PROJECT REPORT
ON

"Farmer's E-Store"

Carried Out at

CENTRE FOR DEVELOPMENT OF ADVANCED COMPUTING
ELECTRONIC CITY, BANGALORE

UNDER THE SUPERVISION OF

Dr. Mohammed Misbahuddin

E-DAC Bangalore

Submitted By

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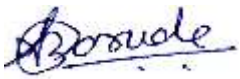
ONLINE DIPLOMA IN ADVANCED COMPUTING
E-DAC, BANGALORE

Candidate's Declaration

We hereby certify that the work being presented in the report entitled**Farmer E-Store** , in partial fulfillment of the requirements for the award of PG Diploma Certificate and submitted in the department of PG-DAC of the C-DAC Bangalore, is an authentic record of our work carried out during the period, 1st March 2021 to 29th March 2021 under the supervision of **Dr. Mohammed Mishabuddin**, C-DAC Bangalore. The matter presented in the report has not been submitted by us for the award of any degree of this or any other Institute/University.

(Name and Signature of Candidate)

Shrikant N Borude (200951981020) 

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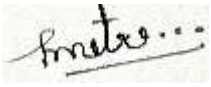
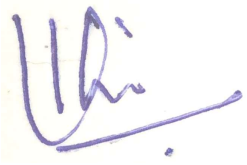
Sakshi Metre (200951981032) 



Counter Signed by

Dr. Mohammed Misbahuddin

ACKNOWLEDGMENT

We take this opportunity to express our gratitude to all those people who have been directly and indirectly with us during the competition of this project.

we pay thanks to Dr Mohammed Misbahuddin who has given guidance and a light to us during this major project. His versatile knowledge about “title name “has eased us in the critical times during the span of this Final Project.

we acknowledge here out debt to those who contributed significantly to one or more steps. We take full responsibility for any remaining sins of omission and commission.

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CERTIFICATE

This is to certify that the work titled **Farmer E-Store**is carried out by

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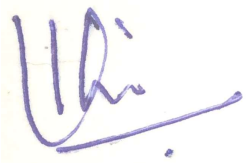
the bonafide students of Diploma in Advanced Computing and Diploma IT Infrastructure, Systems and Security of Centre for Development of Advanced Computing, Electronic City, Bangalore from 2 nd January 2021 - 30th january 2021. The Course End Project work is carried out under my direct supervision and 80% completed.



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ABSTRACT

Farming is the Prime Occupation in India in spite of this, today the people involved in farming belongs to the lower class and is in deep poverty. The Advanced techniques and the Automated machines which are leading the world to new heights, is been lagging when it is concerned to farming, either the lack of awareness of the advanced facilities or the unavailability leads to the poverty in farming. Even after all the hard work and the production done by the farmers, in today's market the farmers are cheated by the Agents, leading to the poverty. Agro-marketing would make all the things automatic which make easier serving as a best solution to all the problems.

This projects aims to facilitate remote area farmers to buy agriculture products, there is a need to build an online agriculture product store. Through the Internet, customer and business owner can communicate with each other, share a different type of information and resources. In the today's e-commerce world, different types of organizations are going to build their businesses through the Internet. Farmer's E-Store will serve as a way for the farmers to sell their products across the country just with some basic knowledge about how to use the website. The site will guide the farmers in all the aspects.

TABLE OF CONTENT

List of Figures

CHAPTER 1

Introduction

Ecommerce is fast gaining ground as an accepted and used business paradigm. More and more business houses are implementing web sites providing functionality for performing commercial transactions over the web. It is reasonable to say that the process of shopping on the web is becoming common place. It is the buying and selling of goods and services, or the transmitting of funds or data, over an electronic network, primarily the internet. These business transactions occur either as business-to-business, business-to-consumer, consumer-to-consumer or consumer to-business. The terms e-commerce and e-business are often used interchangeably. The main objective of this project is to help farmers ensure greater profitability through direct farmer to farmer, farmer to customer & farmer to dealer communication. Our project deals with respect to the farmers benefit of getting their products sale at a best price online. Here, the main users of this website are farmer, customer, dealer and admin. Farmers will get unique interface where they can perform marketing, get the correct rates of the market, get in touch with SMS or Email and gather knowledge of different schemes and get pay online. It will provide market wise, commodity wise report to the farmer in interactive way. The centralized market committee will control all business activities. Agricultural E-commerce enables good trading possibilities by supporting different business models such as multi-suppliers, e-sales and several types of auctions. It can blur the physical existence of agro-allied stores, the integrity of products is ensured no paper money involved in the process, distance doesn't exist and so on. Today E-commerce lacks fully automated business processes and still requires a significant manual effort by users. So our project tries to solve all lacking of E-commerce business process.

1.1 Document Purpose

TheadvancementinInformationTechnologyandinternetpenetrationhasgreatlyenhanced variousbusinessprocesseslike E-Commerce and due to this, sellersandtheircustomers experiencing new and efficient shopping options. ThisFarmer's E-Storeisdevelopedtoprovidethe followingservices:

Enhance BusinessFor Sellers:
To stand with new generation online market, sellers needs to go on that platform. They can upload their products in specific categories and can increase their return on investment
Enhance Experience of Shopping For Customers:
By using this platform customers are going to get more options to buy products. Due to more options customers can get very good quality of products with low price.

1.2 ProblemStatement

To create platform that help bring together all local vendors. We want to help make each stronger individually as a collective whole by providing simple lines of communication and support within the relationship of producers to buyers and producers to producers & essentially creating an online farmers store for that offers consistent connection between all producers and buyers. The main motive of the project is to sell local and buy local using internet connectivity.

1.3 ProjectScope

In this project, we will build a user-friendly website in order to buy and sell agriculture products online. The main purpose to build this store is to facilitate farmer to buy seeds, pesticides and fertilizers from anywhere through internet connectivity.Thearea coversinclude:

- The central concept of the application is to allow the buyer to shop virtually using internet and allow customers to buy products of their own choice.
- Improve the services of buyers and producers eliminating the middlemen between them.
- Maintaining details of customer, seller and products and also updating the same.
- The information pertaining to the products are stored on RDBMS at the server side. The server process the customer's orders and the items are shipped accordingly.
- Capable of storing all the day to day orders.
- J2EE Technology used for the development of theapplication.
- Web-platform means that the system will be available for access 24/7 except when there is a temporary server issue which is expected to beminimal.
- Customers as well as Shop owners will be able to use the system effectively

CHAPTER 2

Literature Survey

2.1 Survey Paper On E-Mandi A Market Exchangebetween Farmers And Endusers

Sheetal Bhagwat1, Sandhyarani Lavhare2, Sneha Ingle3, Nirmal Chaudhari4

In this paper, we have proposed to transform the traditional architectural trading into an electronic exchange between the consumers and farmers in the agricultural supply chain. Mathematical modeling and Preferential evaluation of buyer and supplier satisfaction is done. This preference is then given as an input to the Naïve Bayes algorithm. The app will take up the opportunity and will revolutionize the life for farmers through the mobile application, it is substantially designed for farmers that are resigning in rural areas of India. It is a one-step platform for farmers where the information about shop Agri based products and selling their products all will be presented in one mobile application. This platform can link farmers and consumers within the agricultural value chain, that will ease management and communication about market data. This includes selling its product based on information on current prices. The app also has an NGO based feature as a helping hand for providing the needy ones with food at the same time reducing the wastage it is easy to contact farmers and end-users via the app.

2.2 E-commerce in agri-food sector: a systematic literature review

REVIEW ARTICLE Yiwu Zenga, Fu Jiab, Li Wanc, and Hongdong Guo d

This paper aims to synthesize findings in the Agri-food E-commerce (AE) field through a systematic literature review and propose a number of future research directions based on the gaps identified from the review. There has been a general increase in the number of publications, indicating that AE research has elicited more and more interest from scholars in different countries and across multiple disciplines. We have identified a number of themes and made sense of them by developing an integrated conceptual model, which consists of two parts: one for AE adoption at a firm level and one for AE development at a regional level. Furthermore, we recommend that more emphasis should be put on the regional development modes of AE and their impact in the developing world, as the practice is evolving rapidly in some developing countries such as China.

2.3 A Survey Conducted on E-Agriculture with Indian Farmers

Sumitha Thankachan 1 , Dr. S. Kirubakaran2

Technological importance have been a great support for making decisions in various fields especially in agriculture. The development of agriculture has been on under

development for the past few years due to lack of Agriculture knowledge and environmental changes. The main aim of this paper is to reach farmers for their awareness, usage and perception in e-Agriculture. The study used statistical survey design technique to collect data from farmers for their awareness in e-Commerce. The results obtained indicated the level of awareness is less such that there is a need for e-agriculture for their support. e-Agriculture is a platform for supporting marketing of agricultural products

2.4 Survey on Technical Farming

Prof. Disha Deotale, Kranti Sanap, Sandip Panchal, Ravindra Wagh, Prashant Badade

Smartphones are very effective tools for increasing their power and capacity, smartphones allow end users to perform several tasks and be always notify about their updates . API are made to efficient and useful data that is to be provided to the farmers, for better understand the information of weather forecast in regional language. ”Traditional to Technical Farming ” provides tool for farmers with all the information about land, crops management, profit that they can make by growing a particular crop on their land, to increase productivity by proper use of Fertilizers. TTF, is one such application that can bridge the gap and it helps to provide the farming community with better solutions for the proper management of their land, crop management, proper use of fertilizers , diseased plants in better manner by taking “SOIL TEST” .

