CHAPTER 1

INTRODUCTION

Farmers Cart App is an android application which serves as an interface between farmers and retailers or customers who wish to sell and buy farm products. In day to day life, the intermediate agents have become dominating buyers of the agricultural market, resulting them to take control over the plight of the farmers and gulping their profits. This application helps farmers to sell their products directly to customer without any intermediate agents. This application also helps the customer to find out the nearest farmer and buy quality products. In this application, the customer pay their transportation charges for their products so it helps the farmer have no transportation charges. It helps the farmer to gain profit by less time and less effort. It also helps the smallholder farmers who wish to sell their small amount of products to distant locations. In this application, the customer can analyse and determine which market will be more profitable for purchasing by comparing nearest location and reviews.

The intent of this project is there are around 100 million to 150 million are farmers in India. Farming which has existed since the dawn of humanity but till today the farmers are facing lot of problems to sell their products to the customers with profit. By moving the agriculture to faster technology helps the farmers to grow better in their farming and earn fair profits. Mobile technology is already widespread in the agricultural industry, but there is still plenty of space for improvement.

Manufacturers would eliminate the middlemen by selling product directly to retail stores or consumer. Wholesaler can do the same by selling the products directly to consumers. This strategy has some advantages over a straight forward distribution process. This is the motive for this application to eliminate the middlemen and the farmers can directly sell their products to consumers.

This app helps the farmers to sell their products online from their own locality and the transportation charges will be paid by customers. So, this reduces the transportation charges for the farmers and the customers get quality and fresh products directly from the farmers in their own locality. This app allows farmers to sell their products to customers as a direct supplier without any middlemen. It also help the small holder farmers to sell their small amount of products to distant locations.

1.1 OBJECTIVE:

[1] To help the farmer, Farmers Cart Application is used to gain profit price by cutting the middlemen.

[2] To help the customer, this application is used to buy quality products in their own locality.

1.2 PROBLEM DEFINITION:

Farming is very important sector of India. There are around a hundred million families in the country that depend on farming for a living. Most of them however are smallholder farmers who own typically 1-2 hectares or 2-4 hectares of farmland. These smallholder farmers suffer a lot to sell their small amount of farm products to distant locations. They are spending more transportation charges. This leads to less profit to their farm products. They are earning less profits by more effort.

In India, most of the agricultural products are sold by farmers to moneylenders or to village traders. These private traders and middlemen dominate the marketing and trading for agricultural products. Thus exploiting the poor farmers due to lack of adequate marketing infrastructure in the organised sector.

Farming practices and other activities of a agriculture consume time as well as efforts of a farmer. We stock grains and use food throughout the year. However, we hardly give a thought to the hardwork and dedication of farmers involved in the production of the crops. Nevertheless, the problems faced by farmers go unnoticed in the entire process of extracting food and harvesting crops.

The problem faced by farmer at the end of all agricultural activity is dependency over local traders or middlemen for the disposal of their farm products which leads to loss in their profit for their products.

Agents have become dominating buyers of the agricultural market, resulting them to take control over the plight of the farmers and gulping their profits.

We often hear news that farmers thrown their crops on roads just because no on purchased it. Due to absence of proper market places, farmers are no able to sell their crops and get a reasonable price. In this situation, they have to look for a middlemen and local traders for business. These middlemen don't provide reasonable price for their crops and hence farmes are bound to either sell crops at a lower price or just throw at the roads.

Presence of too many intermediates/middlemen results in the exploitation of both farmers and consumers with the middlemen offering lower prices to farmers and charging higher prices from the consumer.

High incidence of Market fee/charges including commission charges by the licenced agents, development cess, entry tax etc results in a higher transaction cost and low price realization by the farmers in a regulated market.

The farmers living in distant areas in rural India compels the farmers accepting whatever price the traders offer to them.

Thus, the most of the profits are taken by the moneylenders, so the farmer face lots of loss in their field. And also, transportation charges plays a critical issue between farmers.

Technology can be great help in this regard, especially if implemented through the medium of the mobile phone, which is the most convenient, accessible, and affordable tool for communication and connectivity today. There is no doubt that mobile based apps can help farmers address many of the difficult, long-standing problems they face related to various aspect such as cultivating.

Faster technology adoption in the agriculture will enable farmers, especially smallholder farmer. It will provide a framework to farmer for future dealing while selling their products and help them navigate the market easily while also reducing the risk of uncertainity. This move will result in meaningful outcomes for smallholder farmers by increasing their income and protecting their farm products and selling their products to distant location.

1.3 LITERATURE REVIEW:

[1] Application Name: AgriApp-Smart Farming App:

AgriApp is an android application which has cage of tricks and tips of smart farming. This app gives technical information about the agriculture. In this app , the user can gets to know about different types of cultivates. This app gives many information about different types of crops grown in India.

Advantages:

- This app has good feature and advanced techniques, this app has drone order features, which helps to save time.
- This app consists of new technology like soil testing, crop advisory and crop practice.
- This app deals with current markets of different crops and many more and this app also gives information about crops that are cultivated.
- This app has crops calender packages of practice and also it has feature to chat with expert whenever stuck.
- This app gives complete information about crop production, crop protection, smart farming etc.
- This app helps user to buy solution for best crop production and the user can get these products as discounted prices from online.
- This app has many information about different types of crops grown in India and there is doubt clearing sessions with experts.
- In this app, there are some agricultural video related to package of vegetables and fruits, quantity of fertilizers, pesticides etc. and tell the user which medicine is suitable for vegetables in agriculture land.

Disadvantages:

- In this app, many products are fake.
- This app has no reviews for some products.
- This app has slow process which takes slow order and slow delivery
- The User Interface of this app is old fashioned and less attractive
- This app shows some error during login.
- This app do not have many languages which is understandable for farmers.

- The customer care number is not responding.
- Those who are living abroad cannot use this app because during registration this app accepts only and Indian number.
- This app sometimes does not show some product details and some market details.
- This app is very slow and crashes multiple times. Navigation is not good.
- This app does not have the option of forgot password and it sometimes does not sent otp for registration.

[2] Application Name: Bighaat-Smart Farming App:

Bighaat is an android application which is used to shop agricultural related products. This app provides all information from sowing to harvesting of crops.

Advantages:

- This app give useful solution to crop related problems and where user can buy all crop related products at one place.
- Through this app, user can buy products which are not available in their locality.
- This app provide good quality seeds at the door step.

Disadvantage:

- This app does not deliver the correct number of product quantity.
- In this app, the shipments ages to pack and deliver.
- There is no confirmation report when user place the order and do their payment.
- In this app, the products are very costly than outside market and some products are about to expire and such items are in home page.
- In this app, the customer care is not responding properly.
- Sometimes, this app has some otp error.
- Sometimes, this app shows the purchased item is out of stock at the time of delivery day.

[3] Application Name: AgriBegri:

AgriBegri is an professional android application. This app consists of wide variety of products with good quality. This app has collection of agricultural items. This app is a good platform to discuss with experts. This app has genuineness products with reasonable price.

