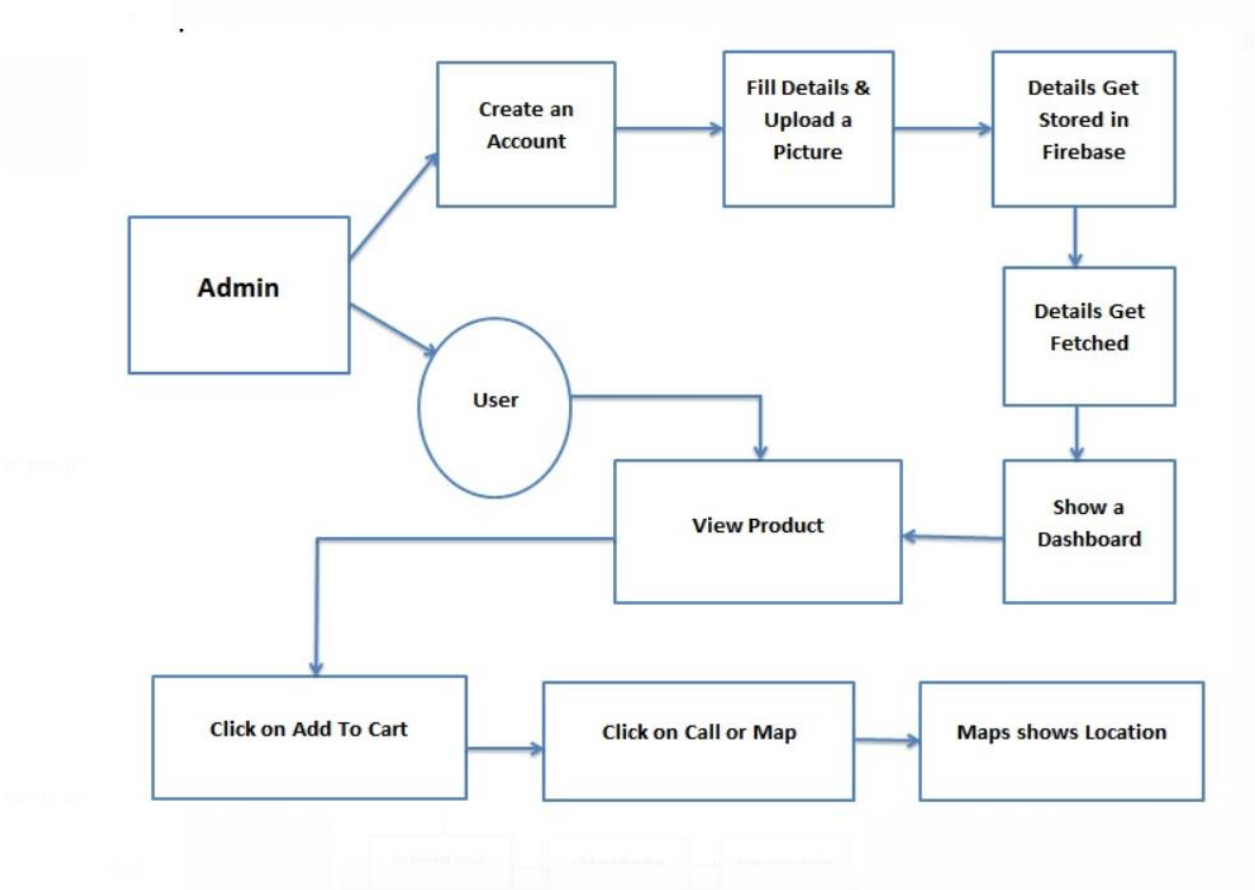
If the User Email id is not in proper format it throws an error saying email id incorrect. Checks for the Password is it right or wrong. If its wrong it's throws an error.

4.10) Generate APK

The APK file has been generated with the help of Android Studio and been installed on the device successfully.

Report on Proposed System and its Implementation

Block Diagram:



An app-based platform for exchange of information regarding farmers equipment, this app will be very convenient for the farmers.

