

**PUNE INSTITUTE OF COMPUTER TECHNOLOGY,
DHANKAWADI, PUNE**

A Mini-Project Report

On

AgriTech App

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TE-4

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I. ABSTRACT

Mobile applications and services make things simpler fulfilling our daily needs for information, communication, entertainment , etc. Mobile Applications have brought a new revolution simplifying human life. In this report we provide one such mobile application “AgroTech” app developed by us as our mini-project , which can help farmers. AgroTech-App is a mobile application built keeping the poor farmers in mind which will help them to buy pesticides at affordable rates . It keeps a farmer updated with all the information related to pesticides, insecticides and farming tools. Basic functionality of the app is to provide agricultural tools and pesticides at affordable prices and quickly. Government of India is spending millions of money to make ICT helpful for agriculture purpose but the hindrance is the literacy of farmers. Mobile being a common device now, with this application we aim to make it friendly for farmers.

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CHAPTER 1

INTRODUCTION

1. PURPOSE

The purpose of this document is to present a detailed description of the AgriTech- Ecommerce Application. It will explain the purpose and features of the application, its interface, functionalities and the constraints under which it must operate. This document is intended for the developers of the system and the stakeholders and will be proposed to the SDL lab teacher for its approval.

2. SCOPE

This application will be an Ecommerce Application for farmers to buy pesticides as well as for sellers to sell pesticides and give Agricultural tools on rental basis . This application is designed to ease the life of farmers and sellers when it comes to commuting to the market on weekly basis. Due to insufficient agricultural infrastructure and facilities , lack of availability of pesticides at nearby shops,etc this app is designed to increase selling of pesticides of seller and give the option of Door step delivery to farmers in remote places .This app can be used as rental tools shop. Farmers and seller can interact with each other with AgriTech Chat section which is good communication media between direct sellers and Farmers as well as between Farmers

3. OVERALL DESCRIPTION

Farmers can buy pesticides online through AgriTech app . Seller can upload available pesticides on AgriTech app for selling at affordable prices. Farmers can get tools of other farmers on rental basis through AgriTech . User can checkout using options such as Cash On Delivery (or) Online Payments .AgriTech uses Secured Database –Firebase and performs secure payments using paytm payment gateway . AgriTech provides easy tracking for order placed and that are yet to be delivered.

4. MOTIVATION

Farmers were unable to get exact pesticides required for their current crop.

Sellers were unable to sell their pesticides efficiently,so to boost the pesticide business and to provide farmers with latest pesticides, some media or platform which connects the farmers directly to pesticide retailers was needed.

CHAPTER_2

DESIGN AND IMPLEMENTATION

2.1 PRODUCT PERSPECTIVE :

The application provides advanced functionalities like tracking orders, maps for location, product rating which will ensure that the needs of the customer are satisfied. This also helps the customers to trust our product.

2.2. REQUIREMENT ANALYSIS

Hardware required for developing the app:

- Computer with intel i5 or greater processor.

Software required for developing the app:

- Android Studio
- Java SDK
- Firebase account

Requirements for running the app:

- A smartphone
- Android lollipop or greater
- Working internet connection

2.3 DEPENDENCIES

- Working internet connection
- Continuous updation of database required
- Database hosted by Google (Firebase)
- Third party payment API

2.4 PRODUCT FUNCTIONS

- Users have their own account to add buy tools and pesticides.
- User can view the products and their details.
- User can track their order and communicate with the seller using chats. Users can make online payments via paytm as well as buy for cash on delivery(COD).
- Users can see highly rated products by user and send feedback.

2.5 FUNCTIONAL REQUIREMENT

1.REGISTRATION

- Description: First the users will have to register/Sign up. There are two different types of services available for the users, To give
- Regular Buyer: The User has to provide details about his/her name , phone number , email id.

1.1 SIGN UP

- Input: Details about the user as mentioned in the description.
- Output: Confirmation of registration status and username and password will be set.

1.2 LOGIN

- Input: Details about the username and password provided.
- Output: Users will be able to use the features of the software

2. Buy Products

2.1 SEARCH

- Input: Enter the name of desired product.
- Output: Product that you have searched for.

2.2 BUY PRODUCT:

- State: Searched the product user asked for.
- Input: Enter the product name.
- Output: Confirmation to buy product and payment gateway.
- Processing: If payment is successful then order is placed.

