



DAFFODIL INTERNATIONAL UNIVERSITY

Department of Software Engineering FSIT

SWE-431 Project/Thesis

FARMING SOLUTION

(Smart Farming)

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This project report has been submitted in fulfillment of the requirements for the degree of Bachelor science in Software Engineering.

APPROVAL

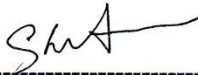
This thesis titled on “**Smart Farming (farming solution)**”, submitted by **Shiful Islam Shawon (ID: 181-35-2413)** to the Department of Software Engineering, Daffodil International University has been accepted as satisfactory for the partial fulfillment of the requirements for the degree of Bachelor of Science in Software Engineering and approval as to its style and contents.

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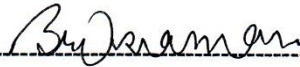
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Chapter 1

Introduction

1.1 Project Overview

This is a blogging web application and also an online marketplace for the seeds, or tree, the baby Plants, medicine and others equipment. Bangladesh is a poor country with a large of population. More people need more food. There has a large amount of information about farming and different kinds of problem that are faced by the real-life farmer. In our country a large number graduate student has to fight for job market that is so much hard for them to getting a job. They can build their career in agriculture sector by proper connection with us. Cause we can give them proper information and good quality seeds, plants and fertilizer. people can contract with us to have a accurate planning to make a proper business in agriculture sector. This sites mainly a blogging and ecommerce sites, where any kind of agricultural blog and equipment can be found easily.

1.2 Project Purpose

Now a days people are addicted in social media and YouTube sites. There are many people sell agricultural products like plants, seeds, equipment. But it is a matter of great regret that some dishonest person sell low quality product and also unproductive plants and seeds, that can be create a huge loss of a farmer or a newly entrepreneur. In agriculture sector the highly productive crops can change the life of the farmer. And unproductive or low productive seeds and plants makes a huge hamper of their financial. We sell only justified varieties plants and seeds. Unjustified varieties often don't give a good production. And also, the plants are easily attacked by the different kinds of worm. As a result, it doesn't give a good benefit cause attacking worm can makes the plants damage also can fall down the production rates. In farming solution people can get proper planning and deployment of rooftop gardening. Now a days rooftop garden is so popular both city and village. Rooftop garden can give us fresh fruits and vegetables. People gets details information about Rooftop Garden. And also, the medicine details of plants can know from the sites that can help them to grow plants properly and easily.so that reason we make the website to give a clear information about farming system. Without it Many kinds of problem are faced by different kinds of bacterial and fungal attack.so overall people can find an easy solution of their farming sector problem by this website.

Their also given some caution for the new entrepreneur, so that they don't do any mistakes at the early stage in the agricultural sector.

1.2.1 Background

Bangladesh is a development country. In our country most of the people are poor and they living by farming. But our farming technology and production is not good at all.

The farmer doesn't know how to grow crops proper way. They often make mistakes and lost their money in this sector. People don't get hybrid plants, seeds and the right pesticides. In this sites people can get more resource and can apply them in Agro-farming. our past generation are doing farming in analog way. That is not so much productive and helpful. Using low quality seeds, they can't get a good result.so the farming sector don't have a good background in our country. But one thing is our country is a land of river. So, our soil quality is so good. If people can use it properly, we can make a good change in our agriculture sector.

1.2.2 Benefits & Beneficiaries

Farming solution gives the people the right information about farming. People can buy farming equipment from this website. The real-life experienced farmer and entrepreneurs gives tips about easy way of farming. We have a lot of population and the more people needs more food. I think that more production of the crops can take a vital part to remove food crisis. We have supplied the best varieties of plants, which are giving good result of production in our country. It will be a great benefit for all of the people. If anyone wants to plants a little plan, they also can choose from our quality product. The sites give the best beneficiaries if the farmer and entrepreneurs are regularly

And follow our tips and information about farming solution.

1.2.3 Goal

The websites giving the people the easy way of the commercial farming. Now a days our farmers and young entrepreneurs are really interested in commercial farming. But they cannot get the proper resources and equipment for this. And also, many people are getting loss buy the wrong selection of plants variety and growing the unproductive and low productive crops. Our goal is to provide them the best variety of plants, and seeds. We also provide the best agro-information to the people so that the people can understand which plants are suitable for there to start a commercial farming and also get knowledge about more productions rate. Our country has a large number of lands, which are not cultivate. if we can supply good plants and seeds people can grow crops, foods in that land. That can solve some food crisis also. Someone if want to leads their life by farming they can grow recently release hybrid plants and also grafting plants to get early fruits or crops. It will be more exiting and give a refreshment to the newly entered farmer or entrepreneur in this farming sector .this is our sample goal to serve the people who want to work with farming sector.

1.3 Project Schedule

Every project should have a target schedule so that the project is done by the proper time. It also gives the employees a proper timing sense.

1.4 Gant Chart

Activities	W - 1	W - 2	W - 3	W - 4	W - 5	W - 6	W - 7	W - 8	W - 9	W - 10	W - 11	W - 12	W - 13	W - 14	W - 15	W - 16
planning																
Requirement analysis																
System design																
Implementation																
Testing																
maintenance																

1.5 Release Plan

Activities	Duration in weeks	Total week
Brainstorming	Week 1	1
Problem identification	Week 3	1
Requirement specification	Week 3, week 4	2
Requirement analysis	Week 5, week 6	2
Design specification	Week 7, week 8	2
Database design	Week 9	1
Client-side implementation	Week 10, week 11	2
Server-side implementation	Week 12, week 13	2
Black box testing	Week 14	1
White-box testing	Week 15	1
Software release	Week 16	1

Chapter 2

Software Requirement Specification

2.1 Functional Requirements

The function which is mandatory to the system is called the functional requirement. Its performance must have too fancy like able to perform in web and all kinds of software system. Farming solution system has some functional requirements. Now we are going to discuss about the functional requirements.

2.1.1 Sign up /Registration in The System

Requirement 1	New user has to registration in software
Description	This is the must need able when the new user wants to purchase product from the websites.to get proper experience new user must need to sign up to the system.
stakeholders	New user

2.1.2 Login In the System

Requirement 2	Admin, and the user have to login in the software
Description	Its mandatory to access the website, Control the websites as an admin the login function must needed. Without login the admin cannot maintain the system. The user has to login for making successful order.
stakeholders	Admin, user

2.1.3 Search Product

Requirement 3	Search
description	User can search product by product name or seeds name very easily. also, can search to find any pesticides within a short time
stakeholders	Users

2.1.4 Add Product To The Cart

Requirement 4	Add product
Description	User can add product to the cart to follow the steps of ordering any product
stakeholders	users

2.1.5 Checkout

Requirement 5	checkout
Description	User do checkout for confirming the order. after confirming the order by checkout, the order took place successfully
stakeholders	users

2.1.6 Rooftop Gardening

Requirement 6	Rooftop gardening
Description	The admin added the rooftop gardening plan and full system by real life experienced gardener experience. Find out the easy technique and gardening system and shortlisted the best variety for gardening in rooftop.
stakeholder	Users, admin

2.1.7 Commercial Farming

Requirement 7	Commercial farming
description	Admin can add commercial farming (fruits, flower and vegetables) by adding from the full process and the success rate of this sector. And the user can gain proper information by this.
stakeholder	Admin, user

2.1.8 Manage Product (Add/Delete Product)

Requirement 8	Admin can add or delete product
Description	Admin can add/delete product and blog
stakeholder	Admin

2.1.9 Add Blog

Requirement 9	Add blog
Description	The admin can add blog that contains agriculture information's and tips or solution of any kinds of problems.
Stakeholder	Admin, user

2.1.10 Agriculture Information (Caution)

Requirement 10	Admin add caution for farmer
Description	Admin collect the right information about wrong product and false or over hyped variety results and give the farmer the right information about good result or bad result success rate in our country.
Stakeholder	Admin

2.1.11 Farmer Help Center

Requirement 11	Farmer Help Center
Description	In this section the farmer/user can get help by creating ticket and ask their query to the admin.and then the admin replies with the answer of the problem which is created by the user
Stakeholder	Admin, The user

2.1.12 Clear cart

Requirement 12	Clear Cart
Description	After add product in the cart the user may have change their mind. Or they want to change their order or quantity. Then they can user clear cart to dismiss product from the cart.
Stakeholder	The user

2.1.13 Manage sales

Requirement 13	Manage sales
----------------	--------------

Description	Admin can manage sales to make easier the sells and report. The admin can look after the order and customer by creating manage sales report.
Stakeholder	The admin

Nonfunctional Requirements

2.2.1 Daily/Monthly sales Report

NFR-01	Daily/Monthly Sells Report
Description	Admin can manage daily sells report if he want. That gives more better experience to maintaining sell.
Stakeholders	Admin

2.2.2 Availability

NFR-02	Availability
Descriptions	The system should always be available for access at 24 hours 7 days a week.

2.3 Data Requirements

To construct a model their needs some data. The internal users would load the majority data. We need to concreate on a few key issues for this reason. That are giver bellow:

- 1.Quantity of data
- 2.Data accessibility
- 3.Sequence of data sources
- 4.Entity types in the system
- 5.Locations for data routing
- 6.Data Capacity And resource are Required
- 7.Schedules For Data Availability

2.4 Performance Requirements

Performance requirements define how well the system accomplishes in certain function. Normally a developer have to manage many task to control the performance.in this project those things are attempt in this system to improve the performance.

2.4.1 Capacity Requirements

SLR-1	The system will handle thousand of data
Description	The system needs to handle a lot of data every month
stakeholder	admin

2.4.2 Accuracy Requirements

SLR-2	User and staff information's accuracy is very important
Description	In The website many kinds of people are browsing.so the user information is so important for this system
stakeholders	All user

2.4.3 Speed And Latency Requirements

SLR-3	Add product, category and blog faster
Description	For this website adding product and blog is more important thing.so this feature must be work as fast as possible.
Stakeholder	Admin

2.5 Dependability Requirements

- Availability
- Safety
- Security
- Reliability

2.5.1 Reliability & Availability Requirements

RAR-1	All time available system (24 hours and 7 days)
Description	Malware free and accessible from any location
Stakeholder	Admin

2.5.2 Fault Tolerance Requirements

RFT-1	Without any problem all user access is handled by the system.
Description	At a time, all kinds of users can easily access our system and they can access in any time. Their request handled time to time.
Stakeholder	Authorized user

2.6 Maintainability Requirements

It is critical to supply all kinds of user with after sales service

2.6.1 Maintainability Requirements

MR-1	The system aids in the updating of a user's profile
Description	Update security system regular is so important to having a good experience.
Stakeholders	System user

2.7 Security Requirements

AR-1	A security mechanism is provided by the application
Description	All modules are highly secured, no out user can not access to the system. Only the verified user can access it.
Stakeholder	Admin

2.8 Usability

The system must be user friendly and easy to all kinds user. The website must be easy accessible and fast and well arrange.

2.8.1 Ease Of Use Requirements

EUR-1	End users must be able to use the application
Description	Friendly system for the admirative to run
stakeholder	admin

2.8.2 User Documentation Required

We know that in documentation there are two sorts. one is written by the application engineer. This paper is created to make easy development life cycle. This paper is created to make easy to development life cycle.

2.8.3 Training Requirement

Training requirement is necessary for the end user to run the system easily and properly. to do anything properly people need to train them. When we release this website first of all we need to train the admin and the user properly, so that they can use the website very easily and without facing any kinds of difficulty.

2.9 Look And Feel Requirement

The look and feel ensure the users view of interface or graphical user interface of our system will appear to them.

2.9.1 Appearance Requirements

This is for ensure which input fields are mandatory and which are optional.

AR-1	Label of mandatory fields must be bold
Description	To gives user a good user experience by making easy the necessary fields level making bold, all input fields must have placeholder
stakeholder	Admin and the user

2.10 Operational And Environmental Requirements

It's based on performance, capacities, measures and processes. the operational and environment requirements refers all that things.

2.10.1 Expected Physical Requirements

There are no expected physical requirements to the system

2.10.2 Interfacing Requirements

Not applicable for this system. Cause there are no expected physical requirements in our system

2.10.3 Release Requirement

Farming solution is web based application. an internet connection and a web browser are requirement to the system.

2.11 Legal Requirements

The term and condition for privacy and policy of any company are primarily mentioned in legal requirement. Our system have heavy security system so that no third party software can not connect to the system

2.11.1 Compliance Requirements

No compliance requirements are existing in our system

2.11.2 Standard Requirements

There are no standard requirements for our system

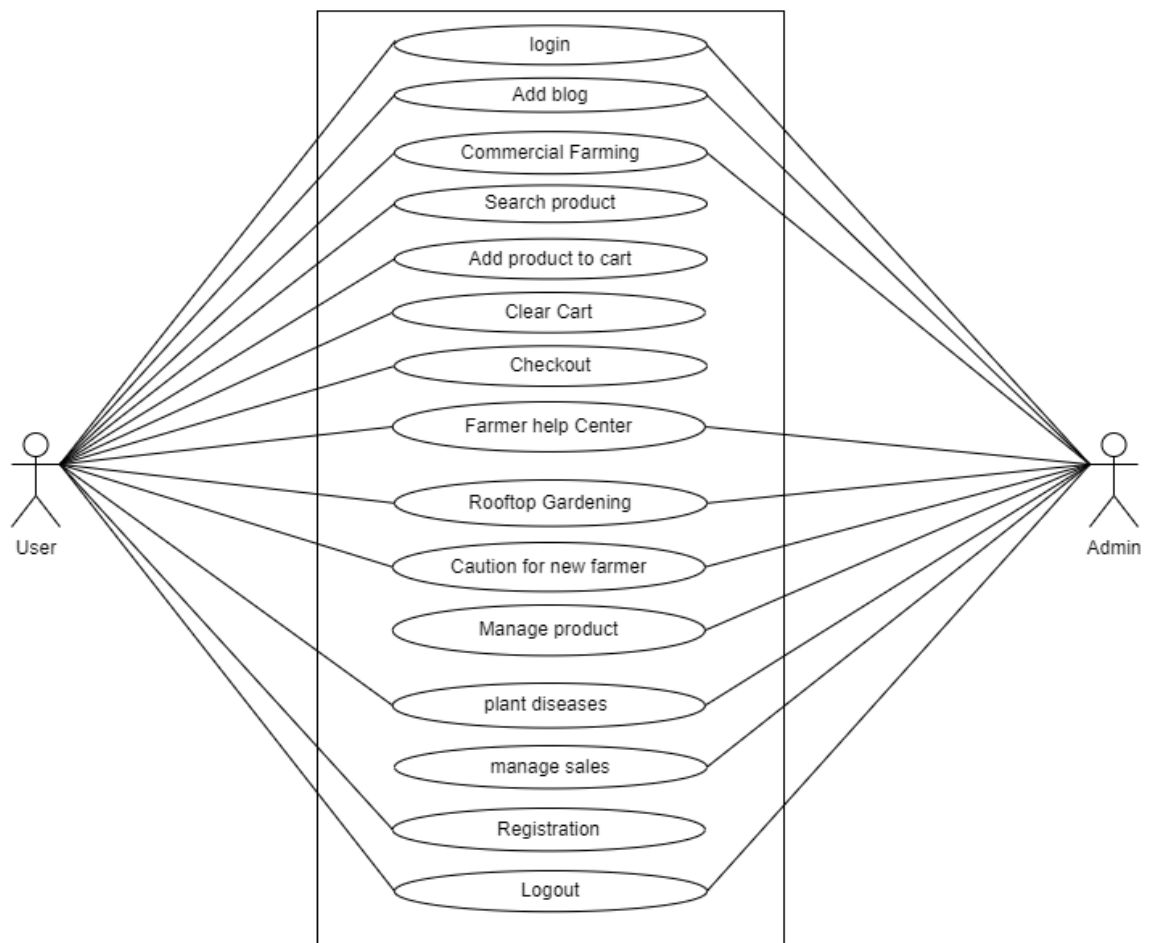
Chapter 3

Use Case For The Proposed System

3.1 Use Case Diagram

The task has to done by the user and the admin are clearly indicated in the use case diagram. In our system there are two players. Each performer has a distinct role to play.