Advantages:

- This application has very convenient and useful and farmer friendly service. This app gives prompt and perfect solution in agrobusiness.
- This application is easy to use and product rates are affordable.
- This application is best recommended for shopping fertilizers and tools.
- This application helps the user by giving useful advice to develop small flower garden.

Disadvantages:

- This app gives only 4 hours time to return the purchased products.
- This app lists branded items but after ordering it gives duplicate items.
- Sometimes application shows error message that application is not working.
- This application gives no warranty for some items used for farming.
- Search option is very poor in this application.
- In this application the forget password option is not working properly.

REFERENCE:

[1] AgriApp - https://play.google.com/store/apps/details?id=com.criyagen

[2] Bighaat - https://play.google.com/store/apps/details?id=com.BigHaat

[3] AgriBegri - https://play.google.com/store/apps/details?id=com.agribegri

CHAPTER 2

SYSTEM DESCRIPTION

2.1 SYSTEM REQUIREMENTS:

- The user should have the appropriate version of windows.
- The system should have up to 8GB RAM minimum requirements for the application.
- The system should contain the android studio.

2.1.1 HARDWARE REQUIREMENTS:

- 64 bit Microsoft Windows 11.
- *86_64 CPU architecture, AMD CPU with support for a Windows Hypervisor.
- 8GB RAM or more.
- 8GB of available disk space minimum(IDE + Android SDK + Android Emulator).
- 1280*800 minimum screen resolution.

2.1.2 SOFTWARE REQUIREMENTS:

2.1.2.1 FRONT END:

- Android Emulator
- Android Studio

2.1.2.2 BACK END:

- Fire Base

2.2 SYSTEM ANALYSIS:

The process of gathering information ,diagnosing the problems,then interpreting facts is known as system analysis.

2.2.1 EXISTING SYSTEM:

In existing system shopping can be done in a manual way, the customer has to go for shopping ,and then he is having the possibility to choose the products whenever he wants. He wants to choose from the available product list and then pay for the same item mainly in the cash mode. This system is not much user friendly as one need to go to the market physically and then select the available products.

Description about the product is less available and are mostly verbal only. For this type of shopping, one needs to have an ample amount of free time. Also, not really good markets exist everywhere, so many times good markets become out of reach for certain people.

Disadvantages :

- The transportation is also a major problem for farmers in manual way.
- The middlemen usually take up to 70% of the profit of farmers leaving them helpless.

2.2.2 PROPOSED SYSTEM:

System is providing platform such as android wherein farmer can sell his crop products at different layer of marketing chain with multiple option. This platform will help farmers to find out nearest markets, its current stock details and its demand for particular product within less time & with less effort. This analysis will thereby help to determine which market will be more profitable for his crop/product.

- Farmers can use this facility and can learn how it is possible and how they can use e-farming to sell their products. This application will act as unique and secure way to perform agro-marketing.
- The system allows farmers to sell their stock directly as a direct supplier throughout the country without any middlemen so that, farmer earns optimum rates for his stock and also the customer gets it at lowered costs. This will also eliminate the food grains mafia that stores these products in own warehouses in order to increase demand and thus rates of the products, so that it can later be sold at higher profits.
- This application converts whole offline manual system to online.

Advantages:

- The customer pay their transportation charges for their products so it helps the farmer to have no transportation charges.
- The customer can find out nearest farmer and buy quality products.
- Farmers can sell their products directly to the customer without any intermediate agents.

CHAPTER 3

SYSTEM DESIGN

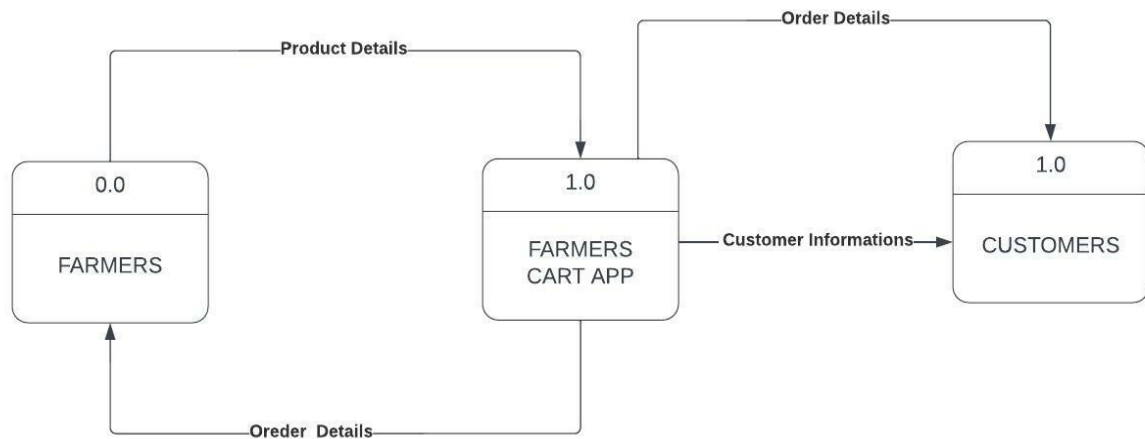## 3.1 DATA FLOW DIAGRAM

LEVEL 0:

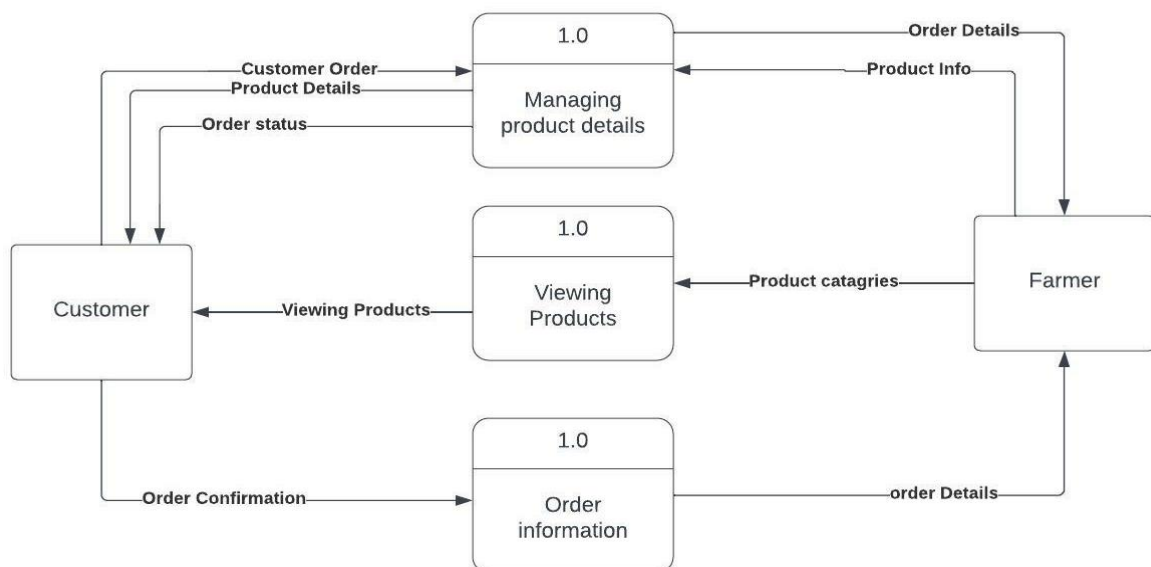Figure.3.1.1. DFD – Level 0 diagram for Farmers Cart app

