

# **Android Based Application: Krishoker Foshol**

**BY**

**Md. Newaz Ahmed Diganta**  
**ID: 171-15-9042**

This Report Presented in Partial Fulfillment of the Requirements for the  
Degree of Bachelor of Science in Computer Science and Engineering

Supervised By

**Md. Jueal Mia**  
Sr. Lecturer  
Department of CSE  
Daffodil International University

Co-Supervised By

**Md. Zahid Hasan**  
Assistant Professor  
Department of CSE  
Daffodil International University



**DAFFODIL INTERNATIONAL UNIVERSITY**

**DHAKA, BANGLADESH JANUARY 2021**

## **APPROVAL**

This Project “**Krishoker Foshol**”, submitted by Md. Newaz Ahmed (Diganta) to the Department of Computer Science and Engineering, Daffodil International University, has been accepted as satisfactory for the partial fulfillment of the requirements for the degree of B.Sc. in Computer Science and Engineering and approved as to its style and contents. The presentation has been held on 31-01-2021.

## **BOARD OF EXAMINERS**



---

**Dr. Touhid Bhuiyan**  
**Professor and Head**  
Department of CSE  
Faculty of Science & Information Technology  
Daffodil International University

**Chairman**



---

**Moushumi Zaman Bonny**  
**Assistant Professor**  
Department of CSE  
Faculty of Science & Information Technology  
Daffodil International University

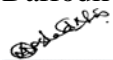
**Internal Examiner**



---

**Md. Sazzadur Ahamed**  
**Senior Lecturer**  
Department of CSE  
Faculty of Science & Information Technology  
Daffodil International University

**Internal Examiner**



---

**Dr. Md Arshad Ali**  
**Associate Professor**  
**Associate Professor**  
Department of Computer Science and Engineering  
Hajee Mohammad Danesh Science and Technology University

**External Examiner**

## DECLARATION

I hereby declare that this project has been done by me under the supervision of **Md. Jueal Mia, Sr. Lecturer, Department of CSE** Daffodil International University. We also declare that neither this project nor any part of this project has been submitted elsewhere for the award of any degree or diploma.

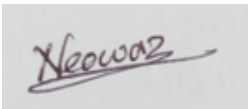
**Supervised by:**



---

**Md. Jueal Mia**  
Sr. Lecturer  
Department of CSE  
Daffodil International University

**Submitted by:**



---

**Md. Newaz Ahmed Diganta**  
ID: 171-15-9042  
Department of CSE  
Daffodil International University

## ACKNOWLEDGEMENT

First, I express my heartiest thanks and gratefulness to Almighty God for His divine blessing that makes me possible to complete the final year project successfully.

I grateful and wish our profound indebtedness to **Md. Jueal Mia, Sr. Lecturer**, Department of CSE Daffodil International University, Dhaka. Deep Knowledge & keen interest of our supervisor in the field of “*Krishoker Foshol*” to carry out this project. His endless patience, scholarly guidance, continual encouragement, constant and energetic supervision, constructive criticism, valuable advice, reading many inferior drafts, and correcting them at all stages have made it possible to complete this project.

I would like to express my heartiest gratitude to Md. Jueal Mia, Sr. Lecturer, Md. Zahid Hasan, Assistant Professor, and Head, Department of CSE, for his kind help to finish our project and also to other faculty members and the staff of the CSE department of Daffodil International University.

I would like to thank my entire coursemate at Daffodil International University, who took part in this discussion while completing the course work.

Finally, I must acknowledge with due respect the constant support and patients of our parents.

## **ABSTRACT**

Krishoker Foshol is an e-commerce based project. And a well-organized site that is very useful for farmers and customers to search for a sell and buy all types of vegetables. In this project, we developing android based software. This software handles the invoice of a product and adds it to the chart board. Every day government fixing a price in the market, But the businessman doesn't use this price cart board that causes the farmer doesn't get an appropriate product price. Previous year when Farmer does not get their padding crops appropriate price, that situation is very shameful in our country. Farmers are producing our daily needed product but they did not sell the product the original price. So, I am very concerned about this matter. That cause I made an android software that helps the farmer to sell their vegetables at the government fixed price and the proper price. We deliver all their product so fast as soon as possible. This software will take a delivery price that is the main profit value in the market and our apps show many advertisements that are another source of gain a money income source in the project. Mainly helping hand for a farmer to sell their product in the all kind of market that achieves another third party businessman. we want to pay the actual product price in the market.

## TABLE OF CONTENTS

<b>CONTENTS</b>	<b>PAGE</b>
Approval	ii
Board of examiners	ii
Declaration	iii
Acknowledgments	iv
Abstract	v
Table of Contents	vi-viii
List of Figures	ix
<b>CHAPTER</b>	
<b>CHAPTER 1: Introduction</b>	<b>1-3</b>
1.1 Introduction	1
1.2 Motivation	1
1.3 Objectives	2
1.4 Expected Outcome	2
1.5 Report Layout	3

<b>CONTENTS</b>	<b>PAGE</b>
<b>CHAPTER 2: Background</b>	<b>4-7</b>
2.1 Introduction	4
2.2 Related Works	5
2.3 Comparative Studies	6
2.4 Scope of the Problem	7
2.5 Challenges	7
<b>CHAPTER 3: Requirement Specification</b>	<b>8-12</b>
3.1 Business Process Modeling	8-9
3.2 Requirement Collection and Analysis	9
3.3 Use Case Modeling and Description	10
3.4 Logical Data Model	11-12
3.5 Design Requirements	12

<b>CHAPTER 4: Design Specification</b>	<b>13-24</b>
4.1 Front-end Design	13-21
4.2 Back-end Design	22-23
4.3 Interaction Design and UX	24
4.4 Implementation Requirements	24
<b>CONTENTS</b>	<b>PAGE</b>
<b>CHAPTER 5: Implementation and Testing</b>	<b>25-26</b>
5.1 Implementation of Database	25-26
5.2 Implementation of Front-end Design	26
5.3 Implementation of Interactions	26
<b>CHAPTER 6: Conclusion and Future Scope</b>	<b>27-28</b>
6.1 Discussion and Conclusion	27
6.2 Scope for Further Developments	28
<b>Appendix</b>	<b>28</b>
<b>References</b>	<b>29</b>
<b>Plagiarism Report</b>	<b>30-31</b>



## LIST OF FIGURES

<b>FIGURES</b>	<b>PAGE NO</b>
Figure1.5: App to customer data management process	3
Figure 3.1: System Development Life Cycle	8
Figure 3.3: Use case diagram	10
Figure 3.4.1: product list in firebase design	11
Figure3.4.2: user list in firebase design	11
Figure 3.4.2: product list under product details, name, price list design.	12
Figure 4.1.1: splash page design.	13
Figure 4.1.2: Main page design.	14
Figure 4.1.3: App logo design.	14
Figure 4.1.4: Sign in and Sign up page design	15
Figure 4.1.5: Menu page design	16
Figure 4.1.6: Product add page design.	17
Figure 4.1.7: Main Grid View Design	18
Figure 4.1.8: Incoming Call page design.	19
Figure 4.1.9: User List page design.	20
Figure 4.1.10: Video Call in progress page design.	21
Figure 4.2: Firebase	22
Figure 4.2.1: Real-Time data	22
Figure 4.2.2: Authentic Email Addresses	23
Figure 4.2.3: Sinch video calling API	23
Figure 5.1: Sign Up and Sign In page design	25

# CHAPTER 1: Introduction

## 1.1 Introduction

It's an android based project. The name of my project is "Krishoker Foshol". This project is organized by C2C. Farmer is mainly benefitted by this project. They can sell their crops in the online market and got government fixed prices that can be helpful for the customer also because they got the fresh and organic product from farmer's hand to hand. And The system recommends the opportunity to accept 24 hours of 7-day orders and a system of home delivery that will make customers happy. It is conveniently accessible and always available since the program is accessible on the Smartphone. Farmer will get the fair value of their product what they manufactured. By using this application users can easily find their product and with that, they can fulfill their needs all over the country. Consumers will get a fresh product at a low cost. The farmer will be able to sell their product at a reasonable price which is provided by the government. The customers will be eligible to communicate with the sellers through their mobile app ( if they have ), also every functioning zone will have a service provider the from the company to establish the communication between two parties [2].