2.5 E-FARMING

Sindhu M R, Aditya Pabshettiwar, Ketan.K.Ghumatkar, Pravin.H.Budhehalkar, Paresh.V.Jaju

Farming is the Prime Occupation in India in spite of this, today the people involved in farming belongs to the lower class and is in deep poverty. The Advanced techniques and the Automated machines which are leading the world to new heights, is been lagging when it is concerned to Farming, either the lack of awareness of the advanced facilities or the unavailability leads to the poverty in Farming. Even after all the hard work and the production done by the farmers, in today’s market the farmers are cheated by the Agents, leading to the poverty. Agromarketing would make all the things automatic which make easier serving as a best solution to all the problems. E-farming will serve as a way for the farmers to sell their products across the country just with some basic knowledge about how to use the website. The site will guide the farmers in all the aspects, the current market rate of different products, the total sale and the earned profit for the sold products, access to the new farming techniques through elearning and centralized approach to view different government’s agriculture schemes including the compensation schemes for farming. Getting availed to the required information related to the markets and different products can be made possible through the SMS facility provided by the system.

CHAPTER 3

SOFTWARE REQUIREMENT SPECIFICATION

3.1 Product Perspective:

Existing system function:

- In the existing system all transactions, dealings of products, purchasing of products were done manually which is time consuming.
- To buy any product user has to collect information about it either by visiting the shop or buy asking people which is better.
- There is no computer system for handling payments. All calculations are performed manually, which may not always be accurate. Maintaining records is difficult.

3.1.1 Product Function

Function ID		
F1	**Function**	loginUser(), createAccount()
	Description	Creating an account for Admin, Customer and Seller providing login through username and password.
F2	**Function**	AddCategory(),RemoveCategory(),Logout()
	Description	Admin has the right to add category and remove category
F3	**Function**	ShowProduct(),AddProduct(),ShowOrders,UserProfile
	Description	According to the requirement of the customer seller can,addproduct, Show product and can also view the orders
F4	**Function**	ViewProduct(),Buyproduct()
	Description	Customers can viewproduct and buyproduct

3.1.2 Operating Environment

ServerSide:

Processor: Intel® i3 processor
HDD: Minimum 20GB Disk Space
RAM: Minimum 4GB
OS: Windows 10
Database: MySQL Workbench 6.3
Development Tool : Spring tool suite

Client Side:

Processor: Intel Dual Core
HDD: Minimum 80GB Disk Space
RAM: Minimum 1GB
OS: Windows 7

3.1.3 Design and ImplementationConstraints:

- Theapplicationuses Advanced Java,JavaScript, jQuery,CSS asmainweb technologies.
- HTTP and FTP protocols are used as communication protocols. FTP is used to upload the web application in live domain and the client can access it via HTTP protocol.
- Several types of validations make this web application a secured one and SQL Injections can also beprevented.
- Since Farmer's E-Store is a web-based application, internet connection must be established.
- TheSocietyManagementSystemwillbeusedon PCsandwillfunctionviainternet or intranet in any webbrowse.

3.2 External Interface Requirements:

3.2.1 Customer Interfaces:

- All the customer will see the login page when they enter in this website. This page asks the user email andpassword.
- After being authenticated by email and password, user will be redirect to their corresponding home page where they can do variousactivities.
- Theuserinterfacewillbesimpleandconsistence,usingterminology commonly understood by intended users of the system. The system will have simple interface,consistencewithstandardinterface,toeliminate needforusertraining of infrequentusers.

3.2.2 Seller Interfaces:

- All the seller will see the login page when they enter in this website. This page asks the user email and password.
- After being authenticated by email and password, user will be redirect to their corresponding home where they can do variousactivities.
- Theuserinterfacewillbesimpleandconsistence,usingterminology commonly understood by intended users of the system. The system will have simple interface,consistencewithstandardinterface,toeliminate needforusertraining of infrequentusers.

3.2.3HardwareInterfaces:

- No extra hardware interfaces areneeded.
- The system will use the standard hardware and data communication resources.
- This includes, but not limited to, general network connection at the server/hosting site, network server and network managementtools.

ApplicationInterfaces:

3.2.3 Software Interfaces :

- Front End – JSP, CSS, JQuery
- Back End – Java, JavaScript,
- Server - Tomcat 9.0

3.2.4 CommunicationsInterfaces:

- This system uses communication resources which includes but not limited to, HTTP protocol for communication with the web browser and web server and TCP/IP network protocol with HTTPprotocol.
- This application will communicate with the database that holds all the information. Users can contact with server side through HTTP protocol by means of a function that is called HTTP Service. This function allows the application to use the data retrieved by server to fulfil the request fired by the user.

3.2.5Users andCharacteristics:

Admin:

- Admin can Login/Logout to thesystem.
- View the list of all Customers.
- View the list of all Sellers and can verify them.
- Can remove Customers, Sellers.
- Admin can add/remove category
- Can see all orders and their status.

Seller:

- Seller can Login/Logout/Register to thesystem.
- View/Update personaldetails.
- View/Updatetheir products.
- Seller can update quantities of their products.
- Seller can view orders and can update orders status.

Customer:

- Customer can Login/Logout/Register to thesystem.
- View/Update personaldetails.
- View/Select category.
- View/Select products available in specific category.
- Customer can Add/Remove/Update product into cart.
- View products present into cart with total amount.
- Customer can pay and place the order.
- Customer can view orders.

CHAPTER 4

SystemDesign

4.1ActivityDiagram

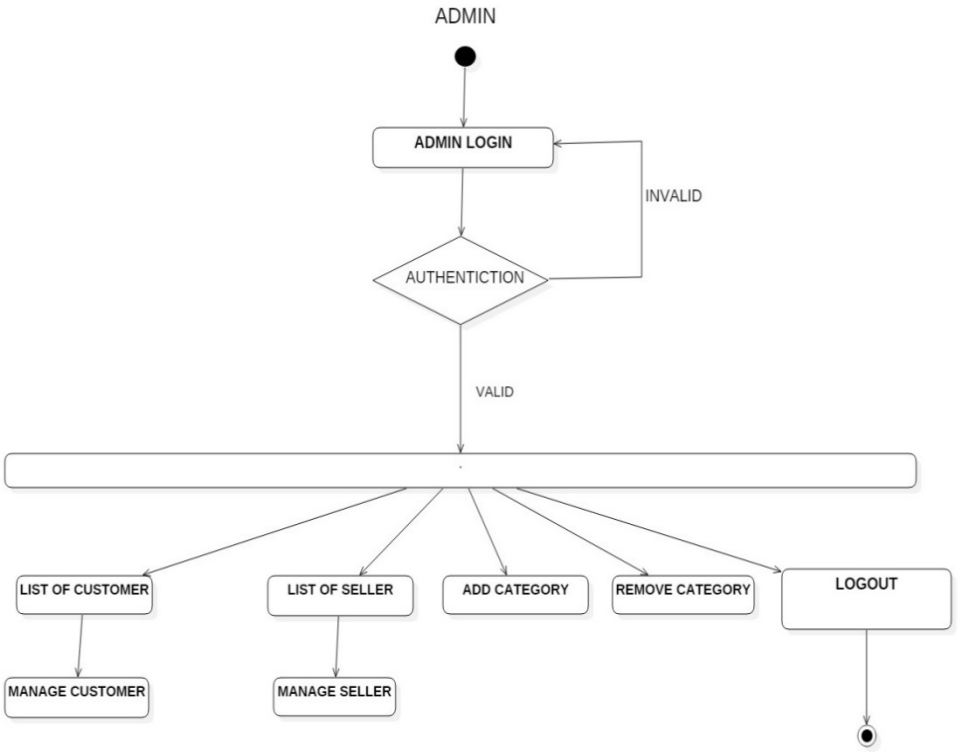


Figure 1: Admin Activity Diagram

Admin Activity Diagram shows the functionality provided by admin
Admin login includes:-

- List of customer
  - Manage customer
- List of seller
  - Manage seller
- Add category
- Remove Category
- logout