LEVEL 1:

Figure.3.1.2. DFD – Level 1 diagram for Farmers Cart app
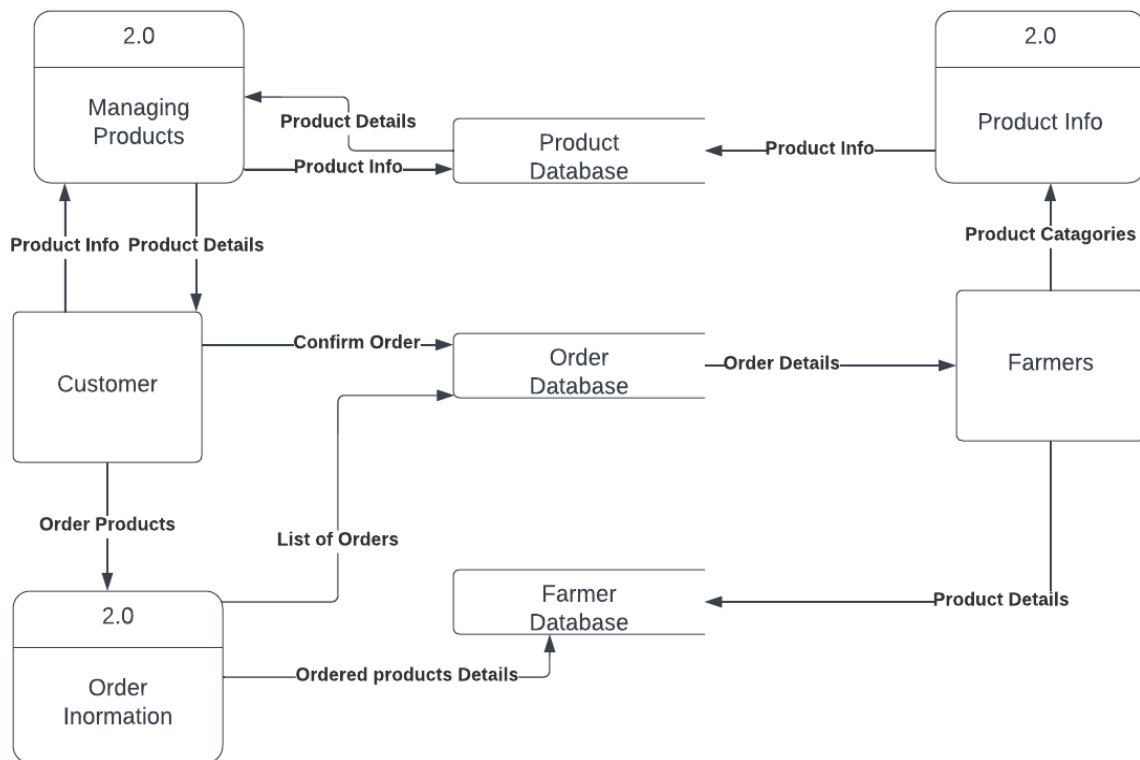
LEVEL 2:

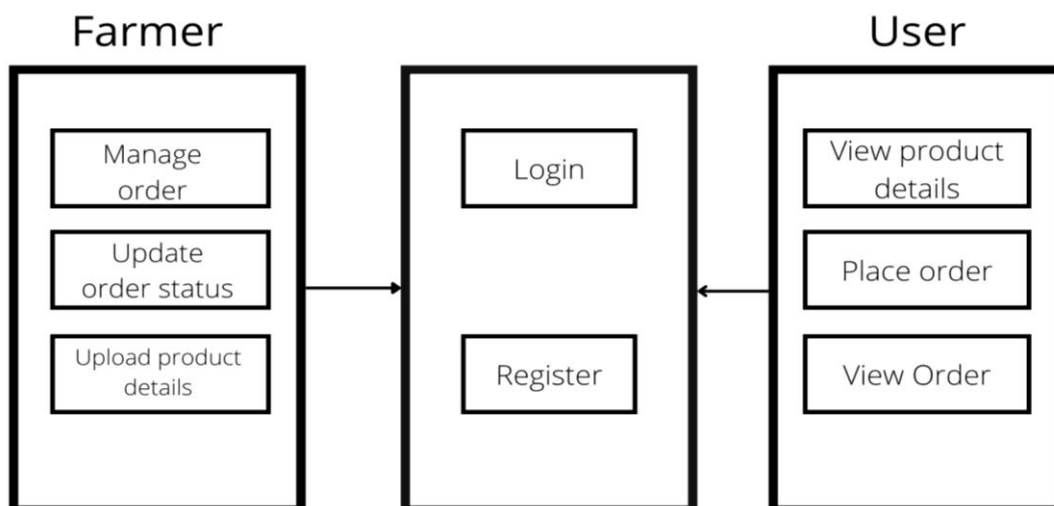Figure.3.1.3 DFD – Level 2 diagram for Farmers Cart app

3.2 ARCHITECTURE DIAGRAM:

Figure.3.2 Architecture Diagram for Farmers Cart app

CHAPTER 4

SYSTEM DEVELOPMENT

(Module wise description of the project)

MODULES:

The Modules which make up the system titled "FARMERS CART APP" are as follows:

4.1 Registration Module

4.2 Farmers Module

4.3 User Module

4.1 REGISTRATION MODULE

4.1.1 REGISTRATION FOR USER AND FARMER

Users will abandon an app that asks them to provide personal information via Register. But our system will get the prior information about the user. For that, Registration is mandatory. By this, the app will recognise the user whether they are seller or buyer of the product. . This function contains registration page for both user and farmers in order to get information of user and farmers respectively. Once you click the Register button, it shows the "Register user" page where the user/buyer can enter their details. If the user is a farmer , they can choose the option given below the register user page called "Are you a Seller?" which shows the Register Farmer page where farmers details are entered. The user registration contains name, phone number, email, password and address of the buyer. The farmer registration contains farmers name, farm name, phone number, email, address and password of the respected farmer. These two registration pages are shown in separated forms. The User registration can be used by the customer side for the purpose of purchasing. The Farmers Registration is used by the farmers for posting their products online. These details will be flashed in **My Account** page which is available in Menu Bar. The inputs from the user or farmers are stored in the database under a account type called "user" or "seller" respectively. These stored details of the user/farmers in the database helps to identify the correct user while logging in. Without registering, the user cannot visit the app even once. Here Register is a must

work to do before entering the app for the first time. Once registered the user have to remain their password for login purpose.