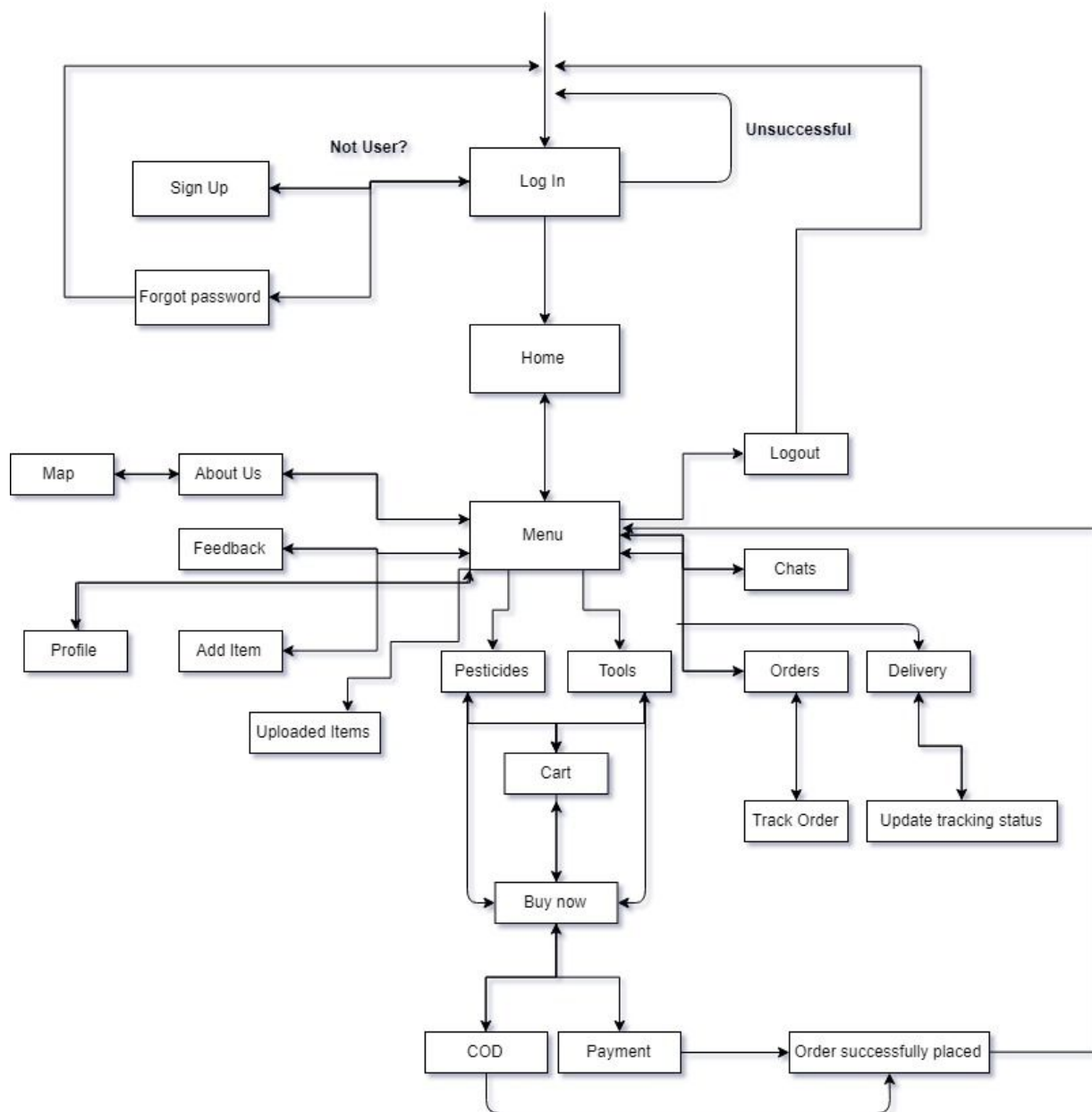
2.3 PAYMENT GATEWAY:

- Input: Credentials,VPA address.
- Output: Payment Successful/Unsuccessful.

2.4 RATING SYSTEM:

- Input: Rate the product according to user feedback.
- Output: Rating specification out of 5 stars.

2.6 ARCHITECTURE DIAGRAM OF AGRITECH APP:



2.10 IMPLEMENTATION

The AgriTech android app was implemented using the Android studio app. Android Studio is the official integrated development environment for Google's Android operating system, built on JetBrains' IntelliJ IDEA software and designed specifically for Android development. It is available for download on Windows, macOS and Linux based operating systems. It has a strong editor tool for developing creative UI and emulators for different versions to test and simulate sensors without having actual Android devices. Installing Android Studio in Ubuntu:

STEP 1:

We started by installing Oracle JDK 8 with the following commands:

- `sudo add-apt-repository ppa:webupd8team/java`
- `sudo apt-get update`
- `sudo apt-get install oracle-java8-installer`
- `sudo apt-get install oracle-java8-set-default`

STEP 2:

- Download the Android Studio package for Linux and extract it to the home directory.
- To launch Android Studio, open a terminal, navigate to the android-studio/bin/directory, and execute `studio.sh`
- Select whether you want to import your previous Android Studio settings or not, then click OK.
- Set the `ANDROID_HOME` environment variable to the location of your Android SDK

Installation:

```
sudo gedit ~/.bashrc
export ANDROID_HOME=/home/user_directory/Android/Sdk
export PATH=${PATH}:${ANDROID_HOME}/tools:${ANDROID_HOME}/platform-tools
export JAVA_HOME=/usr/lib/jvm/java-8-oracle
```

STEP 3:

Install SDK Platforms

- You need to install an SDK before you can jump into building Android apps.
- Click on Configure -> SDK Manager to open Android SDK Manager.