3.1.1 Use Case Diagram



3.2 Use Case Description

3.2.1 Registration/Sign up

Case	User registration
Description	This is the mandatory part of this system.to access full website the user must done registration in this system. Without it to do a successful order the user must have to registered firstly. The user information is so important
Actor	User
Precondition	User go to the browser and search our website
Post condition	User can have login to the website
Main course	1.first user must have internet connection. And search our farming system website 2. Then user click to the registration button, and registered with valid name, email and password
Alternative course	1.If the requirement data don't match, or don't fulfill properly user will go to registration page with error message

3.2.2 Login

Case	Login
Description	To complete the order the user must be login to the system.by given proper email and password . this is mandatory for getting quality service from the system.
Actor	Admin,user
Precondition	User must have account in this system
Post condition	User can have access to the system
Main course	1.first user must have done registration 2.then user click on the login button and login to the system with the proper information. 3.after successfully login user have seen the dashboard

Alternative course	2.At step 2 if the required information do not match then the user will get back the login page with error message
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3.2.3 Add Blog

Case	Add blog
Description	This is the blogging .the admin have to collect correct information about farming and blog to the website. The user can view the blog.and also add blog with proper field. The admin also can added blog by using add blog feature.
Actor	User, admin
Precondition	User must be login and are in dashboard
Post condition	User can read/write blog from the website
Main course	1.user must be login to the system 2.user have to click blog option from the dash board. 3.after successfully going to blog page the user can read/write the blog
Alternative course	1.If the user can not click blog correctly ,will be unable to read blog.

3.2.4 Search Product

Case	Search product
Description	Search product is a mandatory function to the system. People can find their necessary product with the help of search product.so it is so important for the system
Actor	User
Precondition	User need to click search option
Post condition	User can able to search and find product
Main course	1.User have to click search option from the dashboard

	2.User have to search product with the proper name/keywords 3.after successfully search the product are find out easily
Alternative course	1.user are unable to find the search result. And shown a message nothing is found.

3.2.5 Add Product To Cart

case	Add product to cart
Description	Add product to the cart is a step of ordering product. After choosing the required product the user have to adding product to the cart to order.it is a mandatory part to order .so this use case is so import
Actor	user
Precondition	User must login in the system
Post condition	User can able to add product in the cart
Main course	1.User have to login in the system 2.click add product in the cart 3.after clicking add product in the cart the product are added in the cart successfully.
Alternative course	1.if the user don't login to the system are unable to add cart ,so login is necessary.

3.2.6 Commercial Farming

Case	Commercial farming
Description	User select commercial farming to gain full knowledge about commercial farming. The plants which give the best result in every time, that information is given in commercial farming. There has three section that we focus on this feature.as like fruits farming, vegetables farming, flower farming.
Actor	User,admin
Precondition	Admin/user must be login to the system
Post condition	The admin can update details, and user can view commercial farming
Main course	1.admin must be log in the system

	2.click on commercial farming. Add details about commercial farming. Choose update . 3.admin added commercial farming. 4.The user can view commercial farming with details.
Alternative case	1.failed to add commercial farming

3.2.7 Checkout

Case	Checkout
Description	To confirm the final order the user have to checkout so that the product got ordered.it is the final step to order the product successfully
Actor	User
Precondition	User have to updated cart with valid shipping information
Post condition	User can order successfully
Main course	1.User must have to login in the system 2.User have to updated cart item with shipping details. 3.Click agree with term and condition 4. Confirm checkout successfully
Alternative course	If any problems are occurring during the order cant done and reply with incomplete order.

3.2.8 Add Product

Case	Add product
Description	Adding new product like plants, seeds and equipment to the website is mandatory thing.
Actor	Admin
Precondition	Admin must have to login in the system
Post condition	Admin are able to add product

Main course	1.admin have to login in the system 2.Add product with all valid information 3.click add product button to done the add product process.
Alternative course	1.If the admin/staff don't giving are unable to fill up add product field the product don't add to the system

3.2.9 Rooftop Gardening

Case	Rooftop gardening
Description	Giving full information about rooftop gardening .rooftop gardening plan and also common problem with solution are given.
Actor	Admin
Precondition	Admin must have to login in the system
Post condition	Admin are able to add rooftop gardening
Main course	1.admin have to login in the system 2.Add rooftop gardening plan and caution with all valid information 3.click update to added rooftop gardening details successfully.
Alternative course	1.If the admin don't use proper field to update rooftop gardenig,then he saw an error message.

3.2.10 Plants Diseases With Pesticides

Case	Plant diseases with pesticides
Description	In our country a lot of farmer doing farming without having no knowledge about plant diseases and proper pesticides against them.so they may fall into trouble to make a good result.by this feature all kinds of common diseases and pesticides are given.
Actor	Admin, user
Precondition	Admin must have to login in the system

Post condition	Admin are able to add plants diseases with pesticides
Main course	1.admin have to login in the system 2.Add plant diseases with pesticides with all valid information 3.click update to added plant diseases with pesticides details successfully.
Alternative course	1.If the admin don't use proper field to update plant diseases with pesticides he saw an error message.

3.2.11 Farmer Help Center

Case	Farmer Help Center
Description	Farmer fall many problem in many times. But in our country there are a lot of lacking in data and information.in this feature the user can send their problem to the admin.and the admin have to give the best solution to the user.
Actor	Admin, user
Precondition	Admin/user must have to login in the system
Post condition	User can send their problem by creating ticket and the admin can get it and find the best solution to give.
Main course	1.admin/user have to login in the system 2.user have to go to the farmer help center 3.Click on create a ticket option. 4.fullfill all the field that are given in the ticket option with including their problem. 5.Send ticket when all the field are fill up with the valid information. 6.After finishing all the process the user can send their query successfully.
Alternative course	1.admin have to fulfill all the field properly. Otherwise an error message have to seen.

3.2.12 Clear Cart

Case	Clear Cart
Description	After product added in the cart the user sometimes need to change quantity and sometimes they may have change their mind. They need to dismiss the cart.by using clear cart the user can clear cart .
Actor	User
Precondition	User must add product to the cart
Post condition	User can clear their cart.
Main course	1.User have to add product to the cart 2.then user can increase or decrease product amount. 3.They can clear the cart by decreasing the product quantity as 0. 4.They also can clear the cart directly 5.Cart dismiss successfully
Alternative course	1.failed to dismiss the cart as clear cart.

3.2.13 Logout From The System

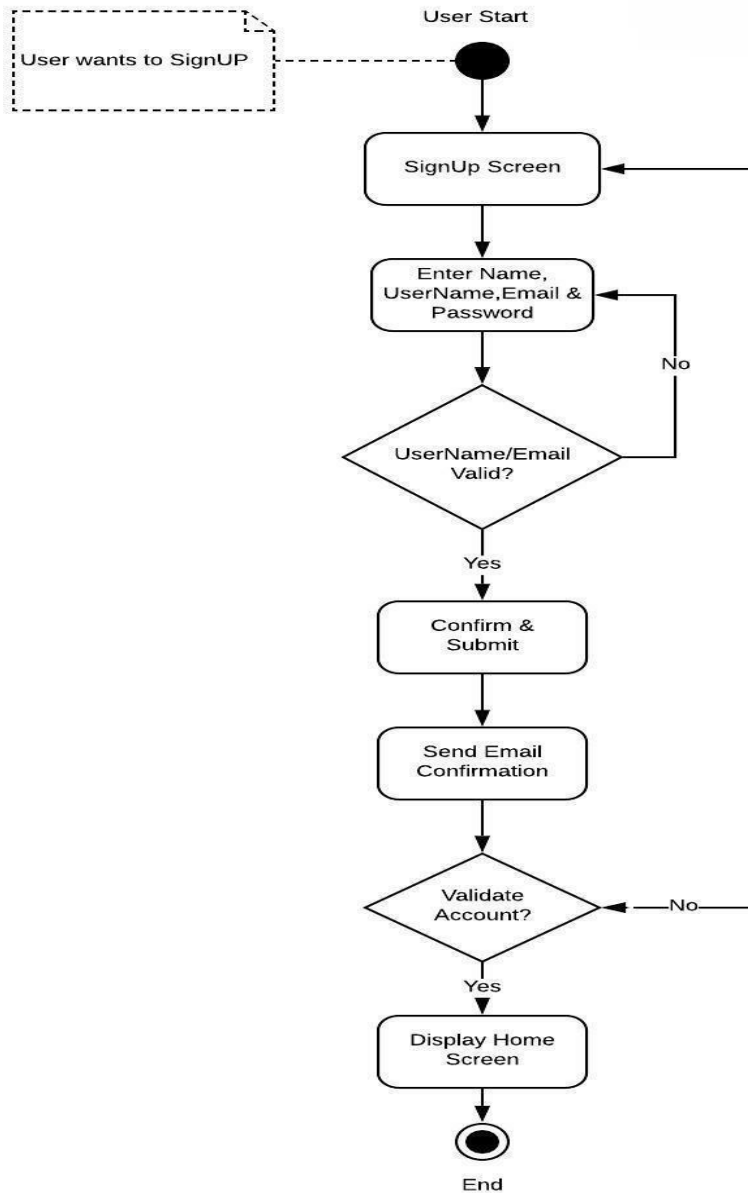
Case	Logout from the system
Description	Many times, the user need to logout from the system. Also have to logout to open a new account.so logout is important.
Actor	Admin, user
Precondition	Admin/user must have to login in the system
Post condition	Admin/user can logout from the system
Main course	1.admin have to login in the system 2.click logout for logout from the system 3.click confirm to logout 4.logout successfully

Alternative course	1.failed to logout
--------------------	--------------------

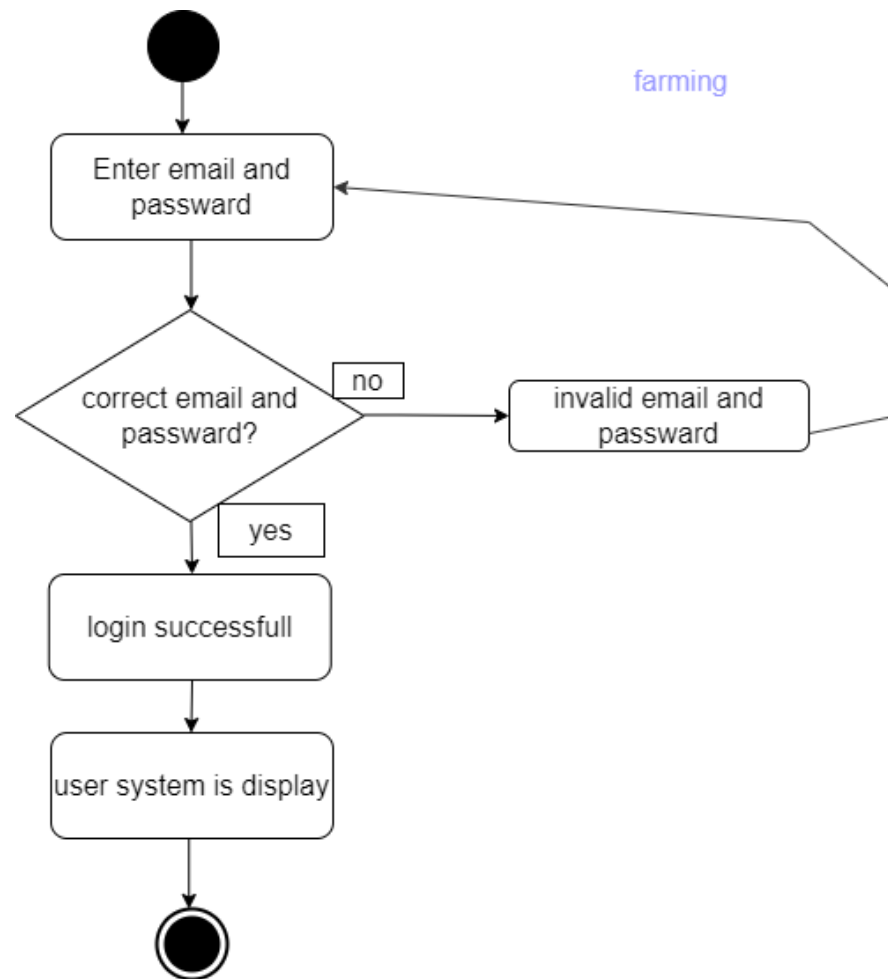
3.3 Activity Diagram

Following my use case I have been prepared my activity diagram that are attaching bellow .

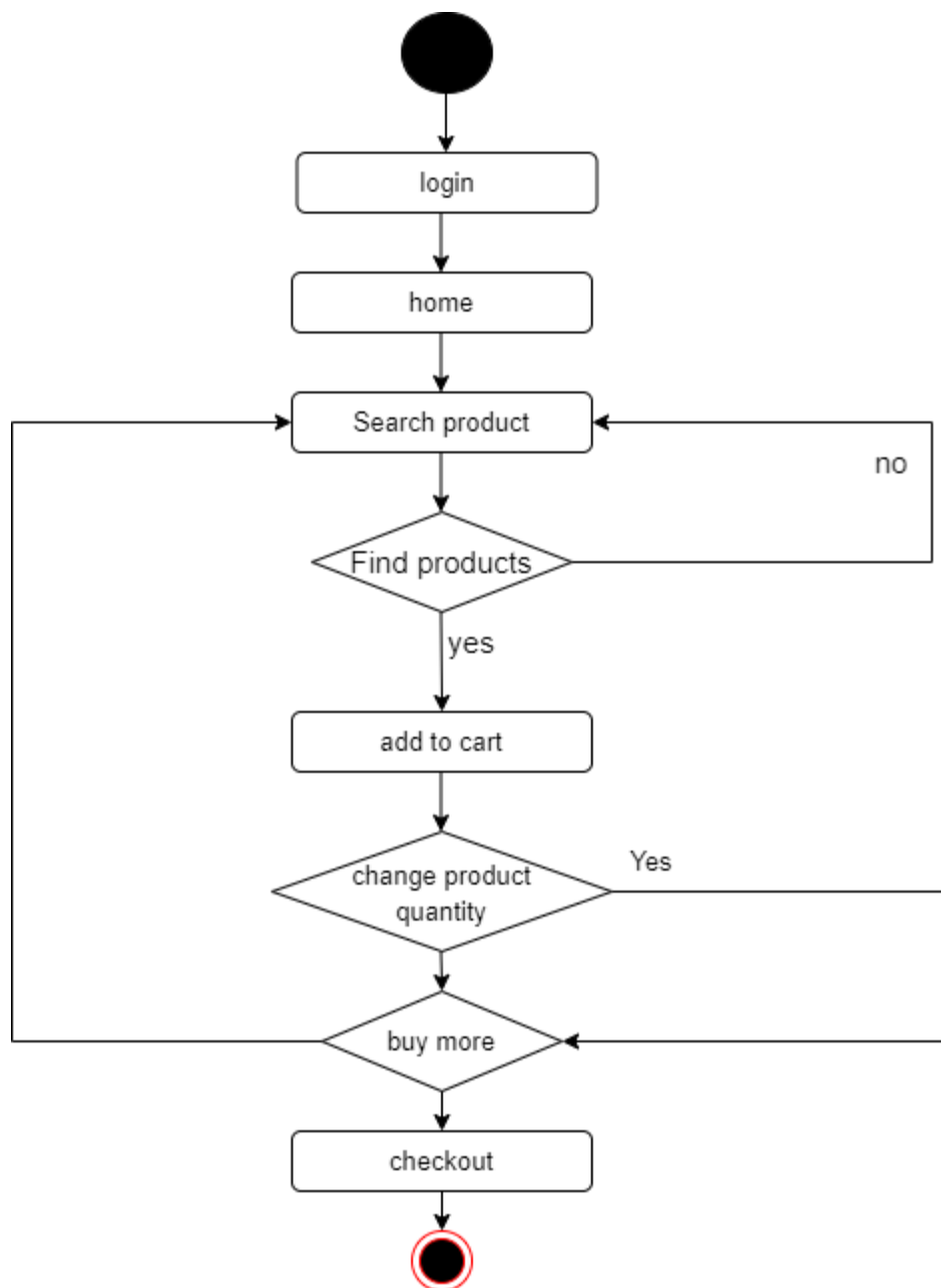
3.3.1 Registration/Sign Up Activity Diagram