## 1.2 Motivation

The farmer always used to sell their product in the local area, that's why they cannot get the fair value of their product. To make the product convenient to the consumer it will be the best and trusted marketplace where consumers easily access what they want. Farm Journal Media data reveals that 59% of farmers use a mobile phone and 44% use tablets. Downloading various agriculture apps will be a wise step to make a small farming business productive if you are a farmer with mobile devices. If you're a farmer with no mobile device it's time to use new technology to join the 21st century. The farmer always used to sell their product in the local area, that's why they cannot get the fair value of their product. To make the product convenient

Farmer always used to sell their product in the local area, that's why

they cannot get the fair value of their product. To make the product convenient to the customer it will be the best and trusted marketplace where consumers easily can access what they want.

### **1.3 Objectives**

The farmer will be able to sell their product at a reasonable price which is provided by the government. The customers will be eligible to communicate with the sellers through their mobile app ( if they have one), also every functioning zone will have a service provider from the company to establish the communication between two parties. The project aims to apply for products in an existing shop on the android platform. Full web support should be offered for creating such an application. The fundamental aim of the project is to provide a full and efficient web application that can provide an online shopping experience. An Android application with a web view can be implemented as a web application.

### **1.4 Expected Outcome**

The farmer will get the fair value of the product that they manufactured. By using this application users can easily find their product and with that, they can fulfill their needs all over the country. Consumers will get a fresh product at a low cost.

The core concept of the application is to enable the consumer to shop on the Internet digitally and to allow consumers to purchase the goods and items that they want from the store. The product information is stored on the server-side on Firebase (store). The server stores the details from the customer and the products are sent to a delivery boy's address. The app has been designed for the first time into two modules for consumers who want to purchase organic food and vegetables from the farmers themselves. The second is for the consumers who are tracking the product list and reviewing the data concerning themselves and adding the product to the table. The end-user of this product is a farmer the application is hosted on the web and the administrator maintains the database. And also added a farmer on a video call from real-time. That is the main concept in the project.

## 1.5 Report Layout

The goal will be to double the functionality of the abstractive online store for the customer of the mobile device and build a standardized connection so that for each system instance the application could be easily customized. We need a similar relation to that shown in Figure to achieve this



Figure1.5: App to customer data management process

To use all functions needed for an online store and the android application, some modules have typically access to the database, depending on the structure of the system. To reconstruct the usual functionality of an application database, a mobile device user does not need access to the database behind the system. Farmers could do this to introduce and access new items from the mobile device's customer through the Internet into the database. The objective is achieved if the consumer fulfills the features needed in the chosen setting and reproduces completely what happens when shopping online[12].

## CHAPTER 2: Background

### 2.1 Introduction

The goal of this project is to make things easier in the process of buying and selling farmer's products like a farmers market but virtual on the internet. This project needs manpower in the field and off-field. It also gives the customers the trust that they take organic and real and fresh fruits that insures our android apps to use the video calling option. And farmers also as an admin, they can add product in the recycle viewer than when a customer can see all product in that home interface, In the menu bar, they also have a user list they can see the customers which farmers are available on the internet and connect with video calling use our apps. In the main grid view interface, theirs has a video calling floating button that is also to see which customers and farmers are on the internet and connect with them [8] [3].

Tools permit developers to test and debug their code and used for testing the user-facing the interface of an application. Implements increase the abilities of developers and make it easier, quicker, and efficient for his works.

The tools we are used in this project to achieve our goal given below...

- ✓ Android Studio
- ✓ Java
- ✓ Firebase
- ✓ Email Authentication
- ✓ Photo store in firebase
- ✓ Video calling API

### 2.2 Related Works

“Krishoker Janala” doesn't work to deliver support. After they have a different suggestion for the crops many pesticides solution. Users can choose one and the best option to detect

the problem of the crop. “Chaldal.com” is another example of this type of application. But they can not gain that much trust from the customers. And they cannot that type customers satisfaction.”ajkerdil.com” is another eCommerce website. Mainly farmers are our main purpose to satisfy their live environment[6][7].

All other online customer services in our country are not trustworthy because they are trading with the customers to give false things and not give the appropriate thing what they are advising in the marketing time. It is the main fact of the trusts. So, we provide the video calling option to communicate with the farmer by this video calling API system and also customers trust this app for this feature. It also maintains the product quality doesn't the quantity. I believe this thing that every human believe in the good that will be the main thing to truthness in their business. Because Allah gives the business halal for the Muslim ummah[4].

### **2.3 Comparative Studies**

Android is a Google-developed mobile operating system built on the Linux kernel that is mainly designed to manage mobile devices like smartphones and tablets. Using the touch motions loosely referring to real-world acts such as swiping, clicking, and pinching, Android's user interface is primarily based on direct manipulation and manipulation of a virtual keyboard for text entry. Google also has Android TV for TVs, Android Auto for cars, and Android Wear for handset watches, each with its advanced user interface, together with touchscreen devices. On notebooks, game consoles, digital cameras, and other models of Android are also included along with other electronics. It has a monolithic system kernel, meaning that all system and driver functions are grouped into one block of code. The operating system is based on the Linux version 2.6. The Linux kernel 2.6-includes useful drivers that allow WiFi and Bluetooth for instance -Android consists of five layers. -The library is in C and (C++) with higher functionalities such as an HTML engine or database (SQLite).A virtual machine-based runtime environment for inefficient computers such as

phones. The goal is to convert JAVA into Android-understood machine language. -a JAVA platform for virtual machine applications to organize and cooperate[1][4][6][7].

## **2.4 Scope of the Problem**

Our project is for the farmers and those who want to make benefit and those who Want to make domestic support from the government. the implementation of the application may be a fact to a non-professional user who does not have any knowledge of this type of system. That is why we are building our application in the "Bangla" language that will be added in the future version and developing the system as simple and friendly as possible. They all have their mentality to sell the crops individually. I considered Video Calling to be the perfect idea to move on to all eCommerce applications compared with these whole platforms. Since no providers providing the same service as this project are available on the market. Krishoker Foshol supports users by providing the latest products in many products containing the right and fresh fruits and other plants of the farmers' territory and selling all products from home. It can be shared by users. And crop owners can advertise their crops on a tremendous basis through better budget deals. Finally, I may tell that my project objective and target customer vary from others when exploring these current channels. And one day it will be the best selling market place on the internet[5].

## **2.5 Challenges**

Bangladesh still being a developing country and farmers mostly being unaware of new technologies still use traditional means of farming which are now ineffective and inefficient. So the main challenge is to introduce our system to the farmers and help them to learn how to use the system. Another challenge is to make the system as simple as possible for everyone.

## CHAPTER 3: Requirement Specification

### 3.1 Business Process Modeling

The SLDC is a term used in systems engineering and information systems and software engineering to describe the process for the design, production, testing, and implementation of information systems. The system development life cycle is often referred to as the application development life cycle. A selection of hardware and software configurations is subject to system development life-cycle definition because a system can only be made of hardware, software, and/or both of them[11].