4.1.2 LOGIN

This function contains login page which has email id and password in which the user/farmer have already registered can access this login page. This login page is activated only after the user has been already registered. And the email id and password will be verified with the database which is already stored via Register. If the login details are wrongly entered when compared with database, the page will show some error. Only the user with correct details entered in the database can access the application. The other modules are followed by this login page.

4.2 FARMERS MODULE

4.2.1 PRODUCT DETAILS

After registering as a farmer, Farmers side page will be displayed which includes product and order pages. This function allows the farmers to add their products with product title, description, quantity, category and price. These details are stored in database in an orderly manner. And their product details are showed to the farmers in their profile. The farmers can post their products by clicking the plused cart symbol to add their fresh products. And the pencil symbol will help the farmers to edit their product which is already posted. Those data will be restored in the database also. Different farmers can post same products which will also be displayed in the product page. Those are arranged in category wise. The farmers have to choose the category accordingly before posting their product. The categories are predefined in the category list. All the products posted by the farmers are displayed in the main page. The products can be searched easily through the search bar present at the top of the main page.

4.2.2 SALES DETAILS

This function contains sales page in which product once ordered by user are stored in database and updated in the farmers sales page. Sales page display order done by the user for the particular product.

4.3 USER MODULE

4.3.1 CART DETAILS

This function contains cart page in which the user once chooses the product to purchase is added to the cart along with the product details. The main function of the cart is that, it stores the product information in the database as well as in the cart details. It is the gateway for order, catalogue and customer management. Features of the cart are large functional products images, product details, product reviews, search, direct order, delivery and return information, quantity and size selected, product title, price, edit options, payment methods.

4.3.2 ORDER DETAILS

This function contains order page in which user can view their order status when the user confirm the product to purchase. In here, customer can views detailed information for previously placed orders. It displays the order number and the date of order. It consists of product description, quantity, price, delivery date, delivery point, delivery terms and payment terms. The main function of the order is to receiving the customer's order, fulfilling the customers order and handling the post-sales processes. To view our order details, tap on the open or completed order that you need the details for. Tao on order details to get all the necessary details.

CHAPTER 5

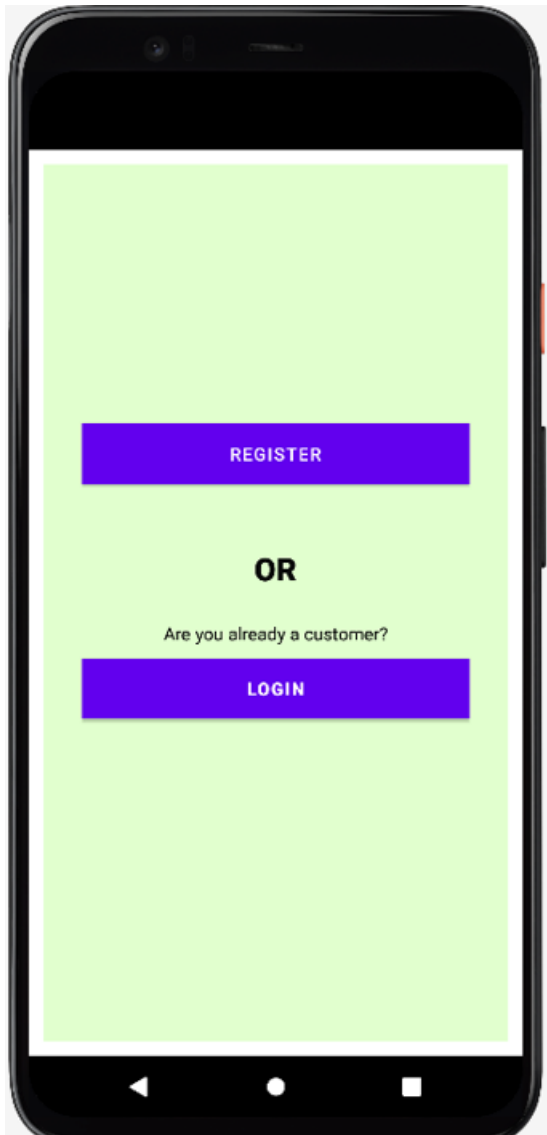## SYSTEM IMPLEMENTATION AND TESTING

5.1 SYSTEM IMPLEMENTAION

Fig.5.1.1 Dashboard for Farmers Cart App

Fig.5.1.1 shows the dashboard for Farmers Cart App .If the register button is clicked, the application should show Register for user page.

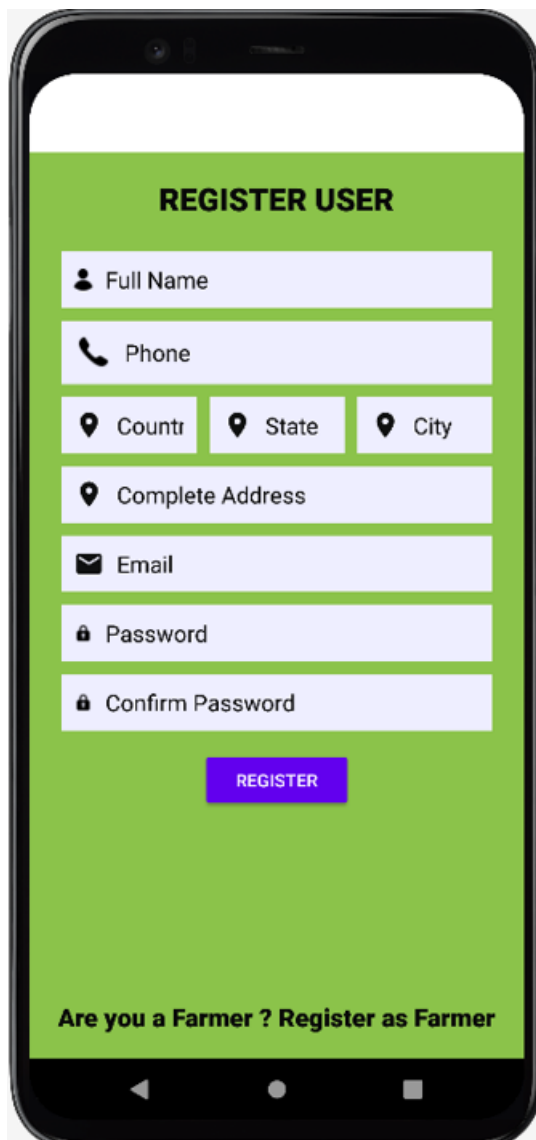If the login button is clicked, the application should show Login page.

Fig.5.1.2. Register page for user

Fig.5.1.2 shows Register page for user. In this page, the user can register as user. If the fields in the register user page are empty it shows an error message. If the register button is clicked the data are stored in the database. If the register is a seller he can click Register as seller.