1. Admin will create an account, then we will fill he's details with the type of crop product.

2. The next step would upload the photo it onto the product and then the product details, click on the upload button to fetch the uploaded product.

3. The app sends the data to Firebase and stores it.

4. The data is fetched onto the product activity in the recycler view to show the images and details on carts.

5. User can then view the picture he/she uploaded with his/her details.

6. Alternatively, the user may choose the uploaded product and add to the charts and can call the admin or click on the location it will fetch the current location.

Hardware –

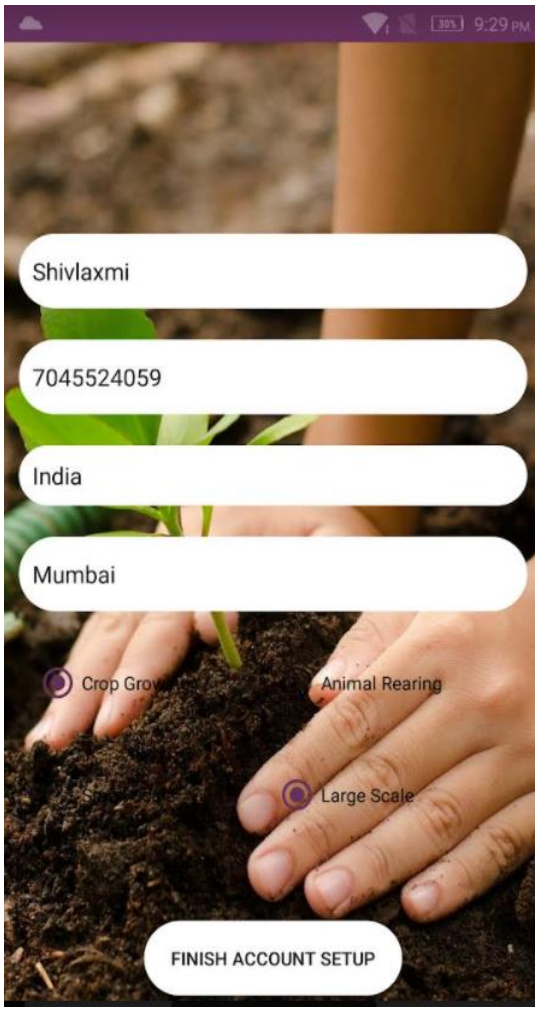
- Android Device
- GPS
- Internet

Results and Discussions :

Module A:

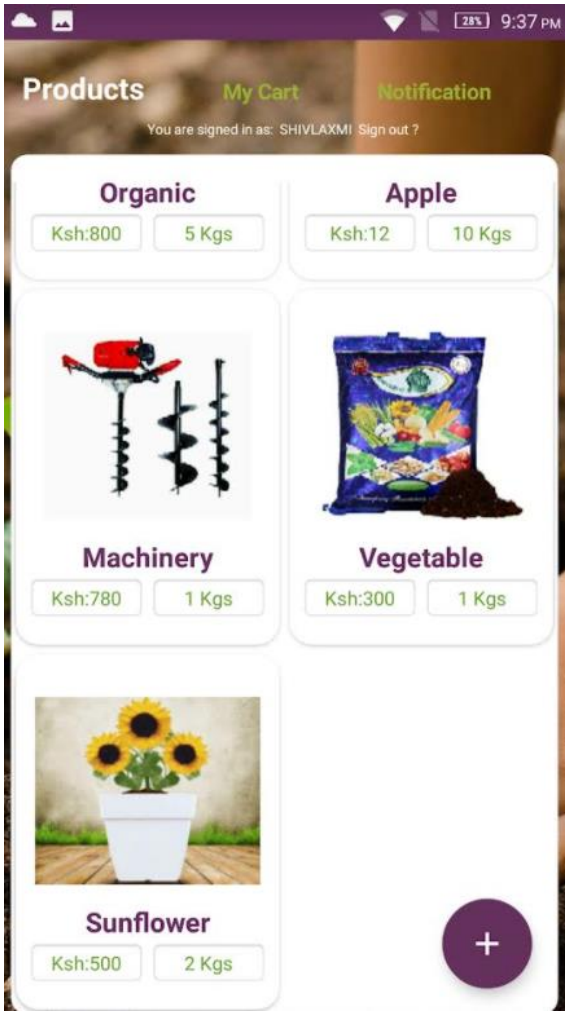
If user is new to these application then he can create an account, and then Sign In also admin can Sign In and edit the details.