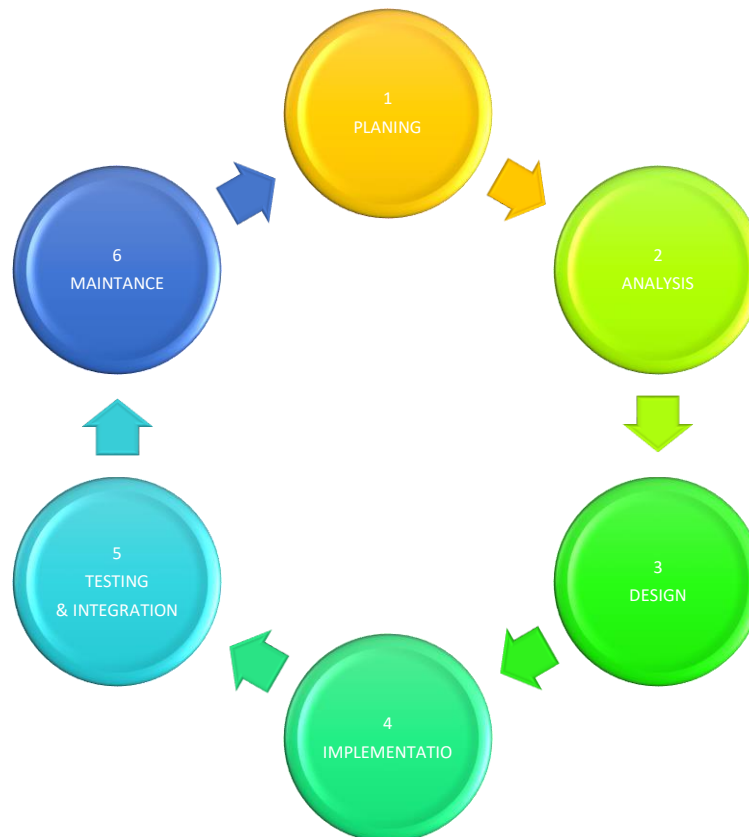


Figure 3.1: System Development Life Cycle



A business procedure is the planning of validly connected responsibilities to complete a fixed business result. Business procedures are usually classified as essential and supporting business forms. It is significant because it shows how the necessities have connected with the framework application. It centers on the business forms that are occurring and how these fundamentals can be accomplished all the more effectively to complete the undertaking [11].

### **3.2 Requirement Collection and Analysis**

Requirement analysis and collection are the most essential requirements for any development process. We have gathered fundamental necessities from the field level and the web. We also surveyed to analyze the needs and requirements of farmers. We collect data from government agriculture universities and government agriculture office[12].

#### **3.2.1 Functional Requirements:**

- Farmer Registration
- Farmer Login
- Farmer Dashboard
- Request for crops information
- The forum that calculates fertilizer for cultivation
- Request for the nearest government agriculture officer's location and contact number.
- live weather (temperature and humidity).

#### **3.2.2 Non-functional Requirement**

Non-functional requirements are additionally significant because it enhances execution, memory expending, and load as speedy as could reasonably be expected. The system is easy to use and navigate. System user interface should be user-friendly[13].