Fig.5.1.3. Register Page for Farmer

Fig.5.1.3 shows Register Page for Farmer. In this page the farmer can register to the app as farmer. If the fields in the register farmer page are empty it shows an error message. If the register button is clicked the data are stored in the database.
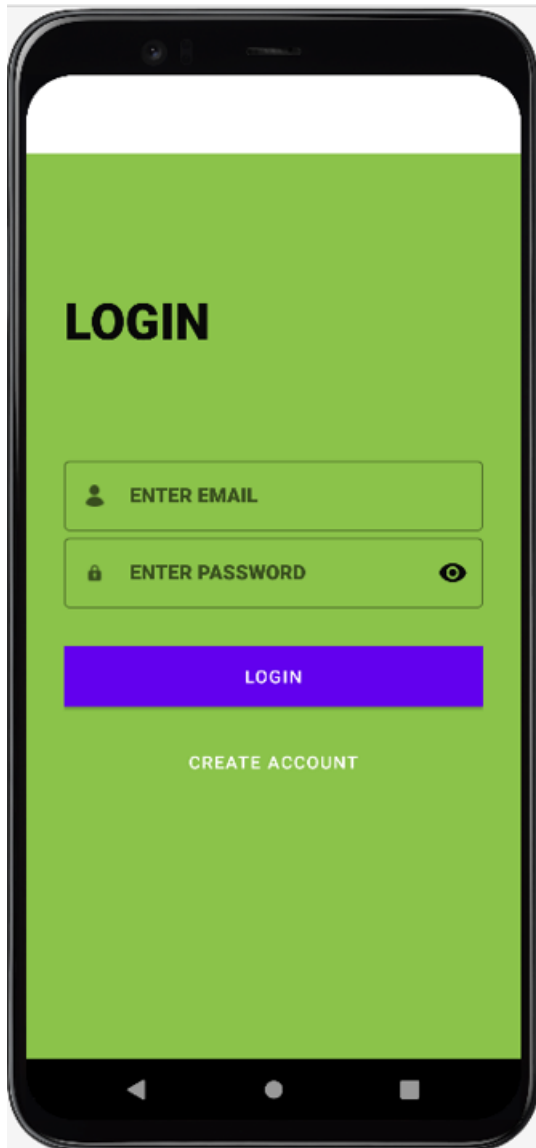
Fig.5.1.4. Login Page

Fig.5.1.4 shows Login Page. The login page allows the registered user to login to the app. The login page checks the type of the user. If the user is farmer the login page is directed to farmer main page else the login page is directed to user main page.
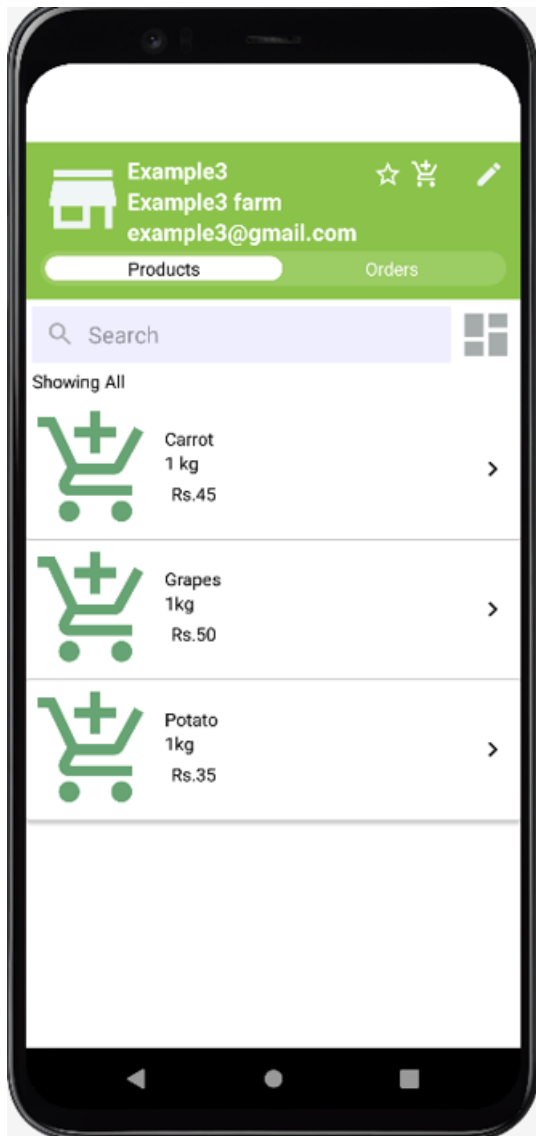
Fig.5.1.5. Main Farmer Page

Fig.5.1.5 shows Main Farmer Page. In this Page, the farmer can view their uploaded product details and their profile. The plused cart symbol in this page is used to add their products and star symbol is used to view the reviews given to their farm buy the customers. If the farmer click the products they can view the details of the product.
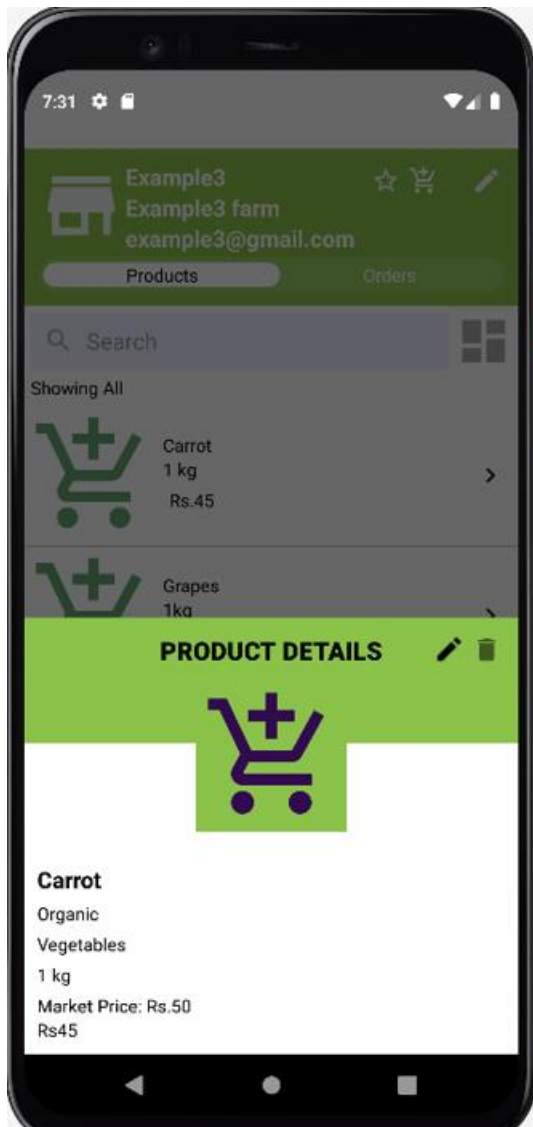
Fig.5.1.6. Product Details Page

