Farmer Assistance

By

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A project submitted for partial fulfilment of the requirements for the degree of Bachelor of Science in Software Engineering

Department of Software Engineering Faculty of Science and Information Technology
DAFFODIL INTERNATIONAL UNIVERSITY

Fall-2019

APPROVAL

The Project titled "**Farmer Assistance**" submitted by **Md. Sazedul Islam (151-35-1073)** to the department of Software Engineering, Daffodil International University has been accepted as satisfactory for the partial fulfilment of the requirements for the degree of B.Sc in Software Engineering and approved as to its style and contents.

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DECALRATION

I hereby, declare that the work presented in this project is the outcome of the investigation performed by me under the supervising of **Md. Khalid Been Badruzzaman Biplob** and internal review by **Ms. Lamisha Rawshan** Lecturer, Department of Software Engineering, Daffodil International University (DIU), Dhaka, Bangladesh. I also declare that no part of this project and thereof has been of is being submitted elsewhere for the award of any degree or diploma.

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This is my humble attempt to present gratitude in preparing this report. I have truly drawn upon my own experience as a student of Software Engineering. This project would not have been possible without the dedications and contributions of a number of individuals.

First and foremost, I would like to express my gratitude to Allah for always help me, then I would like to thanks, of **Md. Khalid Been Badruzzaman Biplob,** Lecturer, Department of Software Engineering, Daffodil International University (DIU) for agreeing to supervise me during the project. His eagerness helped me in every step of the way as well as encouraged me to work with full effort.

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ABSTRACTS

Farmer Assistance is a web-based system. This system is for the farmer who face any kind of problem in their farming. In this system farmer will get information about all kind of farming & they can sell their product. Communicating with the buyer they can easily sell their seeds & product. In this system farmer also communicate agri-consultant and they can ask any question about their farming.

Here, Farmer can create post, view all posts, ask question, update post, delete post and also can sell their product.

The main purpose of the system is to make a simple platform where farmer can get information about their farming and they can easily communicate agri-consultant.

TABLE OF CONTENTS

CHAPTER 1

INTRODUCTION

1.1. Project Overview

Farmer Assistance is basically a web application which is currently built for online platform. The system is developed for the farmer who can face any kind of problem about their farming. In this system farmer can directly communicate the agri-consultant. Farmer can ask their question and get answer easily. In this platform farmer also sell their product easily and they can see all product price. Farmer also get agri block where they get many information about many crops.

1.2 Purpose of the project

Farmer Assistance is a website (used by agri-business companies, contract farming companies & exporters). If they face any kind of agricultural problem they can ask question about this problem. They also get valuable suggestion about this problem from agriconsultant.

1.2.1 Benefits & Beneficiaries

That will be an interactive platform for Farmers and Buyer where they can interconnect easily to trade the products which will save time.

Buyer can find the deal by their locality and farmer choose their buyers from the nearest location and that's how cost can be consumed.

Farmers can get the consultancy easily using this platform and that will help increase their productivity.

Beneficiaries:

1. Farmer who face any kind of problem about farming.
2. Farmer who sell their product.

Benefits:

1. Farmers can get the consultancy.
2. Farmer also get many information about their farming.
3. Buyer can easily find product.
4. 24/7 Response from Admin & consultant.

1.2.2 Goals of the Project

Farmer Assistance web application is aimed at farmers can get the consultancy and they can get information about their farming. Also Farmers and Buyer can interconnect easily to trade the products.

1. Makes a good communication between dealers & farmer.

2. Remove Third party agent between farmer and Customers.

3. Our project aims to help those farmers to sell their products in a transparent way.

1.3 Stakeholders

The Farmer
The person who farming and sell products.

The Buyer
The person who buy products.

The Agri-consultant
The person who give answer and information about farming.

System admins
The person who are maintaining the whole system or application.

1.4 Proposed System Model

A process model is an abstract representation of a software process and each model represents a process of a particular perspective which provides only partial information about that process.

Our propose system is designed using Agile model. Agile model work with iterations. Each iteration lasts for 2 to 3 weeks. It's an incremental process of software development.

Agile model can change and response with the change of requirements, technology and people.

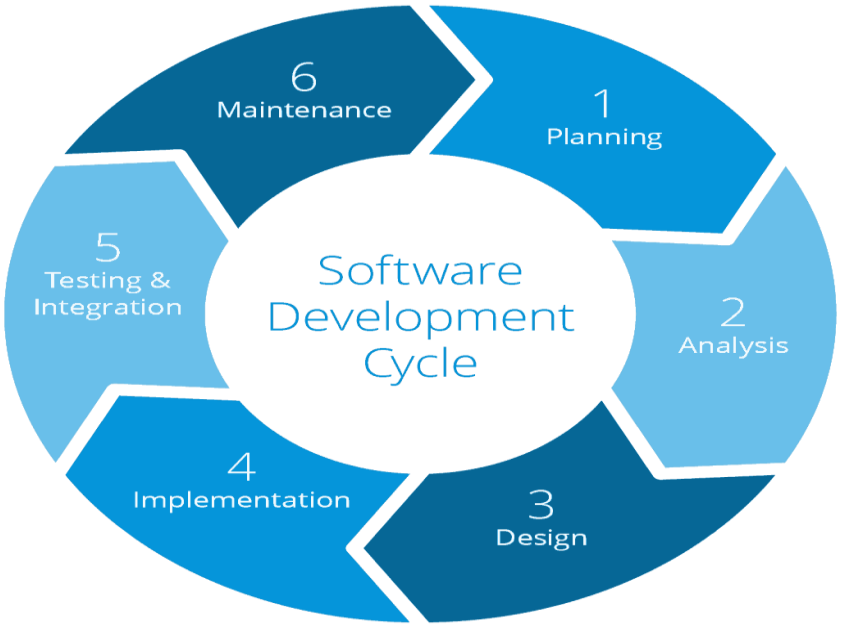

Figure 1.1: Agile model

1.5 Project Schedule

Weeks Works	1	2	3	4	5	6	7	8	9	10	11	12	13
Project planning													
Analysis													
Feasibility study													
Project proposal													
UI design													
Midterm defense													
Development													
Testing													
Project Document													
Final defense													

Figure1.5:Grant chart

1.5.2 Release Plan

Release 1: beta version 1.0.0 on 23/11/2019

CHAPTER 2 SOFTWARE REQUIREMENT SPECIFICATION

2.1 Functional Requirements

Functional Requirements are given in table 2.1

Table 2.1: Functional Requirements

ID	Requirement	Description	Priority
01	Create Question	Farmer can ask question if he face any problem about his farming	H
02	Answer Question	Agri-consultant should answer question	H
03	Create Post	Farmer can create post if he sell something	H
04	Edit post	Farmer can edit post after creating a post.	L
05	Verify Post	Admin should verify post	H

2.2 Non-Functional Requirements

Non-Functional Requirements are given in table 2.2

Table 2.2: Non-Functional Requirements

ID	Requirement	Description	Priority
01	Search	Search product	M
02	Sign Up	User can get services from application by signing up once a time.	H
03	Login	User can login after signing up	H
04	Logout	A login user can logout whenever he/she wants.	H

2.3 Data Requirement

Data Requirements are given 2.3

Table 2.3: Data Requirements

No.	Description	Priority
1.	User have search for valid keywords.	M
2.	User have to enter valid information on the forms otherwise system will show an error message.	H
3.	User must have to sign up before login. Login data will be matched with signup data if it does not match user will get error message.	M
4.	All field on form must have to be fill up otherwise user will get error message.	H

2.4 Performance Requirements

2.4.1 Speed and Latency Requirements

Speed and Latency Requirements are given 2.4

Table 2.4: Speed Latency Requirements

No.	Description	Priority
1.	The system should load the data from server within 3 seconds.	M
2.	The system must have a high speed of manipulation data and reply to the user request.	H

2.4.2 Capacity Requirements

Capacity Requirements are given in Table 2.6

Table 2.6: Capacity Requirements

No.	Description	Priority
1.	The application size must have to be less than 150 Mb	L
2.	The remote server database size must be able to load the system data.	L

2.5 Dependability Requirements

2.5.1. Reliability Requirements

Reliability Requirements are given in table 2.7

Table 2.7: Reliability Requirements

No.	Description	Priority
1.	Sign up, create post, create question depend on insertion of new data in the server.	H
2.	System must send the user data to the server	H

2.5.2 Availability Requirements

Availability Requirements are given in table 2.8

Table 2.8: Availability Requirements

No.	Description	Priority
1.	The system should work 24 hours a day	H
2.	The system should provide the desired data to the user on time	H

2.5.4 Safety-Critical Requirements

No visible Safety-Critical requirements

2.6 Maintainability and Supportability Requirements

2.6.1 Maintenance Requirements

Maintenance Requirements are given in table 2.10

Table 2.10: Maintenance Requirements

No.	Description	Priority
1.	The system maintenance should be quick	H

2.7.1. Access Requirements

Access Requirements are given in table 2.12

Table 2.12: Access Requirements

No.	Description	Priority
5.	Only SEQURITY Administrator will be able to enter the system to make maintenance.	M
6.	The Application user access boundary should be within the application	H

2.7.2 Integrity Requirements

Integrity Requirements in given table 2.13

Table 2.13: Integrity Requirements

No.	Description	Priority
1.	The data of the system must not be altered without any permission	M
2.	The data integrity should be maintained	M

2.7.3 Privacy Requirements

Privacy Requirements are given in table 2.14

Table 2.14: Privacy Requirements

No.	Description	Priority
1.	The user data must not be visible for public	M
2.	The user data should not contain any private issues.	M