### 3.3 Use Case Modeling and Description

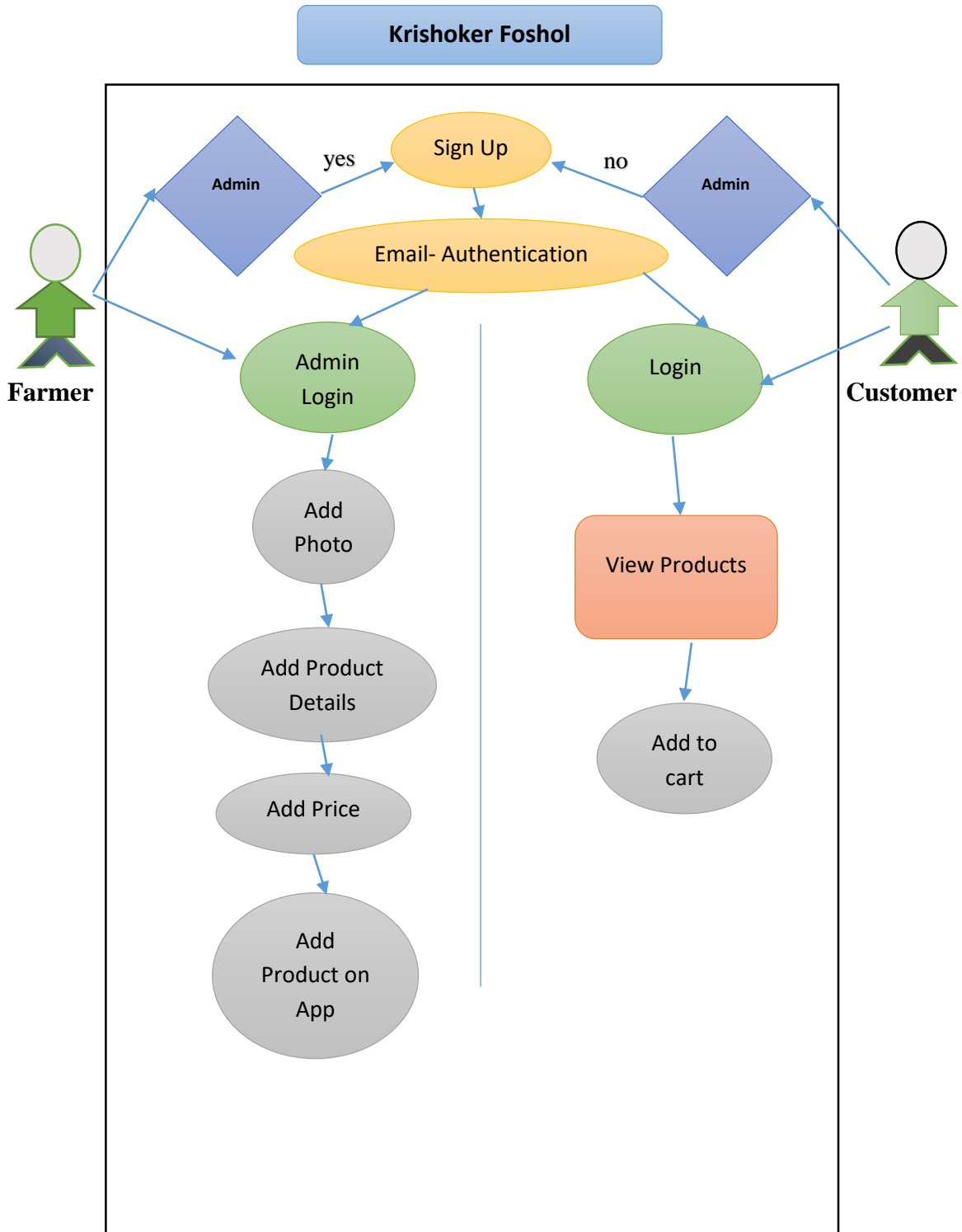


Figure 3.3: Use case diagram

### 3.4 Logical Data Model

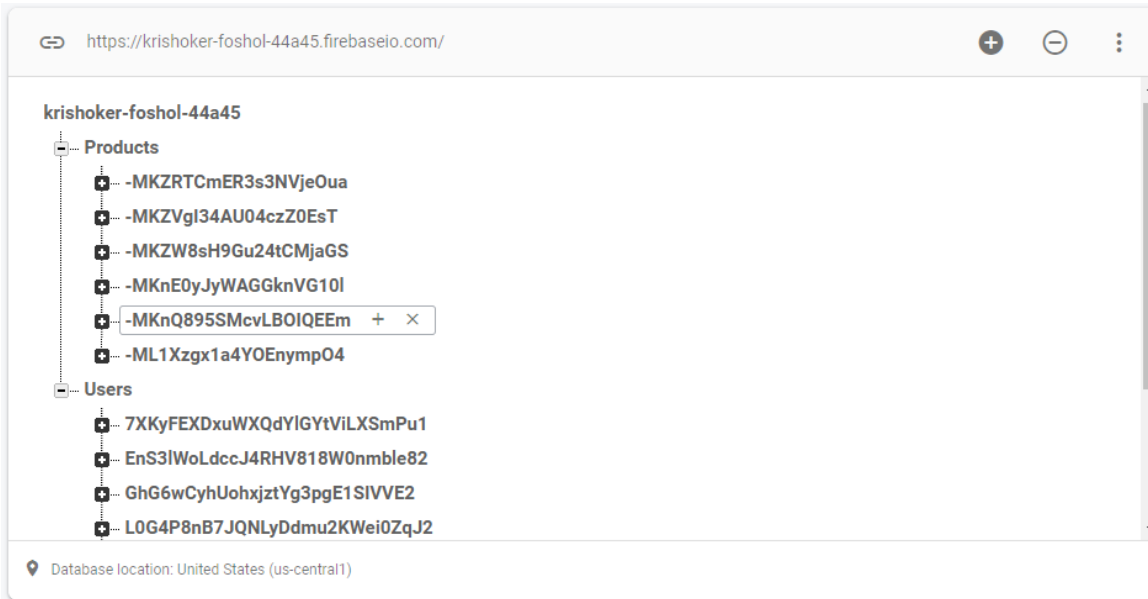


Figure 3.4.1: product list in firebase design

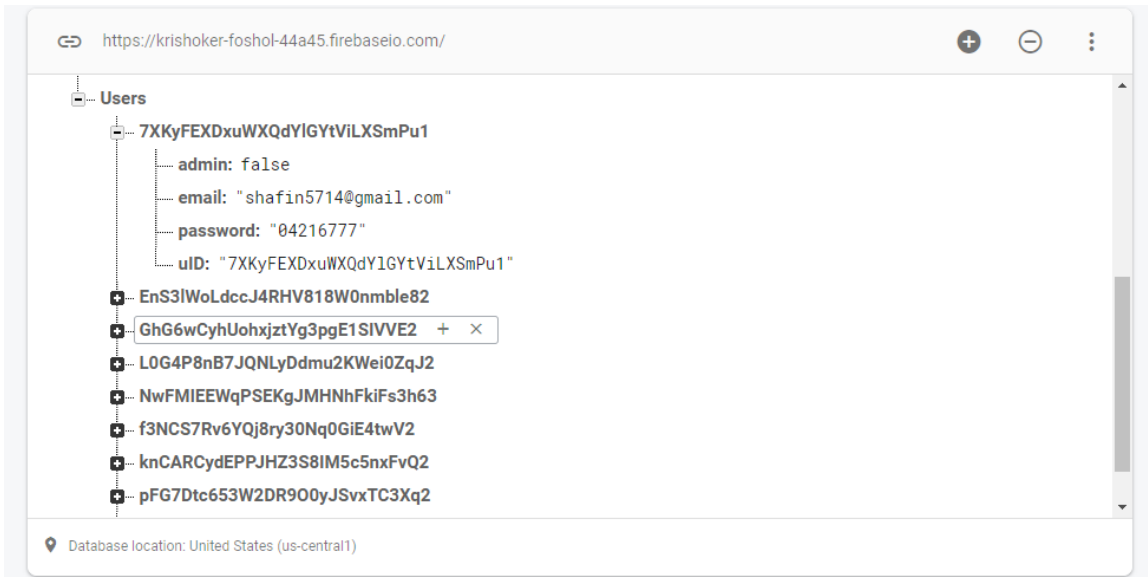


Figure 3.4.2: user list in firebase design



Figure 3.4.2: product list under product details, name, price list design.

### 3.5 Design Requirements

Design requirements are a very important part of an application that makes the application unique from any other existing application. In our application, we focused on farming facilities and the farmer's needs. We work with some special feature and this requirement will be very helpful for user who wants to use our application. We have designed our application with the following features.

- In our application, we have two types of users. One is a normal user like a farmer and the other one is an admin
- Admin can control everything in the application
- A system administrator will arrange the fundamental settings of the framework
- The user has to create an account to store his data and log in to use features
- Clients will give some data like name, telephone name, and so on
- To use some unique features user have to allow their internet

To see “Field and Farm” instant information a user has to install some required sensor in his field and farm.

## CHAPTER 4: Design Specification

Design Specification is an explanation of how to develop a design. In the Design Specification chapter, we attempt to demonstrate the application's front-end and back-end design. Some instruments and platforms are also available that we used to create this application.

### 4.1 Front-end Design

The front-end is the most important part of developing an application. It works at the introduction layer and clients can connect with it straightforwardly. It is essential to build up a straightforward and effectively understanding front-end for the clients. So we attempted to keep our UI as straightforward as could reasonably be expected and effectively available for the client [3].



Figure 4.1.1: splash page design.

**Splash Page:** it is a splash page in this application. It is stable in only 2 minutes and then shows the main page. The splash XML file only shows the photo [8][9].



Figure 4.1.2: Main page design.

**Main Page:** krishoker\_foshol main page is showing 2 options. One is the registration page and another page is the login page.

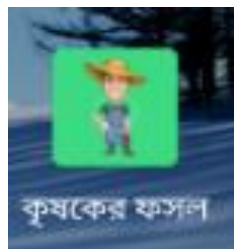


Figure 4.1.3: App logo design.

**App logo:** This is the app's main logo. This app logo is a symbol of a digital farmer in our country. So one day they will be able to buy their all crops use in this app very short time and best price. And customers also buy fresh and less price on other online platforms and

also can see how the farmers grow up this product in their field. With video calling, they can contract with the farmer for a very short time[9].