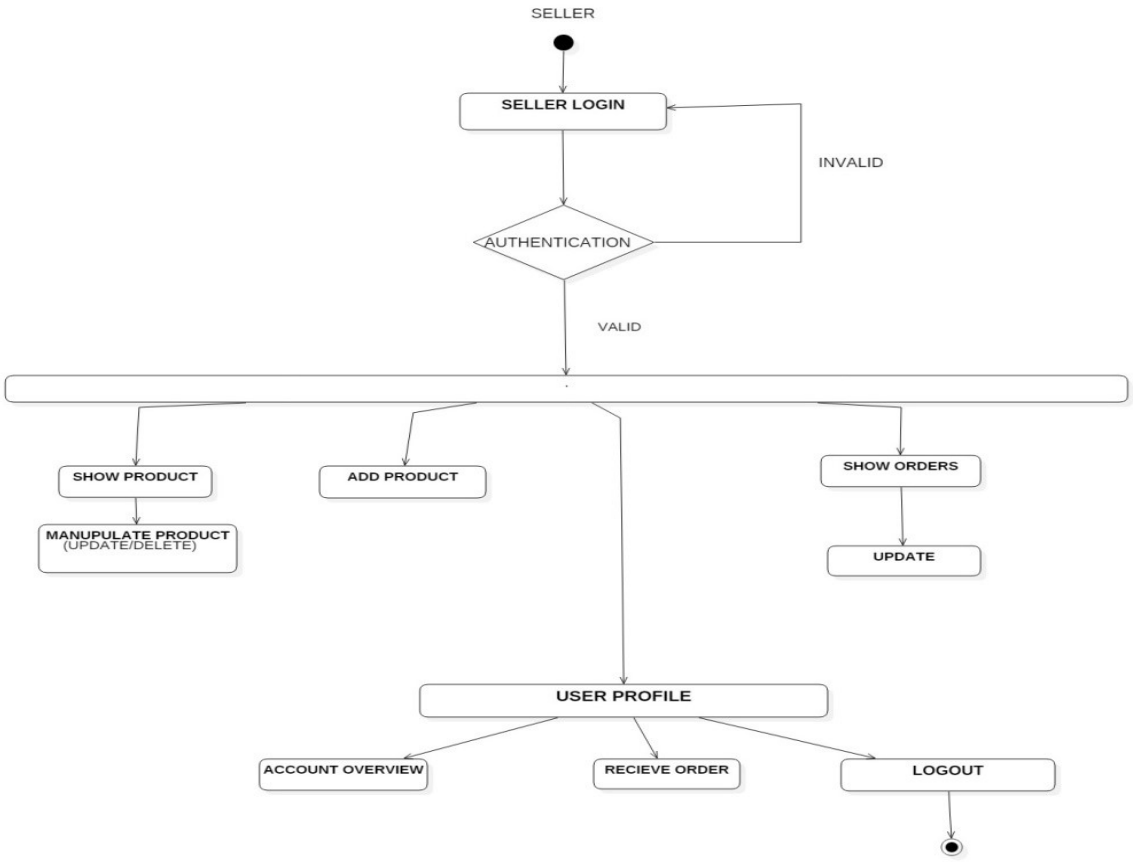
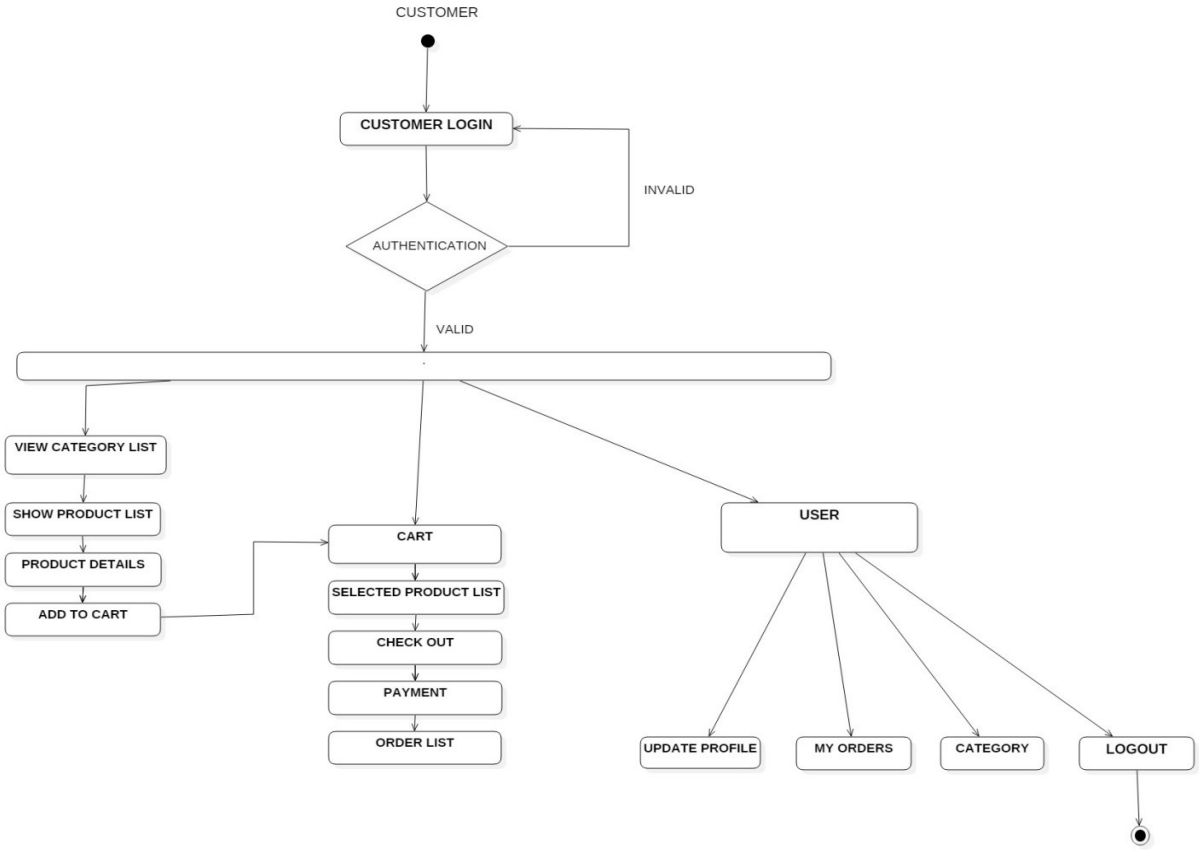


Figure 2: Seller ActivityDiagram

Seller Activity Diagram shows the functionality provided by Seller

Seller Login includes :-

- Seller login
- Show Product
  - Manipulate product
- Add product
- User Profile
  - Account overview
  - Receive order
  - Logout
- Show orders
- Update



Seller Activity Diagram shows the functionality provided by Seller

Customer Login Includes:-

- Customer login
  - View category list
  - Show product list
  - Product details
  - Add to cart
    - Cart
    - Selected product list
    - Check out
    - Payment
    - Order list
- User
  - Update profile
  - My orders
  - Category
  - Logout

4.2 Data FlowDiagram

Data flow diagram: Data Flow Diagramming is a means of representing a system at any level of detail with a graphic network of symbols showing data flows, data stores, data processes, and data sources/destinations. The goal of data flow diagramming is to have a commonly understood model of a system.