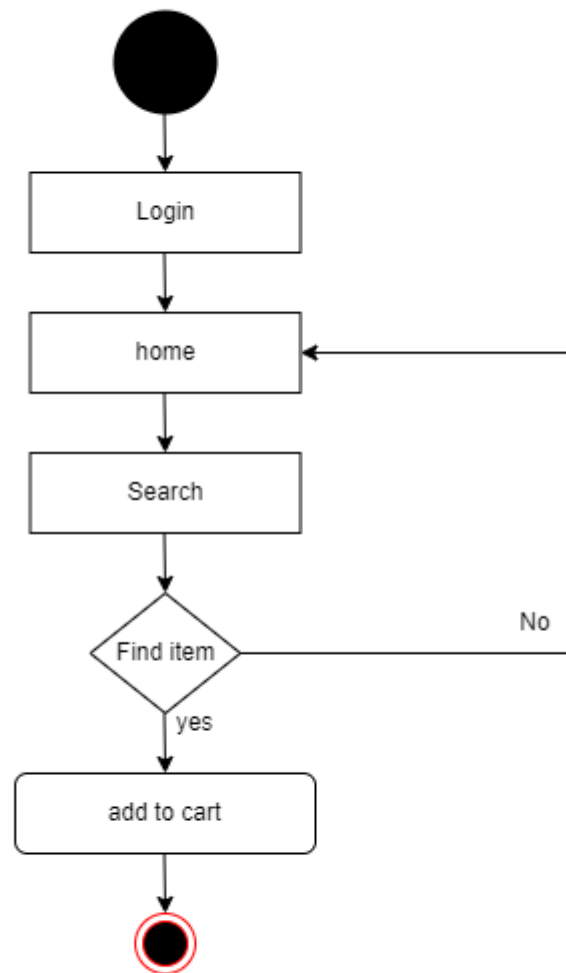
3.3.2 Login Activity Diagram



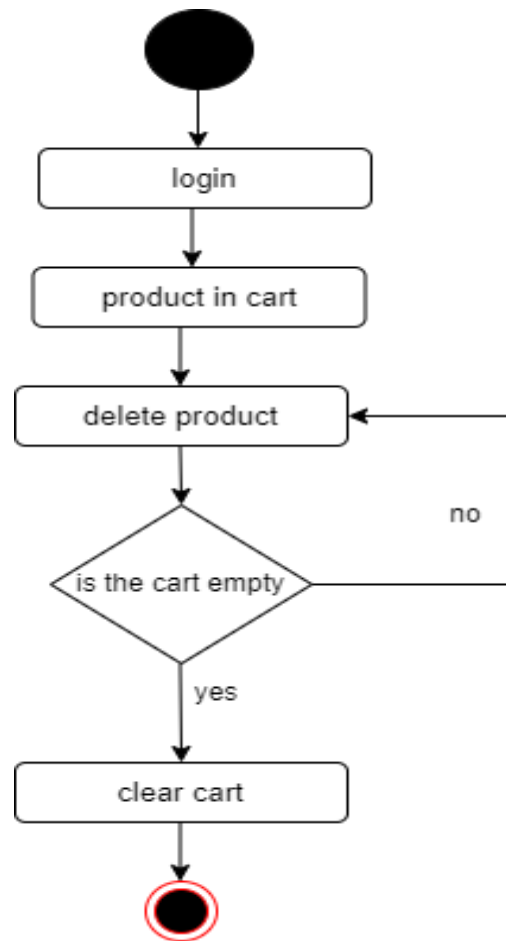
3.3.3 Search Product Activity Diagram



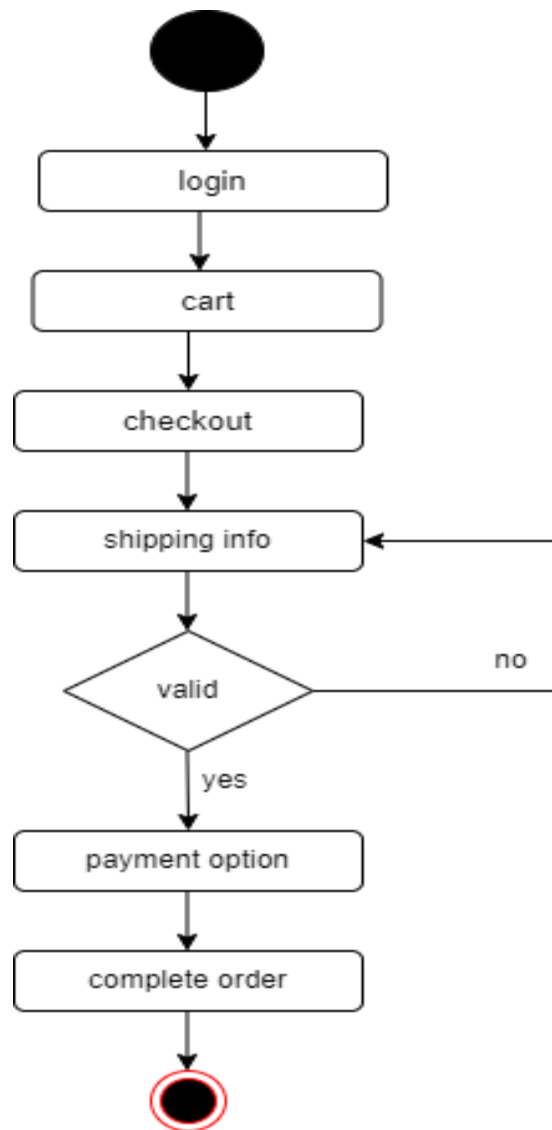
3.3.4 Activity Diagram For Add To Cart



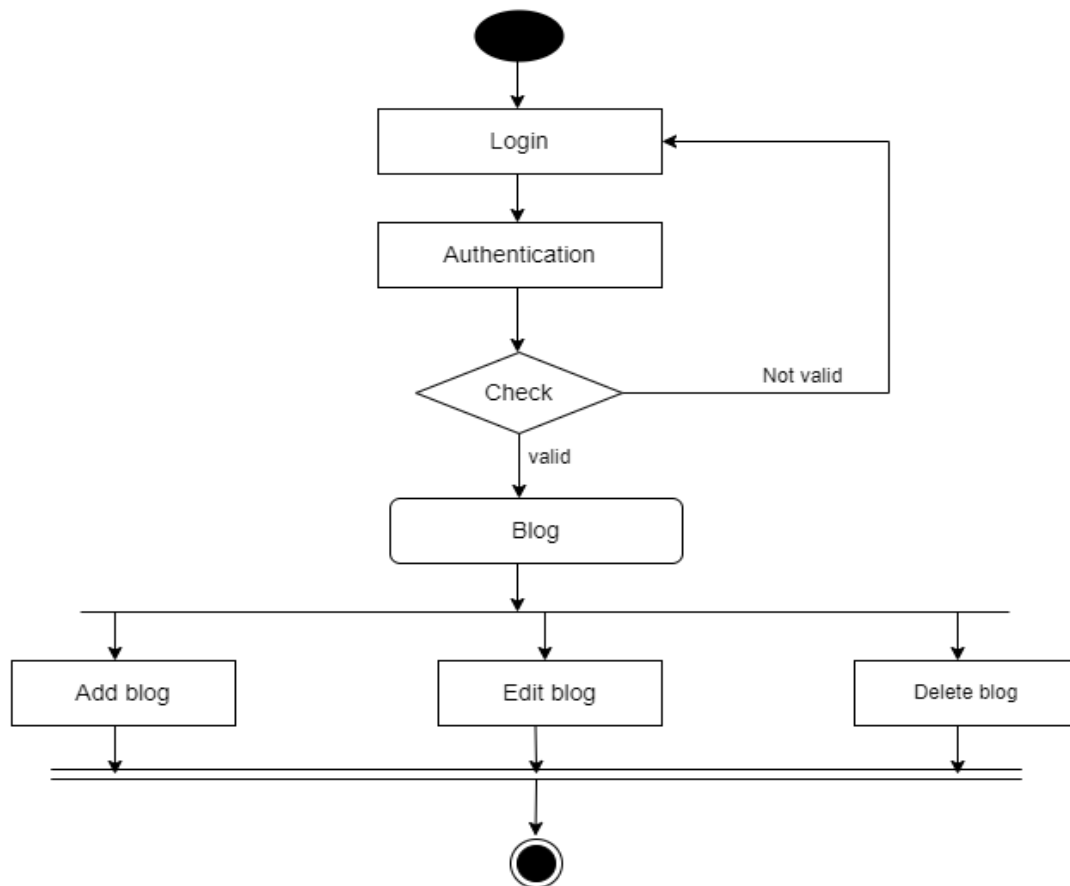
3.3.5 Activity Diagram For Clear Cart



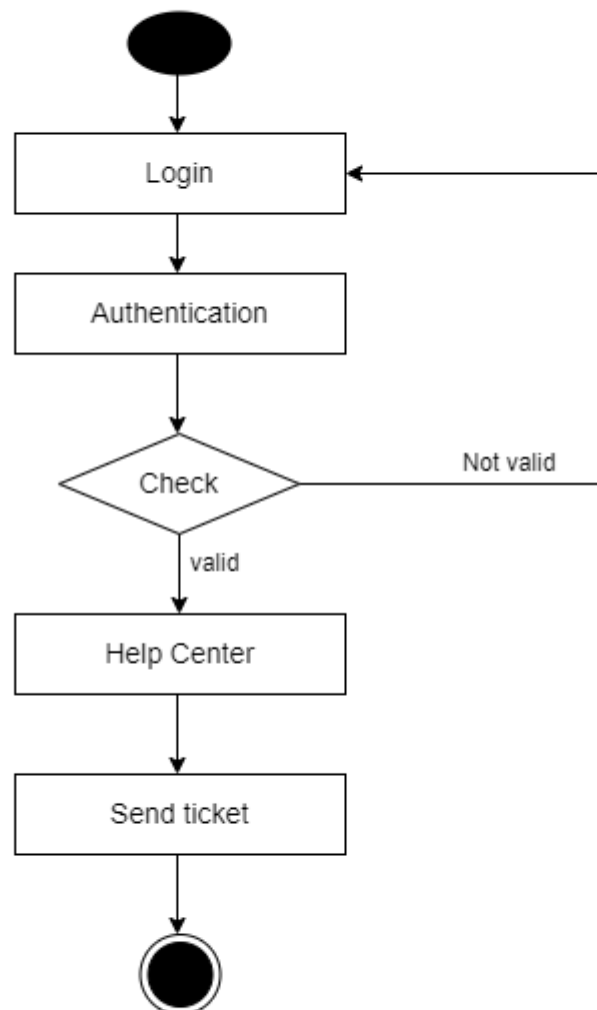
3.3.6 Activity Diagram Checkout



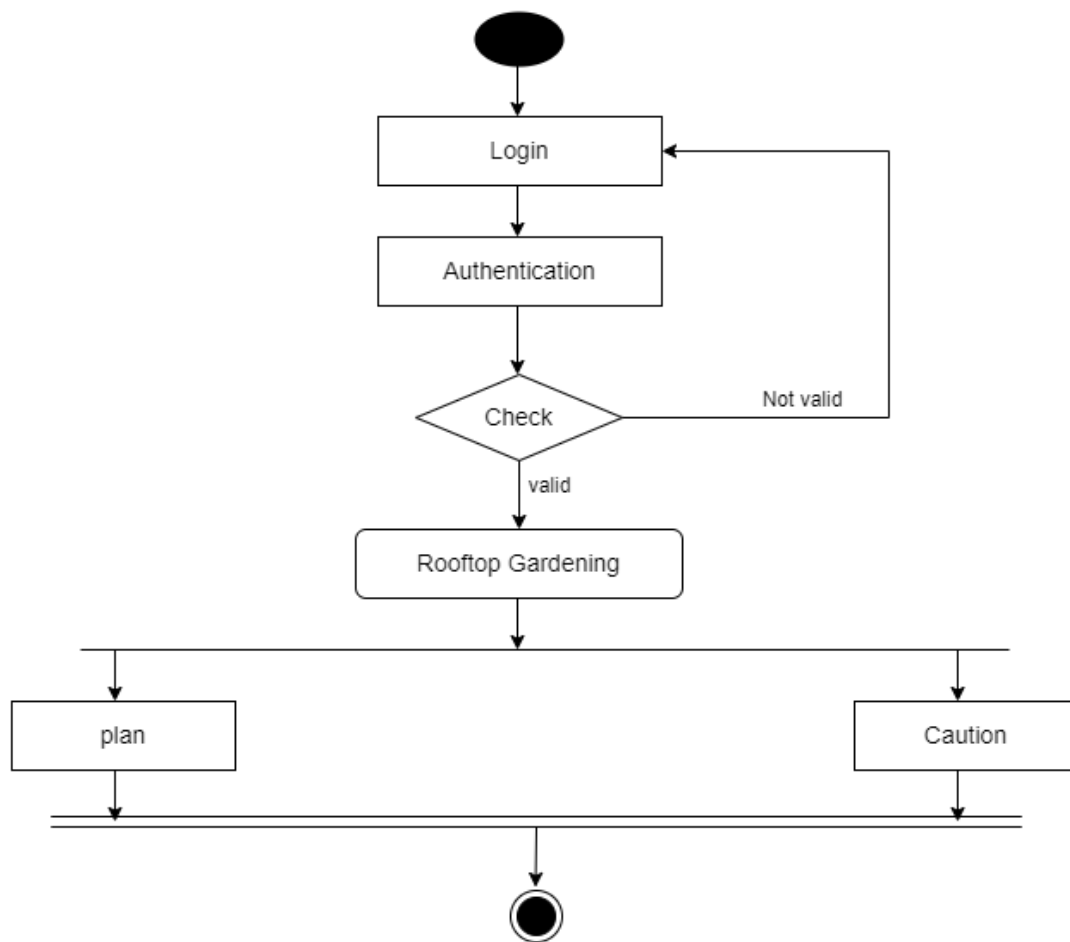
3.3.7 Activity Diagram For Add blog



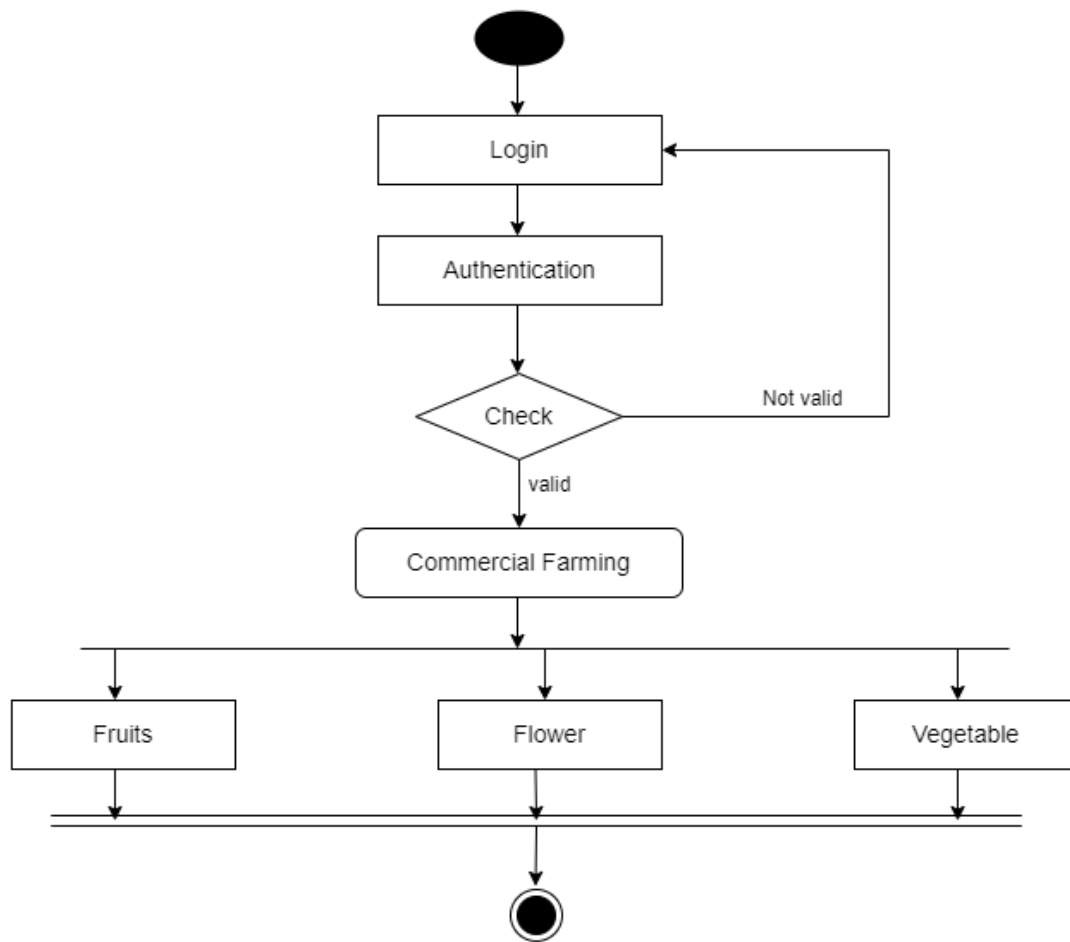
3.3.8 Activity Diagram For Farmer Help Center