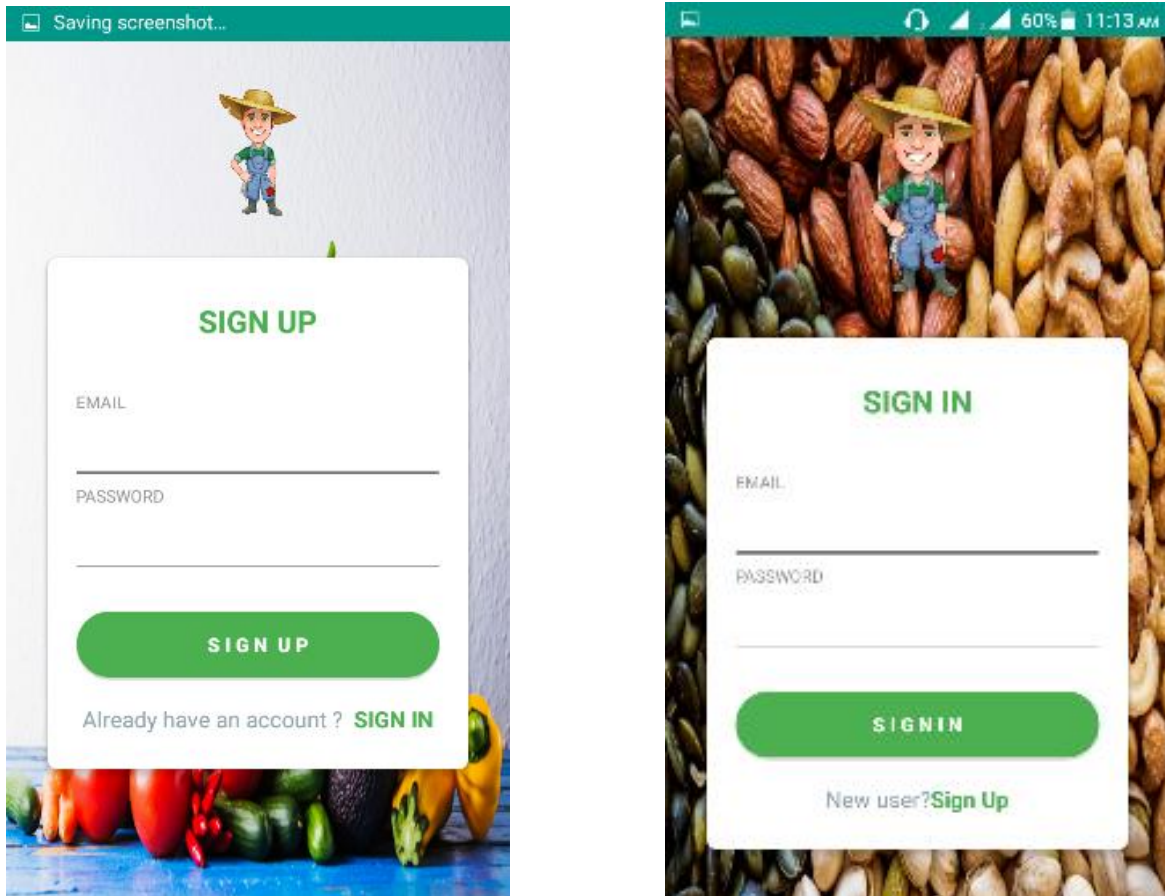


Figure 4.1.4: Sign in and Sign up page design

**Sign in sign out the page:** We can sign in and sign up on this page. Here give the customers and farmers' email, and password then you can log in to the main page or the main view page. That means the recycler view page. The is the main page where customers and farmers also see the product name price and description. So, it is an important page in the app to buy or sell all the products.

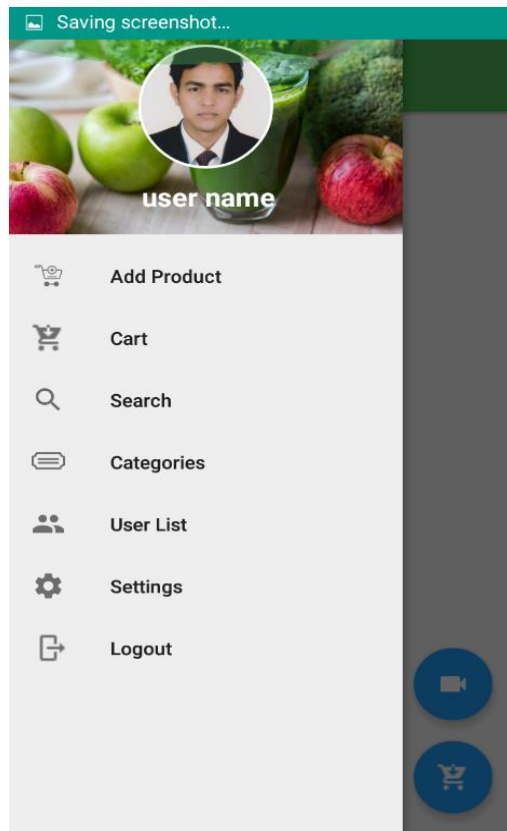


Figure 4.1.5: Menu page design

**Menu page design:** In this menu page there are many options. one is a very important thing is the add the product. if you are an admin and also a farmer then you can add the product. otherwise, you can not add any product in the gride view[9].



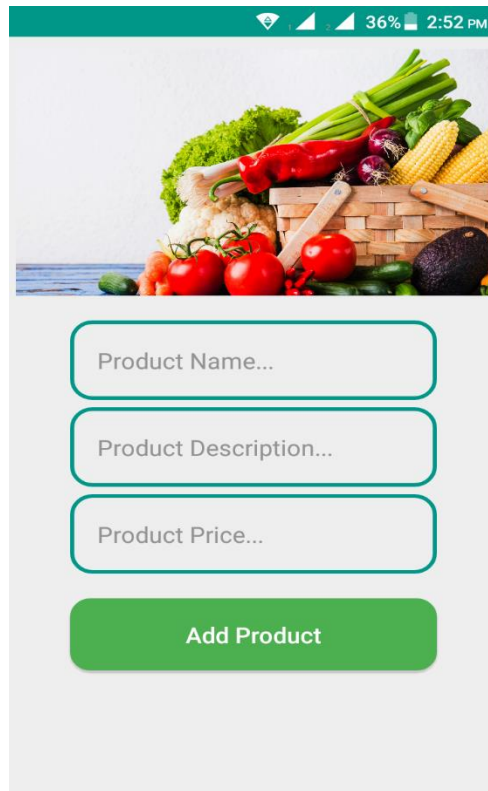


Figure 4.1.6: Product add page design.

**Add product page:** Add product is the customize for the farmer and also the admin panel .there are four types of things that will be added in the add product list. The first Product name, secondly Product description, Product price. So it is stored all product information with the unique id. when it will be added then it will be shown in the grid viewer list. Those are the main things.

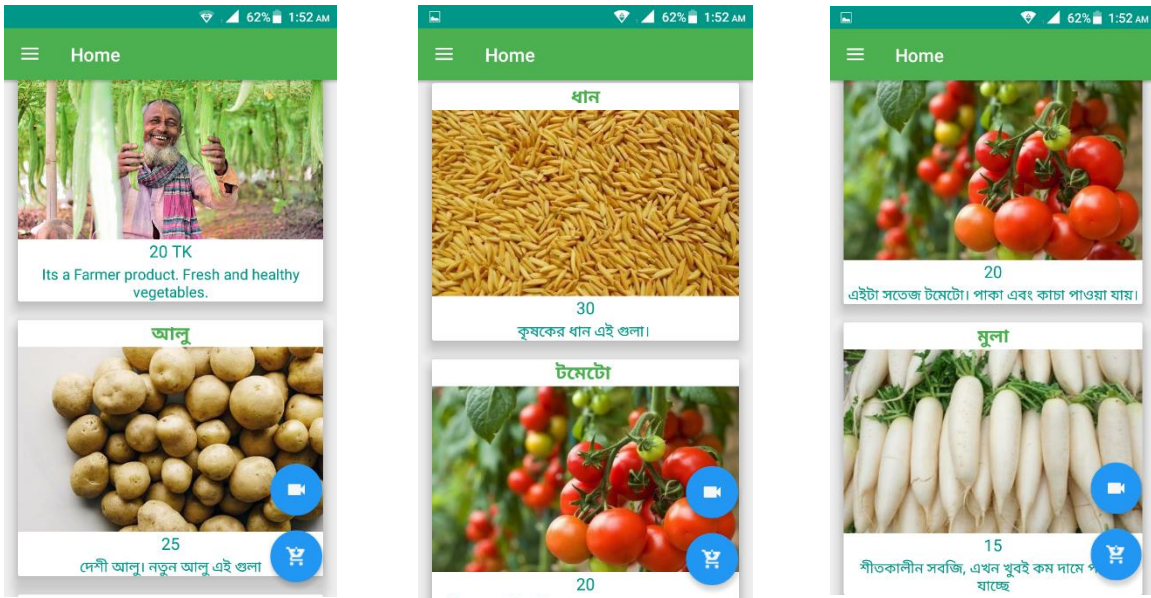


Figure 4.1.7: Main Grid View Design

**Main Grid view:** This is the Grid viewer here for all products shown. and also show the name and description and also show the product price.