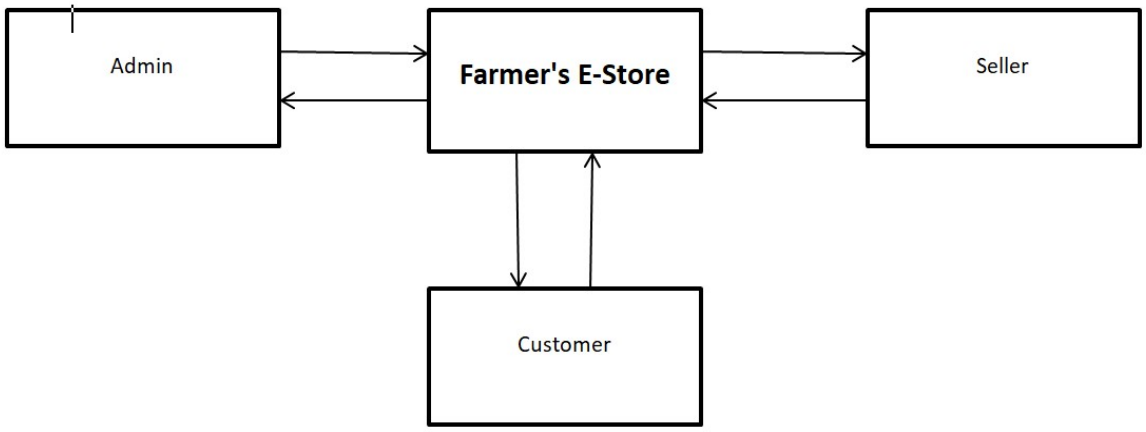


Figure 4: Level 0 Data FlowDiagram

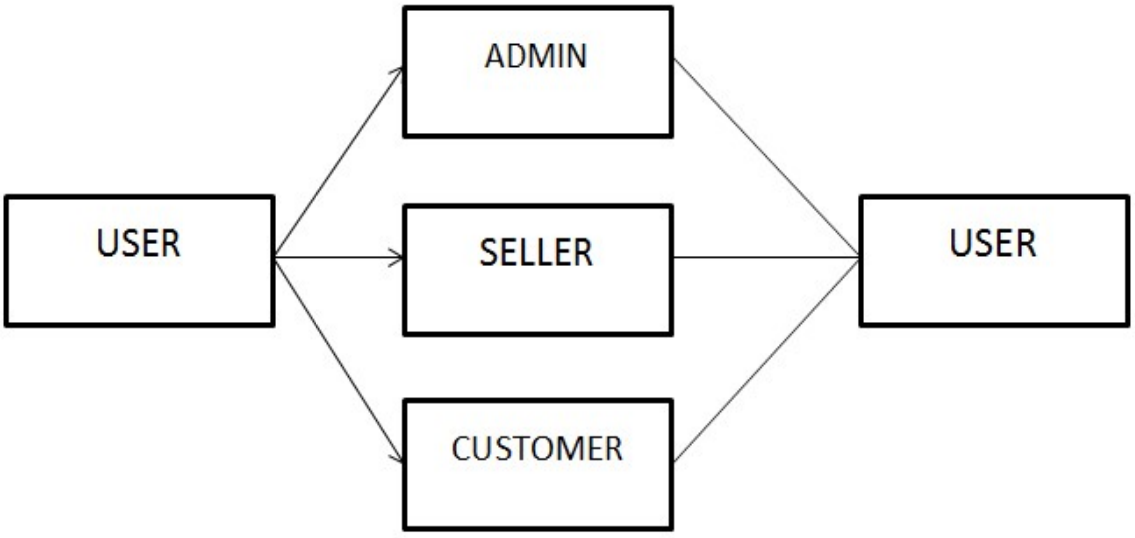


Figure 5: Level 1 Data FlowDiagram

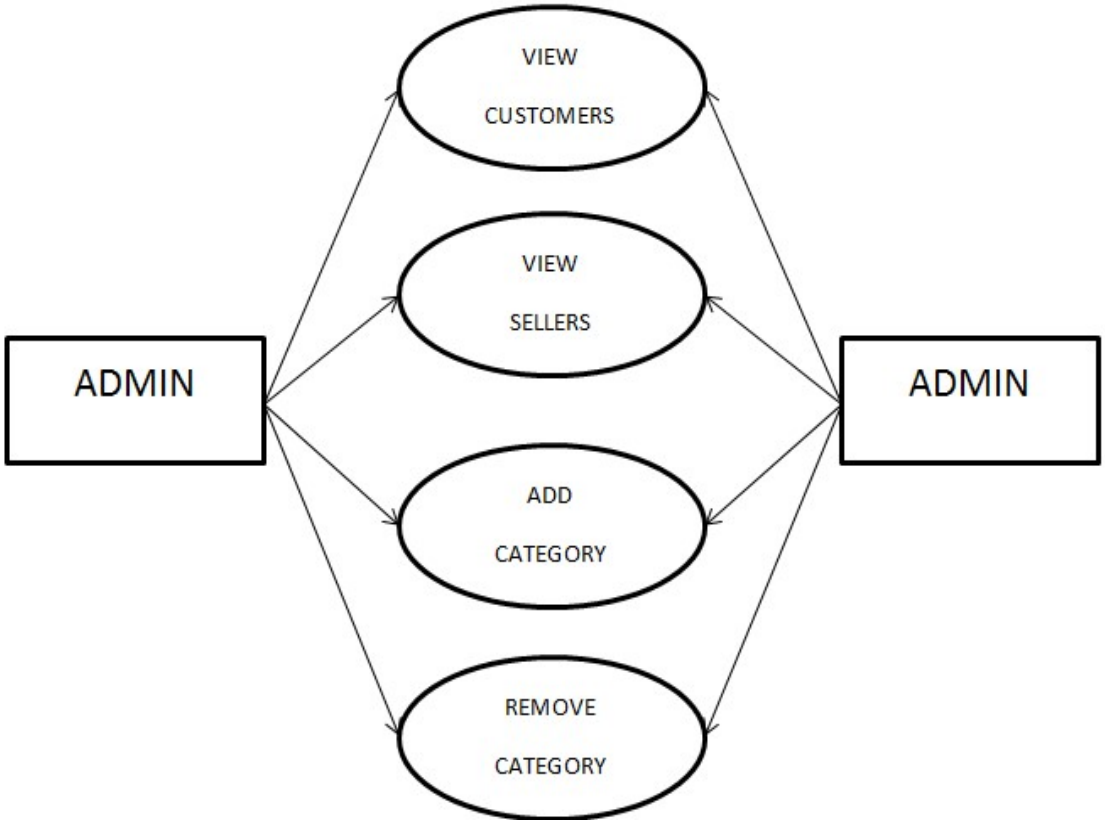


Figure 6: Level 2 Data FlowDiagram (Admin)

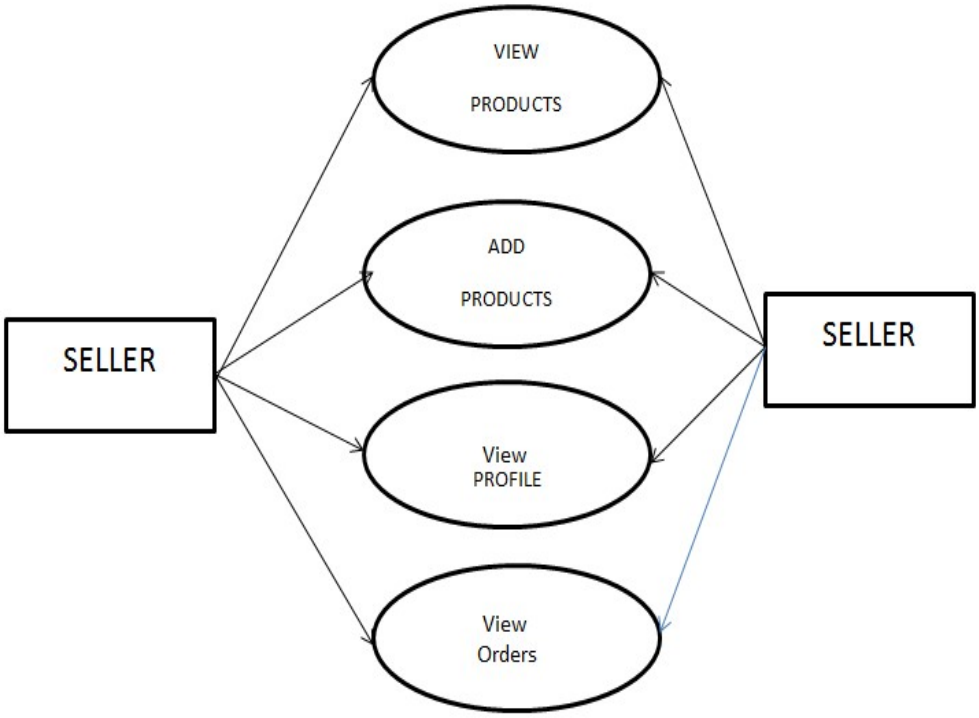


Figure 7: Level 2 Data FlowDiagram (Seller)

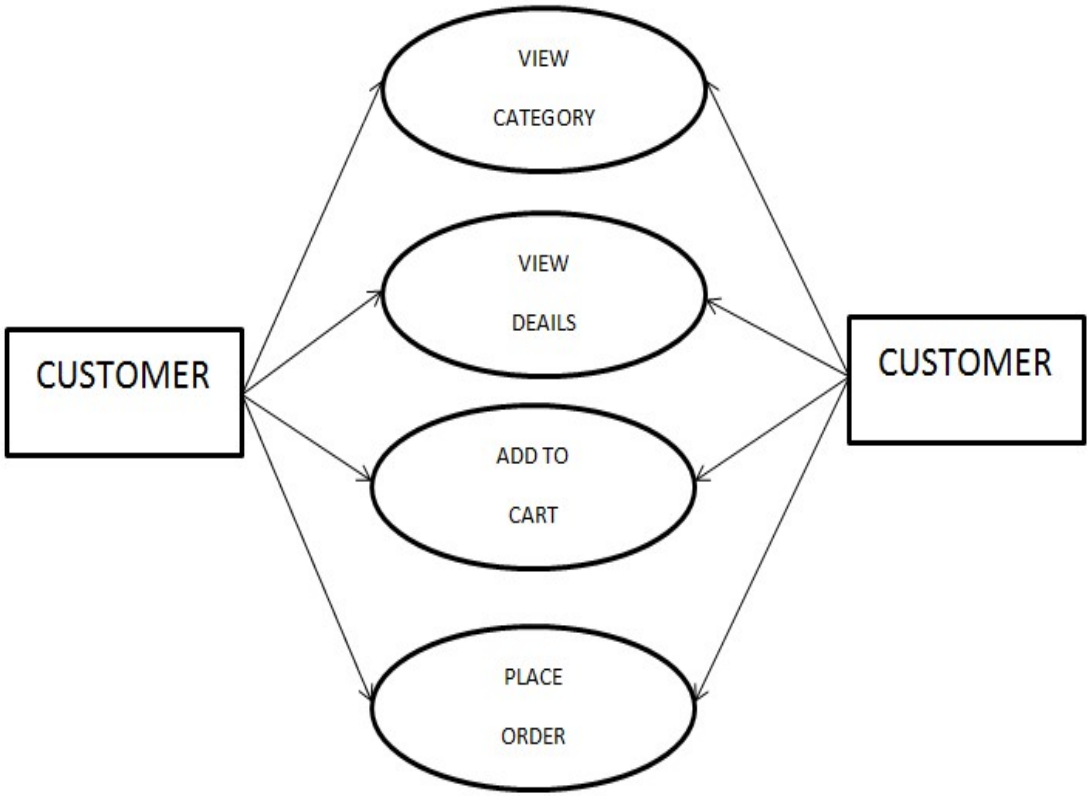


Figure 8: Level 2 Data FlowDiagram (Customer)