- Select the latest API in order to test against target build, e.g. API 19 (Android 4.4.2), and the Android Support Library and Android Support Repository packages in Extras . Then install the selected Packages.

CHAPTER 3 TESTING/RESULT AND ANALYSIS

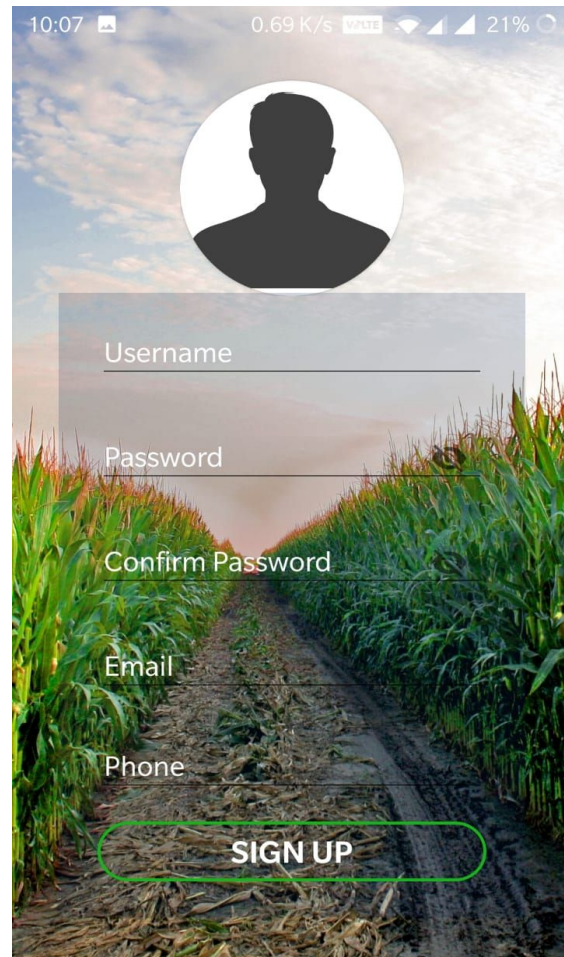
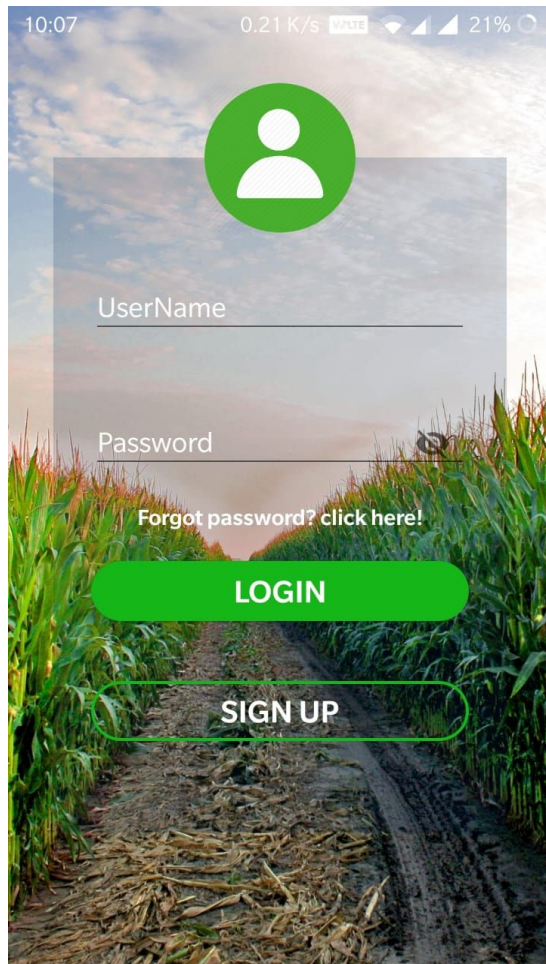
3.1 TEST CASES

SR. NO.	TEST CASE DESCRIPTION	EXPECTED RESULT	ACTUAL RESULT	REMARK
SIGNUP PAGE				
1.	Enter username, email, phone no, Set passwd.	New account Created successfully and can login. Homepage page will open.	Same as expected	User shouldn't be already registered.
LOGIN PAGE				
1.	Enter correct username and password	User successfully logged in.	Same as expected	Forgot password will receive OTP on email.
2.	Enter incorrect username and password	Toast showing incorrect username or password	Same as expected	
HOMEPAGE				
1.	Clicks an option from the navigation drawer	Activity corresponding to that option opens	Same as expected	
2.	Clicks logout from the navigation drawer	User successfully Same as expected logged out and login activity opens	Same as expected	
PROFILE				