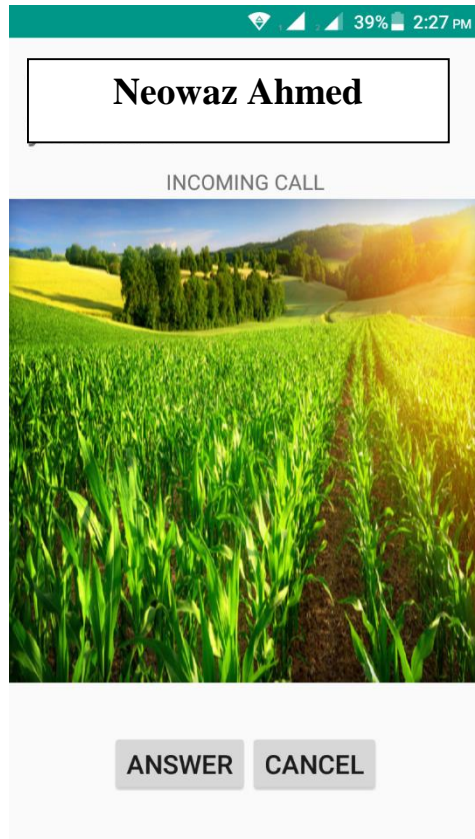


Figure 4.1.8: Incoming Call page design.

**Incoming call page:** In the video call option

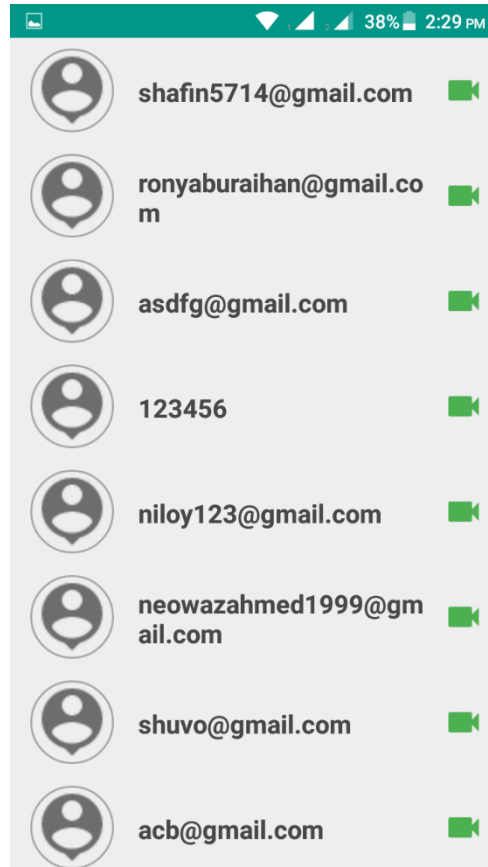


Figure 4.1.9: User List page design.

**User List:** This is a user list page design layout. Here you can see the user list which is registered in our database. User list data will be available in online activity. If they are active on the internet then call each other. but if they are both are not available on the internet then they cannot connect. This is our app system in the krishokera\_foshol app.

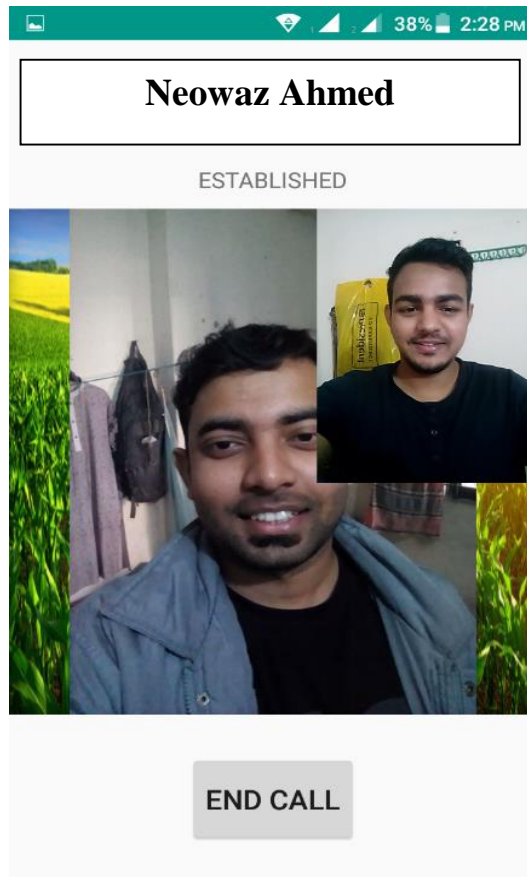


Figure 4.1.10: Video Call in progress page design.

**Video calling API using :**

Sample output in the video call. it's an ADMIN panel and the customer video calling screenshot.

## 4.2 Back-end Design

The Back-end design is the part that works behind a project. A client can't view or notify the back-end part. Users only use the front-in interface to communicate with the application. A client doesn't need to understand how this part is working. The back-end does almost everything that happens on the application. To handle the back-end part is very complex because the back-end normally consists of programming languages as here Java, C is used.