CHAPTER 3 SYSTEM ANALYSIS

3.1 Use Case Diagram

3.1.1 Use Case Diagram

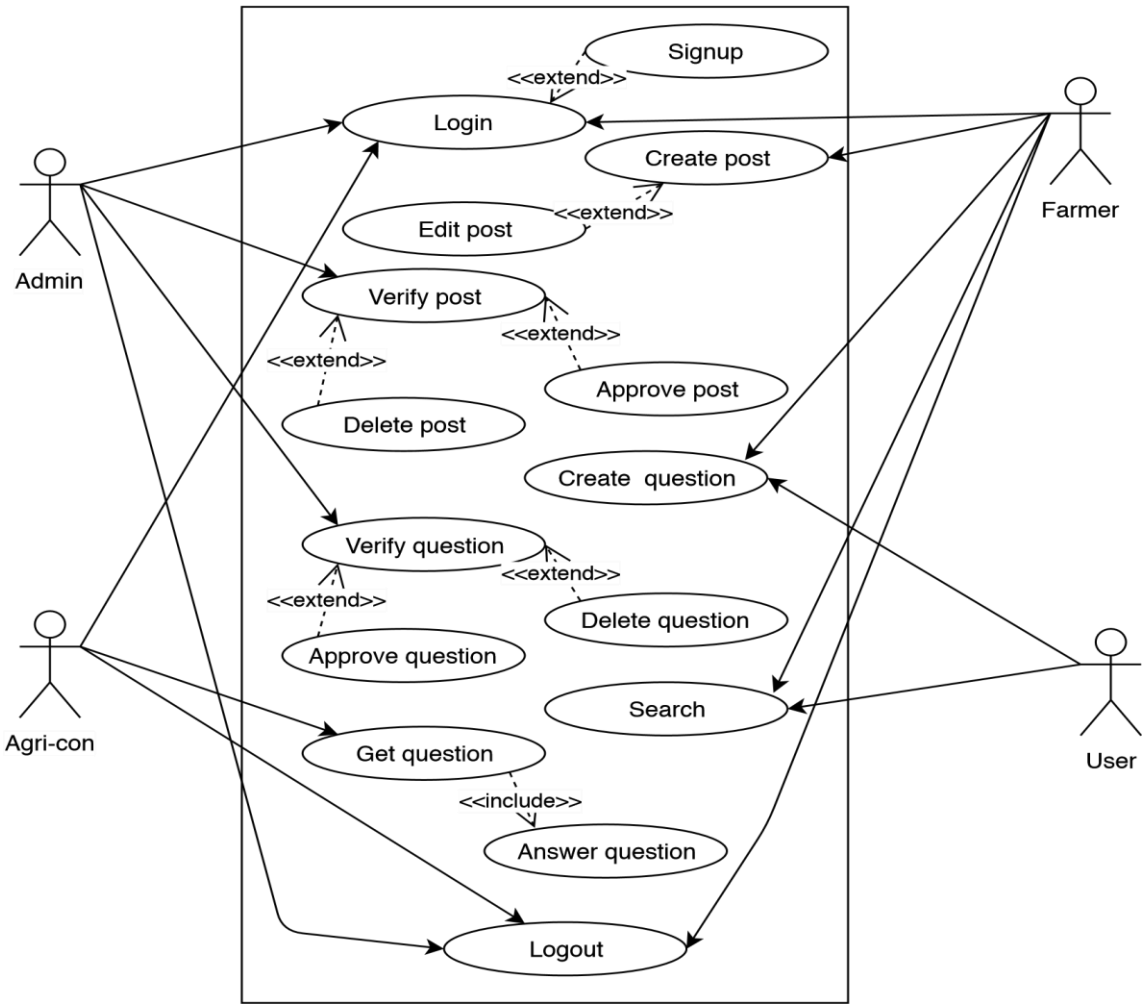

Figure 3.1.1: Use Case

3.1.2 Use Case Diagram for admin

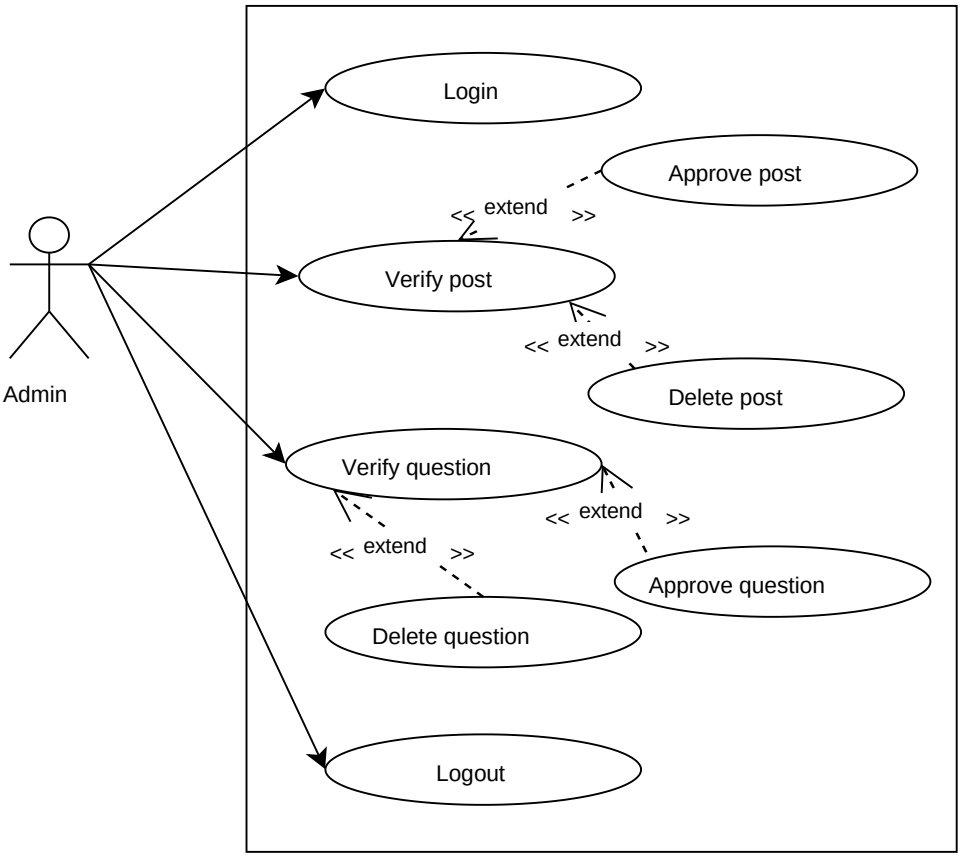

Figure 3.1.2: Use Case for admin

3.1.3 Use Case Diagram for farmer

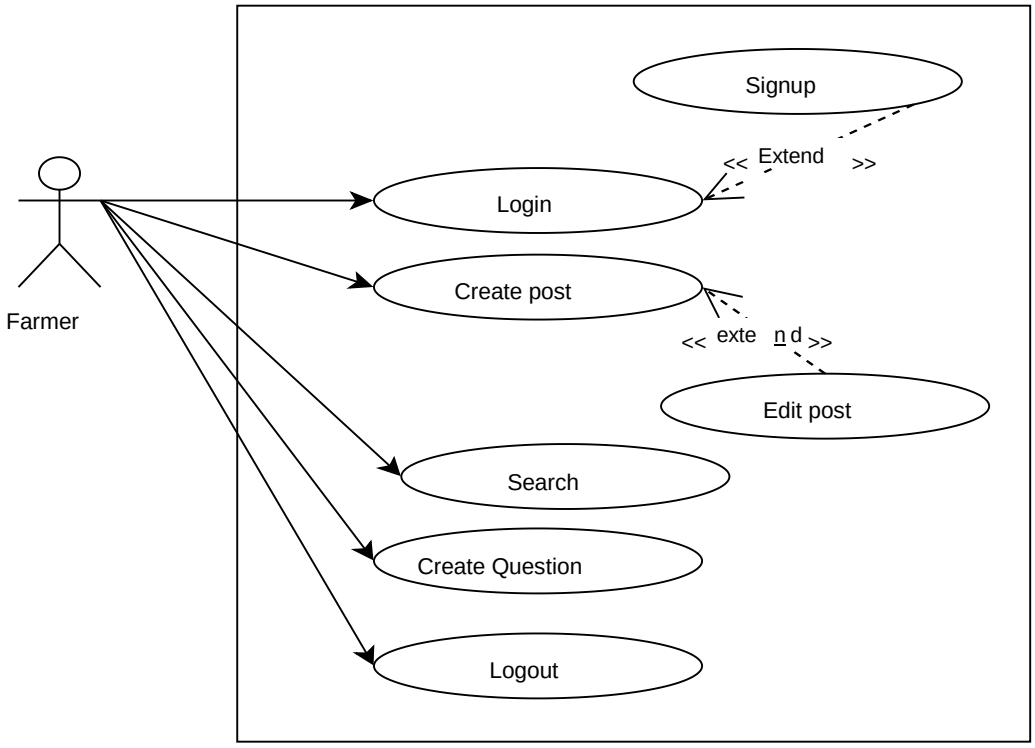

Figure 3.11.3: Use Case for farmer

3.1.4 Use Case Diagram for agri-con

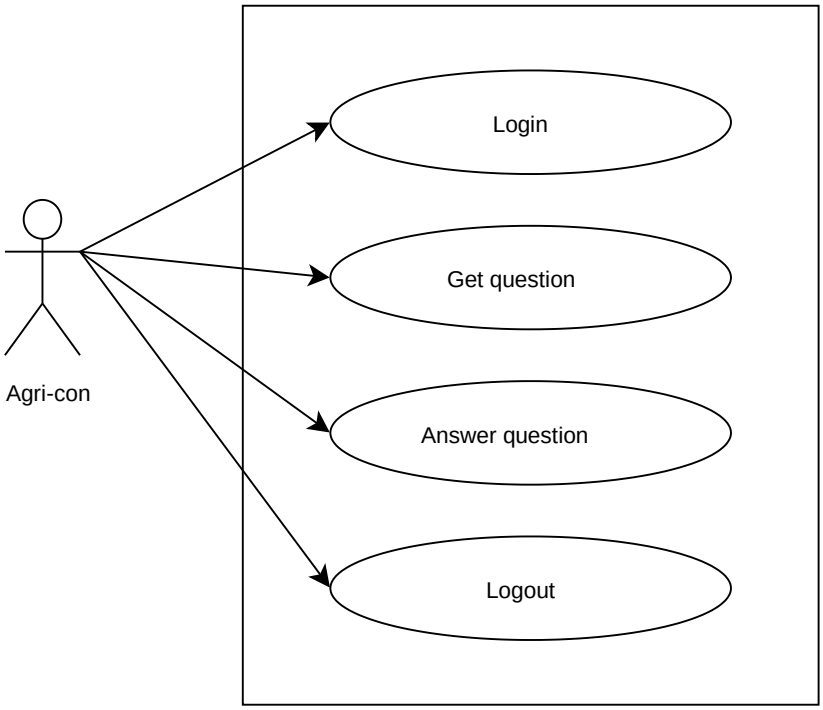

Figure 3.1.4: Use Case for agri-consultant

3.1.5 Use Case Diagram for user

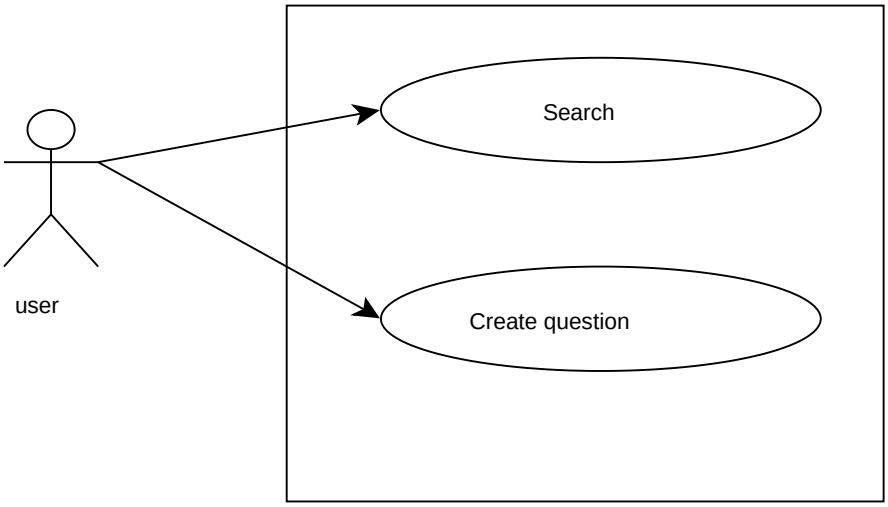

Figure 3.1.5: Use Case for user

3.2 Use case Description:

3.2.1 Sign up:

User have to complete sign up by providing basic information's before login. In sign, up form all field must have to fill up and information's must have to be accurate. Sign up details given in table 3.16

Table 3.16: Sign up

Use Case Name:	Sign up module
Scenario:	User have to sign up to login.
Brief Description:	Without signup user cannot login and access main features of the system.
Actor:	Farmer & Agri-consultant
Precondition:	Must go into sign up page.
Post condition:	User must have provided all necessary information in the sign-up form.
Main-Success Scenario	1. Server must have to be working. 2. User have to properly fill the signup form. 3. Completing sign up user get confirmation message.
Scenario Extensions	1. Have fill all fields in the signup form. 2. Have to provide proper information otherwise signup can't be complete.