Fig.5.1.6 shows Product Details Page . In this page, the farmer can view their product details in the base sheet. The edit button in this page can be used to edit their product details and delete button in this page is used to delete their product and it is removed from database.
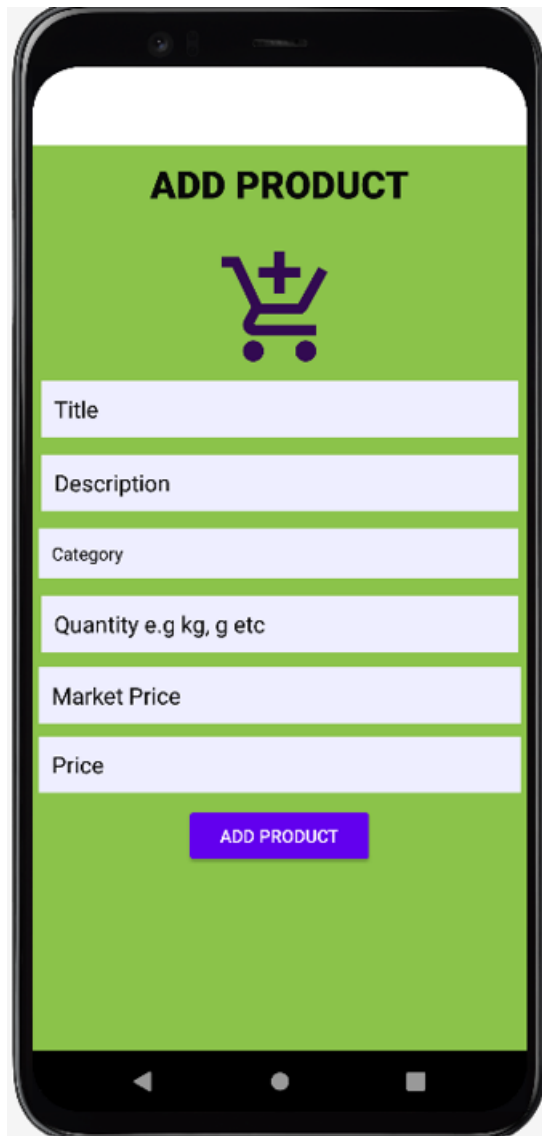
Fig.5.1.7. Add Product page for farmer

Fig.5.1.7 shows Add Product page for farmer. In Add Product page for farmer, the farmer can add their products which is stored in database.
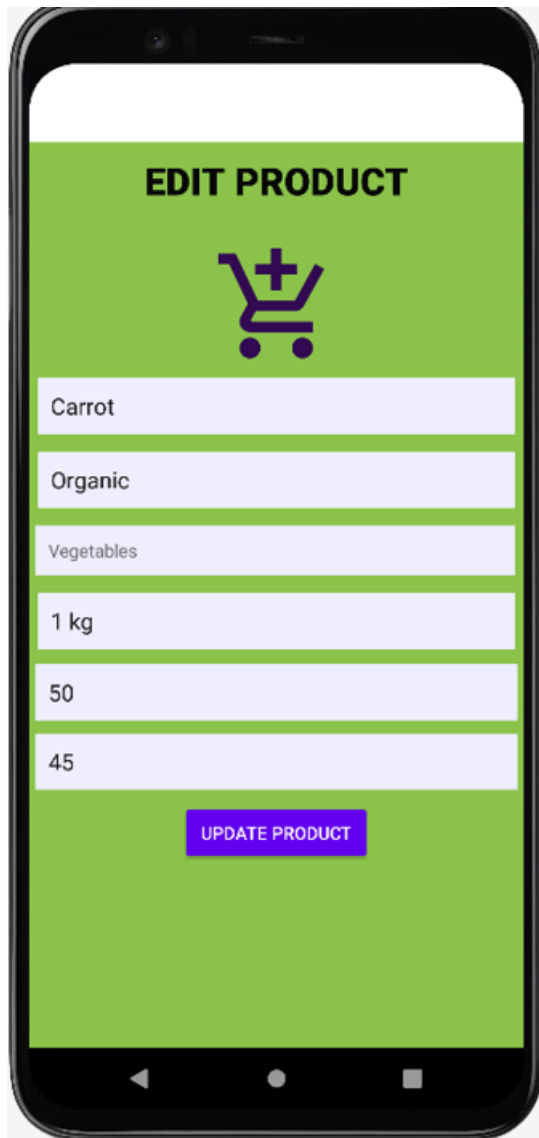
Fig.5.1.8. Edit Product page

Fig.5.1.8 shows Edit Product page. In this page, the farmer can edit their products and after clicking update product the edited product details is stored in database.
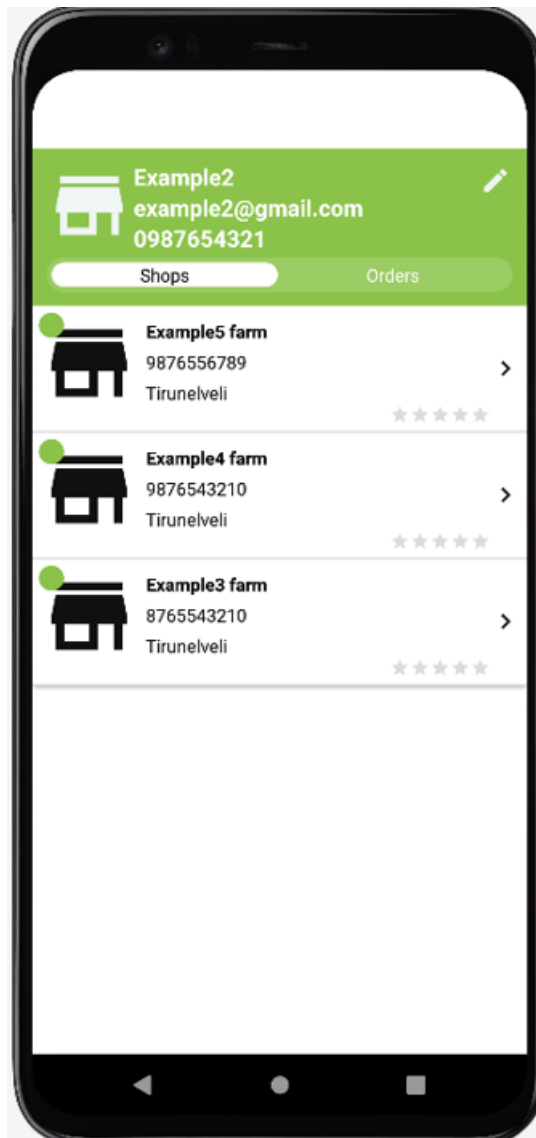
Fig.5.1.9. Main User Page