Figure 4.2: Firebase

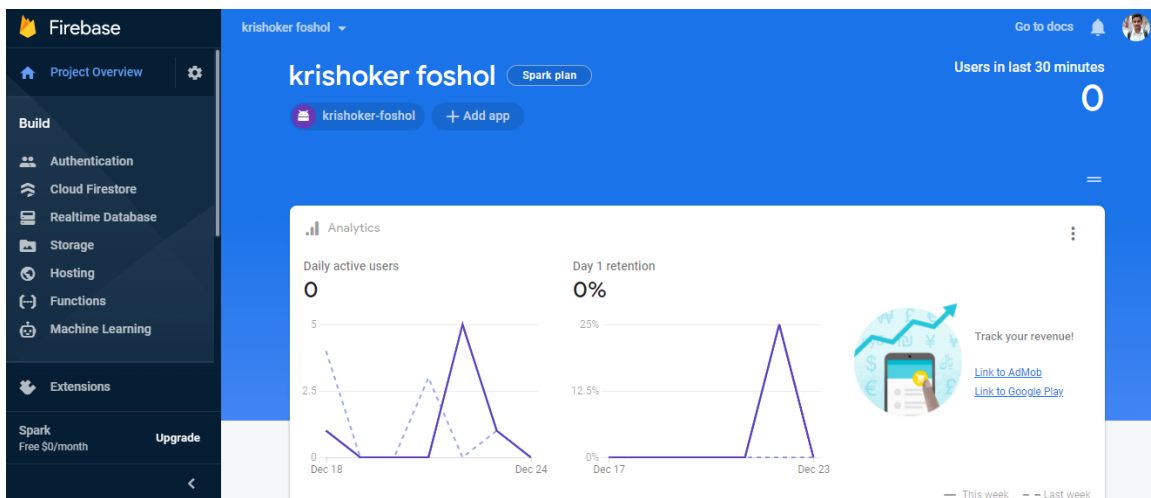


Figure 4.2.1: Real-Time data

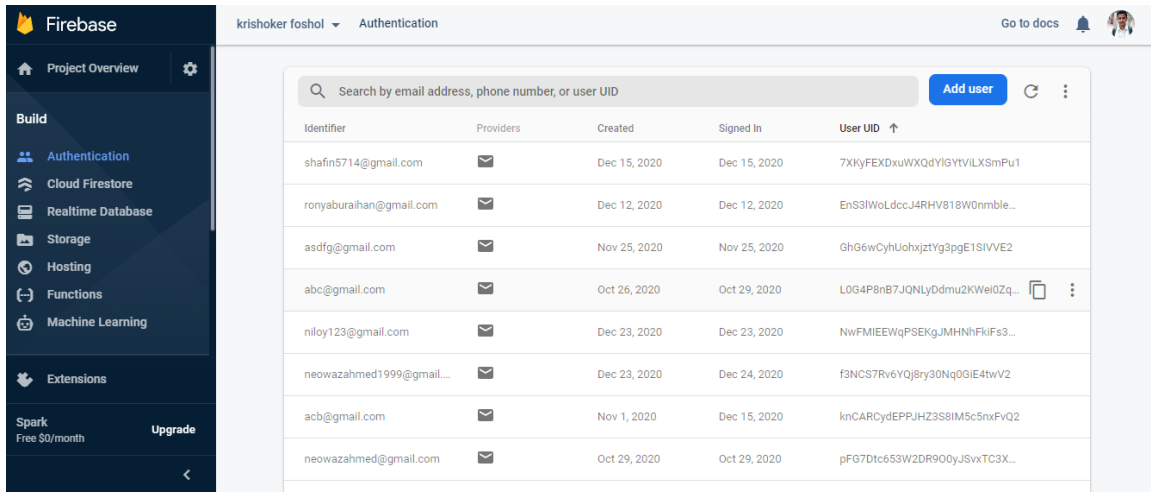


Figure 4.2.2: Authentic Email Addresses

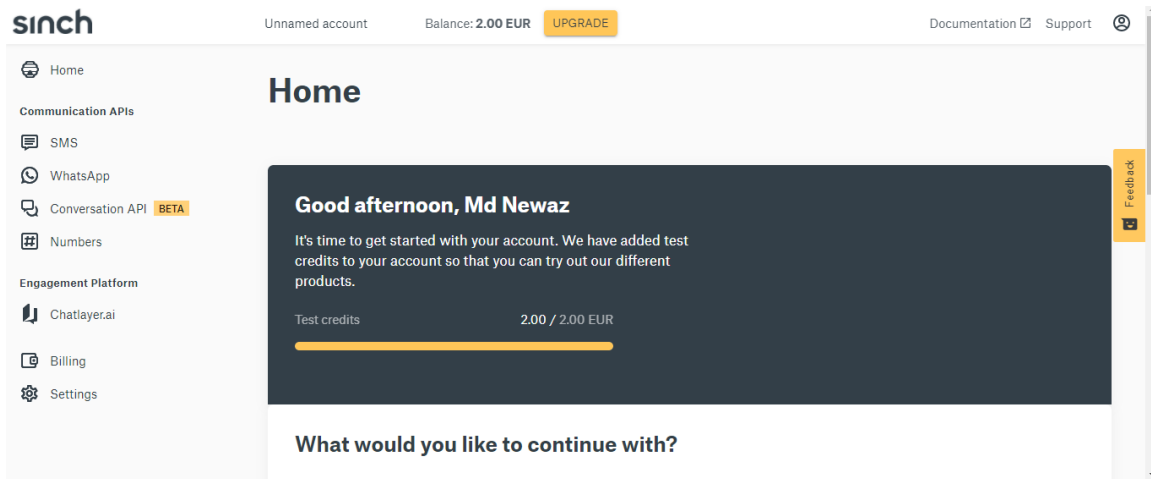


Figure 4.2.3: Sinch video calling API

### **4.3 Interaction Design and UX**

Interaction design describes the communication between the user and the application. Interaction design considers how the user provides space, processes problems, and discovers results. It performs related activities and takes care of problems in performance. The interaction design of the application essentially centers on the general experiences between the users and the application. In our application, all the features interact with the user. We are primarily focused on the applicability of the application and there is an option where the user will need to register and log in to the application using their verified information. In our application for UX, we have tried to give our users a great experience by adding some new features. We attempt to keep our application straightforward and simple to use for better execution and experience for the client.

### **4.4 Implementation Requirements**

To develop this project, we used various types of devices, parts, and programs [8]. For implementation requirements, we categorized our project into two-part.

**Our application's front-end and back-end design as follows:**

- Java is used to create an android application.
- Rest API used.
- Machine Learning using for image processing
- Hardware Components
- Humidity sensor
- Wi-Fi module for internet connection.
- Power supply



## CHAPTER 5: Implementation and Testing

Here, we have focused on how we implement our database. As we mentioned earlier for our project we use the Firebase database [10]. All the data will be stored in our database along with the farmer's information.

### 5.1 Implementation of Database

In this app, we use Firebase Database to store Data from Customers and Farmers. All information store in this Database. There are categories in User information and Admin information also. If the login customer was Farmer then it will be true that he will be Admin panel also. He will access the Add to product Item. Then chose the product Picture and then give a unique name, then product price, product details also. Now I show the structure of the Database below:

Users :

1. Name:
2. Email:
3. Password:

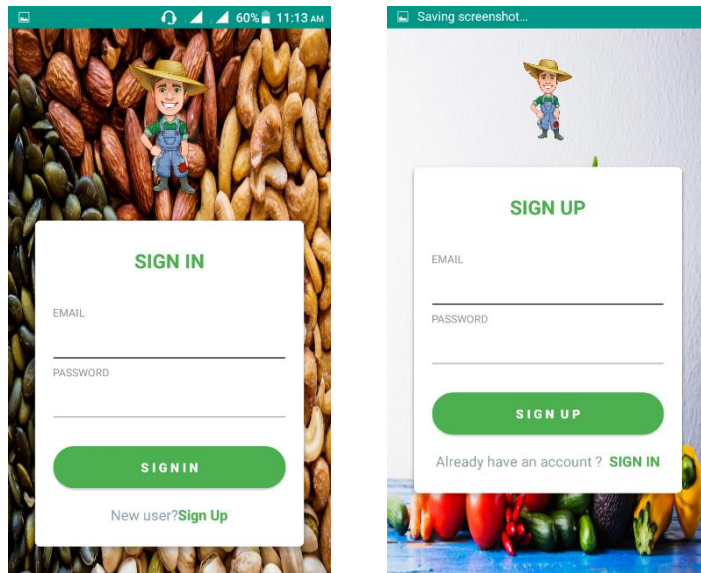


Figure 5.1: Sign Up and Sign In page design

Add Product Information :

1. Authentication Id:
2. Photo information :

3. Product details :
4. Product Price:

## **5.2 Implementation of Front-end Design**

An application can attract users with its design that is easily understandable and user-friendly. Our android based application work some features without the internet and some feature requires the internet. So, we try our best to keep our design understandable also user-friendly. We've used a very simple UI design, so if a user opens a feature of our app, just by looking at the screen, they'll understand what this feature does.

## **5.3 Implementation of Interactions**

The success of a system completely depends on the interaction with the user. Interaction is what makes a system popular and attractive to a user. So, making a process interactive is very important. We develop some unique features to interact with our users.

We have implemented our system with the 'Bangla' font for an easy and better user experience. The system is user-friendly and a user can easily interact with our system. Our application has been successfully implemented and has impressive interaction with users.