3.2.2. Login

User have to login to obtain all internal features. For login user have to provide email and password. Login details given in table 3.17

Table 3.17: Login

Use Case Name:	User have to login to access main features of the system.
Scenario:	In the system if user want to create post, edit and delete post, make question he have to login.

Brief Description:	Once a user login he can create post, view his post, update and delete his post. All this feature is accessible for the login users.
Actor:	Farmer, Agri-consultant, admin

3.2.3 Logout

User can logout after successfully login. Logout is only available for user who already logged in into the system. Logout details given in table 3.18

Table 3.18: Logout

Use Case Name:	User can logout after login.
Scenario:	If user want get out of the system, he can logout.
Brief Description:	After using the internal features of the system user can logout to make system information safe.
Actor:	Farmer, Agri-consultant, admin
Precondition:	Must have to logged in.
Post condition:	Logout should be confirmed.
Main Success Scenario	1. Get logout confirmation message
Scenario Extensions	1. User have to sign up and login if login not confirmed log out cannot be done.

3.2.4 Create post

Farmer can create post after login once. Create post details given in table 3.19 Table 3.19: Create post

Use Case Name:	User can create post after login
Scenario:	If user want to make a lost post, he can make it.
Brief Description:	After login user can create a lost post by simply go to post creation section and select lost post.
Actor:	Farmer

3.2.5 Verify Post

Admin will verify any post that has been created by farmer. After making a post by the farmer admin will check all information's. Verify post details given in table 3.20

Table 3.20: Verify post

Use Case Name:	Admin can verify posts created by farmer.
Scenario:	After the post creation admin will check all the information's.
Brief Description:	When user create posts, he can make mistakes or provide wring information admin will check all posts.
Actor:	Admin
Precondition:	Admin have to login into the system.
Post condition:	Posts must have to be available.

3.2.6. Delete post

Farmer can delete previous created posts. Delete post details given in table 3.22 Table 3.21: Delete post

Use Case Name:	Farmer can delete posts that he created before.
Scenario:	After seeing post admin can delete that post.
Brief Description:	Verifying post admin can delete that post.
Actor:	Admin

3.2.7 Edit Post

Farmer can edit a post after creating that post. Edit post details given in table 3.23

Table 3.22: Edit post

Use Case Name:	Farmer can update previous post.
Scenario:	If farmer thing he need to change information of a post he can edit the post.
Brief Description:	After create post if farmer need to change information he edit the post
Actor:	Farmer

3.2.8 Search Items

User can search post in lost and found section separately. Search post details given in table 3.24

Table 3.23: Search post

Use Case Name:	User can search products
Scenario:	If user want information of a particular thing he can search with similar words.
Brief Description:	There are so many posts in the system sometimes it's hard to find a particular post so user can search and easily find it.
Actor:	Users, Buyer
Precondition:	1. Have to search proper keywords.

3.2.9 Create Question

User can create question. Create question details given in table 3.25

Table 3.24: Create Question

Use Case Name:	Create a question.
Scenario:	If user want to ask any question he can.
Brief Description:	If any user/farmer face any kind of problem about their farming he can ask question.
Actor:	User, farmer
Precondition:	1. No condition here
Post condition:	1. No condition here
Main Success Scenario	1. Instant get solution.
Scenario Extensions	1.. If question isn't valid he can't get answer.

3.2.10. Answer Question

Agri-consultant see all the question & answer the question. Answer Question details given in table 3.25

Table 3.25: Create Found post

Use Case Name:	Answer the question.
Scenario:	If agri-consultant get question then he answer the question
Brief Description:	After login Agri-consultant get many question and he give the answer for this question.
Actor:	Agri-consultant
Precondition:	Must have to log in.
Post condition:	Get question.

Main Success Scenario	1. Give solution for farmer about their farming.
Scenario Extensions	1. If agri-consultant don’t get any question he can’t give any solution.