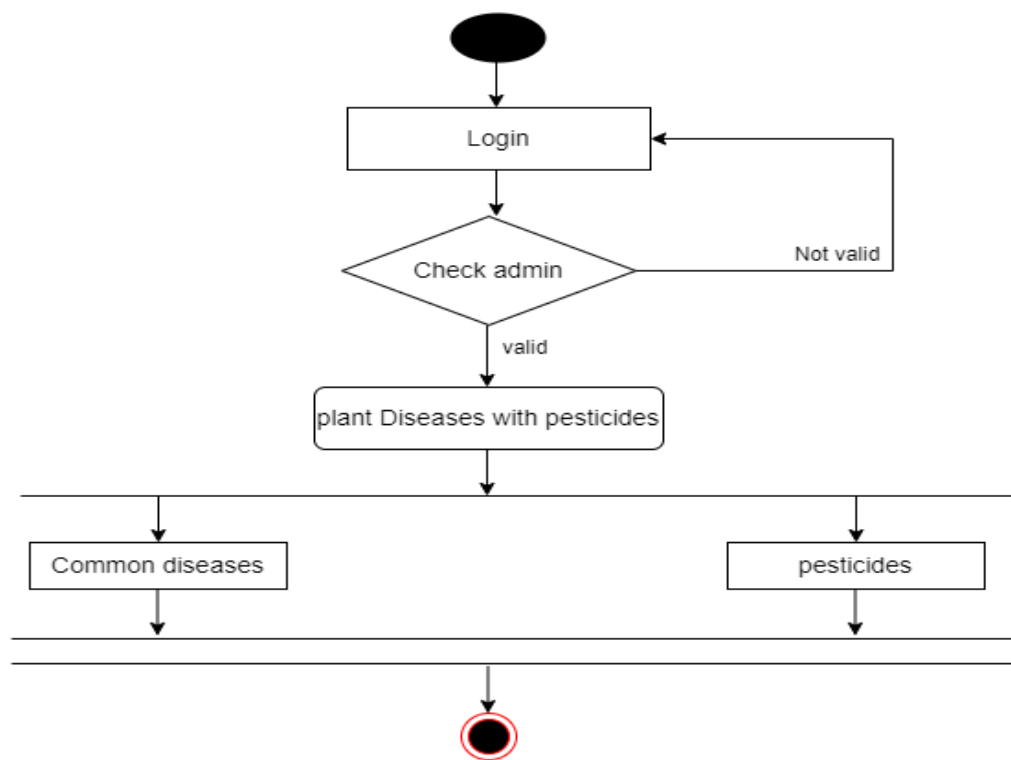
3.3.9 Activity Diagram For Rooftop Gardening



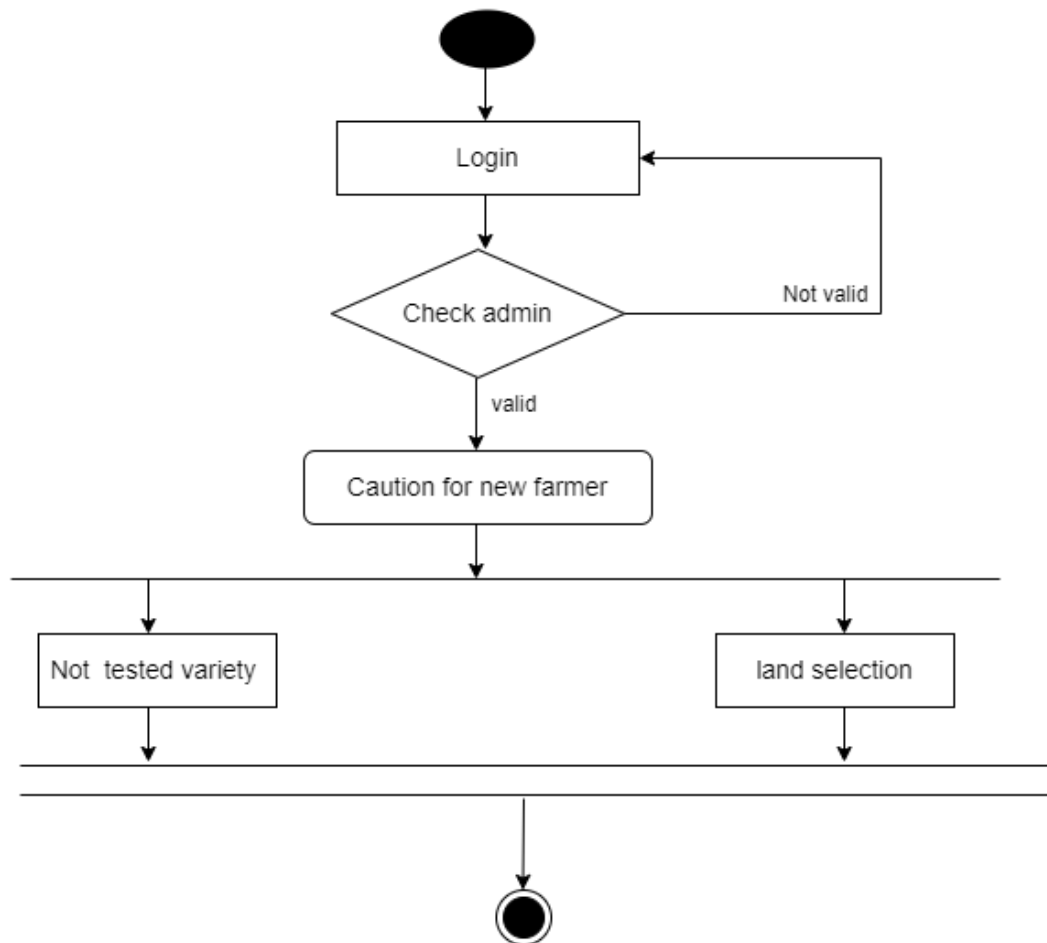
3.3.10 Activity Diagram For Commercial Farming



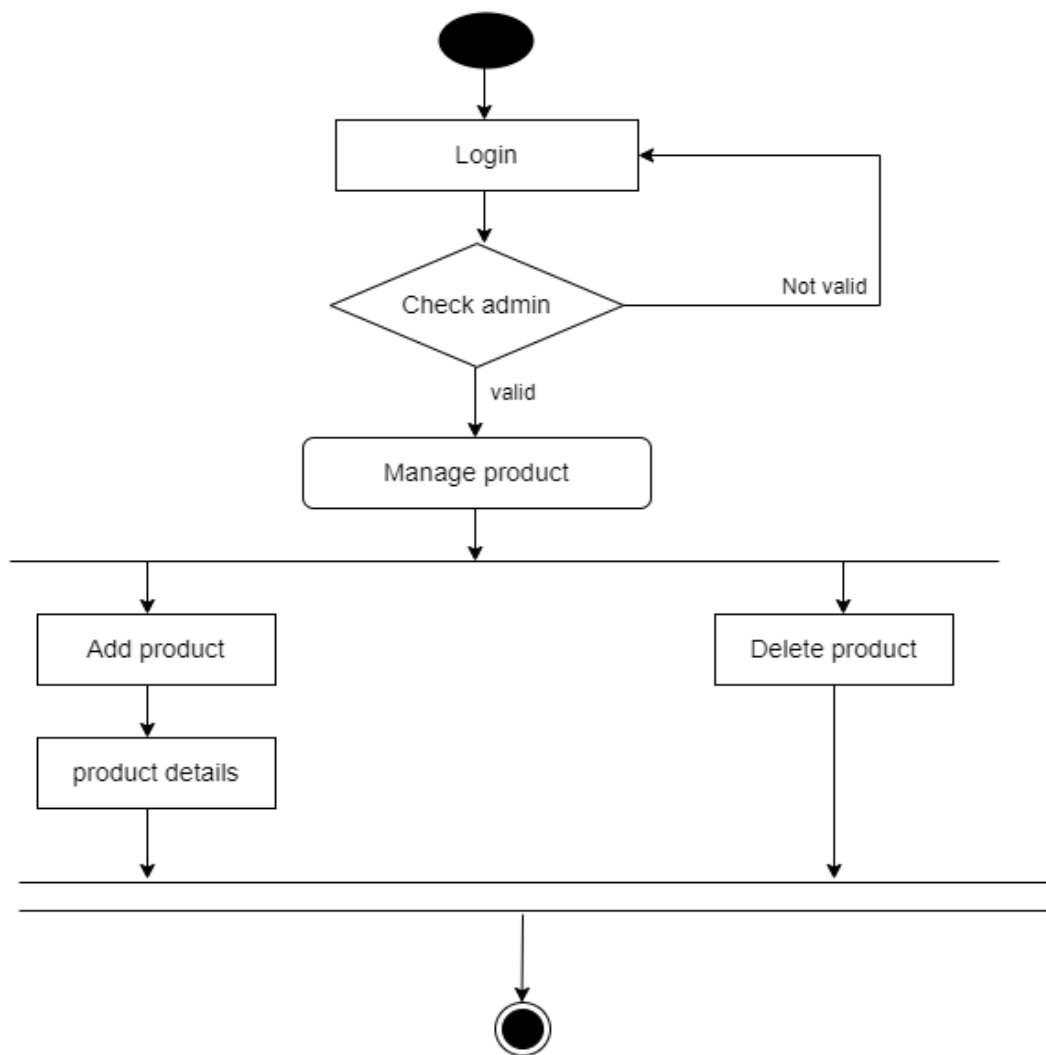
3.3.11 Activity Diagram For Plant Disease With Pesticides



3.3.12 Caution For New Farmer



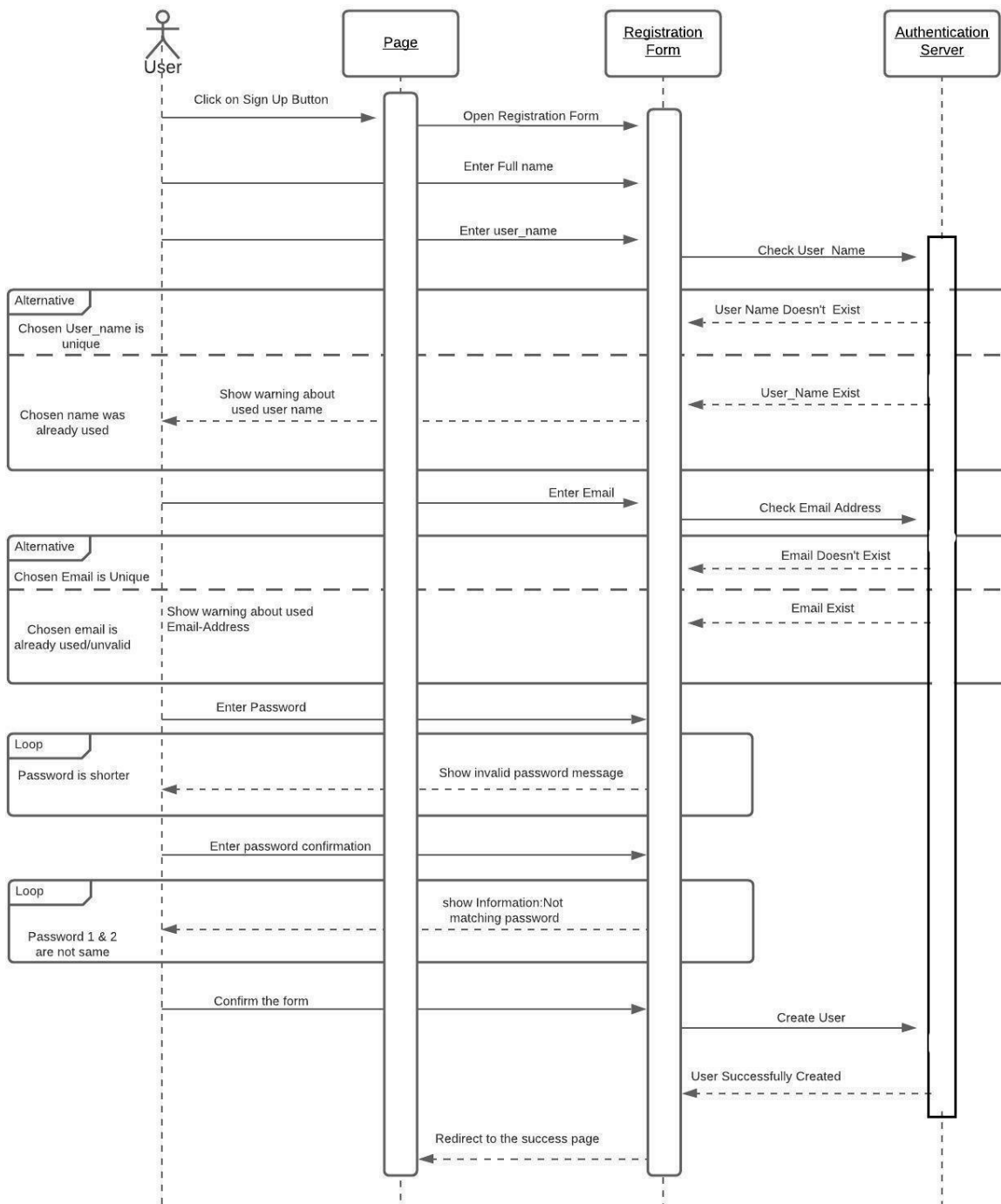
3.3.13 Manage product(Add/delete)



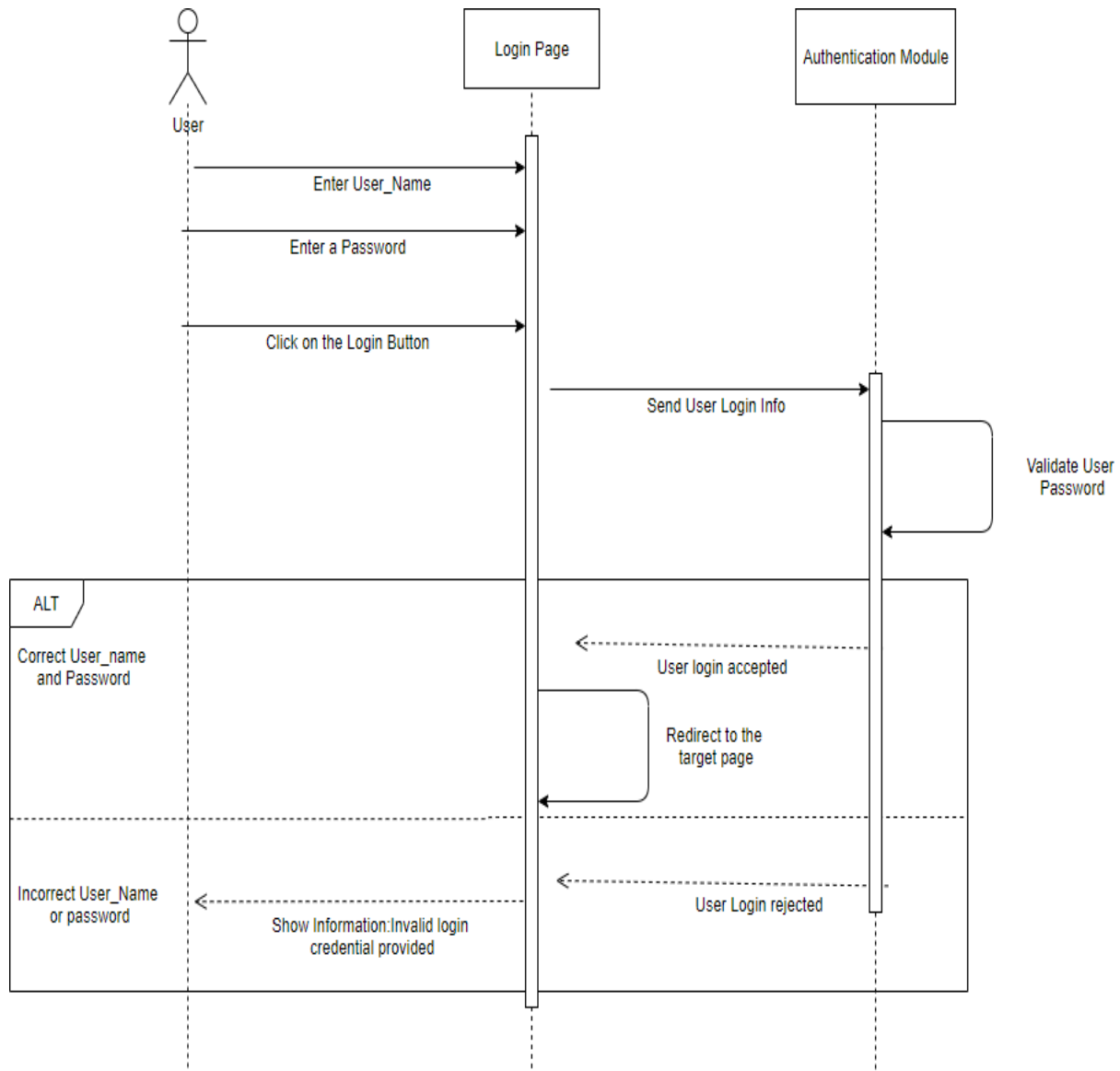
3.4 Sequence Diagram

Sequence diagram shows about the data follows in the system. Our systems sequence diagram are given below .