## **CHAPTER 6: Conclusion and Future Scope**

### **6.1 Discussion and Conclusion**

Every year, crop agriculture is restricted by challenges, such as a) loss of land in the Arab countries; b) increase in population; c) climate change; (d) inadequate management practices; Around 80,000 hectares of agricultural land are produced each year in Bangladesh. The loss is troubling and must be dealt with promptly. To avoid further loss of arable land, government land use policy should be changed and enforced immediately. The rise in population growth is another issue with agriculture. To ensure sustainable crop development, the two problems of arable land depletion and population growth must be tackled simultaneously. Flood, drought, and salinity also affect the country's crop production. It is important to develop varieties/technologies which tolerate these natural hazards. To offset the detrimental effects of climate change, renewables, decreased use of fossil fuels, and forestation are recommended. Chemical fertilizers should be integrated with organic manure to promote crop production, and expensive non-urea fertilizers should continue to be subsidized. The effects of climatic change have recently seriously affected the occurrence of pests and diseases. More pest-resistant varieties should therefore be produced. Restricted access to institutional credit for small and marginal farmers in Bangladesh. Nor do they qualify for NGOs' microcredit. To satisfy their needs it is recommended to create a new institution/foundation in line with PKSF. The farmer's unions or cooperatives do not have to compete with their goods at a fair price. The government could promote farmers' co-ops to ensure that their goods are priced equally. A top-down method of influence must be avoided to make such cooperatives successful. Farmers should also increase investment in agriculture research to a minimum of 2 percent of GDP to contribute to generating technologies for coping with and disseminating climate change hazards at their level.

## **6.2 Scope for Further Developments**

In the future this application can be improved by adding the following functionality:

Some necessary expensive sensors can be added to make the project more accurate and easier. (like PH sensor) Artificial intelligence can be added to detect and analyze the diseases of animals and crops. A website can be created for more and recent information on agriculture. A free seminar can be arranged to use this system efficiently. Online marketing can be added to make selling easy for farmers.

## **APPENDIX**

From the Summer-2019 semester, we had started our experience to cause a structure where a user can monitor his field and farm. Use can control the fan, light, and water pump. We try our hard to make the system as flexible as possible. We use microcontrollers to reduce costs. If a user doesn't want to install the microcontroller he can use our mobile application. In our mobile application, we developed many features that can be very helpful to users. We have built up a web blog for more information. We are trying to bring image processing into our application. These features can be very helpful not only for the farmer but also for all regular users. Since our point of view is to satisfy all customers from different stages.

# Reference

- [1] smallbiztrends, [Online]. Available: <https://smallbiztrends.com/2018/09/agricultural-apps.html/>, [last accessed on 22<sup>nd</sup> November 2020].
- [2] Crop Agriculture of Bangladesh Challenges and Opportunities, [Online]. Available: [https://www.researchgate.net/publication/250212260\\_Crop\\_Agriculture\\_of\\_Bangladesh\\_Challenges\\_and\\_Opportunities](https://www.researchgate.net/publication/250212260_Crop_Agriculture_of_Bangladesh_Challenges_and_Opportunities), [last accessed on 22<sup>nd</sup> November 2020].
- [3] User interface tips, [Online]. Available: <http://www.convertplc.com/blog/item/67-7-tips-for-creating-a-distinctive-and-userfriendly-user-interface>, [last accessed on 25<sup>nd</sup> November 2020].
- [4] firebase, "firebase," firebase, [Online]. Available: <https://firebase.google.com/>. [Accessed 15 December 2020].
- [6] Chaldal.com , [Online]. Available : <https://play.google.com/store/apps/details?id=com.Chaldal.user>, [last accessed on 26 November 2020].
- [7] Krishoker\_Janala, [Online]. Available: [https://play.google.com/store/apps/details?id=com.Krishoker\\_Janala](https://play.google.com/store/apps/details?id=com.Krishoker_Janala) , [last accessed on 29 November 2020].
- [8] Learn android, [Online]. Available: <https://www.javatpoint.com/>, [ last accessed on 25 February 2020].
- [9] Error solve [Online]. Available: <https://www.youtube.com/>, [ last accessed on 11 March 2020].
- [10] About BPM , [Online]. Available: [https://en.wikipedia.org/wiki/Business\\_process\\_modeling](https://en.wikipedia.org/wiki/Business_process_modeling), [last accessed on 15 December 2020].
- [11] BPM, [Online]. Available: <https://creately.com/blog/diagrams/business-process-modelingtechniques/>, [last accessed on 18 December 2020].
- [12] Requirements analysis, [Online]. Available: [https://en.wikipedia.org/wiki/Requirements\\_analysis](https://en.wikipedia.org/wiki/Requirements_analysis), [last accessed on 20 December 2020].
- [13] Use case diagram, [Online]. Available: <https://www.lucidchart.com/pages/uml-use-case-diagram>, [last accessed on 22 December 2020].
- [14] Layouts knowledge, [Online]. Available: <https://developer.android.com/guide/topics/ui/declaring-layout>, [last accessed on 11 October 2020].
- [15] Material design, [Online]. Available: <https://developer.android.com/guide/topics/ui/look-and-feel>, [last accessed on 15 October 2020].
- [16] Firebase Authentication, [Online]. Available: <https://developer.android.com/distribute/best-practices/develop/firebaseauthentication>, [last accessed on 15 February 2020].
- [17] Front-end design, [Online]. Available: [:https://developer.android.com/guide/topics/ui](https://developer.android.com/guide/topics/ui), [last accessed on 16 February 2020].

## Plagiarism Report

Android Based Application: Krishoker Foshol

### ORIGINALITY REPORT

<b>21</b> %	<b>15</b> %	<b>3</b> %	<b>15</b> %
SIMILARITY INDEX	INTERNET SOURCES	PUBLICATIONS	STUDENT PAPERS

### PRIMARY SOURCES

<b>1</b>	<b>Submitted to Daffodil International University</b> Student Paper	<b>9</b> %
<b>2</b>	<b>dspace.daffodilvarsity.edu.bd:8080</b> Internet Source	<b>4</b> %
<b>3</b>	<b>pt.scribd.com</b> Internet Source	<b>1</b> %
<b>4</b>	<b>www.coursehero.com</b> Internet Source	<b>1</b> %
<b>5</b>	<b>www.researchgate.net</b> Internet Source	<b>1</b> %
<b>6</b>	<b>Submitted to Gusto International College</b> Student Paper	<b>1</b> %
<b>7</b>	<b>www.studymode.com</b> Internet Source	<b>1</b> %
<b>8</b>	<b>Submitted to Universiti Teknologi Malaysia</b> Student Paper	<b>1</b> %
<b>9</b>	<b>Mondal, Mohammad H. "Crop Agriculture of Bangladesh: Challenges and Opportunities",</b>	<b>&lt;1</b> %

Bangladesh Journal of Agricultural Research,  
2010.

Publication

---

10	<a href="http://smallbiztrends.com">smallbiztrends.com</a> Internet Source	<1%
11	Submitted to Whitireia Community Polytechnic Student Paper	<1%
12	Submitted to Amity University Student Paper	<1%
13	<a href="http://www.ukessays.com">www.ukessays.com</a> Internet Source	<1%
14	Submitted to Galgotias University, Greater Noida Student Paper	<1%
15	Karen Cofre, Esteban Molina, Graciela Guerrero. "Voice controlled interface oriented memory loss assistance system for older adults", 2020 15th Iberian Conference on Information Systems and Technologies (CISTI), 2020 Publication	<1%
16	<a href="http://dspace.library.daffodilvarsity.edu.bd:8080">dspace.library.daffodilvarsity.edu.bd:8080</a> Internet Source	<1%
17	<a href="http://studentsrepo.um.edu.my">studentsrepo.um.edu.my</a> Internet Source	<1%

---