3.3 Activity Diagram

3.3.1 Activity Diagram for Admin

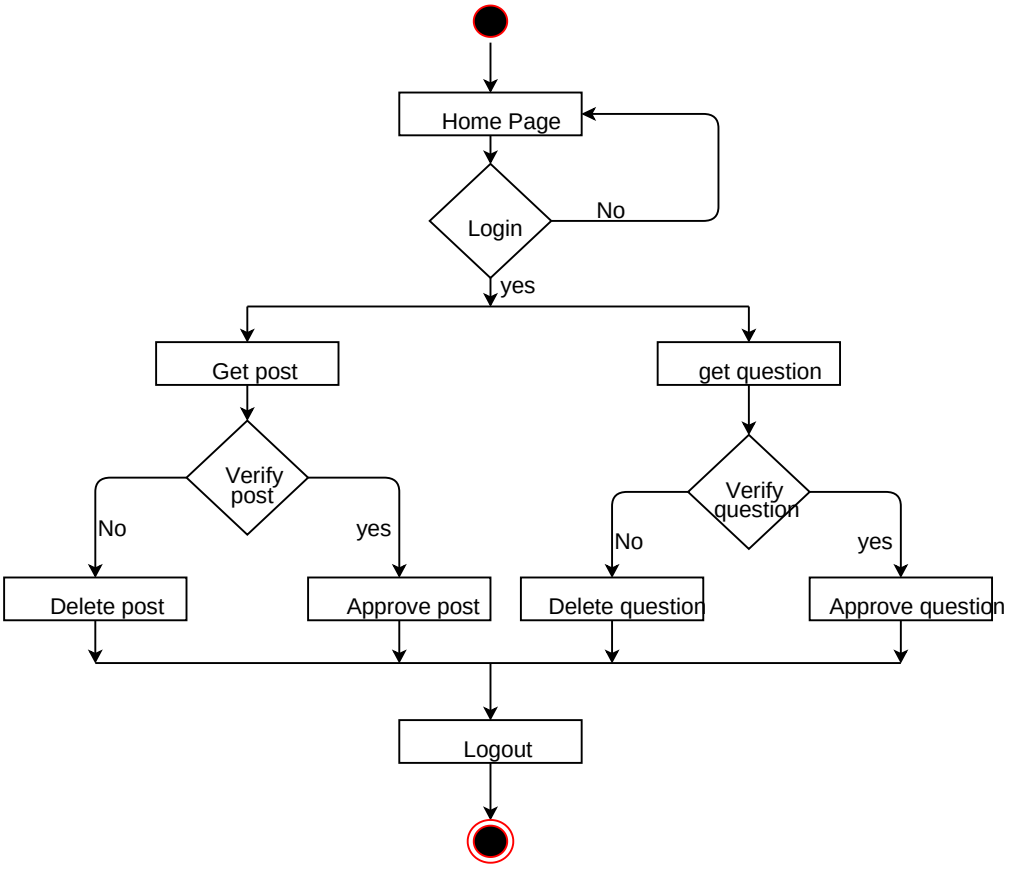

Figure 3.3.1: Activity Diagram for Admin

3.3.2 Activity Diagram for Farmer

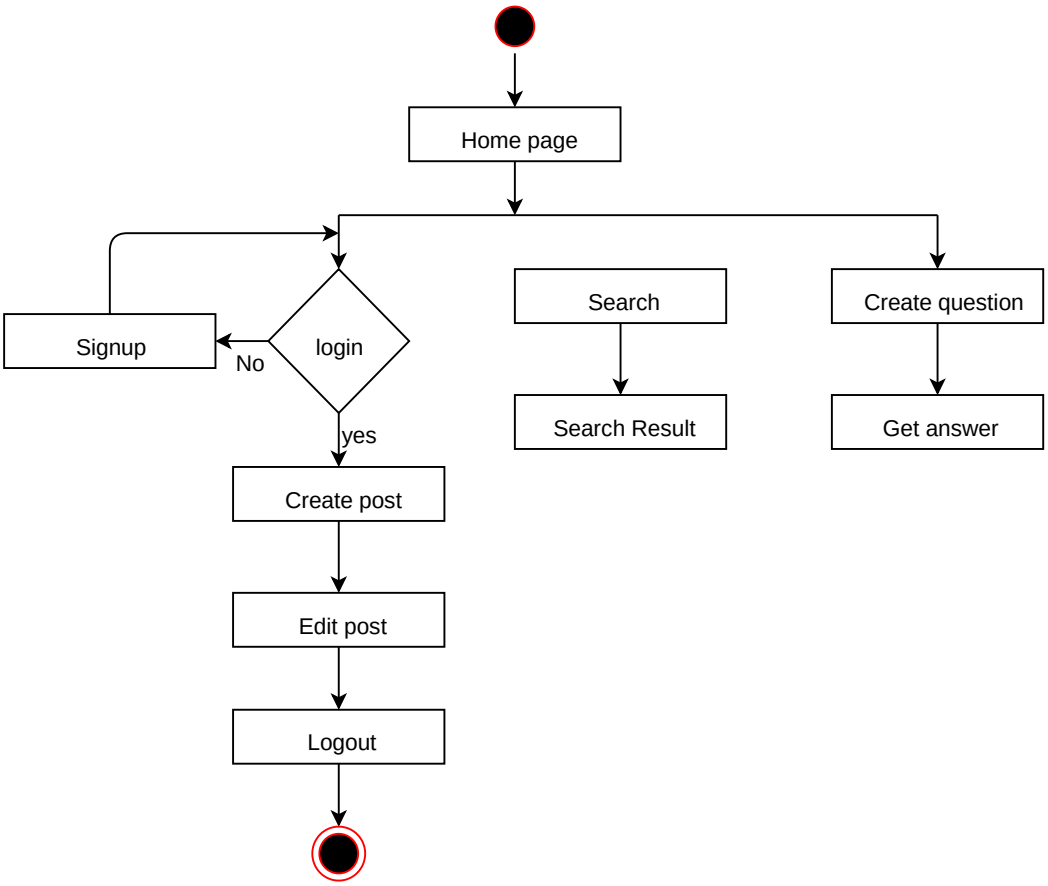

Figure 3.3.2: Activity Diagram for farmer

3.3.3 Activity Diagram for Agri-con

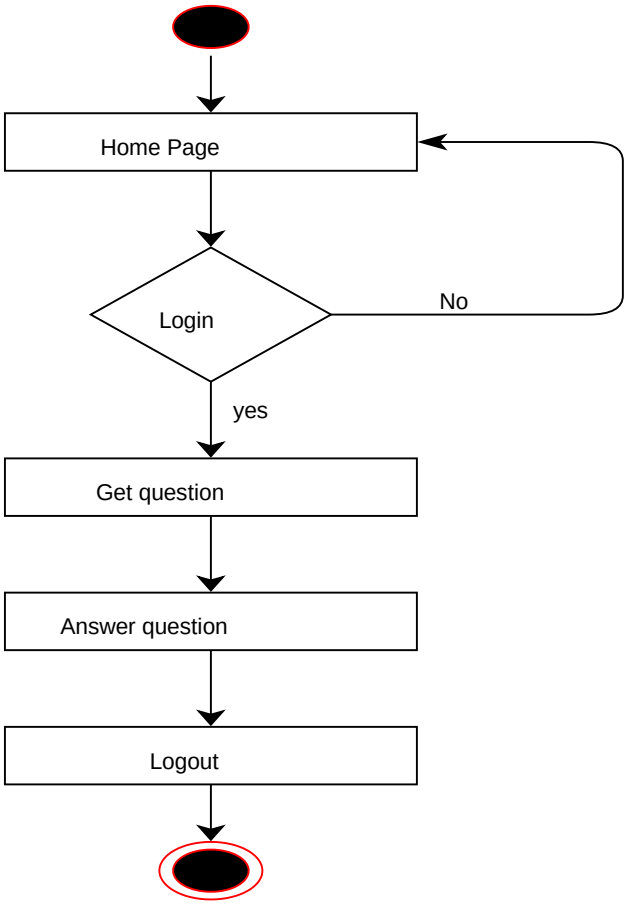

Figure 3.3.3: Activity Diagram for Agri-con

3.3.4 Activity Diagram for user

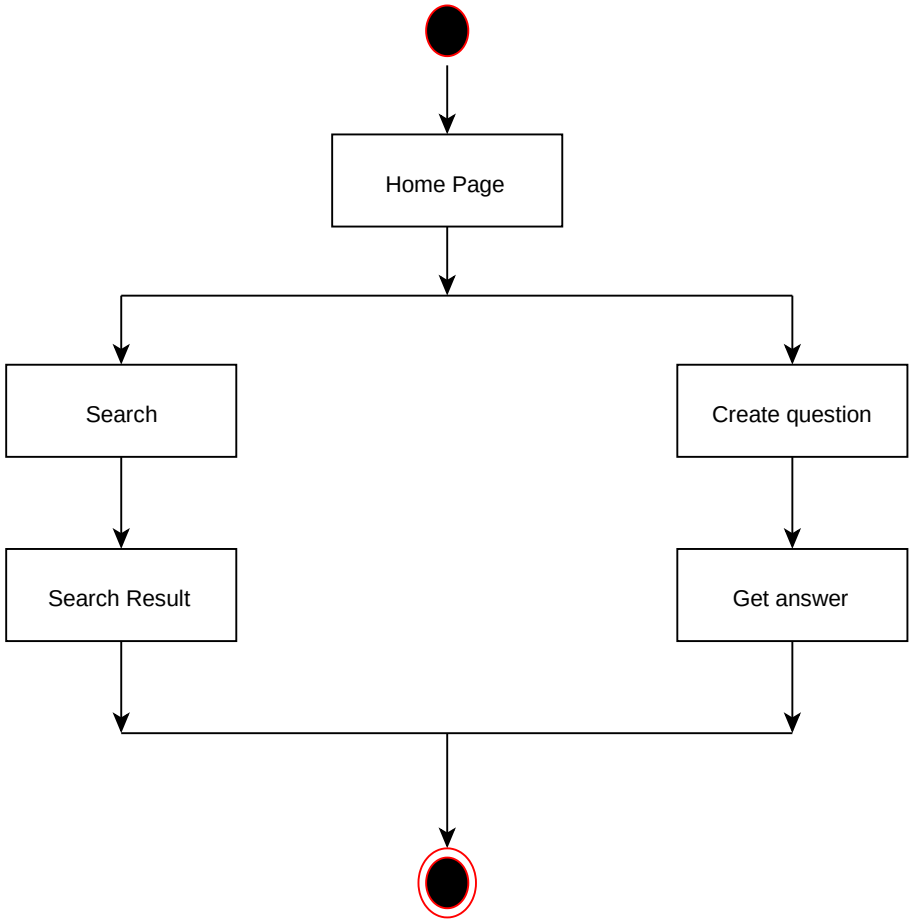

Figure 3.3.4:User Panel

3.4 Sequence Diagram

3.4.1 Sequence diagram for farmer

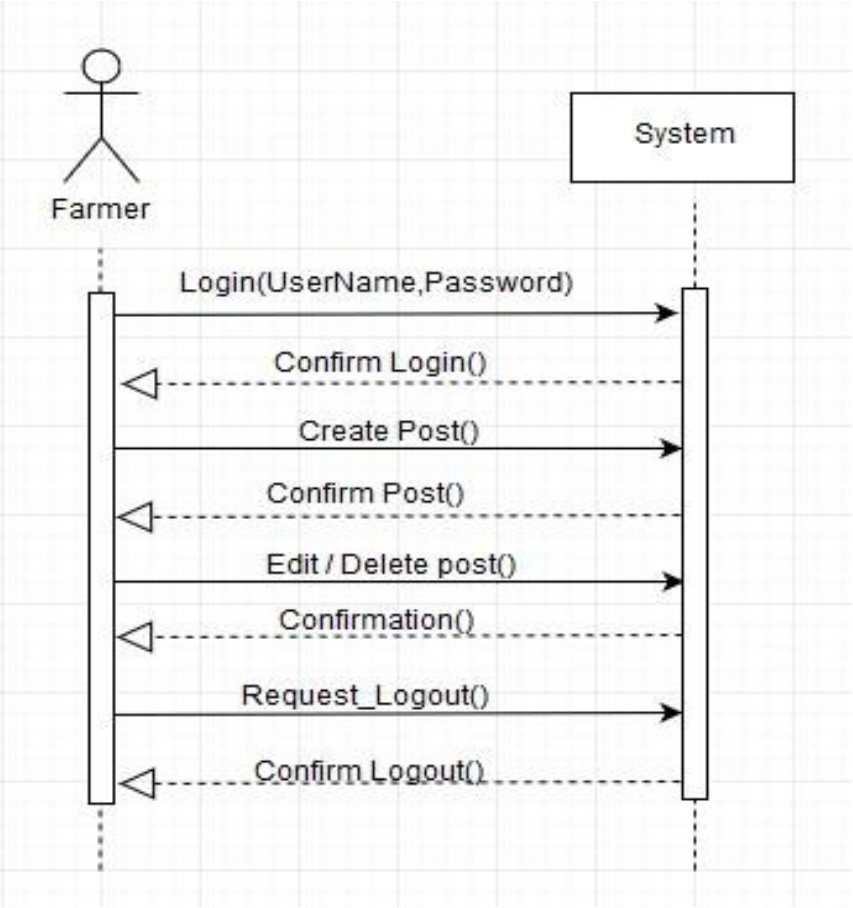

Figure 3.4.1: Sequence diagram for Farmer

3.4.2 Sequence Diagram for Agri-consultant

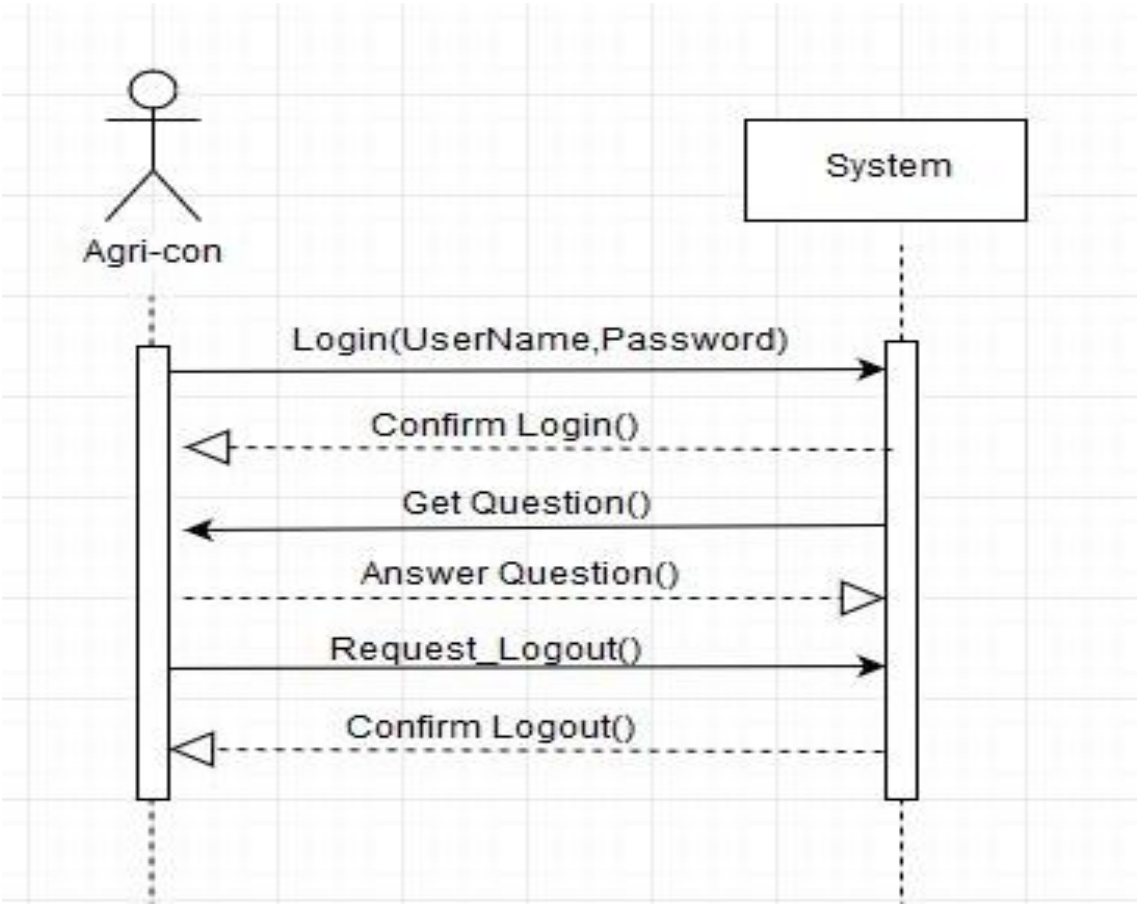

Figure 3.4.1: Sequence Diagram for agri-consultant

3.4.3 Sequence Diagram for Admin

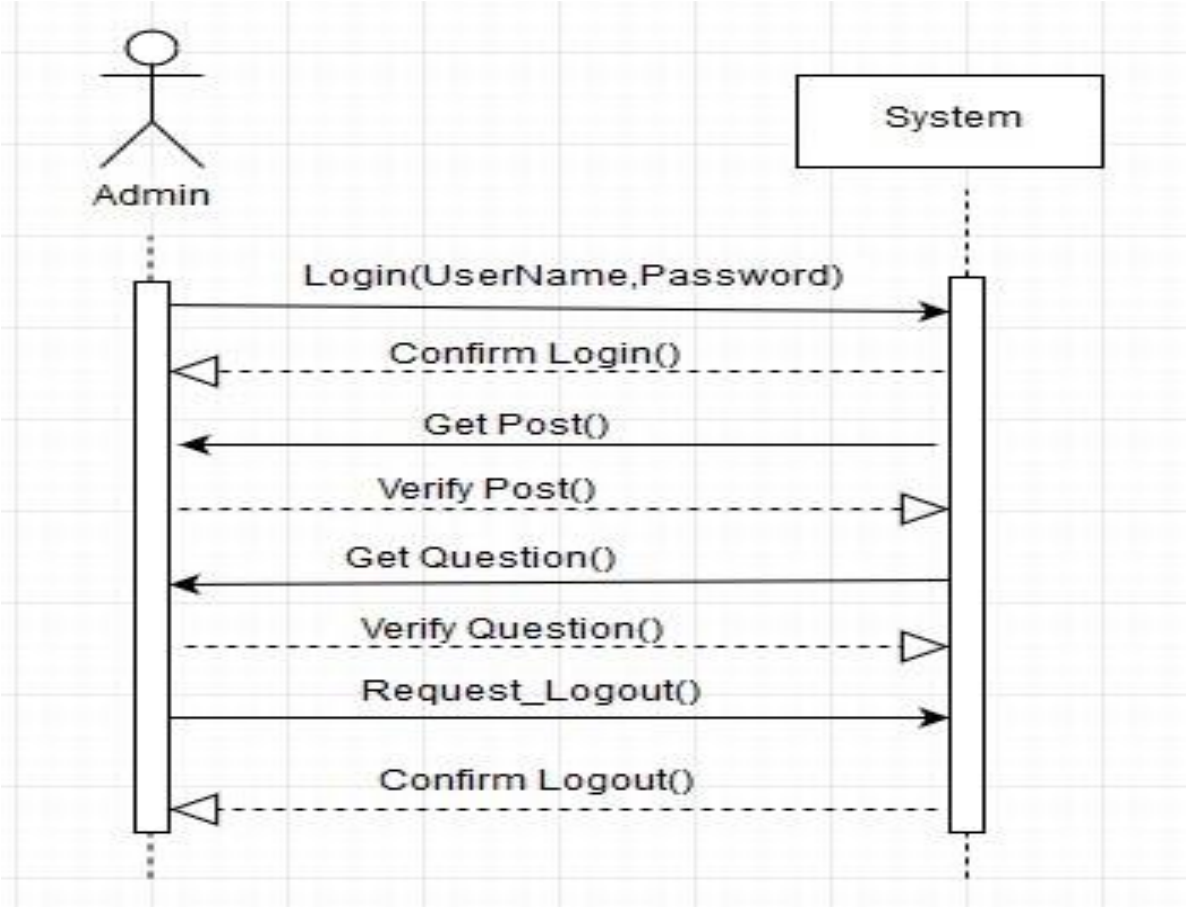

Figure 3.4.3: Sequence Diagram for admin

3.4.4 Sequence Diagram for User

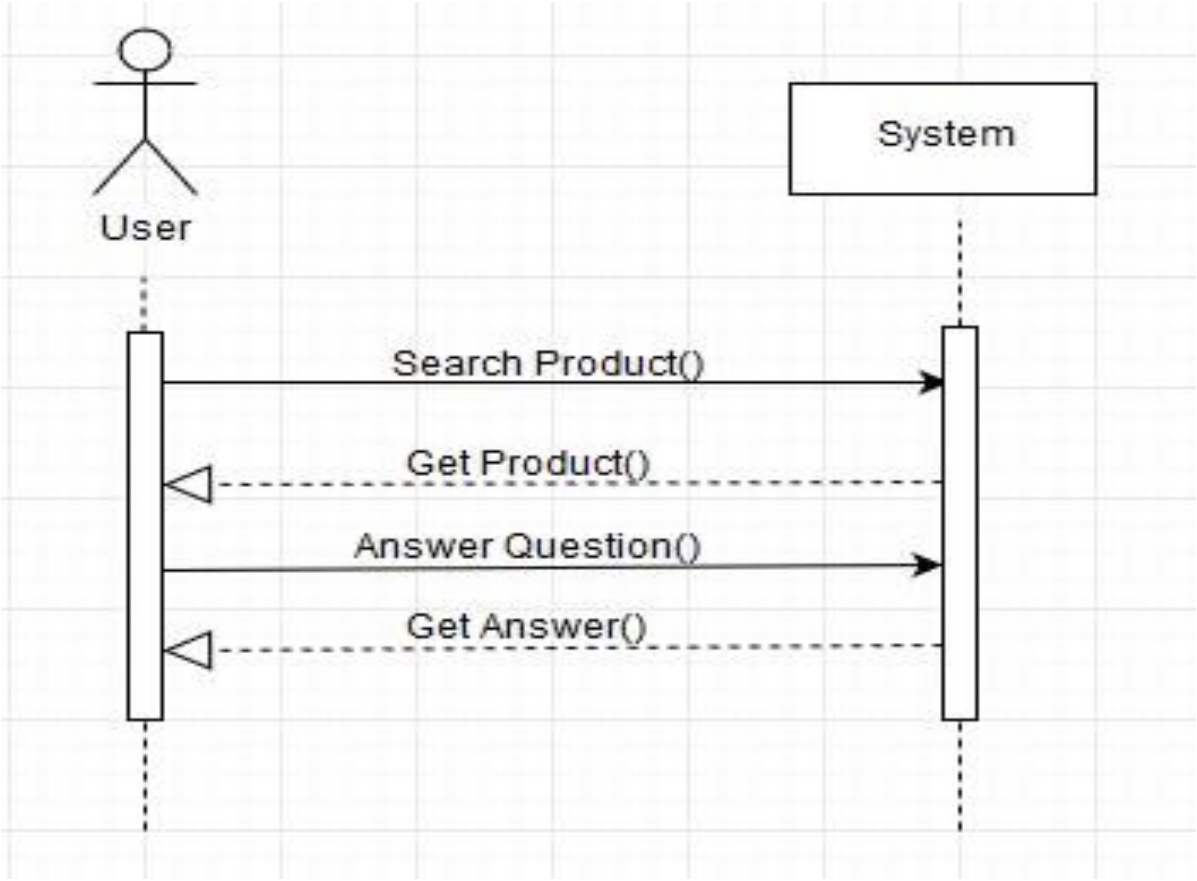

Figure 3.4.4: Sequence Diagram for user

CHAPTER- 4: SYSTEM DESIGN SPECIFICATION

4.2 Data Flow Diagram

4.2.1 DFD Level-0

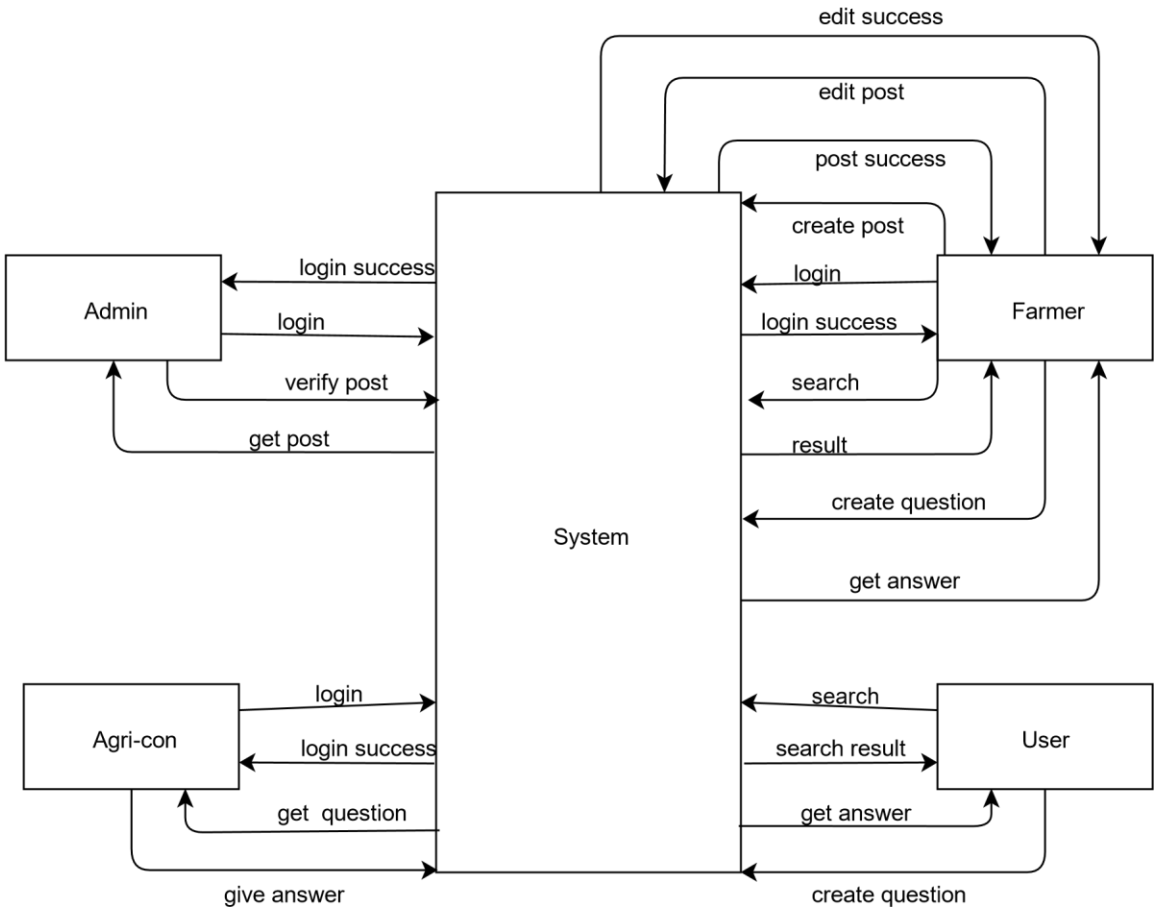

Figure 4.2.1: DFD Level - 0

4.3 ER Diagram

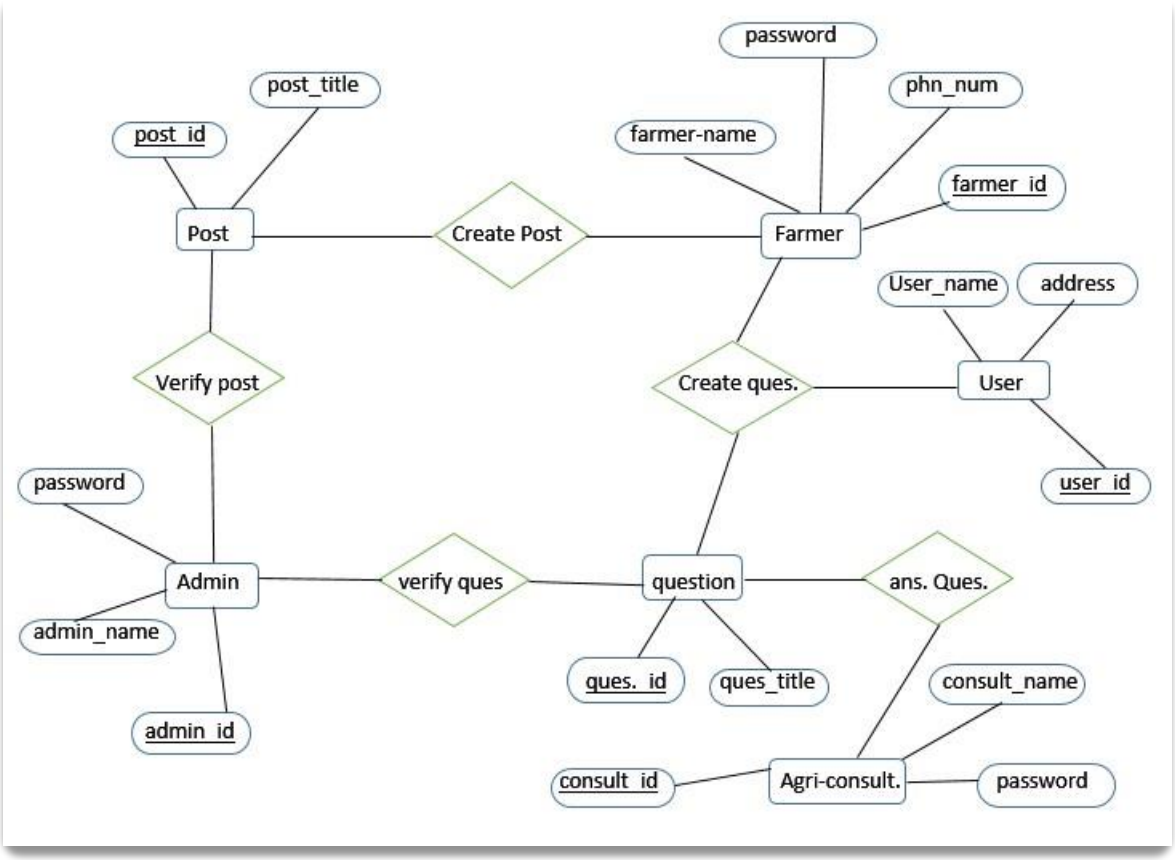

Figure 4.20: ER Diagram

4.4 Database

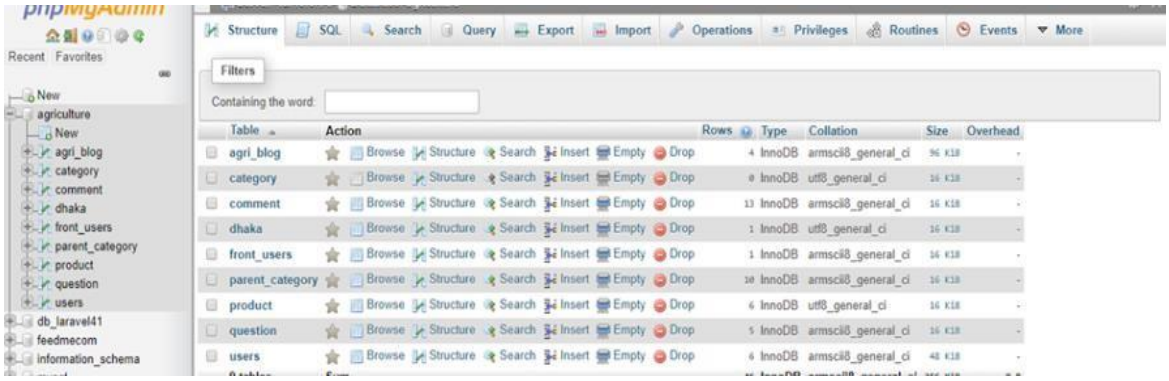

Figure 4.4: Database

4.5 Development Tools & Technology 4.5.1 User Interface Technology

User Interface Technology is given in table 4.31

Table: 4.31: User Interface Technology

4.5.1.1	PHP
4.5.1.2	JavaScript jQuery
4.5.1.3	HTML5, CSS3 and Twitter Bootstrap

4.5.2 Implementation Tools & Platforms

Implementation Tools & Platforms is given in table in table 4.32

Table: 4.32: Implementation Tools & Platforms

4.5.2.1	Atom
4.5.2.2	MY SQL ,Xampp

CHAPTER -5:
SYSTEM TESTING