Fig.5.1.9 shows Main User Page. In Main User page, the user can view their profile and the farm details in their own city. After clicking the any one of the farm, the user will be directed to Shop details page.
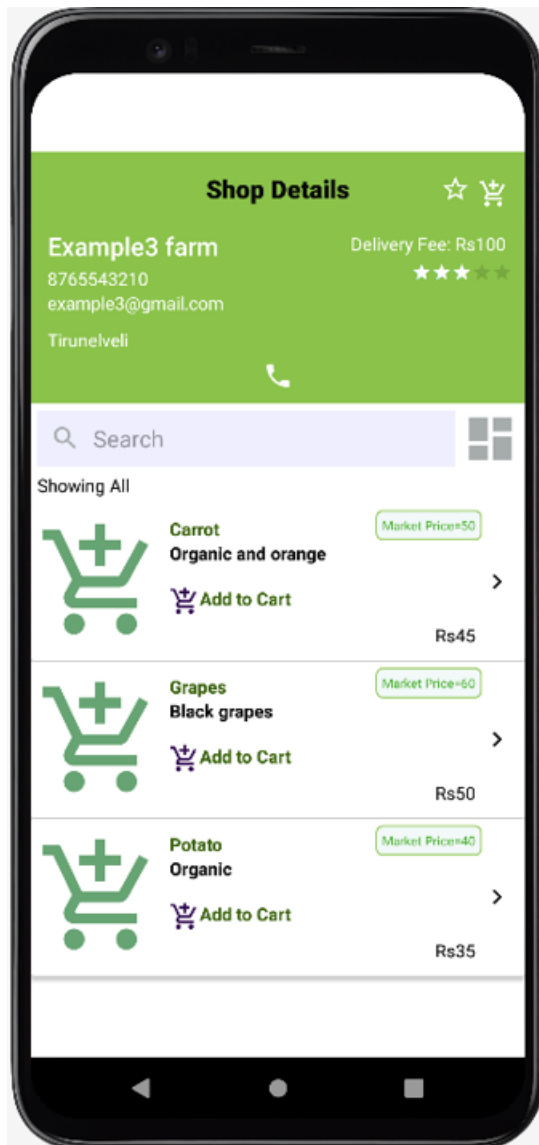
Fig.5.1.10. Farm Details Page

Fig.5.1.10 shows Farm Details Page. In Farm Details Page, the user can view Farmers profile and they can view the products uploaded by the farmers. If the user click Add to Cart the selected product will be added to the cart. The star button in this page is used to view review of that farm. The cart button is used to view the Cart Details Page.
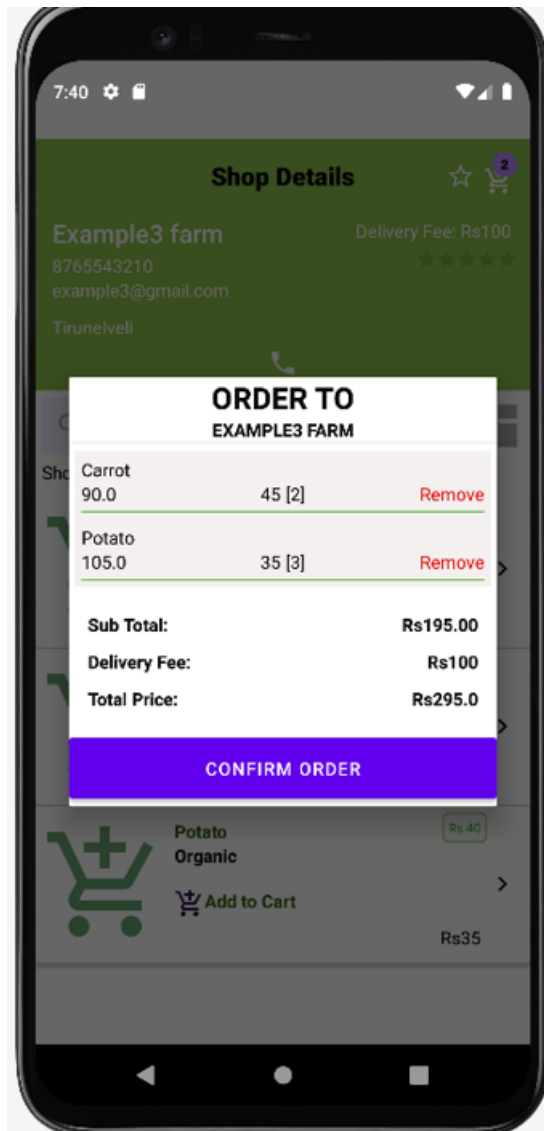
Fig.5.1.11. Cart Details Page

Fig.5.1.11 shows Cart Details Page. In this page, the user can view the added products in cart. If Remove button is clicked the product is removed from the cart. After clicking the confirm order the user will be directed to Order Details.
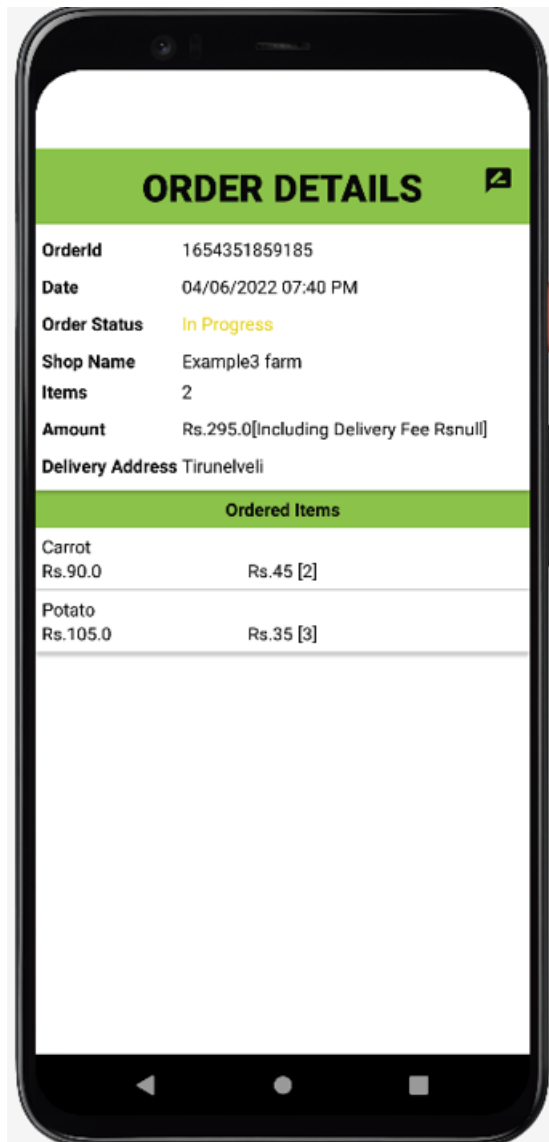
Fig.5.1.12. Order Details Page for user