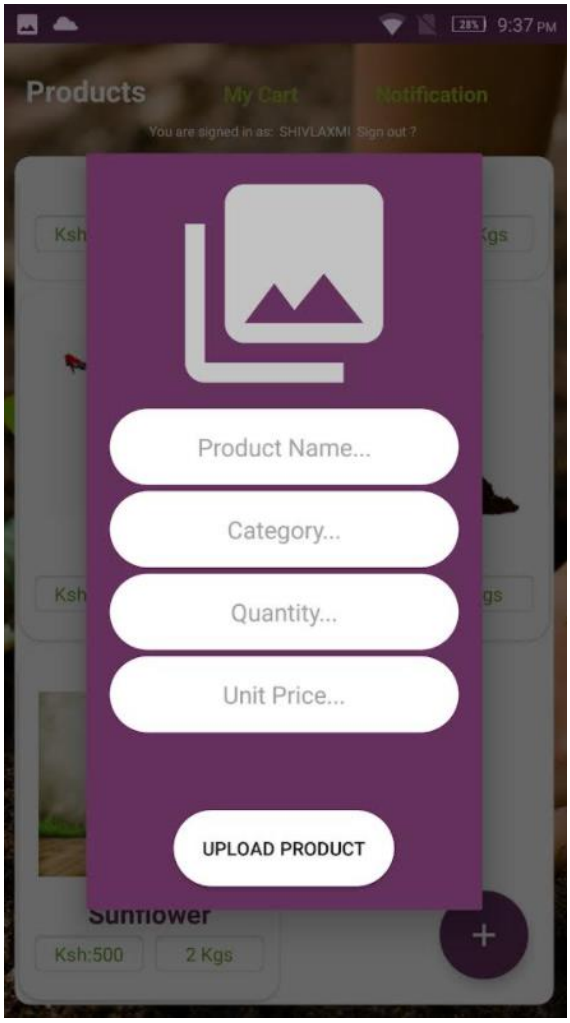
Module B:



After Sign In Here, the Admin will provides he's details and the type of crop also the farming type like large scale or small where he/she wants to supply.

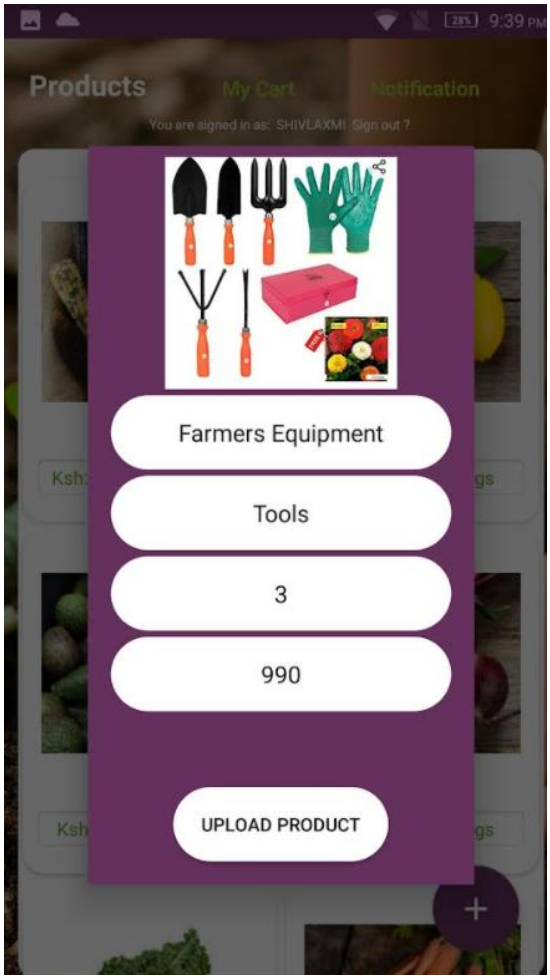
Module C:

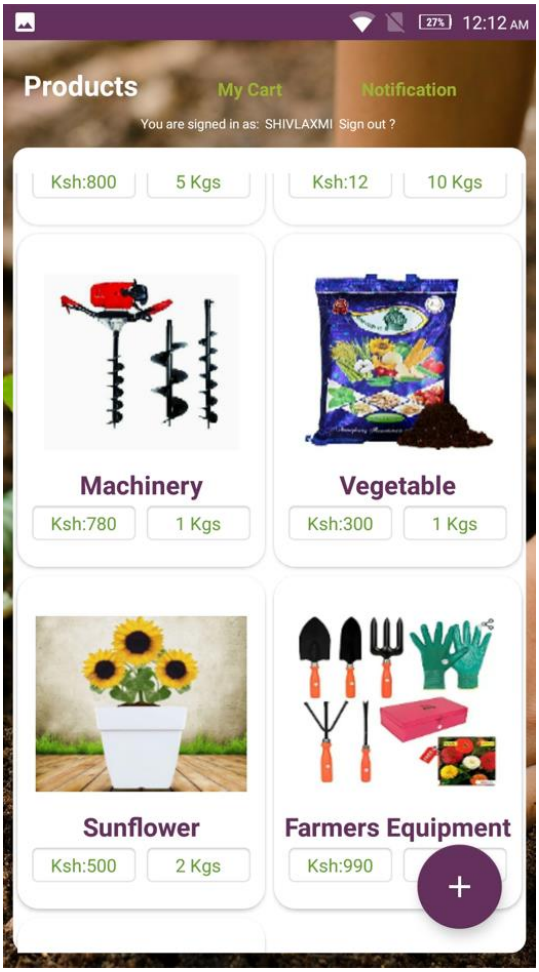




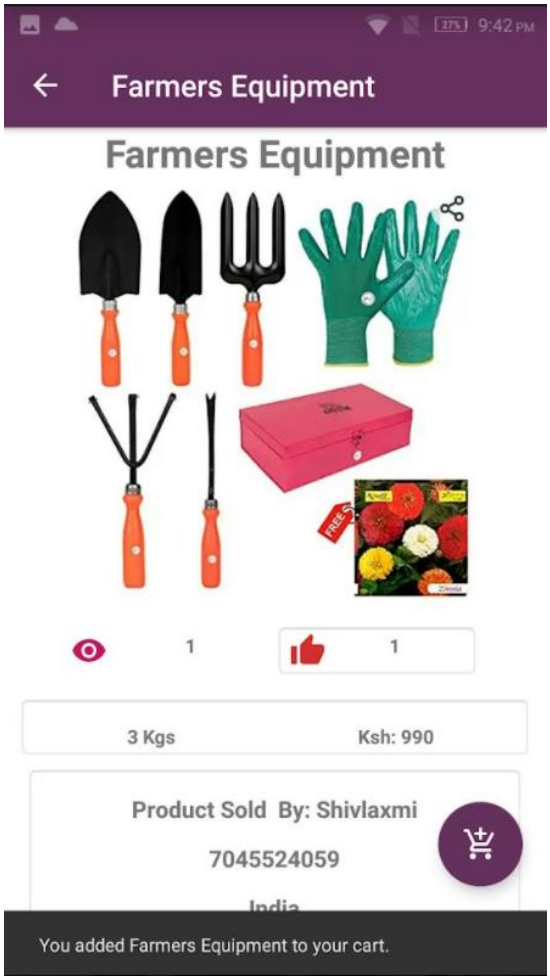
Here, the admin can upload the product.