5.1 Testing Features

5.1.1 Features to be tested

Features to be tested details are given in table 5.33

Table 5.33: Features to be tested

Featured ID	Featured Name	Description	Involved User
001	Login (Admin)	Check admin login working or not	Admin
002	Search	Check search feature working or not	User
003	Create post	Check farmer can successfully create a post.	Farmer
004	View post	Check user can see all post in home page.	Buyer, Farmer
005	Post details	Check user can see a post details by clicking on detail.	Buyer, Farmer
006	Edit/delete post	Check farmer can edit / delete a post or not.	Farmer
007	Verify post	Check admin can approve / delete a post or not.	Admin
008	Create Question	Check farmer can ask question or not	Farmer
009	Answer Question	Check Agri-consultant can give answer or not.	Agri-consultant
010	Logout	Check user can log out or not	Farmer, Agriconsultant
011	Logout (Admin)	Check admin can logout or not.	Admin

5.3 Testing Environment (Hardware/Software Requirements)

Hardware: Computer

5.4.1 Sign up module

Sign up module are given in table 5.37.

Table 5.37: Sign up module

Id	ACTION	Input	Expected Result	Actual Result	Pass/Fail	Code module
1	Sign up	First name: Minhaz Last name: Abedin Username: ah_shad Password: mithen123 Email: shad13@gmail.com Location: Dhaka Phone number:0170011ssdd	Show error message phone number is invalid	Showing error message phone number is invalid	Pass	Models
2.	Sign up	First name: Minhaz Last name: Abedin Username: ah_shad Password: mithen123 Email: mithen13@gmail.com Location: Dhaka Phone number:01700112233	Show error message Last name is invalid	Showing error message Last name is invalid	Pass	Models