4.3 Class Diagram

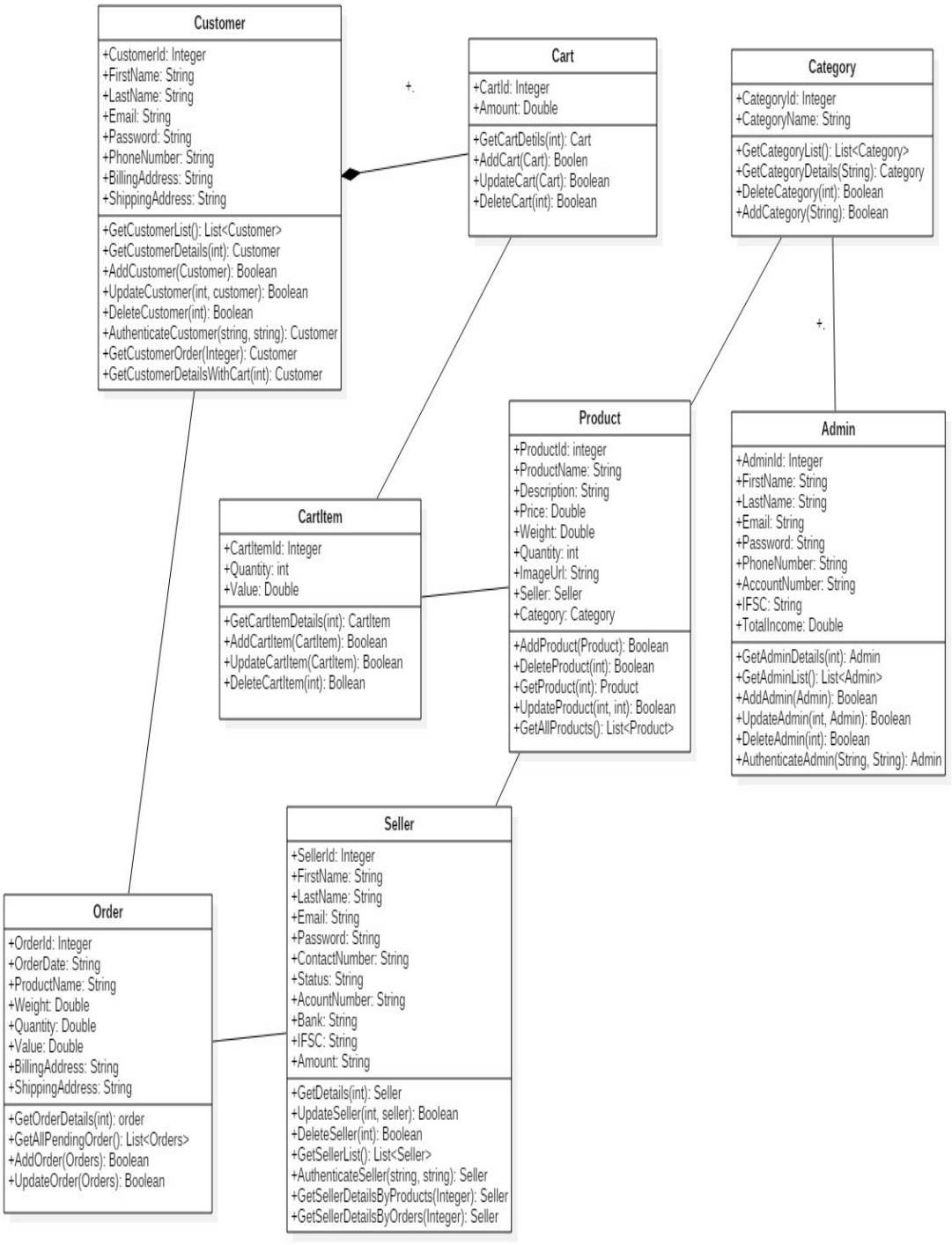


Figure 9: Class Diagram

4.4 Use CaseDiagram

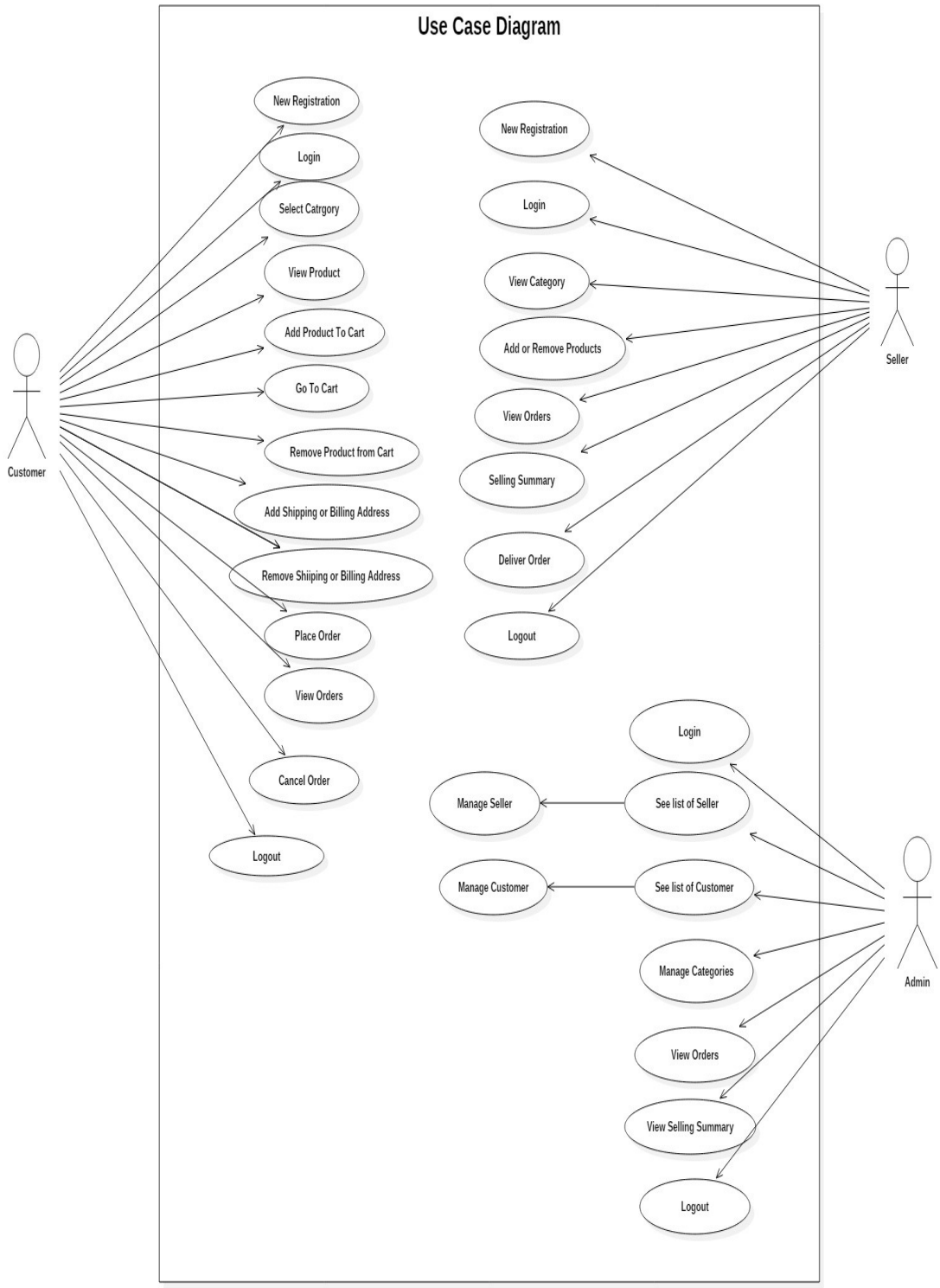


Figure 10: Use Case Diagram

4.5 ERDiagram

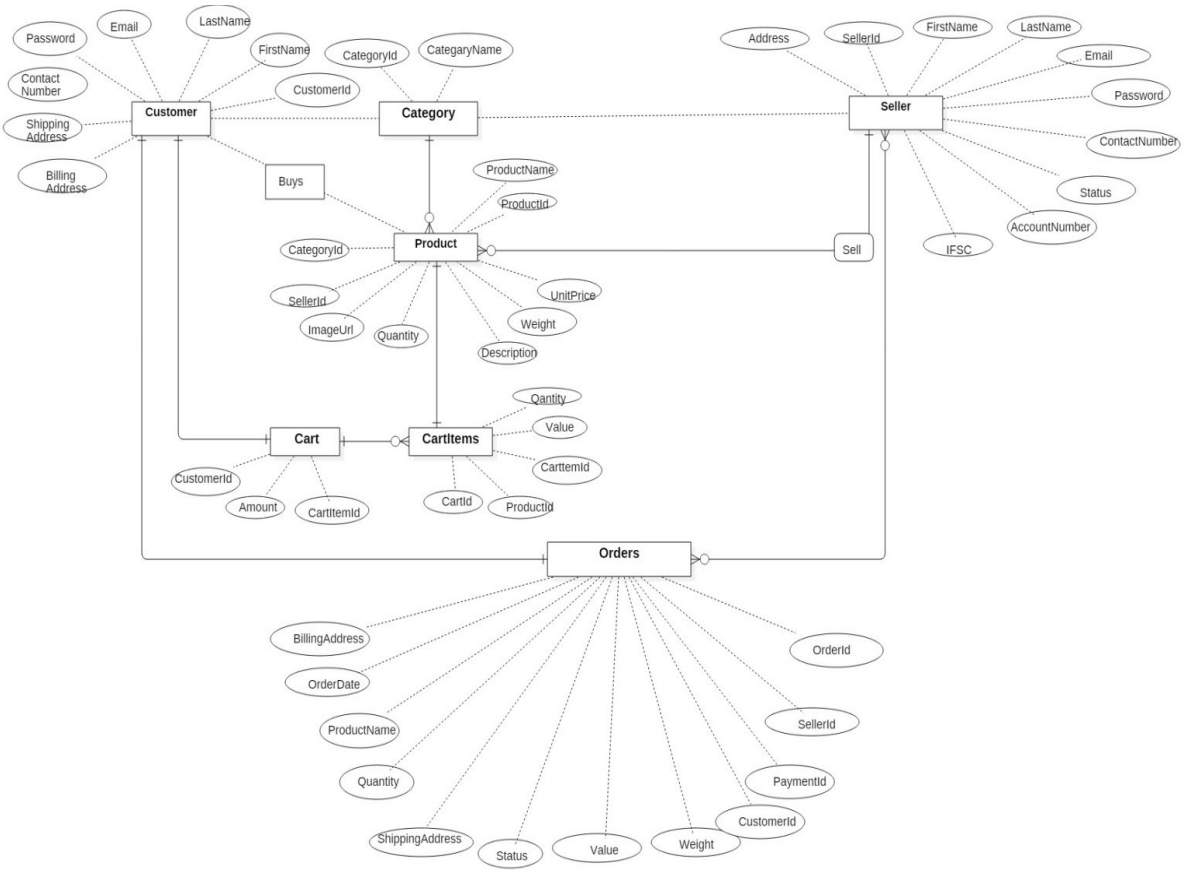


Figure 11: ER Diagram

Entity Relationship Diagram: An ER diagram is a graphical representation of an organization's data storage requirements. The entity- relationship (E-R) model is a high-level data model. It is based on a perception of real world that consist of collection of basic objects, called entities, and of relationships among these objects, It was developed to facilitate database design by allowing specification of an enterprise schema, which represent the overall logical structure of database.

CHAPTER 5

TableStructure

5.1 Admin:

Field	Type	Null	Key	Default	Extra
admin_id	int(11)	NO	PRI	NULL	auto_increment
IFSC	varchar(255)	YES		NULL	
accountNumber	varchar(255)	YES		NULL	
email	varchar(255)	YES		NULL	
firstName	varchar(255)	YES		NULL	
lastName	varchar(255)	YES		NULL	
password	varchar(255)	YES		NULL	
phoneNumber	varchar(255)	YES		NULL	
totalIncome	double	NO		NULL	

In above table we use primary key constraint to admin_id column. Because primary key
is used to identify uniquely .Uniquely means null value and not repeated duplicate value.
Also we have use Auto_increment which enable us to provide admin_id for each separate admin complexity of admin_id Reduced to in simple manner.
Also use not null constraint in the totalIncome column because without any value the procedure can not Proceed.

5.2 Seller:

Field	Type	Null	Key	Default	Extra
seller_id	int(11)	NO	PRI	NULL	auto_increment
IFSC	varchar(255)	YES		NULL	
accountNumber	varchar(255)	YES		NULL	
address	varchar(255)	YES		NULL	
email	varchar(255)	YES		NULL	
firstName	varchar(255)	YES		NULL	
lastName	varchar(255)	YES		NULL	
phoneNumber	varchar(255)	NO		NULL	
status	varchar(255)	YES		NULL	
password	varchar(255)	YES		NULL	