Module D:

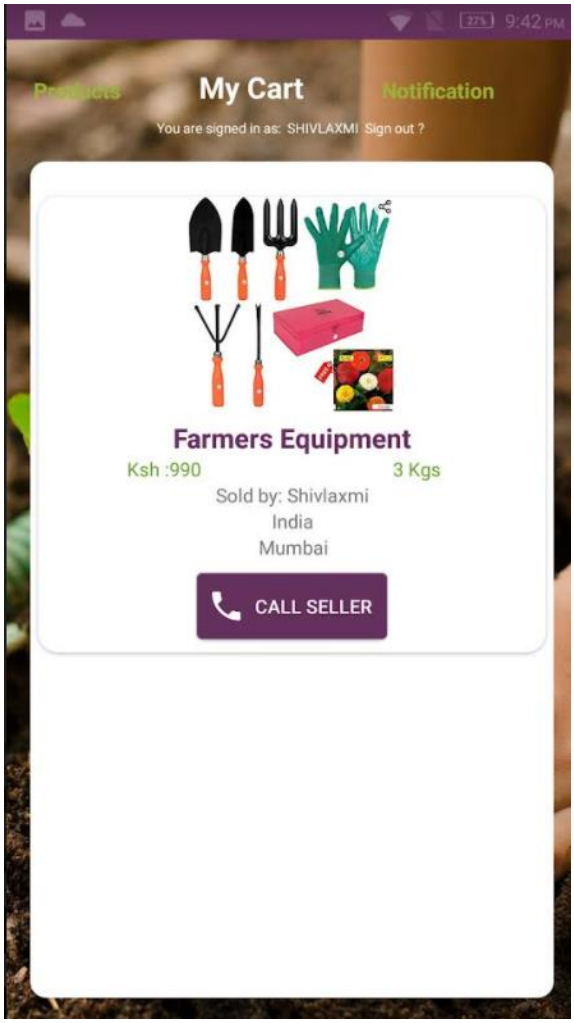


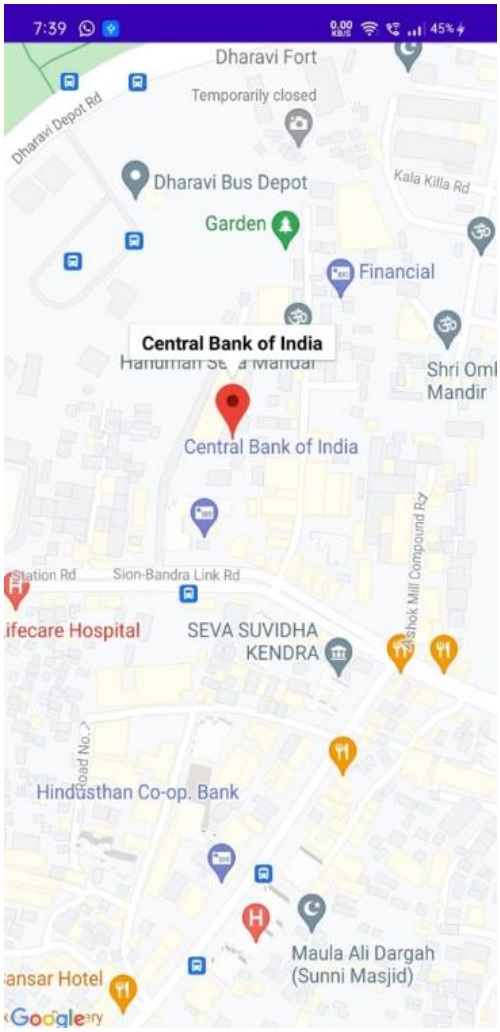


Admin after uploading the product, the User can add the equipment to the cart.