3.	Sign up	First name: Minhaz Last name:Abedin Username: ah_shad Password: mithen123 Email: Location: Dhaka Phone number:01700112233	Show error message email field required	Showing error message email filed required	Pass	Models

4.	Sign up	First name: Mithen Last name: Ab Username: ah_shad Password: Rua123 Email: trisa13@gmail.com Location: Dhaka Phone number:01700112233	Signup Successful	Showing success message	Pass	Models

5.4.2 Login Module

Table 5.38: Login Module

Id	ACTION	Input	Expected Result	Actual Result	Pass/Fail	Code module
1	Login	Email: mithen13@gmail.com Password: abch20	Show error message password don't match	Showing error message password don't match	Pass	Models
3.	Login	Email: mithen13@gmail.com Password: shad123	Login successful	Showing success message	Pass	Models

5.4.3 Search module

Table 5.39: Search module

Id	ACTION	Input	Expected Result	Actual Result	Pass/Fail	Code module
1	Search	Search for alu	Show all post of Dhaka	Showing all post of Dhaka	Pass	Views

5.4.4 Create post module

Table 5.40: Create post modules

Id	ACTION	Input	Expected Result	Actual Result	Pass/Fail	Code module
1	Create post	Title: alu Category: vegetable Price:100tk Quantity: 5kg Picture: abc.png	Show success message	Showing success message	Pass	Forms and views
2.	Create post	Title: alu Category: vegetable Price: Quantity: 5kg Picture: abc.png	Show error message price field required	Show error message price field required	Pass	Forms and views
3.	Create post	Title: Category: vegetable Price:100tk Quantity: 5kg Picture: abc.png	Show Error message title field required.	Show Error message title field required.	Pass	Forms and views

CHAPTER- 6 : USER MANUAL IMPLEMENATION

6.1 User manual for user:

6.1.1 User Home Page

At first user will view the home page. In homepage user will see some buttons on the menu bar then products.