In the above table we use primary key constraint to admin_id column.because primary key is used to identify uniquely.also use Auto_increment which enable us to provide seller id for each separate seller complexity of seller_id.Similarly we useNot Null constraint to phone number column because it helps to get seller information for future use

5.3 Customer:

Field	Type	Null	Key	Default	Extra
customer_id	int(11)	NO	PRI	NULL	auto_increment
billingAddress	varchar(255)	YES		NULL	
email	varchar(255)	YES		NULL	
firstName	varchar(255)	YES		NULL	
lastName	varchar(255)	YES		NULL	
password	varchar(255)	YES		NULL	
phoneNumber	varchar(255)	YES		NULL	
shippingAddress	varchar(255)	YES		NULL	

Similarly we used here primary key and auto_increment to give us separate customer_id and helps to generate new customer_id as per customer login

5.4 Cart:

Field	Type	Null	Key	Default	Extra
cartId	int(11)	NO	PRI	NULL	auto_increment
amount	double	NO		NULL	
customer_id	int (11)	YES	MUL	NULL	

Similarly we used here primary key and auto_increment. For cartId Also we are used here foreign Key to fetch the data between costomer and cart table. foreignkey use to reference between twoTables

5.5CartItem:

Field	Type	Null	Key	Default	Extra
cartitem_id	int(11)	NO	PRI	NULL	auto_increment
quantity	int (11)	YES		NULL	
value	double	YES		NULL	
cart_id	int (11)	YES	MUL	NULL	
product_id	int (11)	YES	MUL	NULL	

Similarly we used here primary key and auto_increment. For cartItem_id Also we are used here foreign Key to fetch the data between cartItem and cart ae well as product table. Foreign key use to reference between two tables we implement relationship between two tables .

5.6 Category:

Field	Type	Null	Key	Default	Extra
categoryid	int(11)	NO	PRI	NULL	auto_increment
categoryName	varchar(20)	YES		NULL	

5.7 Product:

Field	Type	Null	Key	Default	Extra
product_id	int(11)	NO	PRI	NULL	auto_increment
description	varchar(255)	YES		NULL	
imageUrl	varchar(255)	YES		NULL	
price	double	NO		NULL	
productName	varchar(255)	YES		NULL	
quantity	int(11)	NO		NULL	
weight	double	NO		NULL	
categoryid	int(11)	YES	MUL	NULL	
seller_id	int(11)	YES	MUL	NULL	

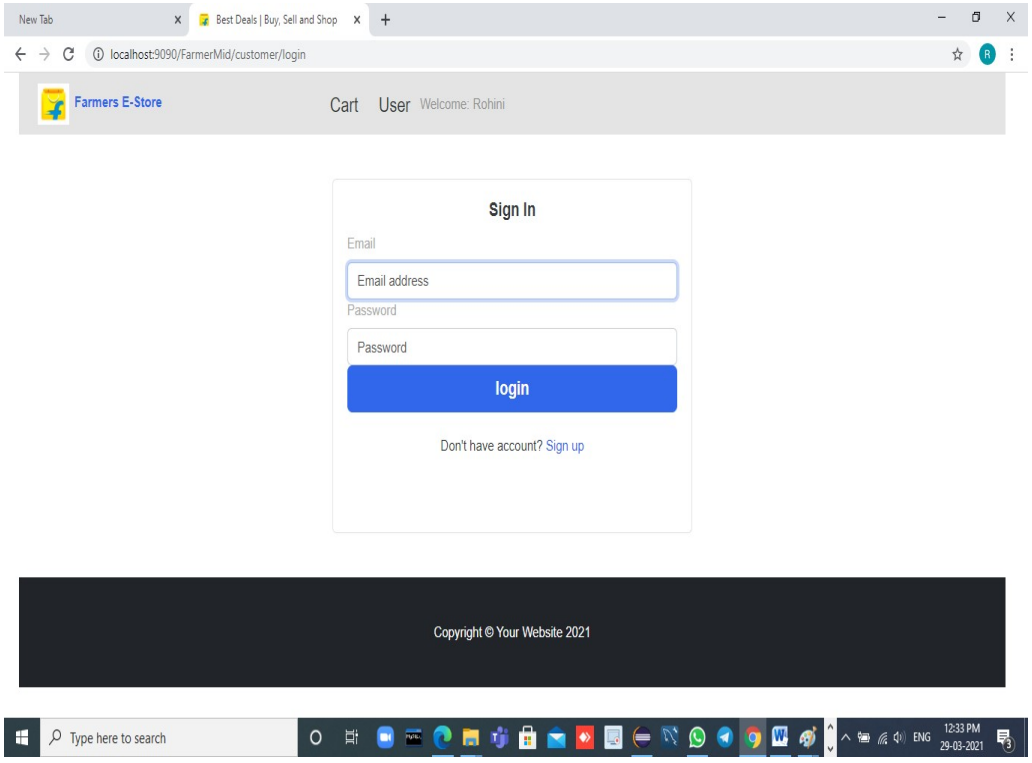
5.8 Orders:

Field	Type	Null	Key	Default	Extra
orderId	int(11)	NO	PRI	NULL	auto_increment
billingAddress	varchar(255)	YES		NULL	
orderDate	varchar(255)	YES		NULL	
productName	varchar(255)	YES		NULL	
quantity	int(11)	NO		NULL	
shippingAddress	varchar(255)	YES		NULL	
status	varchar(255)	YES		NULL	
value	double	NO		NULL	
weight	double	NO		NULL	
customer_id	int(11)	YES	MUL	NULL	
seller_id	int(11)	YES	MUL	NULL	

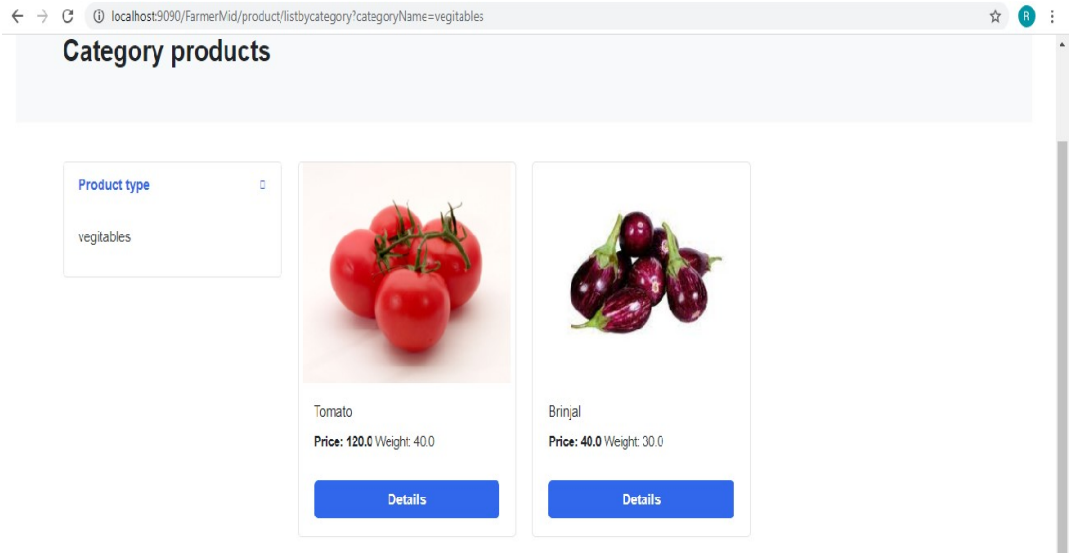
We use primary key and auto_increment in both product and order table .also we us foreign key to fetch data from related tables

Chapter 6
Outcomes (Screenshot)

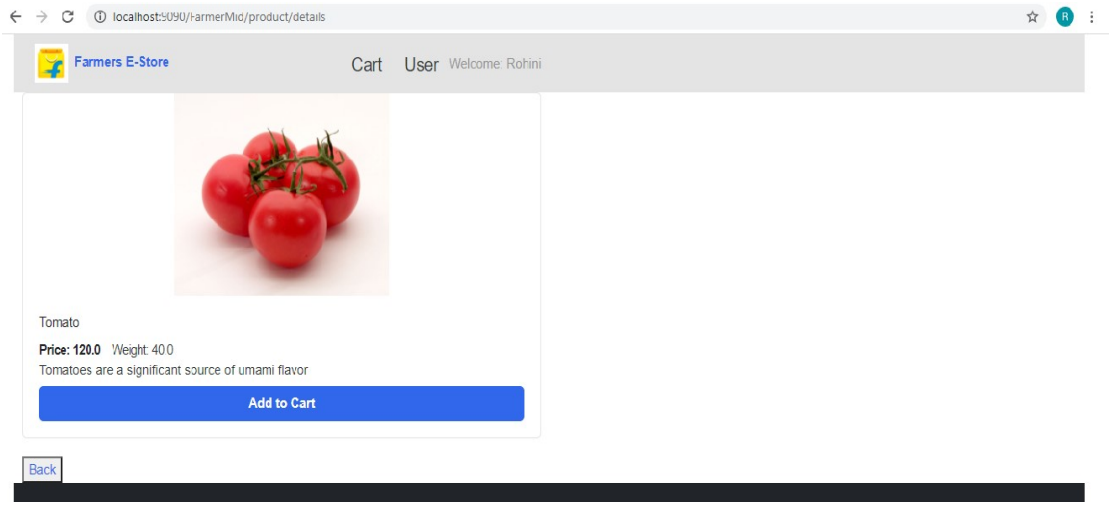
6.1. Customer



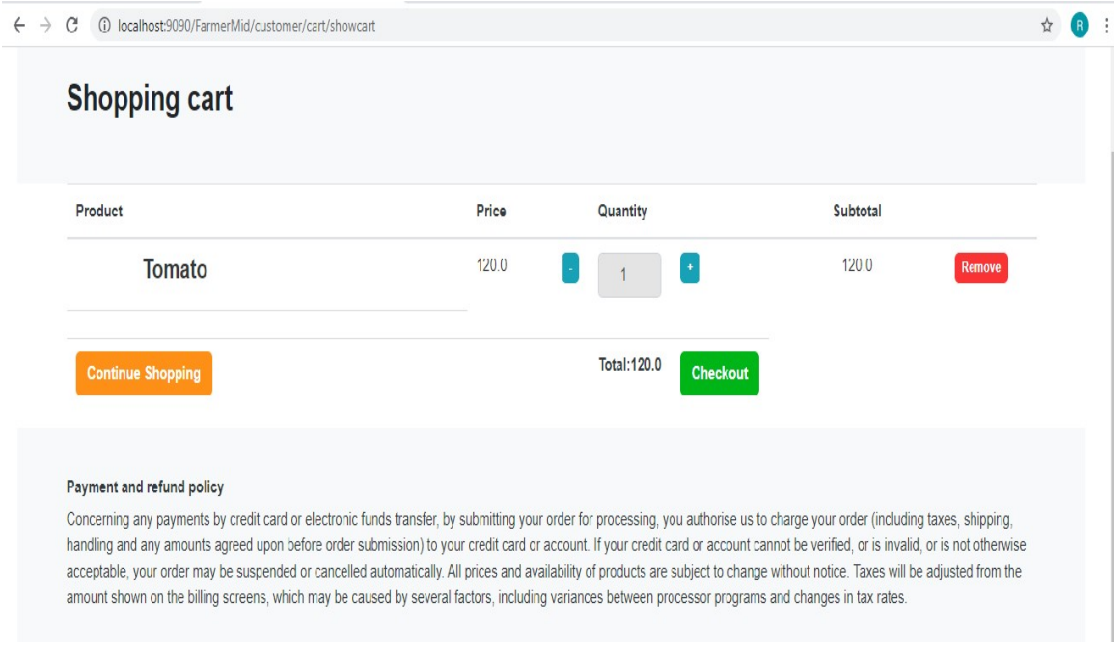
Customer Login page where customer can login through Email and password ,if customer is not register he can register using signup



This are category product, customer can view this product to buy it according to need clicking on details customer can see the more description about product.

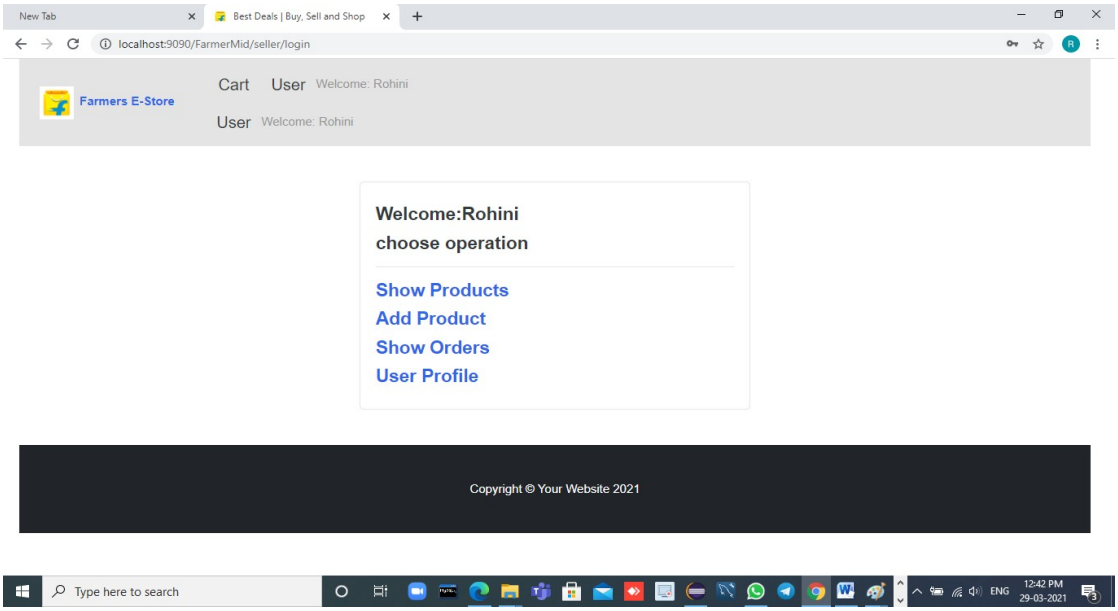


In this figure add to cart is display along with the description of product(tomato) price, weight, details.