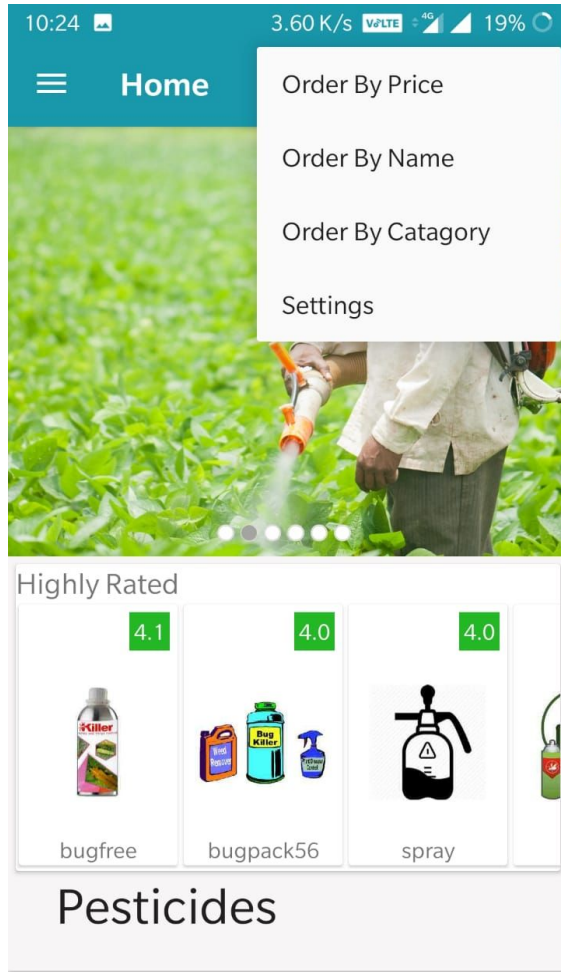
1.	Users can view and update their phone no, email, profile, username.	Data updated successfully.	Same as expected.	
2.	User can delete the account permanently	Account deleted successfully and signup page appears.	Same as expected.	
ADD ITEM				
1.	Enter item name, images, price type, Quantity.	Item will appear in feed for buyers.	Same as expected	
Pesticides				
1.	Pesticides available to buy will appear with all detail and rating.	Users are able to buy pesticides.	Same as expected.	
2.	Pesticides can be added to cart	Appear in cart.	Same as expected	
Delivery				
1.	Buyers can track their order	Shipment of order is seen to buyers.	Same as expected.	
Chats				
1.	Users of the app can chat with each other.	Chats are visible only for private users.	Same as expected.	
Feedback				
1.	Users can write a feedback to us.	Feedback can be seen only by app administrators.	Same as expected.	
About us				
1.	Users can see our office location in map and our vision and mission.	Maps working good and vision and mission is visible.	Same as expected.	

3.2 RESULTS (Screenshots)

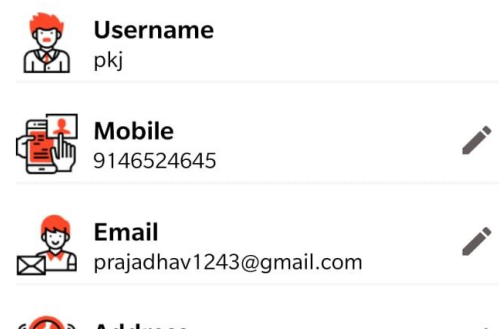
Login and Signup page



HomePage and Profile



Account Info



Pesticides and Add Item

5:35 0.44 K/s V/LTE 4G 19%

≡ Add Item ⋮

Add Photo

Name

Price

Pesticide ▾

Description

Quantity :


SUBMIT

10:29 1.37 K/s V/LTE 4G 13%

≡ Pesticides 🔍 🛒 ⋮

★★★★★

Add to cart BUY NOW




pcp16

Farming Tool

₹ 899

★★★★★

Add to cart BUY NOW




pcphydrapack

Farming Tool

₹ 769

★★★★★

Add to cart BUY NOW




solabiol

Farming Tool

₹ 1099

★★★★★

Add to cart BUY NOW



solabiol67

Pesticide

Detail About Product



Name : bugfree

Catagory : Pesticide

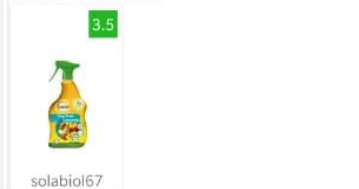
Price : ₹ 399

Seller : pkj



A Brief History Pesticides are not recent inventions! Many ancient civilizations used pesticides to protect their crops from insects and pests. Ancient Sumerians used elemental sulfur to protect their crops from insects. Whereas, Medieval farmers experimented with chemicals using arsenic, lead on common crops. The Chinese used arsenic and mercury compounds to control body lice and other pests. While, the Greeks and Romans used oil, ash, sulfur, and other materials to protect themselves, their livestock, and their crops from various pests. Meanwhile, in the nineteenth century, researchers focused more on natural techniques involving compounds made with the roots of tropical vegetables and chrysanthemums. In 1939, Dichloro-Diphenyl-Trichloroethane (DDT) was discovered, which has become extremely effective and rapidly used as the insecticide in the world. However, twenty years later, due to biological effects and human safety, DDT has been banned in almost 86 countries.