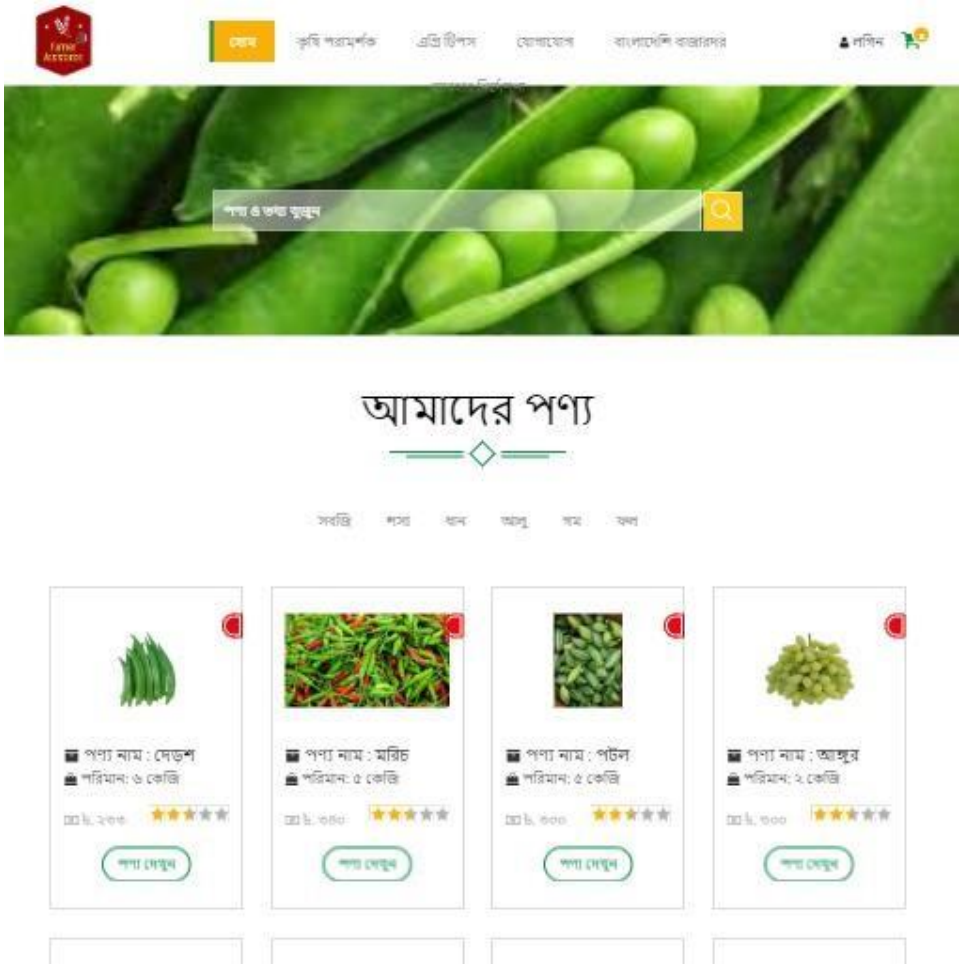

Figure 6.1.1: User Homepage

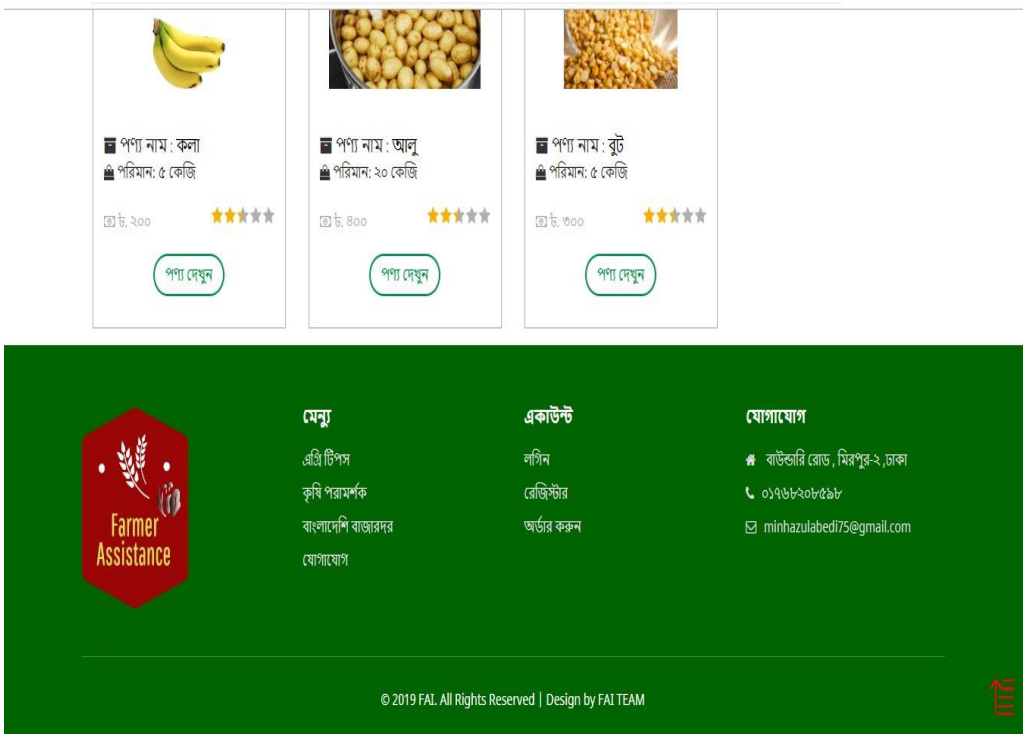

Figure 6.1.1: User Homepage (2)

6.1.2 User Signup

Before login into the system user must have to sign up. To sign up user have to go to sign up page.

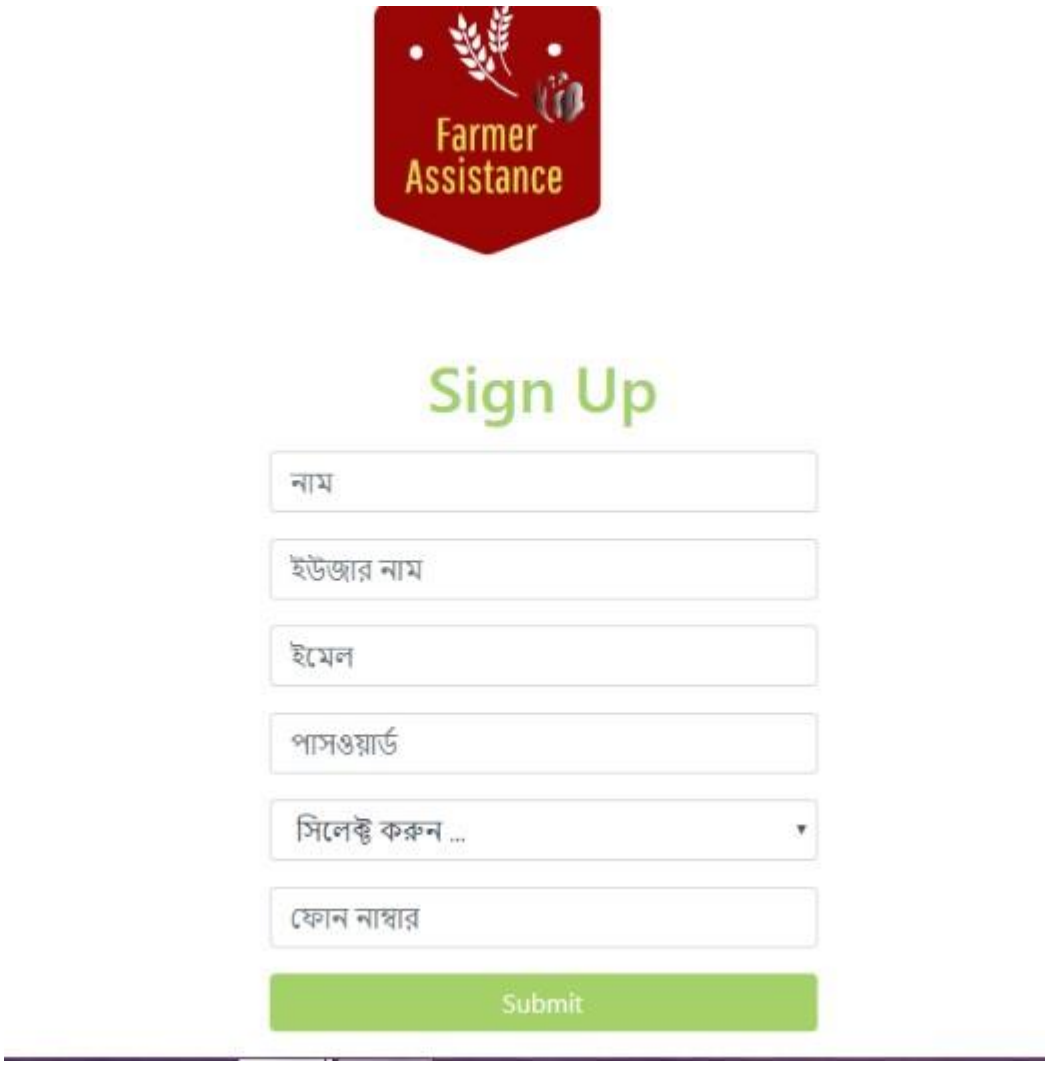

Figure 6.1.2: User Signup

6.1.3 User login

After sign up user can login into the system with the email and password

Figure 6.1.2: User login (1)

Figure 6.1.2: User login (2)

6.1.4 Create post

Farmer can create post for their products. To make a post farmer have to select add post. Then farmer will get a form.

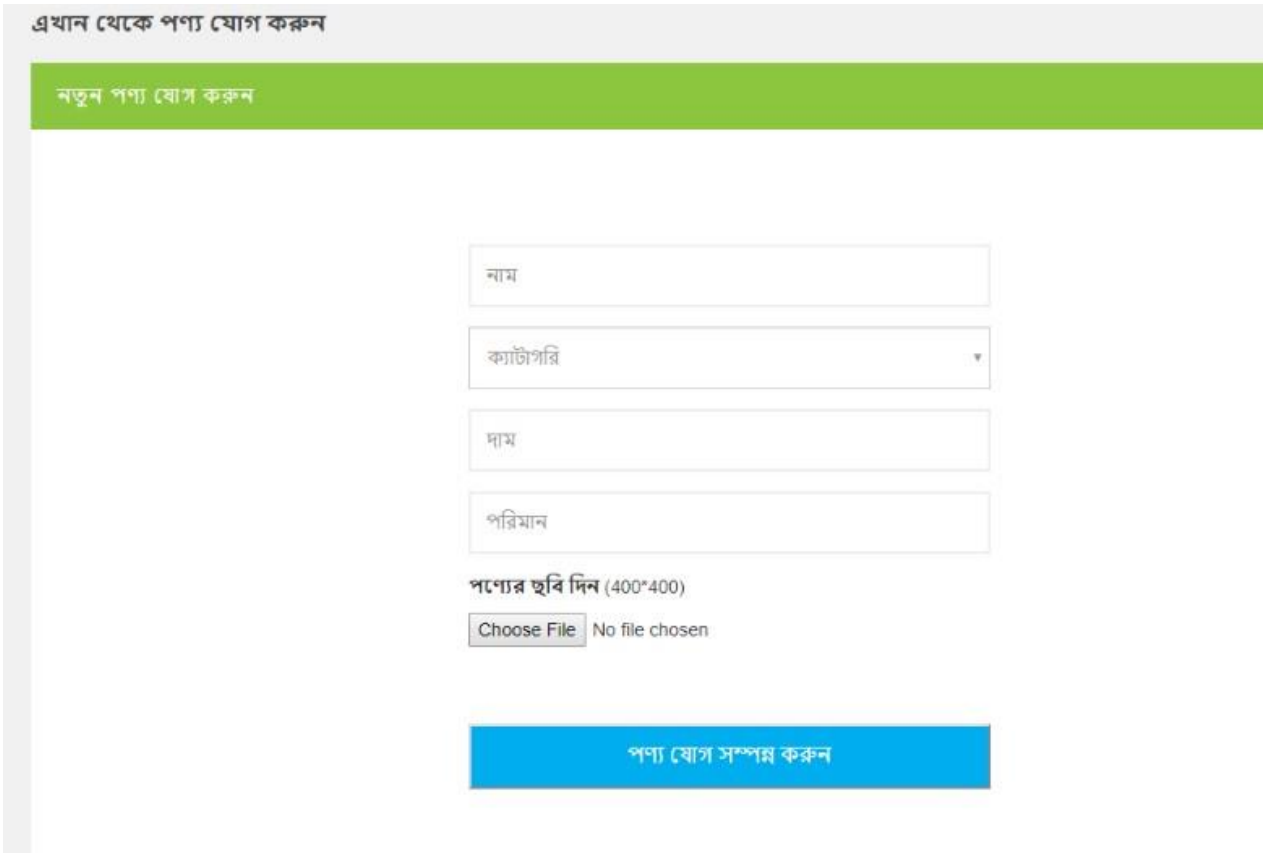

Figure 6.1.4: create post

6.1.6 Create question

Farmer & User can create any question about their farming.