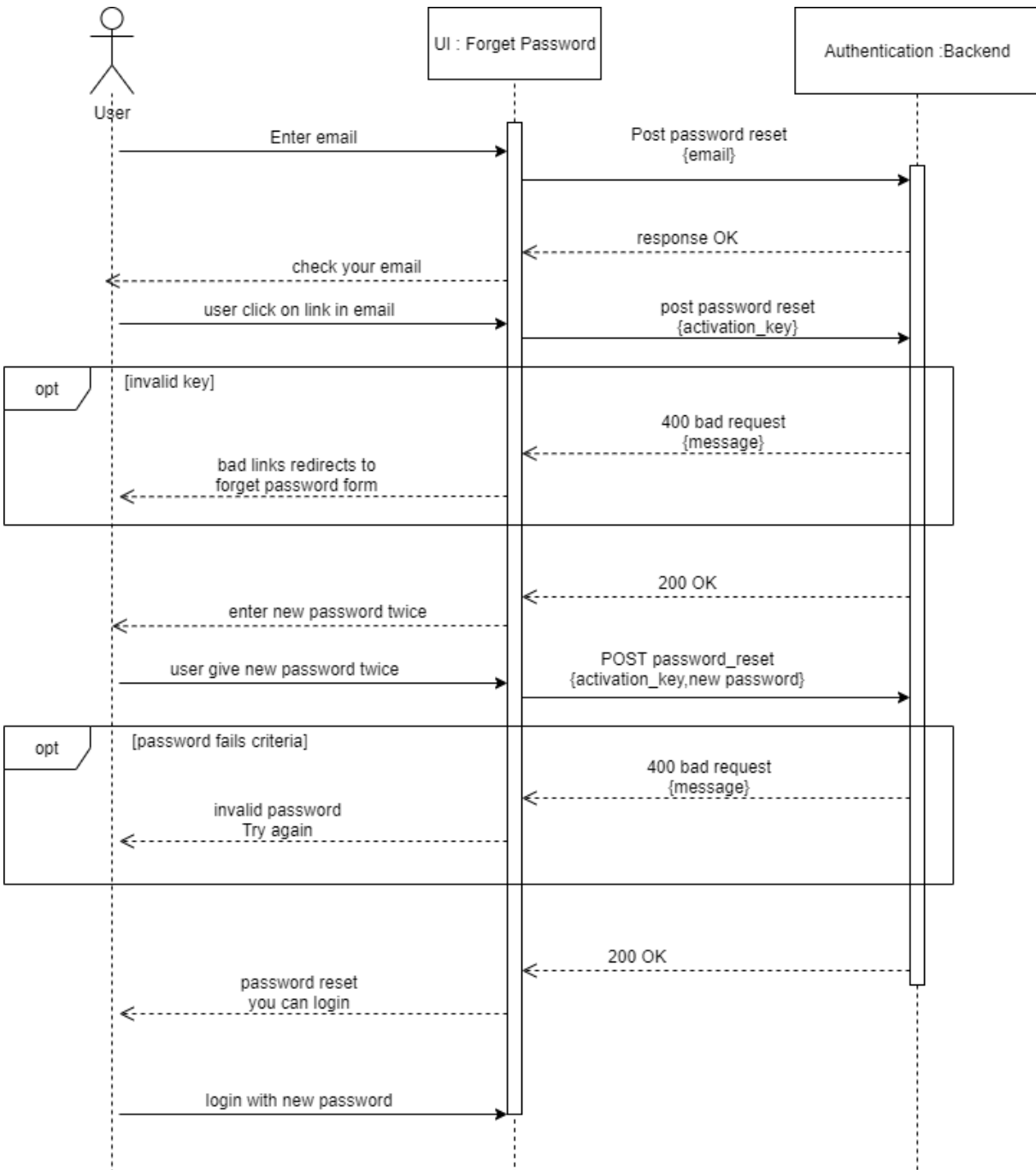
3.4.1 Registration Sequence Diagram



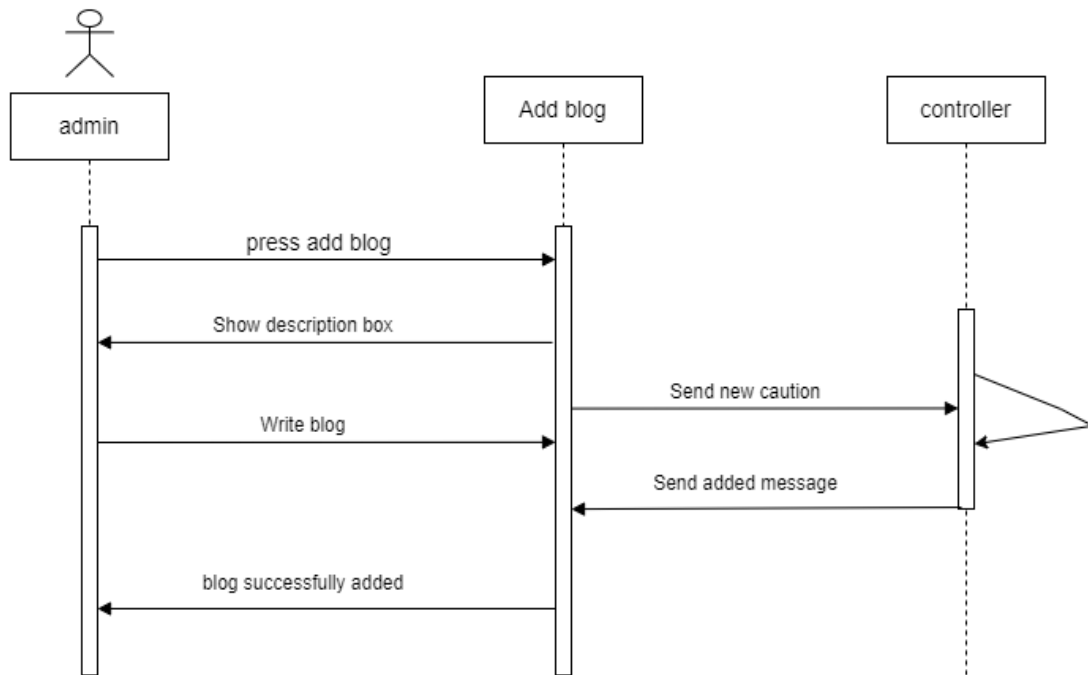
3.4.2 Sequence Diagram For Login



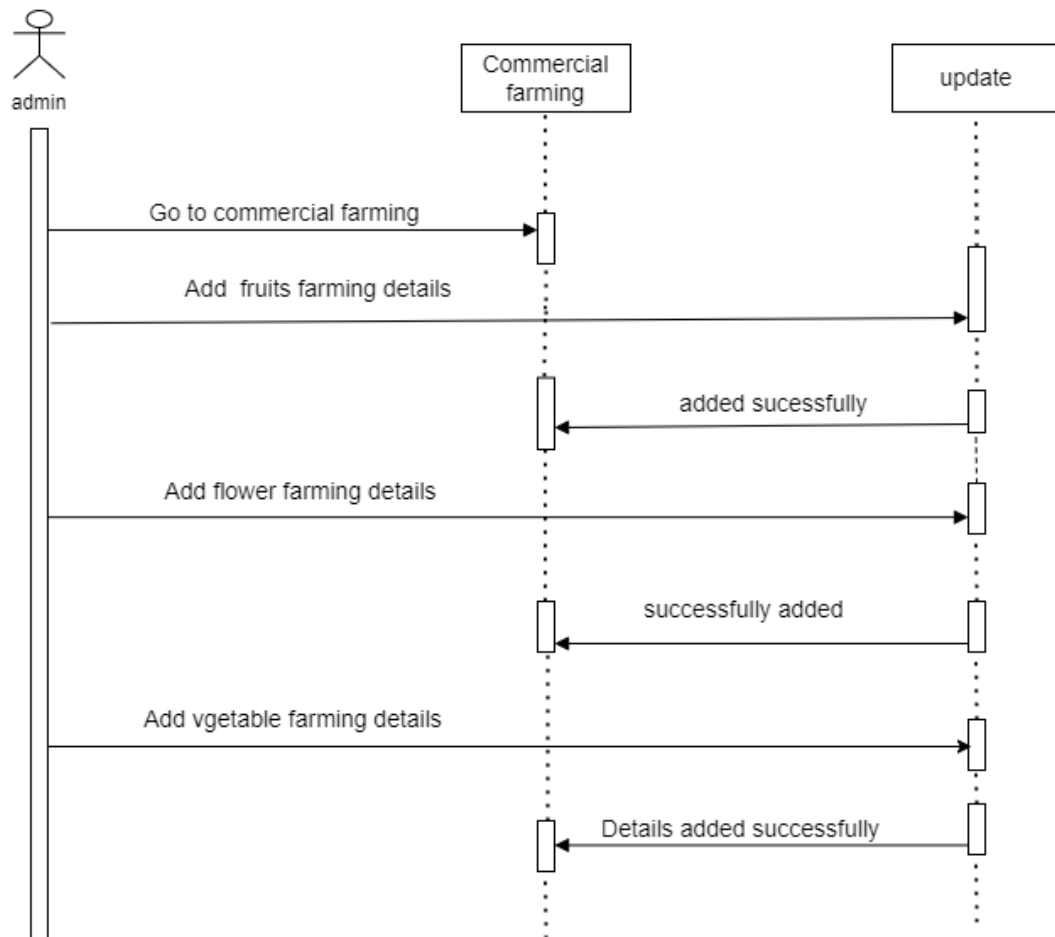
3.4.3 Sequence Diagram For Forget Password



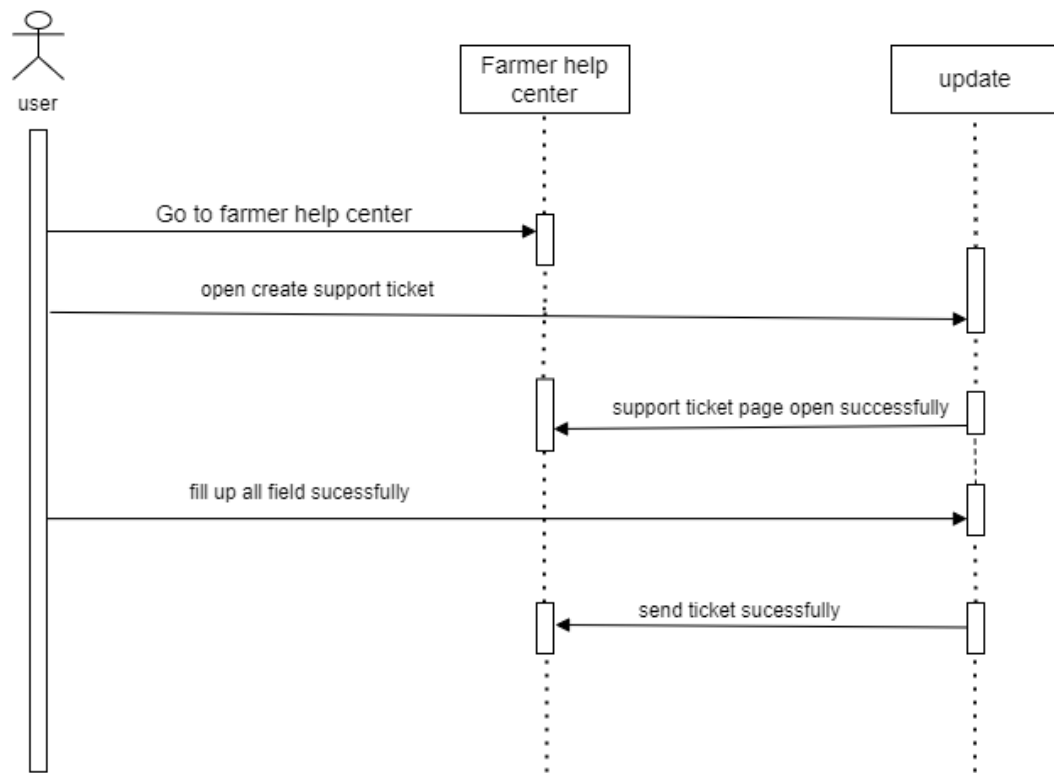
3.3.4 Sequence Diagram For Add Blog



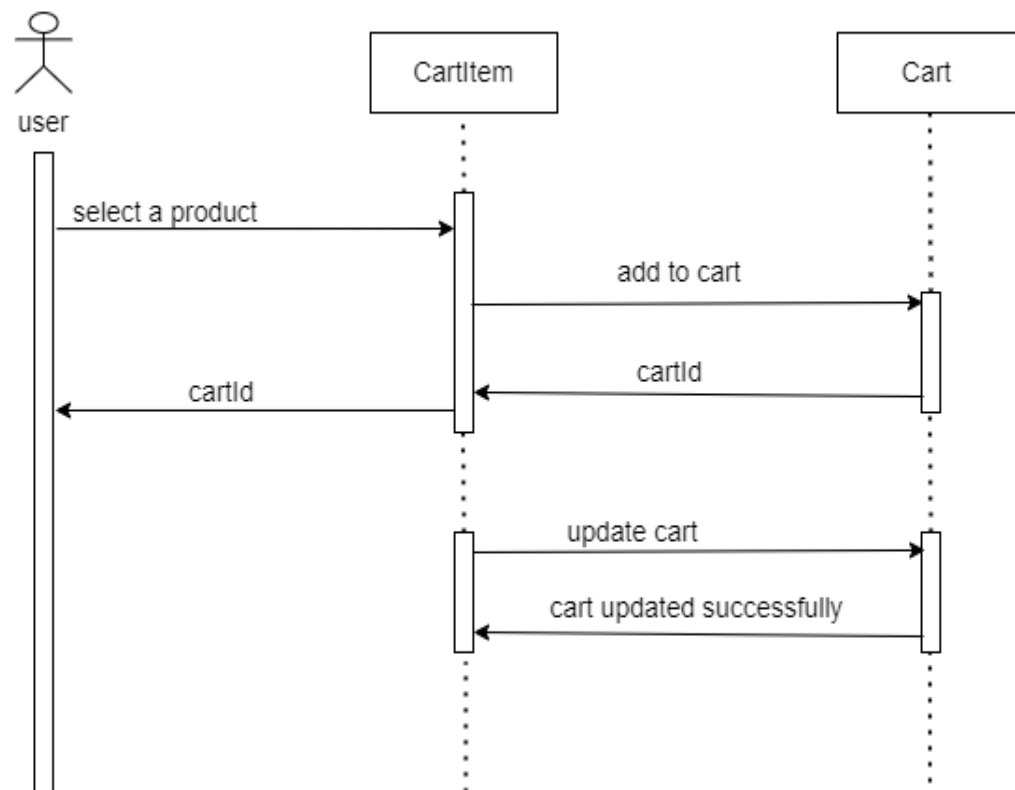
3.4.5 Commercial Farming Sequence Diagram



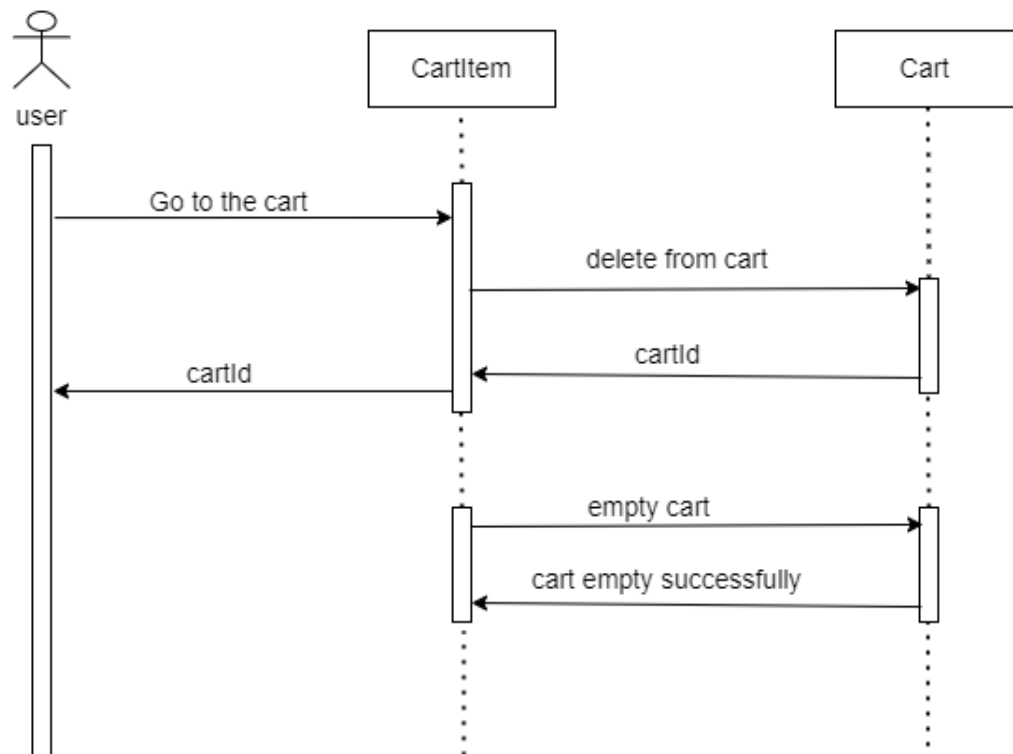
3.4.6 Farmer help Center Sequence Diagram