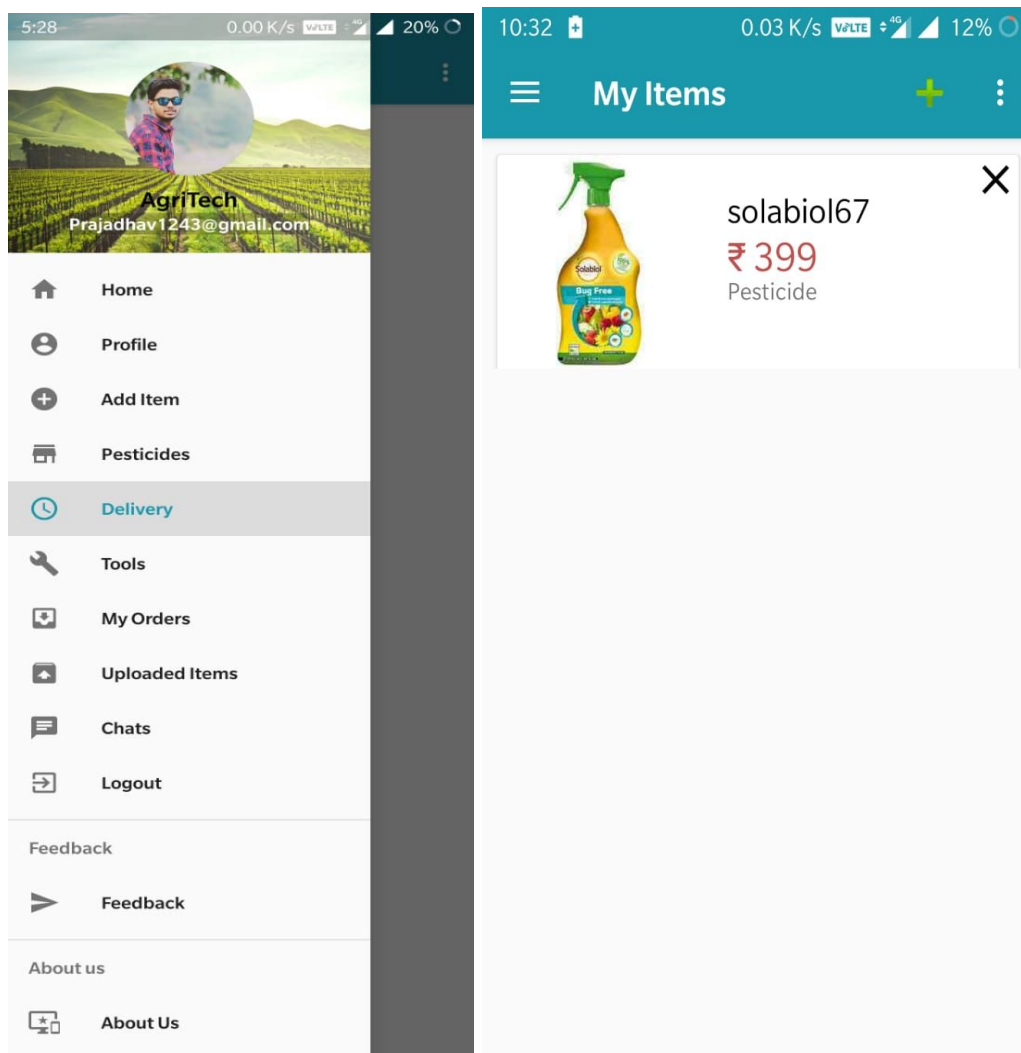
Similar Products



Rate the product :



Navigation and myitems



Cart and Payment

10:29 1.20 K/s V6LTE 4G 13%

← Cart

10:36 6.01 K/s V6LTE 4G 9%

paytm

Login to use Paytm balance or your saved cards Login

Total amount to be paid ₹ 399.00

Select an option to pay

Debit Card

Card No.