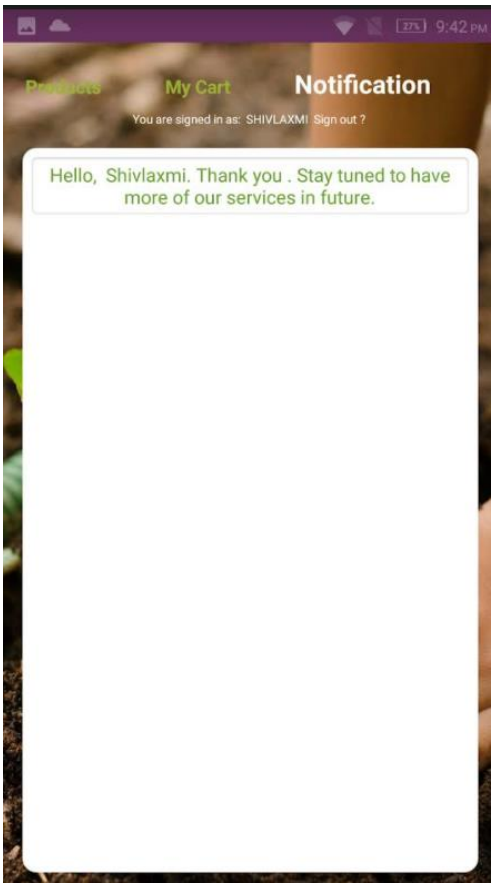


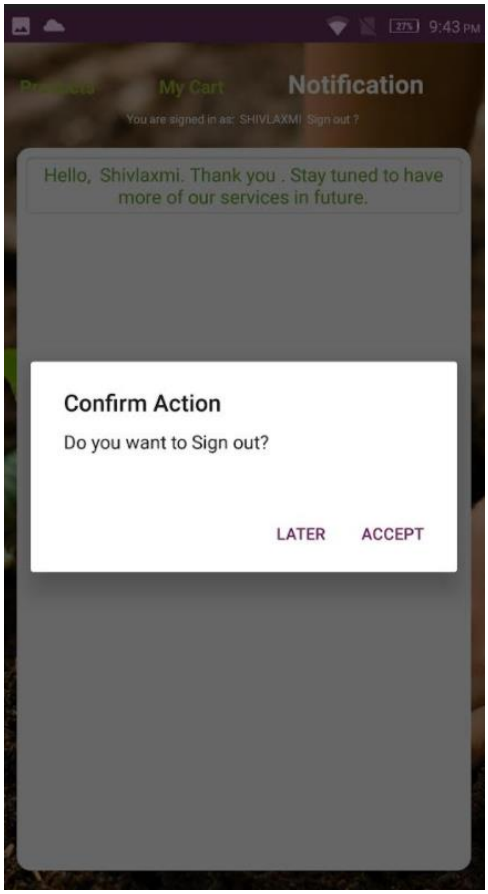
If the User Likes the products then he can give a Thumps up and he/she can add the Equipment to Cart.





After Placing the Order you can directly Call or track the location through map.





then you wil get a notification for visiting the application says Thank you and then you can sign out.

Conclusion:

The main objective of designing this system is to provide a platform for Agri Shoppers and also for the Farmers. Every farmer comes across a situation where he wants an Agri Equipment but doesn't have the right knowledge from where they can get all the equipment. This project will provide a concrete platform to help farmers to get their equipment. Stronger connection between producers and consumers may result in more differentiated products that meet consumer needs. E-commerce offers an alternative venue of promoting and marketing agricultural products that has a benefit of reaching extensive geographical populations and providing detailed product information at a relatively low cost.

Future Scope:

The current system has less features which can be increased in the future. Due to the lack of transport facility, it becomes impossible. Although the importance of agricultural market is paramount in every village, there is lack of transport facility and the Lack of organizied markets. Can be improved in future.

References

Acharya, S.S. and N.L. Agarwal (2011), Agricultural Marketing in India, Oxford &IBH publishing Company Pvt Ltd., Fifth edition. Singh, Hardeep, M.K. goel, and A.K. Singhal (2012), Challenges in Rural and

Agriculture Market, VSRD International Journal of Business & Management Research, Vol. 2 (6), pp. 299-304

Mueller, A.E. Rolf (2000), "Emergent E-Commerce in Agriculture", AIC Issues Brief, Agricultural Issue Centre, University of California, No. 14, pp-1-8.

Prof. Rahul goswami, Ekta Juneja and,Swati Sharma (2008). Agribusiness sector in Rural India and increasing opportunities in e-Commerce. Marketing to Rural Consumers-Understanding and tapping rural market potential,3,4,5, April 2008, pp.145-148.

The CII-Deloitte Report, (2016) on "e-Commerce in India – A Game Changer for the India with key trends and brings forth the point of view of major stakeholders in the Indian e-Commerce industry.