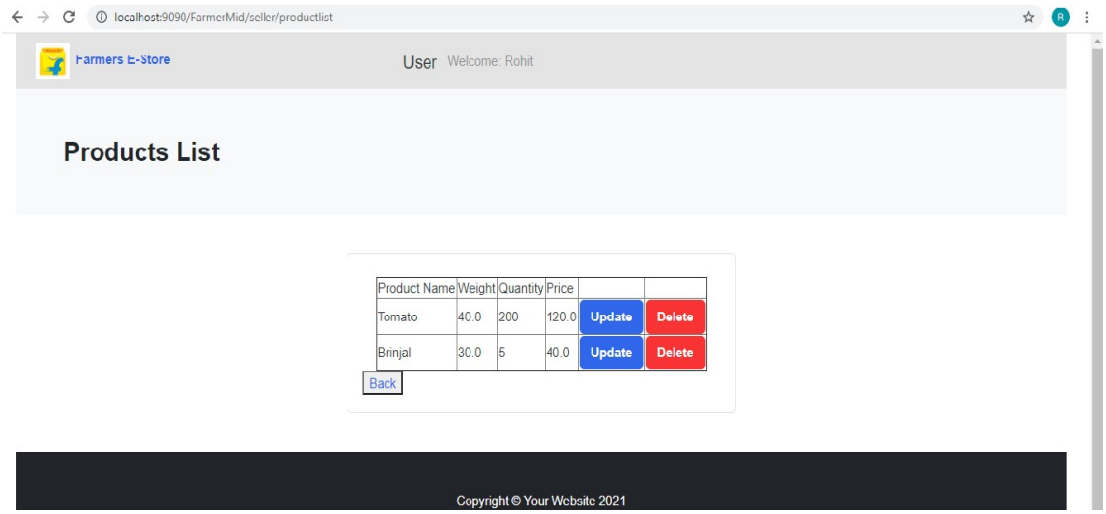


In this figure customer is ready to checkout the product after the shopping .customer needs to enter the quantity of the product and to enter the checkout button to finish the shopping or he can continue shopping button.

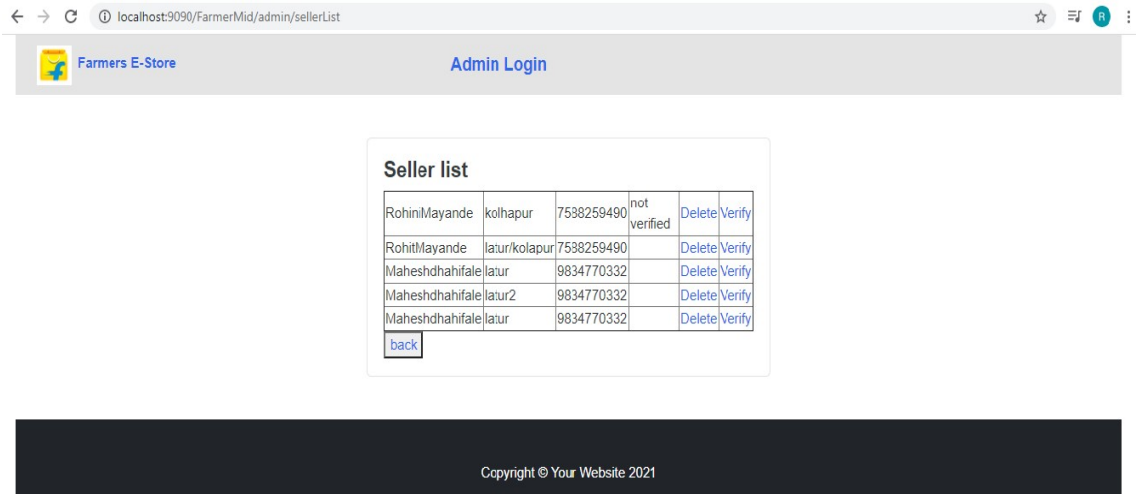
6.2 Seller



This is the Seller page where seller can Show products ,Add products, Show Orders and also can check the profile he can add products by just clicking on add products button

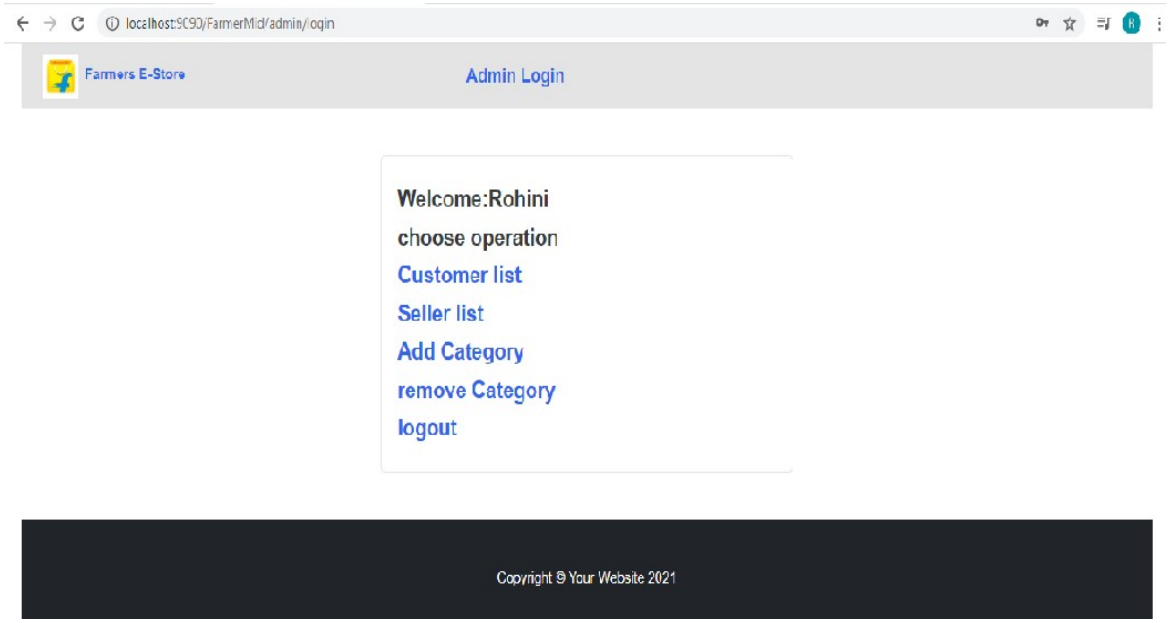


In this product list is displayed to seller where he can update the current price according to the market valuation or can delete the unwanted products



This is the Admin page where admin can view all the details about the customer and seller and admin also have the authority of verifying the respective customer and seller

6.3. Admin



In this figure, Admin has the authority to visit each list and verify the products.

7. Conclusion

The project report entitled "Farmer's E-Store" is developed with much care that it is free of errors and at the same time it is efficient and less time consuming. The important thing is that the system is robust. We have tried our level best to make the site as dynamic as possible. Also provision is provided for future developments in the system.
This project helps in understanding the creation of an interactive web page and the technologies used to implement it. The building of the project has given us the idea and a precise knowledge about how the application can be developed, how it connects to the database and how the data and web pages are modified as required. The main motive for the project was to provide dynamic online platform to help farmers in every possible way and provide them a stable platform where they can perform every transaction with ease.

7.1 FutureScope

Partial Payment:
Partial payment will help user as well as farmer to buy and sell theproduct required by user accordingly. If the product is more with farmer then farmer can update his left over product for further purchasing.

Payment Gateway:
In this project we have designed false transaction which will show only that transaction is successful, similar to virtual transaction for better understanding. Since the implementation of payment gateway is not possible right now, it will be implemented in future.

Implementation of Debit/Credit payment modes:
In this website we have worked upon implementation of net banking only. Debit and credit will be implemented in future.

Mandatory charges:
Application of charges at the time of registration will be implemented considering the need of the user as well as farmer.

Data analysis
With all the information stored in database Admin can generate reports. The report will include all the information about the transaction and also what all products are sold by which farmers.

8. References

- **http://farmersweb.com/**
- **http://farmer.gov.in/**
- **Google**
- **Wikipedia**