Month Year
MM YY

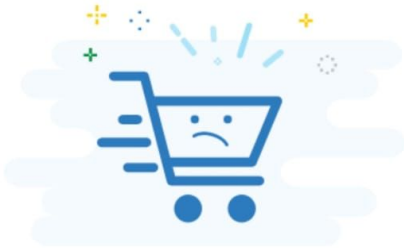
CVV

Pay Now

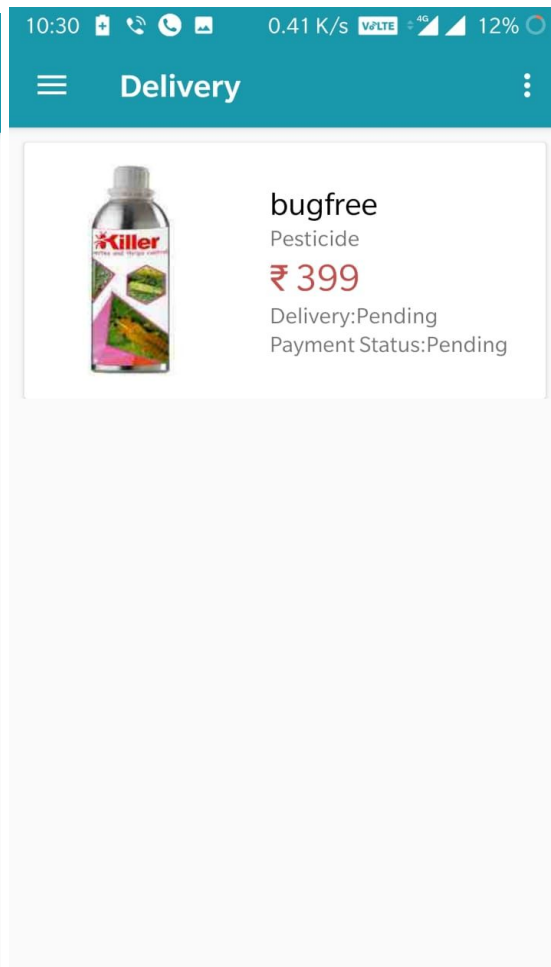
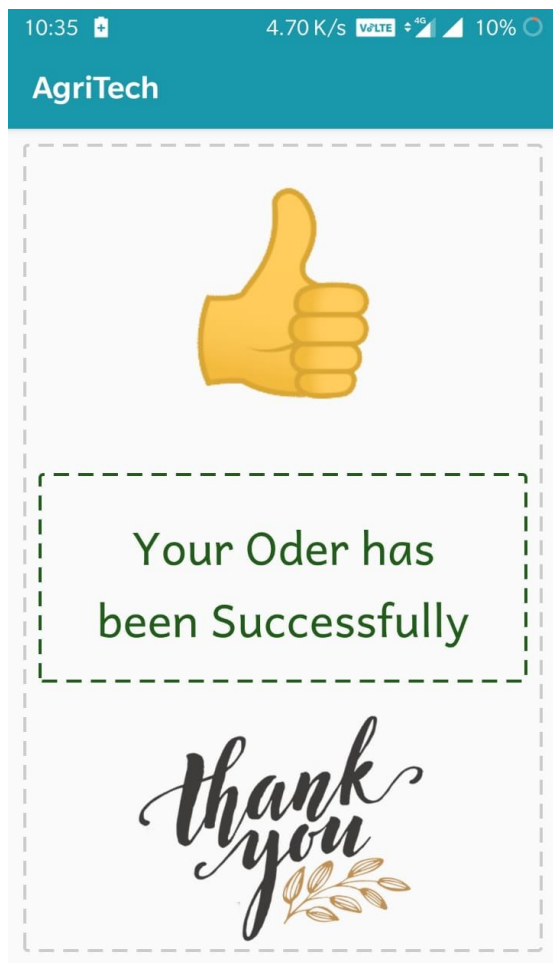
Other payment modes