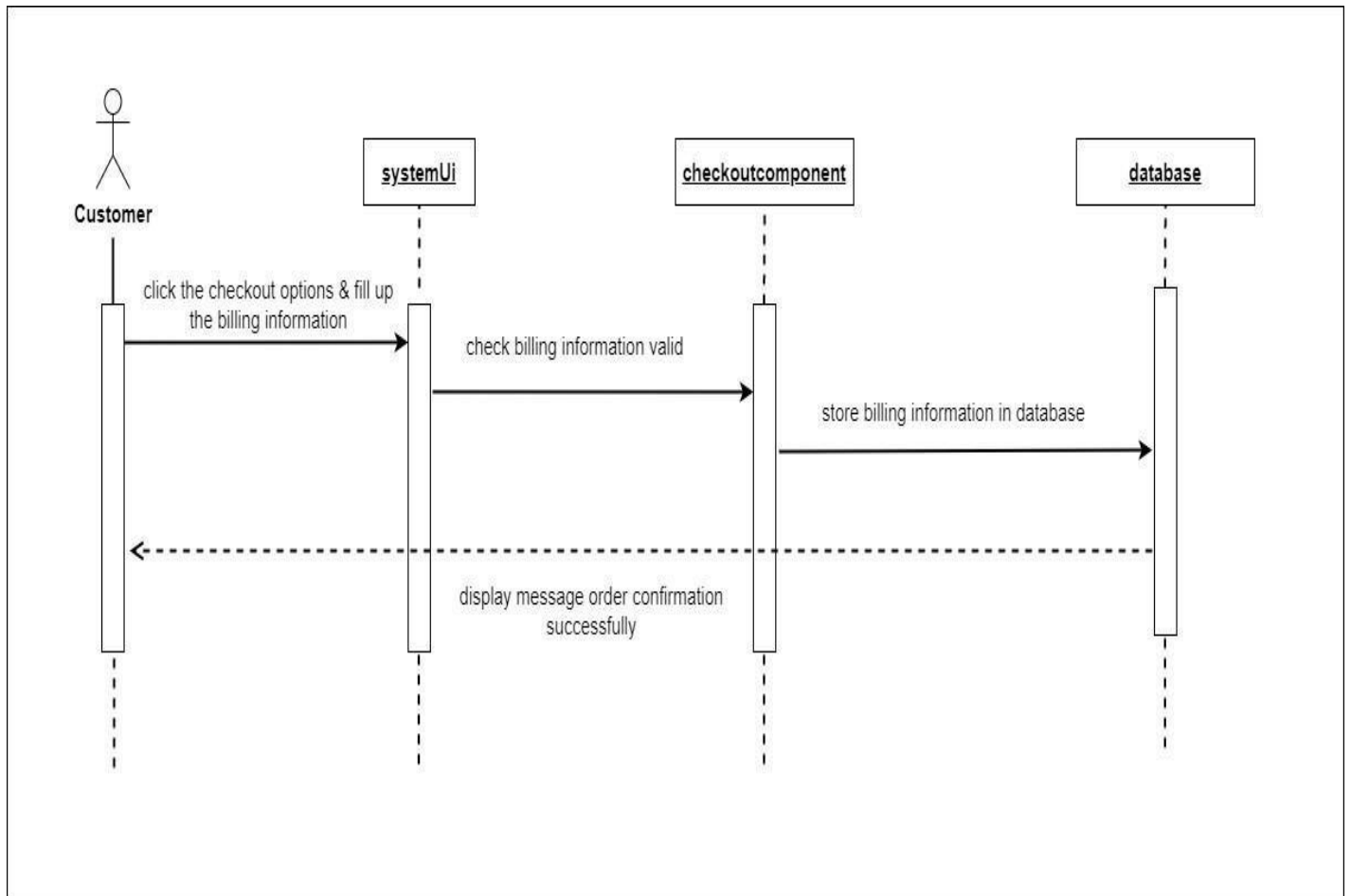
3.4.7 Add To Cart Sequence Diagram



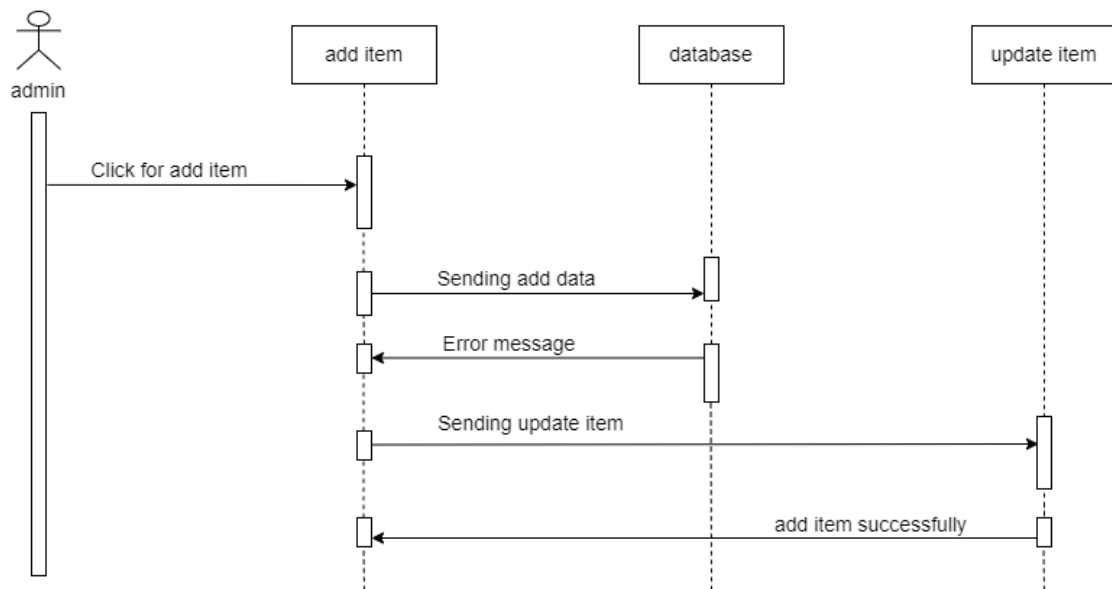
3.4.8 Sequence Diagram For Clear Cart



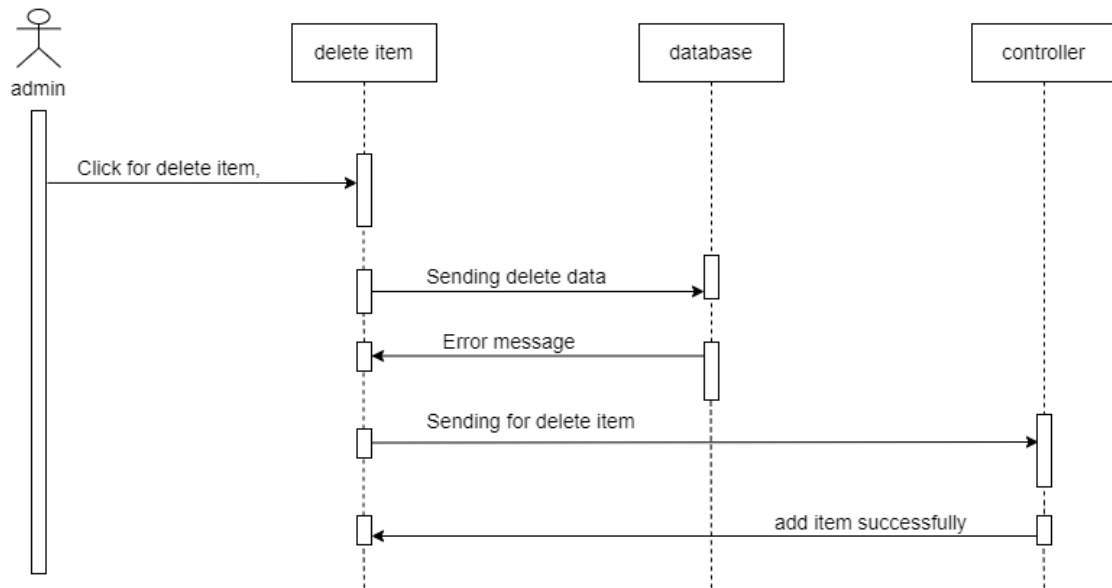
3.4.9 Sequence Diagram For Checkout



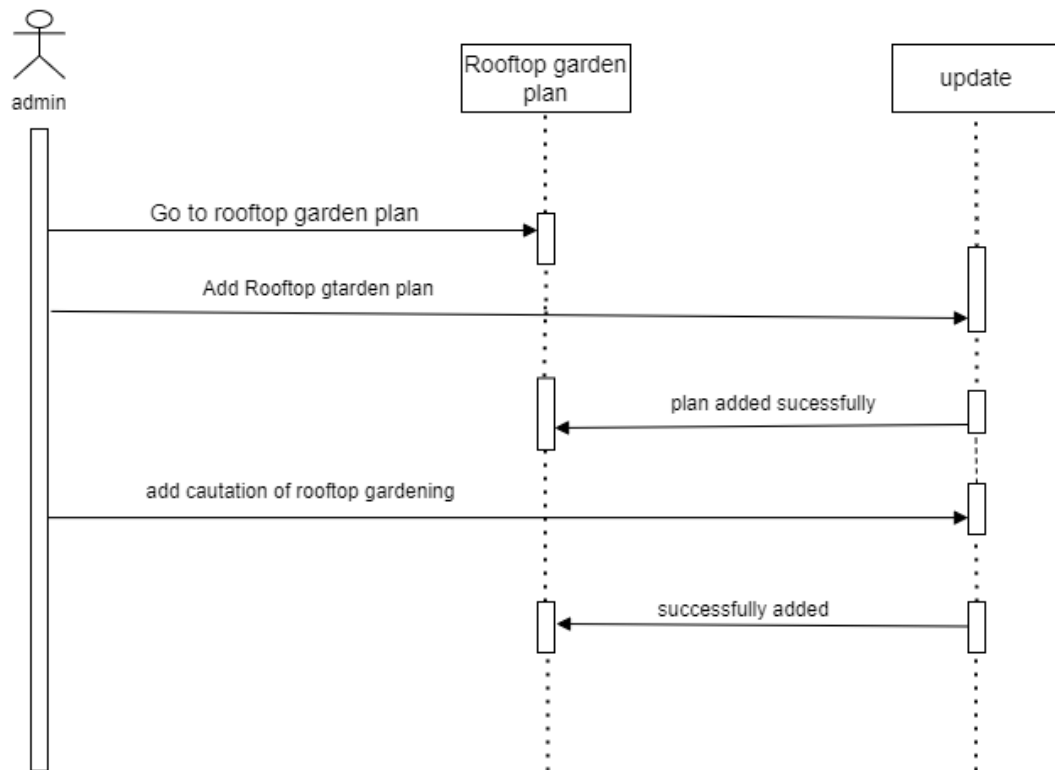
3.4.10 Add Product Sequence Diagram



3.4.11 Delete Product Sequence Diagram



3.4.12 Rooftop gardening Sequence Diagram



Chapter 4

System Design Specification

4.1 Development Tools And Technology

Developing tool are the first needed things to build a successful websites.in this system “Farming solution” I use Laravel and for editing purpose I use visual studio code.

4.1.1 User Interface Technology

Html, CSS, Bootstrap are uses for developing fronted sites

4.1.2 Programming Language

To develop a software ,the major thing is programming language. All the major things which are implement in the websites are related to the programming language.it this system I used html,css, bootstrap, PHP(the server sites programming language. I also use Laravel as a framework. All are open sourced.

4.1.3 Database Server

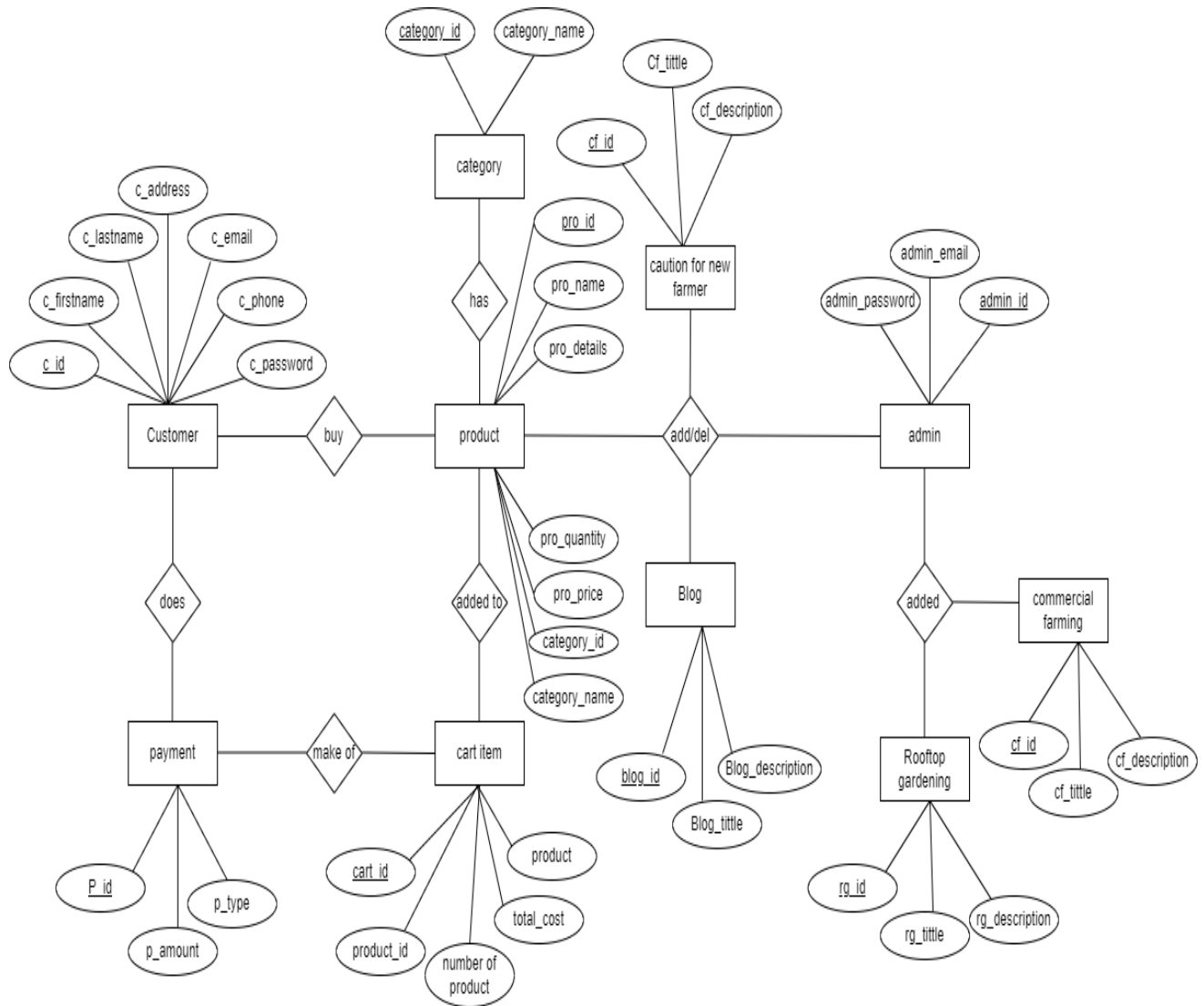
We use XAMPP. XAMPP has the ability for serve any web pages on www.it also secured and easy to use. PHP my admin makes our task easy. my admin is a PHP based tool which can handle MySQL database server.