Fig.5.1.12 shows Order Details Page for user. In this page, the user can view their order details and ordered product details. If the review button is clicked the user will be directed to write review page.
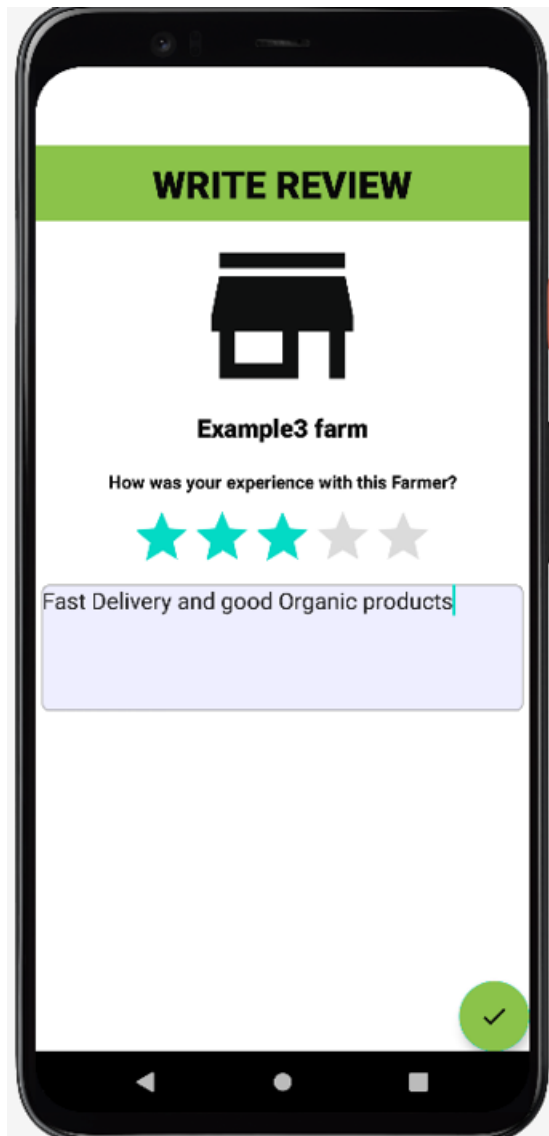
Fig.5.1.13. Write Review Page

Fig.5.1.13 shows Write Review Page. In this page, the user can write their review to that farm and after clicking tick symbol the review written will be stored in database.
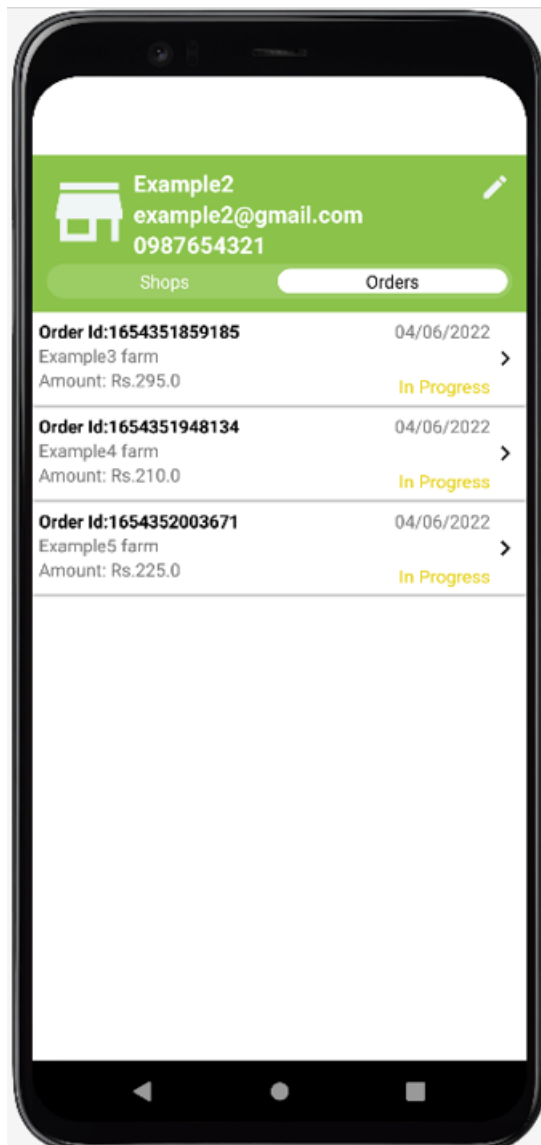
Fig.5.1.14. Order Details for farmer

Fig.5.1.14 shows Order Details for farmer. In this page, the farmer view the orders done by the user to their farm. The edit button in this page is used to edit the status of the product delivery.

5.2 TEST CASES

5.2.1 TEST CASE FOR REGISTER

S.NO	INPUT	EXPECTED OUTPUT	GENERATED OUTPUT	RESULT
1.	Give the necessary details about the seller/buyer	Have to store the details in the database	All the values are stored in the data base	PASS
2	When a field is empty	Have to show error message and cannot register.	It shows error message and user cannot register.	PASS

5.2.2 TEST CASE FOR LOGIN

S.NO	INPUT	EXPECTED OUTPUT	GENERATED OUTPUT	RESULT
3.	Give the unique email id and password.	Have to authenticate the details from the database.	Successfully authenticated and logged in.	PASS
4.	When a field is empty.	Have to show error message and cannot login	It shows error message and user cannot login.	PASS

5.2.3 TEST CASE FOR DISPLAYING FARMERS MAIN PAGE

S.NO	INPUT	EXPECTED OUTPUT	GENERATED OUTPUT	RESULT
7	After giving correct email id and password of farmers.	Have to show the farmers main page which contains the farmers profile and their uploaded products.	Successfully display the farmers main page with farmers profile and their uploaded products.	PASS

5.2.4 TEST CASE FOR DISPLAYING CUSTOMER MAIN PAGE

S.NO	INPUT	EXPECTED OUTPUT	GENERATED OUTPUT	RESULT
8	After giving correct email id and password of customers.	Have to show the farmers customers main page which contains the customer profile and farms in their city.	Successfully display the customers main page with customer profile and farms in their city.	PASS

5.2.5 TEST CASE FOR FARMERS TO ADD PRODUCT

S.NO	INPUT	EXPECTED OUTPUT	GENERATED OUTPUT	RESULT
9	Entering Product details in Add product.	Have to add product details and stored in database.	Products details are added and stored in the database.	PASS
10	When a field is left empty in Add product page.	Have to show error message and cannot login	It shows error message and user cannot login.	PASS

5.2.6 TEST CASE FOR CUSTOMER TO PLACE ORDER

S.NO	INPUT	EXPECTED OUTPUT	GENERATED OUTPUT	RESULT
11.	After Customer giving confirmed order.	Customer have to view their order details and have to display the ordered items.	Successfully display the customers order details and also display the ordered items.	PASS

5.2.7 TEST CASE FOR DISPLAYING CUSTOMERS ORDER TO FARMERS

S.NO	INPUT	EXPECTED OUTPUT	GENERATED OUTPUT	RESULT
12.	After the farmers click on the order button.	Farmers have to view ordered details for their farm ordered by the customer.	Successfully displays the ordered details for their farms ordered by the customer.	PASS

CHAPTER 6

CONCLUSION AND FUTURE ENHANCEMENT

6.1 CONCLUSION

The proposed system is internet based system. In this system, the farmers can upload their products details and users can view and order the products. The proposed system provides information such as farmers shop, farmers product details ,market price details, price details and order details. Customers can search for their desired product and order the product from the farmers shop.

The main purpose of the system is Farmers to upload and sell their product in any time without the middle agent. Customer can order their products and get their product. Both Farmers an Customers can easily view their product orders details. Farmers can delete orders, edit order status, add product details and also update the product details.

6.2 FUTURE ENHANCEMENT

In Future our Application enables the GPS location tracking feature for tracking Customer location and we establish the online payment gateway for customer.