Credit Card >

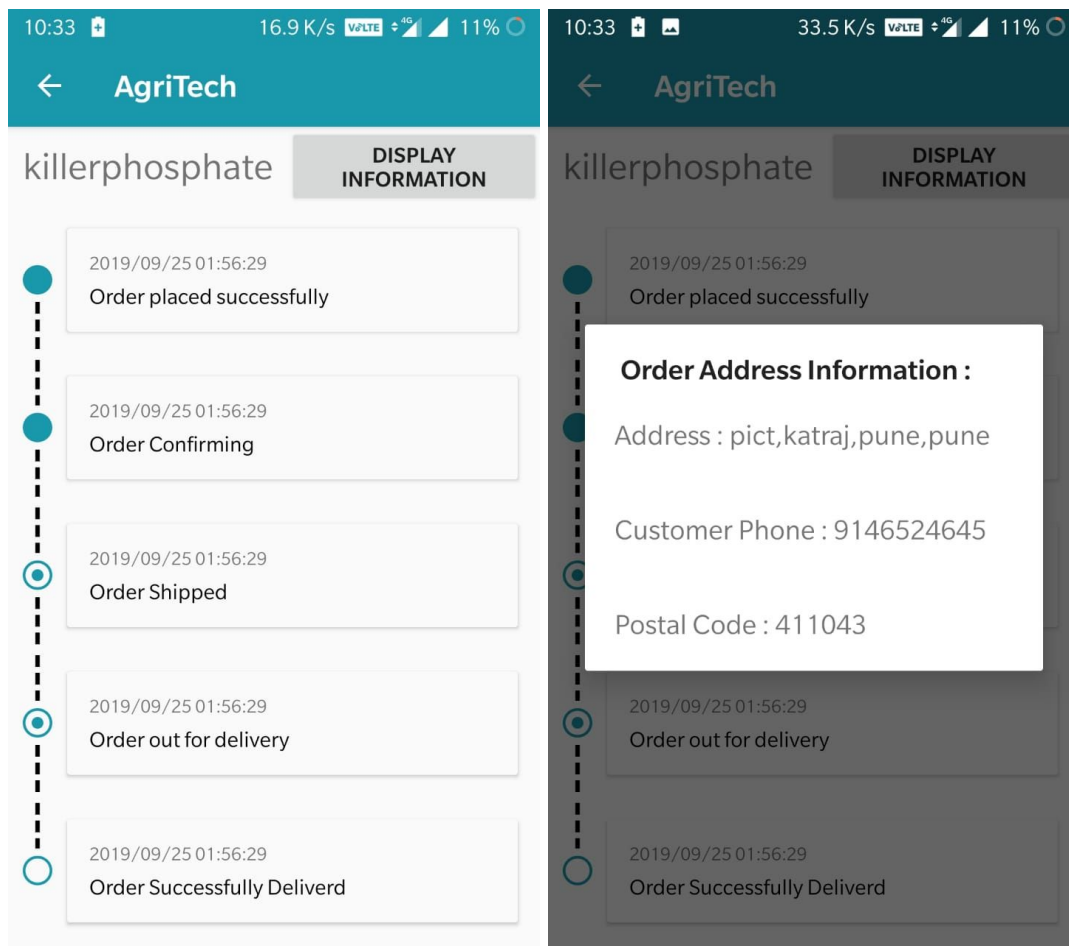
Net Banking >



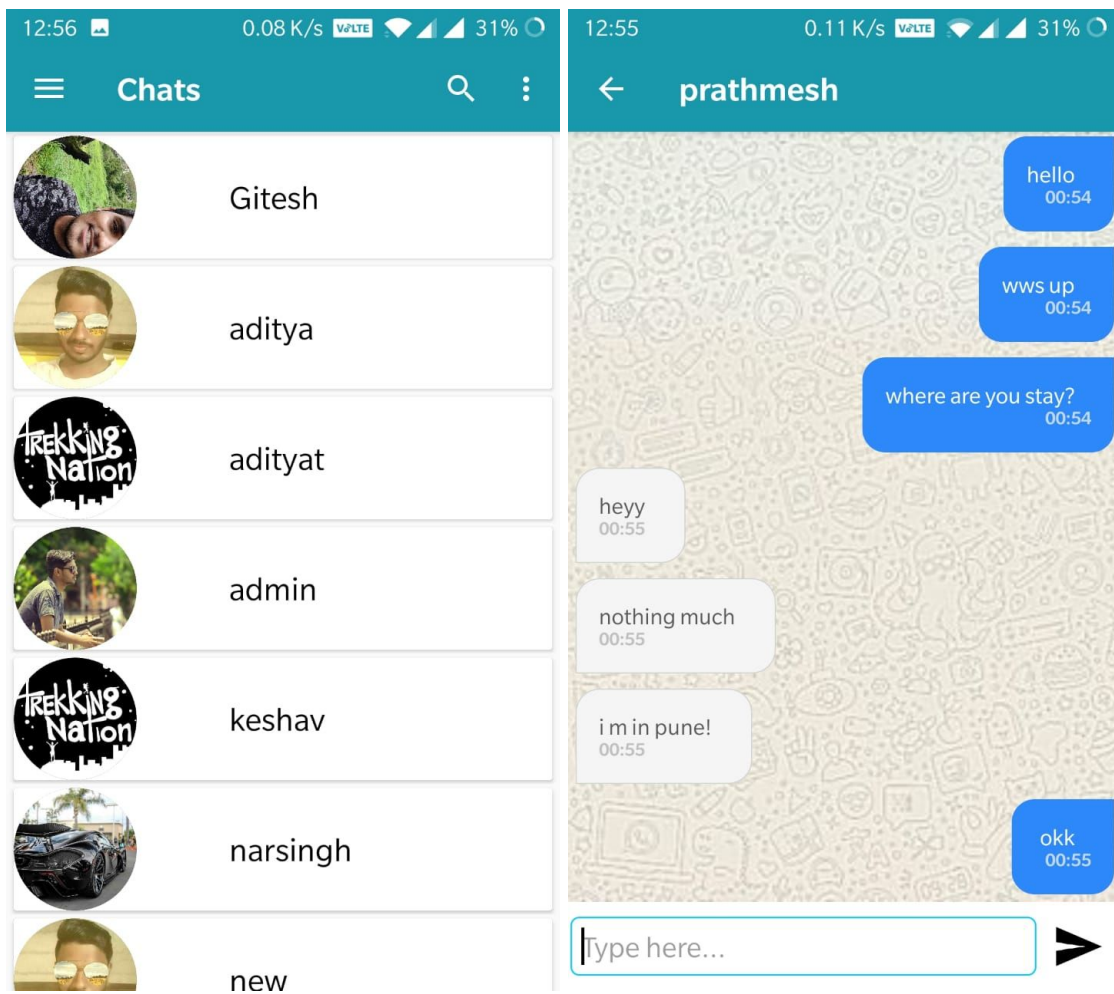
Delivery



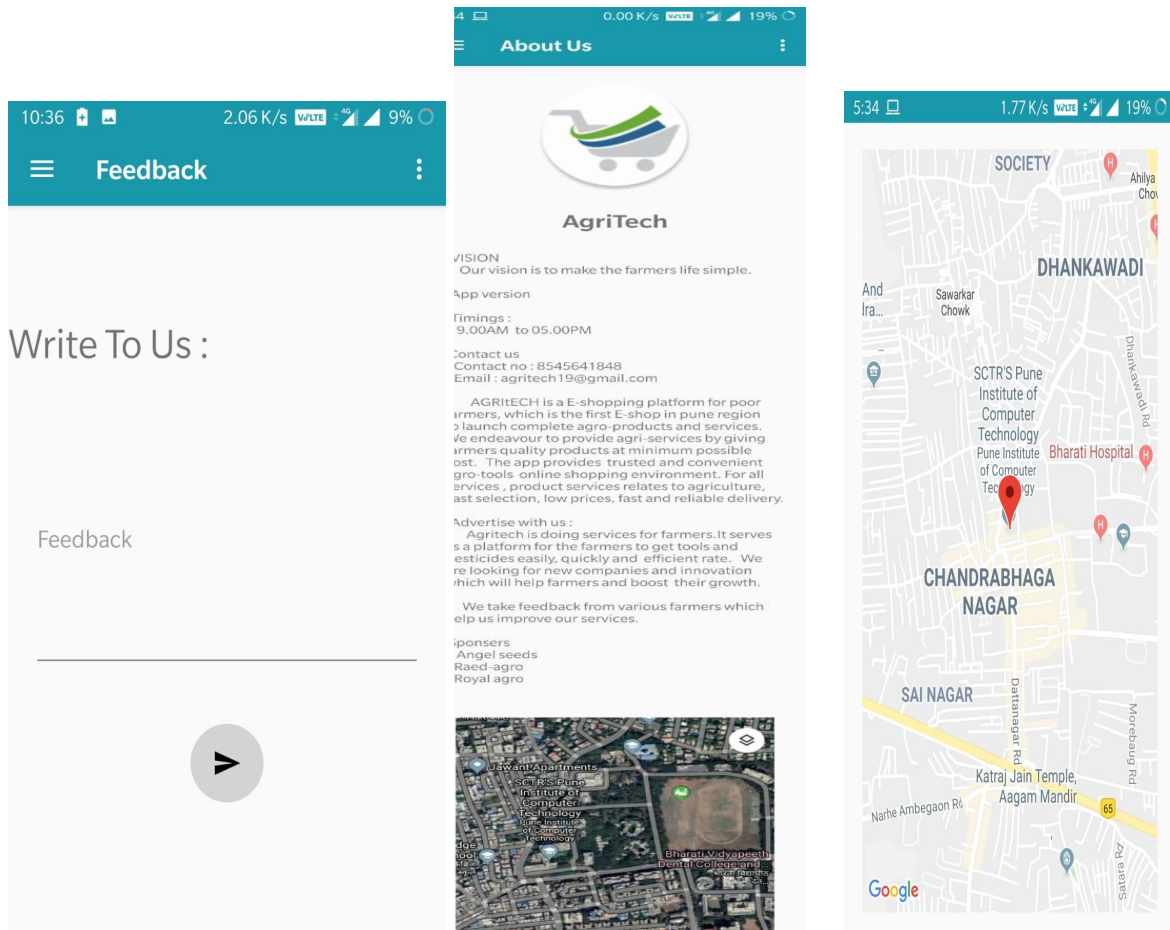
Order Tracking



Chats



Feedback and About us



CHAPTER 4

CONCLUSION AND FUTURE ENHANCEMENTS

4.1 CONCLUSION

- The AgriTech App will help poor farmers to get Agricultural tools and Pesticides at affordable prices.
- It will help sellers in improving their business of pesticides using Agritech app.
- This application will make the process of viewing, buying, requesting and payment related to agricultural tools and pesticides very simple.

4.2 FUTURE ENHANCEMENTS

- Currently available in english and planning to launch in other regional languages.
- Implementation of chatbot in app for answering questions of farmers using tensorflow API.
- In future farmers can readily get rarely available pesticides at cheapest cost.
- Users can communicate through our chat services and understand the current farming practises.
- It will help sellers in improving their business of pesticides using Agritech app.

Chapter 5

REFERENCES

[1] Youtube. “ FirebaseUI - Firestore + RecyclerView (FirestoreRecyclerView) - Android Studio Tutorial ”.[Online] Available:

<https://www.youtube.com/playlist?list=PLrnPJCHvNZuAXdWxOzsN5rgG2M4uJ8bH1>

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