4.1.4 Integrated Development Environment

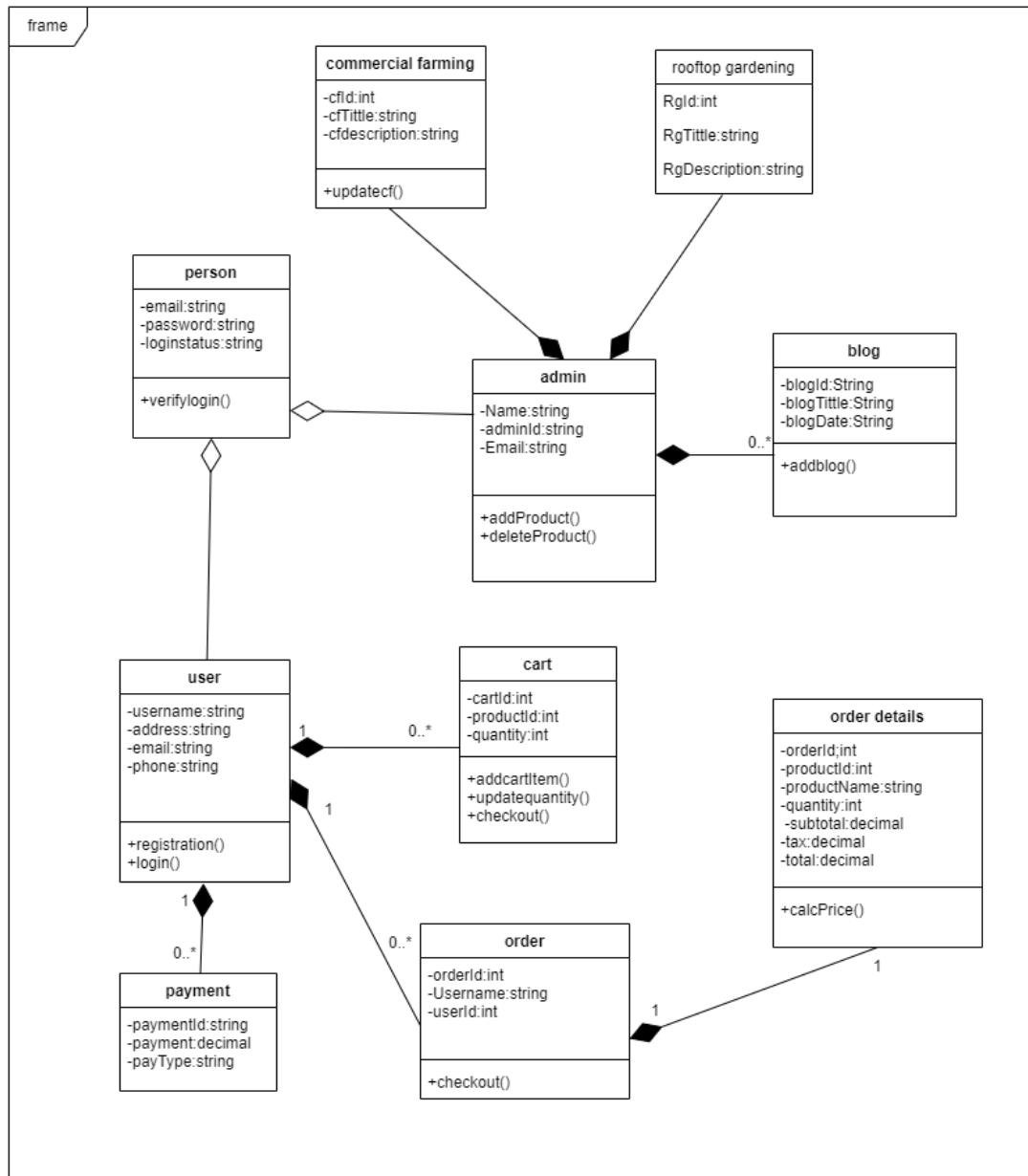
The full form of ide is integrated development environment..i use visual studio code as a ide.

The visual studio is one of the popular ide over the worldwide .

4.2 Entity Relation Database Diagram



4.3 UML CLASS DIAGRAM FOR FARMING SOLUTION



Chapter 5

System Testing

5.1 Testing Features

To run a system properly feature testing is so important. Over one testing we can measure our system how much correct and proper to run. Virtually every feature and utility have utterly different crisis.

5.1.2 Feature To Be Tested

Feature	Priority	Description
Registration	1	By giving real and valid information the registration should be done by the user
Login	1	User needs to login by using valid email and strong password
Add blog	2	The admin have to add blog. That have to be valid keywords.
Search product	2	Search product by valid keywords
checkout	1	For checkout the user must be done the full process correctly. otherwise, he have to fail to checkout.
Manage product	1	The admin have to add or remove product. This function have to work proper

Here.

3=Low priority

2=Medium priority

1=High priority

5.2 Testing Strategy

To check any finding solution a method of testing must be need. Some features are really sensitive and have a chance to hacked. The take a look at team leads to research in it.

5.2.1 Black Box Testing

Without seeing code the testing can execute is known as black box testing it tests the applying system explanation valid and invalid option. For implementation we use similar category partition and boundary value analysis.

5.2.2 Boundary Value Analysis

Boundary value analysis is so much important is any system. In our system we have to do so much operation which are involved with different number and calculation.to do it properly the boundary value analysis is mandatory to use.

5.2.3 White Box Testing

It's a clear box testing.in this testing the tester are known the internal resource or architecture.

In white box testing the tester can predict the out come of each case like unit testing, integration testing and system testing.

5.2.4 Pass Fail Criteria

The tester will establish pass/fail criteria. They will build it by the action of which input data is working and which isn't work. The data without have any problem are demand as pass criteria otherwise a failure criterion.

5.3 Testing Environment

- Test data
- Database servers
- Clients operating system
- Front end running environment
- System and application
- Network
- Hardware with server operating system

5.4 Test Cases

The set of rules and condition are known as a test case. If a system is capable of meeting the task or requirements specified by the test cases.

5.4.1 Registration

Serial no	Test case	input	Expected output	Actual output	result
1	First name, last name	Input any value	correct	correct	passed
2	Email check	Without @	Invalid email	Please add @	passed
3	Strong password	Not strong	Not right	Must have to chose a strong password	passed

5.4.2 Login

Serial no	Test case	Input	Expected output	Actual output	result
1	Email verified	Not recognized email	error	Email or password is not correct	Passed
2	Password check	Any password	error	Doesn't matched	passed

5.4.3 Product

Serial no	Test case	Input	Expected output	Actual output	Result
1	View product	Click product button	Open page	All products are visible	passed
2	Availability test	Not available/stockout	Don't go to the next page	As expected	passed

5.4.4 Add Blog

Serial no	Test case	input	Expected output	Actual output	Result
1	Title	Empty	Error occurs	Description field is mandatory	passed
2	image	Empty	Error signal	Must have to use image	passed
3	Description	empty	Error signal	This field is required	passed

5.4.5 Search

Serial no	Test case	Input	Expected output	Actual output	Result
1	Product name	Wrong name	Not found	Please search with a correct name	passed
2	keywords	Half word/incomplete name of product	Not found	Enter a valid name	passed
3	Finding right product	nitro	found	As expected	passed

5.4.6 Add Cart Test Case

Serial no	Test case	Input	Expected output	Actual output	result
1	Quantity increment/decrement	Click + to increment product number	Product number are increasing	As expected,	passed
2	Show total item in cart	Open the cart click show total amount	Display the total amount of items in the cart	As expected,	passed
3	Remove item from cart	Item name 123 Item Id 123	Product removed from the cart	Successfully remove product	passed
4	Proceed to checkout	Item name 123 Item id 12 Shipping info	Proceed to payment	As expected,	passed

5.4.7 Clear Cart Test Case

Serial no	Test case	Input	Expected output	Actual output	Result
1	Less quantity	Click - to decrement product number	Product number are decreasing	As expected	Passed
2	Dismiss cart	All item are remove from the cart	Cart have to deleted	As expected	passed

5.4.8 Checkout Test Case

Serial no	Test case	Input	Expected output	Actual output	Result
1	Confirm order	Don't give shipping address	Order don't complete.	Please add shipping address	passed
2	Agree with terms	Agree with terms and confirmation	Go to the order done page with the order details information	As expected	passed

5.4.9 Rooftop Gardening Test Case

Serial no	Test case	Input	Expected output	Actual output	Result
1	Image	Giving text	Error occurs	Field type must be image	passed
2	Tittle	String	Correct	Correct	passed

5.4.10 Add Product Test Case

Serial no	Test case	Input	Expected output	Actual output	Result
1	Picture added	empty	Error occurs	Please add a picture of the product	passed
2	Product description	empty	Error occurs	Product description are mandatory to added a product in the system	passed
3	price	Empty	Error occurs	This filled must be fulfilled	passed

5.4.11 Caution For New Farmer

Serial no	Test case	Input	Expected output	Actual output	Result
1	Tittle name	Necessary value	Added successfully	Adding thing see on the page.	passed
2	Edit description	empty	Error occurs	Description must be need.	passed
3	image	empty	Error occurs	Must have to added picture	passed

Chapter 6

User Manual

6.1 Home page



I am shopping for... 

 Compare  Wishlist  Cart

[Home](#) [Blogs](#) [Agriculture Information](#) [Commercial Farming](#) [Rooftop Gardening](#) [Plant Disease](#) [All categories](#) [Farmer Help Center](#)

Categories [See All >](#)

- ☐ pesticides
- ☐ Tractor
- ☐ Sprayers & Applicators
- ☐ Planting and Seeding
- ☐ Hay and Forage
- ☐ Harvesting
- ☐ Plants
- ☐ Seeds
- ☐ Water Pump
- ☐ Water Tank
- ☐ Agriculture Book



New Products



₹160.00
★★★★★
Nitro



₹120.00 **₹100.00**
★★★★★
Ready Mix Garden Soil
Premium Quality 5Kg Ba...



₹500,000.00
★★★★★
John Deere R4023 Sprayer



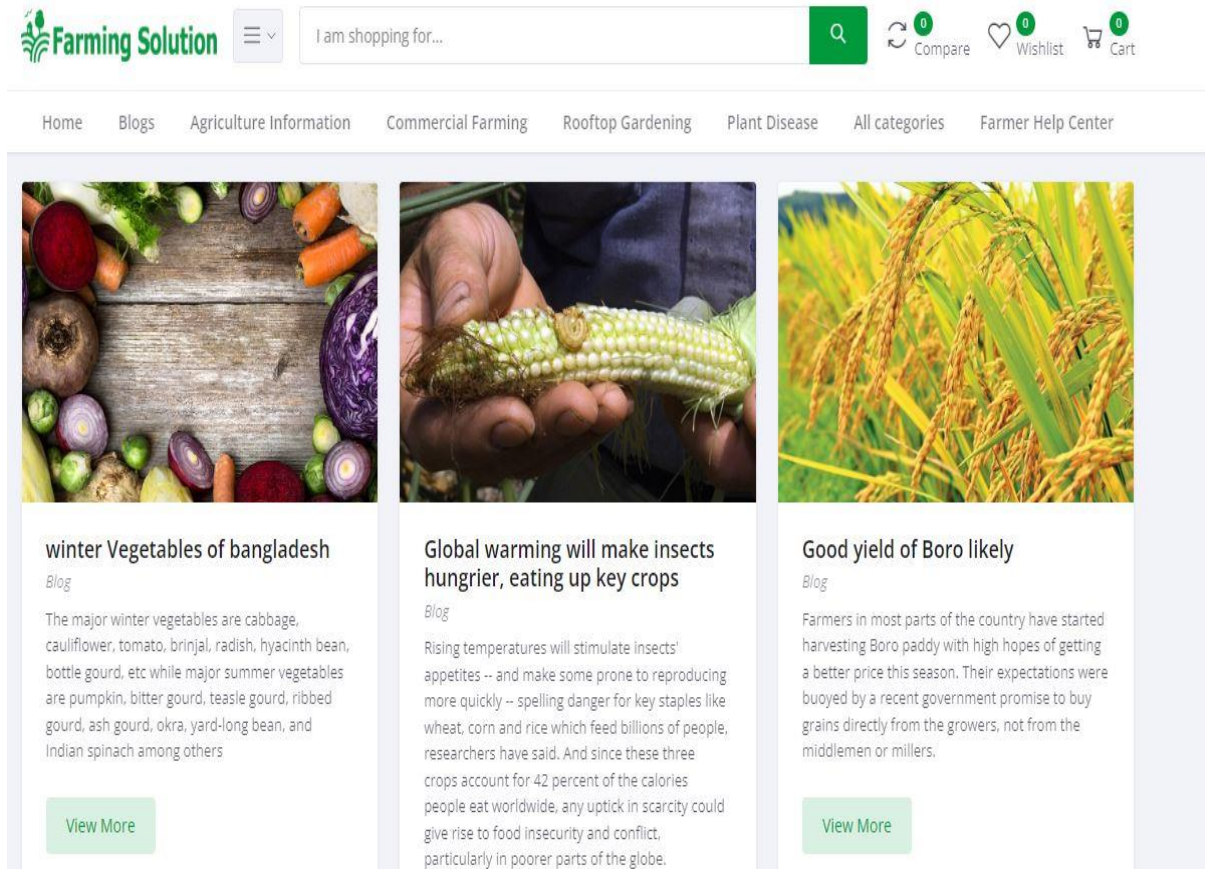
₹900,000.00
★★★★★
Massey Ferguson 9500
Smart 4WD

©DAFFODIL INTERNATIONAL UNIVERSITY

56

6.2 Add Blog

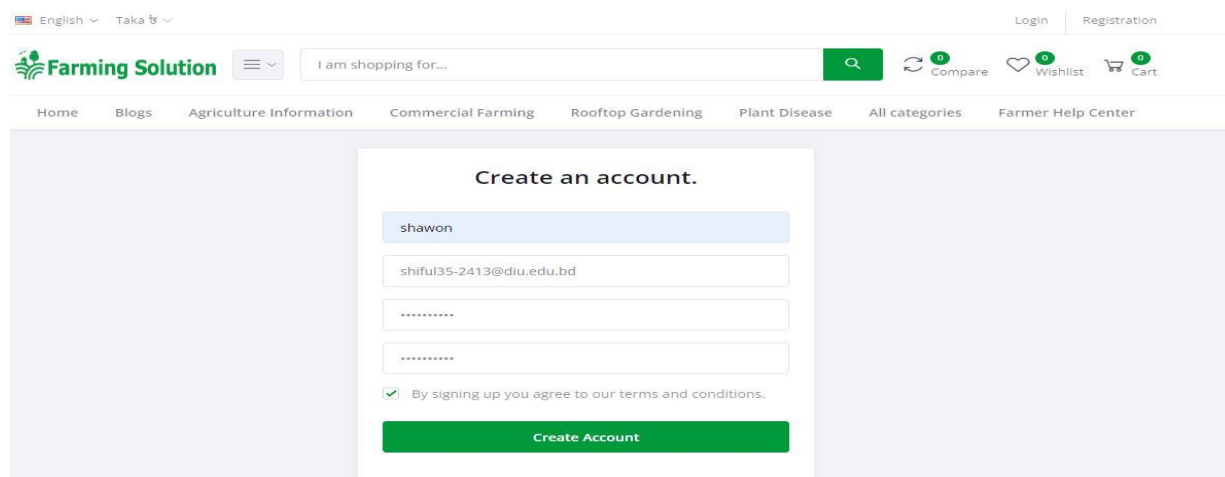
Both admin and user can add blog.



The screenshot shows the Farming Solution website with a navigation bar and three blog posts. The navigation bar includes the logo, a search bar, and icons for Compare, Wishlist, and Cart. The main content area features three blog posts, each with a featured image, a title, a subtitle, a brief description, and a 'View More' button.

- winter Vegetables of bangladesh**
Blog
The major winter vegetables are cabbage, cauliflower, tomato, brinjal, radish, hyacinth bean, bottle gourd, etc while major summer vegetables are pumpkin, bitter gourd, teasle gourd, ribbed gourd, ash gourd, okra, yard-long bean, and Indian spinach among others
[View More](#)
- Global warming will make insects hungrier, eating up key crops**
Blog
Rising temperatures will stimulate insects' appetites -- and make some prone to reproducing more quickly -- spelling danger for key staples like wheat, corn and rice which feed billions of people, researchers have said. And since these three crops account for 42 percent of the calories people eat worldwide, any uptick in scarcity could give rise to food insecurity and conflict, particularly in poorer parts of the globe.
[View More](#)
- Good yield of Boro likely**
Blog
Farmers in most parts of the country have started harvesting Boro paddy with high hopes of getting a better price this season. Their expectations were buoyed by a recent government promise to buy grains directly from the growers, not from the middlemen or millers.
[View More](#)

6.3 Registration/Sign up Page



The screenshot shows the Farming Solution website with a navigation bar and a registration form. The navigation bar includes the logo, a search bar, and icons for Compare, Wishlist, and Cart. The main content area features a registration form with the following fields and options:

- Create an account.**
- Username: shawon
- Email: shiful35-2413@diu.edu.bd
- Password: (masked with dots)
- Confirm Password: (masked with dots)
- ☒ By signing up you agree to our terms and conditions.
- [Create Account](#)

6.4 Login

Both the admin and the user need to Login in the system.

Login to your account.

☐ Remember Me [Forgot password?](#)

Login

6.5 Agriculture Information/Caution



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Modern agri tools usage

Agriculture Information

Various types of modern agriculture machinery and technology are used in different agricultural operations nowadays. Different levels in crop production include – Primary and secondary level tillage of the soil, Seeding and planting, Cultivation, Fertilizer application and distribution, Pest control, Harvesting, Irrigation, Drainage ,Transportation, Storage, Handling the residues of earlier crops etc.



Boosting agriculture's role

Agriculture Information

We need more concerted efforts to end conflict, alleviate suffering and reduce risk and vulnerability conditions facing millions of people, most of whom are poor and live in rural and marginalised areas of developing countries.

[View More](#)



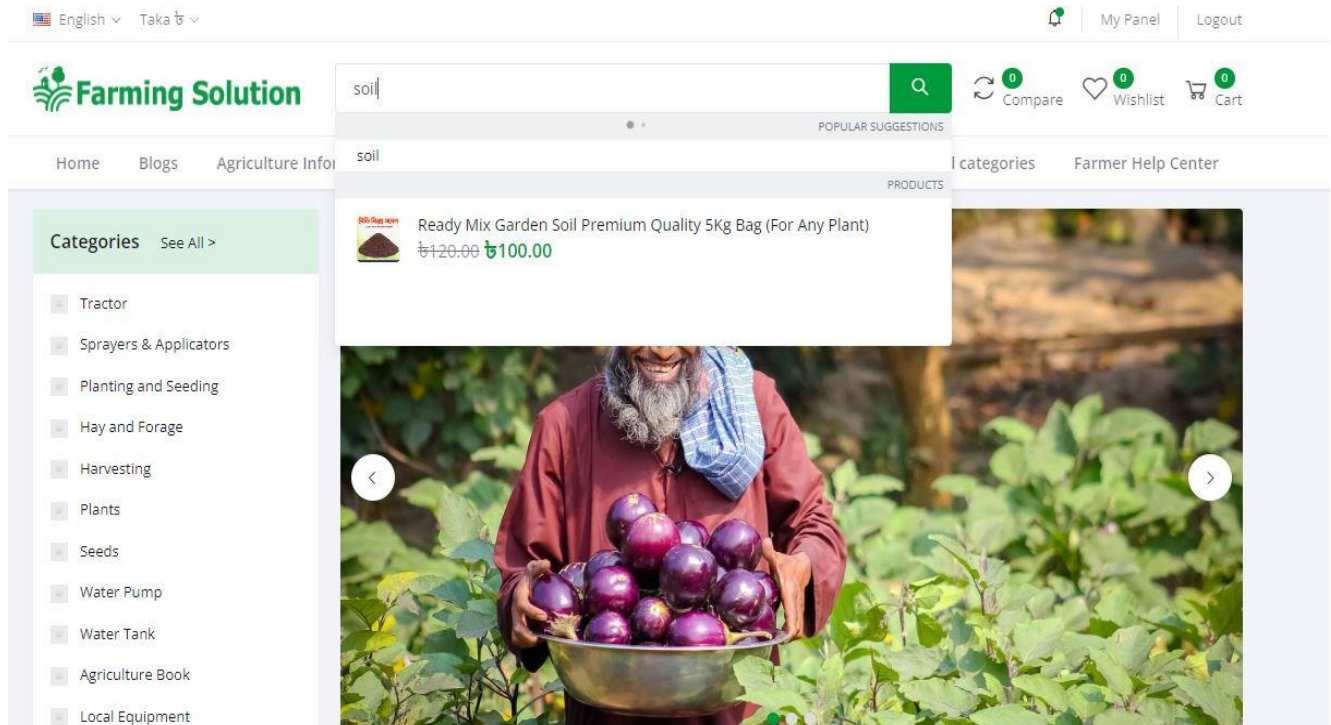
World Food Day: Post-Pandemic Food Security And Resilience In Bangladesh

Agriculture Information

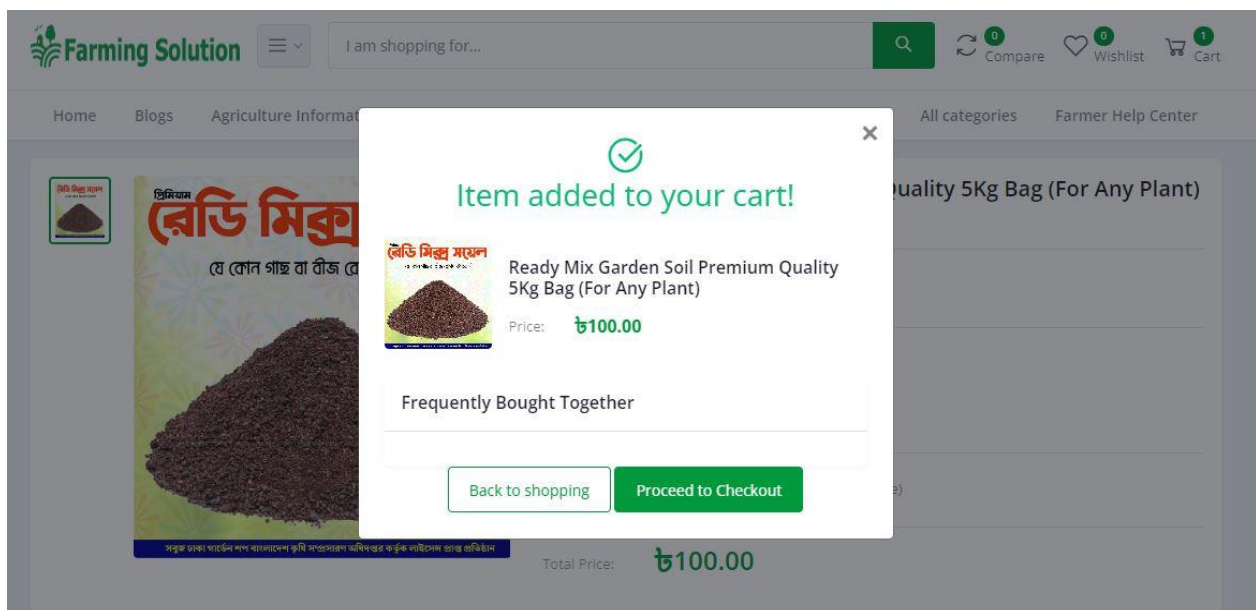
As the second wave of the COVID-19 pandemic lays waste to lives and livelihoods in countries around the globe, today's celebration of the annual World Food Day reminds us not to lose sight of longer-term goals. In many developing countries, Bangladesh included, the economic shock of the pandemic is expected to have severe impacts on food security. The World Food

6.6 Search product

User Can find Easily By searching.



6.7 Add product To cart



6.8 Checkout



Thank You for Your Order!

A copy of your order summary has been sent to shiful35-2413@diu.edu.bd

Order Summary

Order date:	24-09-2022 22:27 PM	Order status:	Pending
Name:	shawon	Total order amount:	₳100.00
Email:	shiful35-2413@diu.edu.bd	Shipping:	Flat shipping rate
Shipping address:	boro bagh mirpur, Dhaka, Bangladesh	Payment method:	Cash on Delivery



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Order Code: **20220924-22273968**

Order Details

#	Product	Variation	Quantity	Delivery Type	Price
1	Ready Mix Garden Soil Premium Quality 5Kg Bag (For Any Plant)		1	Home Delivery	₳100.00
Subtotal					₳100.00
Shipping					₳0.00
Tax					₳0.00
Coupon Discount					₳0.00
Total					₳100.00

6.9 Commercial Farming



I am shopping for...



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Blogs

Agriculture Information

Commercial Farming

Rooftop Gardening

Plant Disease

All categories

Farmer Help Center



Fig farming

Commercial Farming

Being informed about the process of cultivation of sweet, delicious food Tiin (Ara fruit or Fig of *Ficus* group) from a Turkish friend in Singapore, SoyeB Sadik of Shahjahanpur of Bogura returned to his home during the Corona period and started to cultivate some 600 saplings of the fruit tree on two bighas of land.

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Thai Guava Farming

Commercial Farming

Thai guavas are generally the size of a softball with apple green skin that can range from bumpy to smooth. The flesh is white with pale yellow seeds and tends to be drier than the pink type of guavas. Since 2000, Bangladeshi farmers started growing them and there are few varieties now. A silent revolution has happened due to its gradually rising demands and lucrative market price everywhere in Rajshahi region at present. Many farmers have cultivated varieties of Thai guava and achieved extraordinary success. Guava cultivation has made them self-sufficient.

[View More](#)

Papaya Farming

Commercial Farming

Papaya is one of the easiest crops to grow. It requires very minimal maintenance and less water. It is easy to grow and with the right nutrients, the profits are high. There are farmers who average up to 3 Lakhs in profit from one-acre land with papaya farming. The profits could go as high as 5 Lakhs per acre.

[View More](#)[View More](#)

Dragon Farming

Commercial Farming

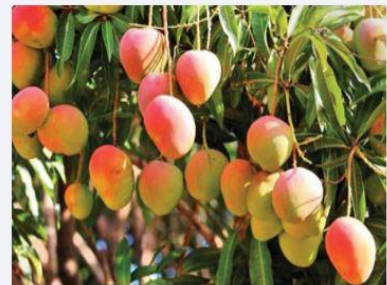
Six years ago, Bangladesh produced only 66 tonnes of dragon fruit on 18 hectares of land, according to the Horticulture Wing of the Department of Agricultural Extension (DAE). Jhenaidah is the main dragon fruit producing hub as it accounts for 39 per cent of the total production while other districts, namely Jashore, Natore and Bandarban, have become major producers as well.

[View More](#)

Flower farming

Commercial Farming

The current challenges for floriculture are:



Mango cultivation

Commercial Farming

Nutritious mango contains plenty of vitamins. Besides, there are minerals, fiber, food power, protein, calcium, iron, carotene, vitamin B-2, sugar, etc. Each 100 gram paddy contains 90 kilocalory food power, 8300 microgram carotene, 78.66 grams of water, 20 grams of carbohydrate, 1 gram fat, zero decimal 7 grams, zero decimal grams of fiber, 20 milligrams of potassium, 20

6.10 Plants Diseases with Pesticides

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Fungus attack on plants
Plant Disease

Different fungi can attack different plants and plant organs, so fungal infections cause an enormous range of disease symptoms, such as color and shape changes, rotting, wounds, and wilting. Color changes can appear as leaf yellowing and can be accompanied by changes in leaf shape

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usage of carbofuran
Plant Disease

Carbofuran is a pesticide that is widely used to control insects and nematodes on a variety of agricultural crops because of its wide-ranging biological activity and relatively low persistence when compared to organochlorine pesticides

[View More](#)



leaf miner
Plant Disease

Leaf miner damage is unsightly and, if left untreated, can end up causing serious damage to a plant. Taking steps to rid plants of leaf miners will not only make them look better but will also improve their overall health. Let's take a look at identifying leaf miners and how to kill leaf miners

[View More](#)

6.11 Farmer Help Center

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Create a Ticket

Subject

Subject

Provide a detailed description

Type your reply

Photo

Browse

Choose File

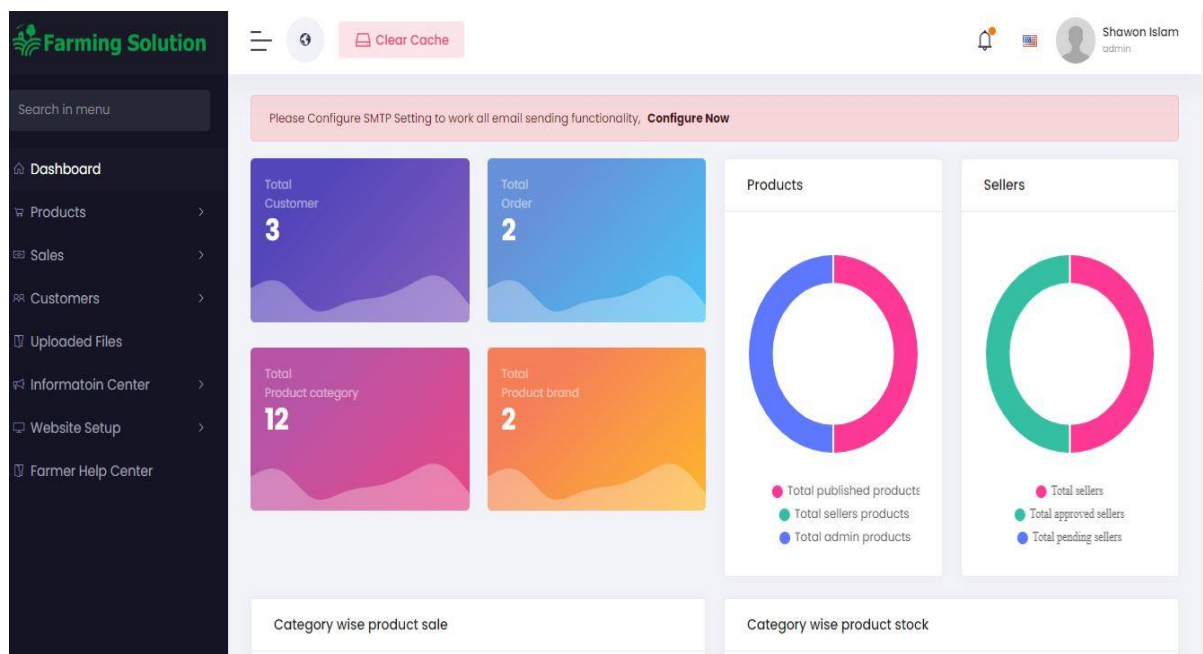
Cancel

Send Ticket

Subject

Status

6.12 Admin Dashboard



6.13 Add Product

The Add Product form is divided into two main sections: Product Information and Shipping Configuration. The Product Information section contains fields for Product Name, Category, Brand, Unit, Minimum Purchase Qty, and Tags. The Shipping Configuration section includes toggle switches for Free Shipping, Flat Rate, and Is Product Quantity Multiply. A Low Stock Quantity Warning section is also present with a Quantity input field.

Product Information:

- Product Name: Product Name
- Category: Tractor
- Brand: Select Brand
- Unit: Unit (e.g. KG, Pc etc)
- Minimum Purchase Qty: 1
- Tags: Type and hit enter to add a tag

Shipping Configuration:

- Free Shipping: ☒
- Flat Rate: ☐
- Is Product Quantity Multiply: ☐

Low Stock Quantity Warning:

Quantity: 1

Stock Visibility State

6.14 Manage Sales Report

[Clear Cache](#)



**Shawon Islam**
admin

All Orders

Bulk Action ▾

Filter by Deliv... ▾

26-08-2022 to 24-

Type Order code &

Filter

☐	Order Code:	Num. of Products	Customer	Amount	Delivery Status	Payment Status	Options
☐	20220924-22273968	1	shawon	₹100.00	pending	Un-Paid	  
☐	20220411-11094641	1	Demo User	₹900,000.00	delivered	Paid	  

6.15 Customer Dashboard





I am shopping for...

0 Compare

0 Wishlist

0 Cart

[Home](#) [Blogs](#) [Agriculture Information](#) [Commercial Farming](#) [Rooftop Gardening](#) [Plant Disease](#) [All categories](#) [Farmer Help Center](#)

**shawon**
shiful35-2413@diu.edu.bd

[Dashboard](#)
[Purchase History](#) new
[Downloads](#)
[Wishlist](#)
[Compare](#)
[Blog](#)

0 Product
in your cart

0 Products
in your wishlist

1 Products
you ordered

Default Shipping Address

Chapter 7

Project Summery

7.1 GitHub link

https://github.com/shawon393/Farming_solution/tree/master

7.2 Obstacles & Achievement

- ✓ Successfully build a project
- ✓ Learned new technology
- ✓ Manage all information of a project
- ✓ Know about document process deploying project

7.3 Limitations

This system are development as much as its running properly but in the system there has some limitation. which are discuss bellow:

- ✓ Don't have digital payment system. only cash on delivery
- ✓ Live medicine and plants problem solution
- ✓ Area based farming

7.4 Reference

1. www.Google.com
2. [the daily star](http://the.dailystar.com)
3. www.stakeoverflow.com
4. www.wikipedia.com
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My account clearence