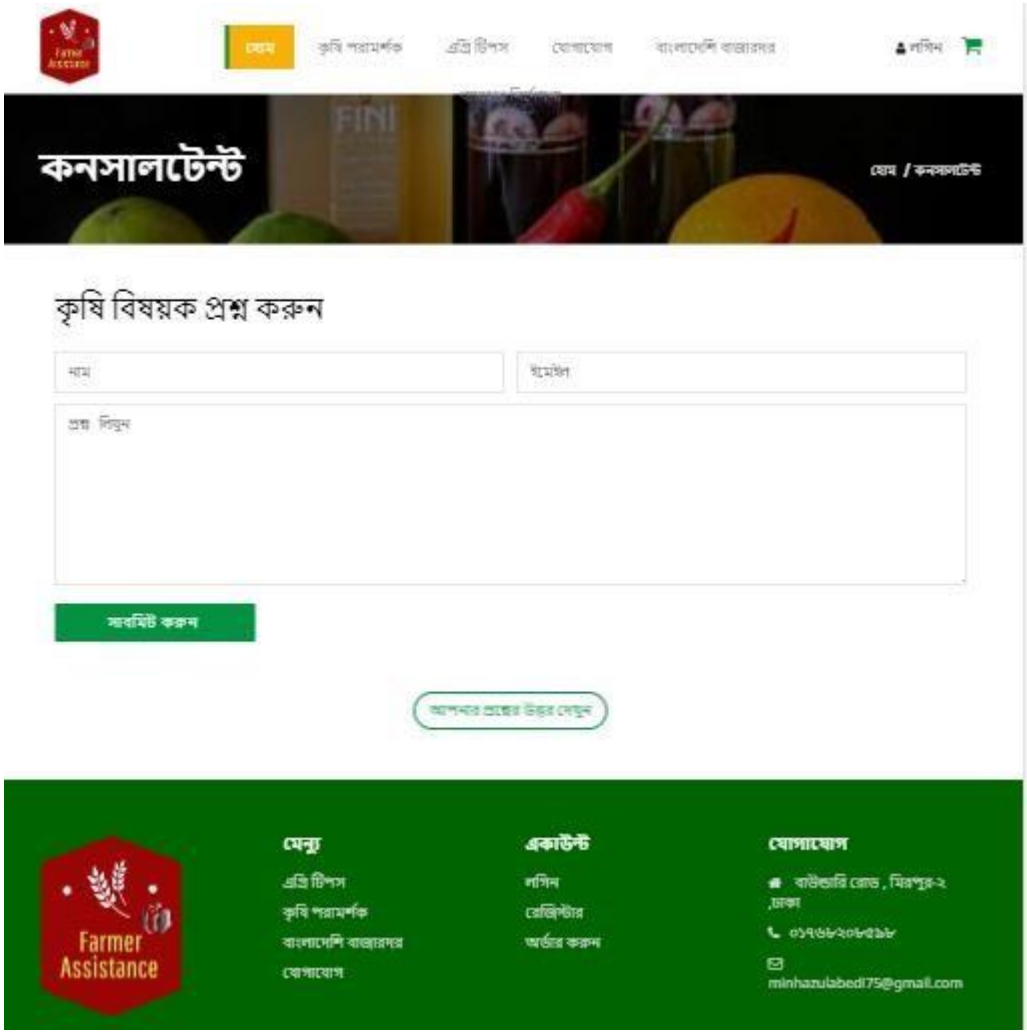

Figure 6.1.6: create question

6.1.7 Agri tips

Farmer & User can use for helping agriculture event

Figure 6.1.7: agriculture tips

6.1.8 Contact

Farmer & User can contact in this policy

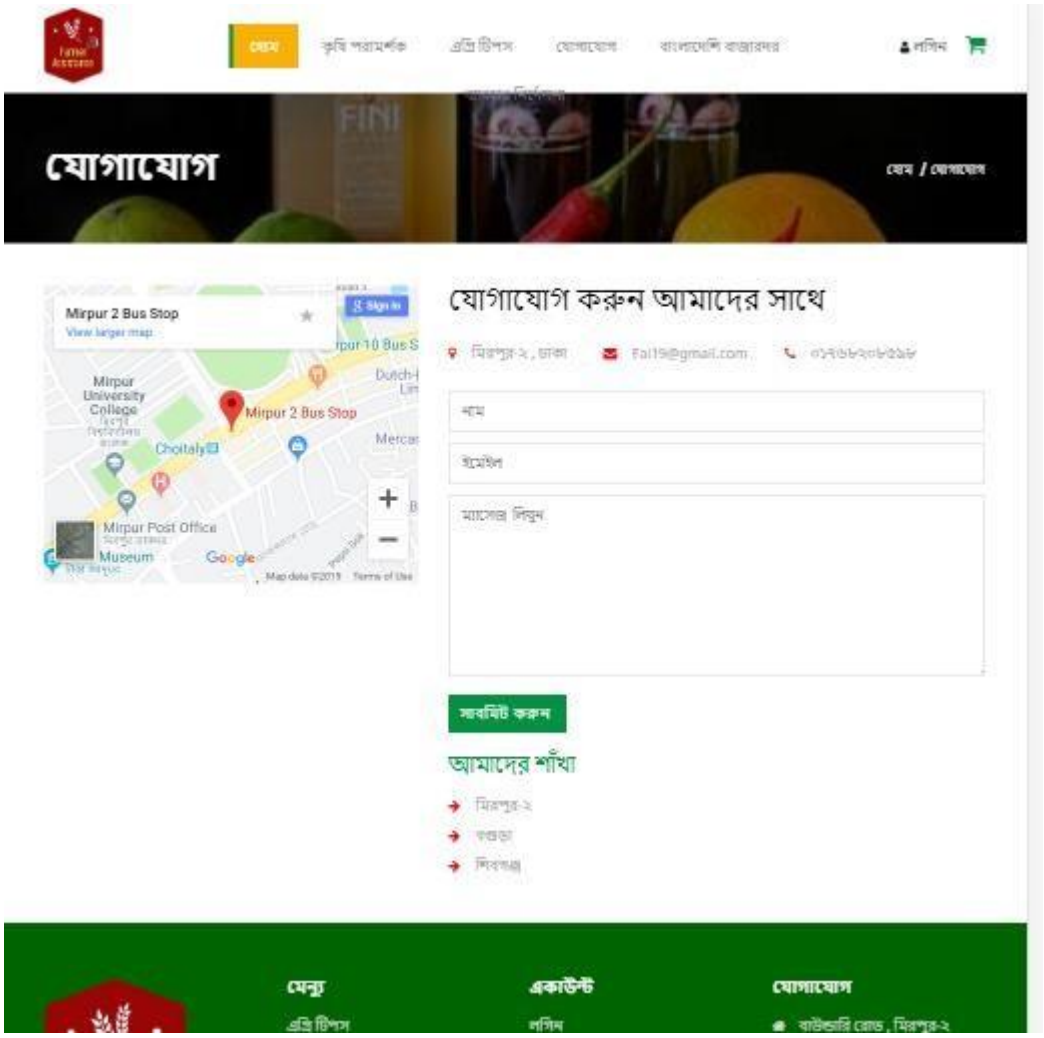

Figure 6.1.8: Contact

6.1.9 Farmer and Features

Farmer can use all feature for his product

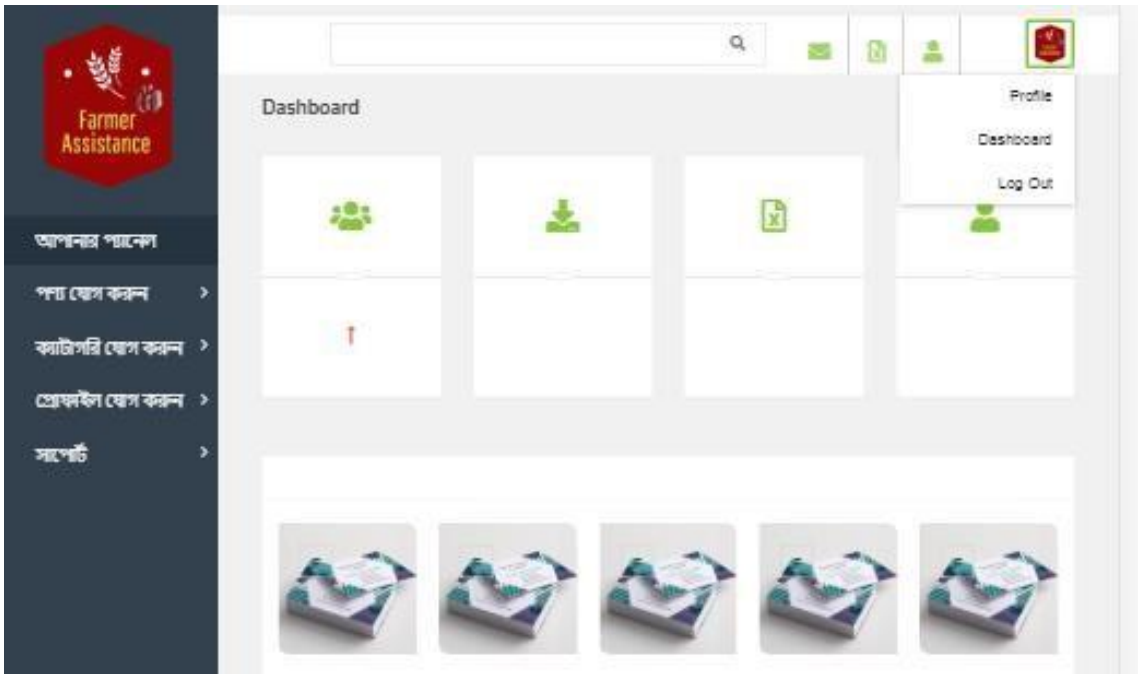

Figure 6.1.9 : Farmer Panel (1)

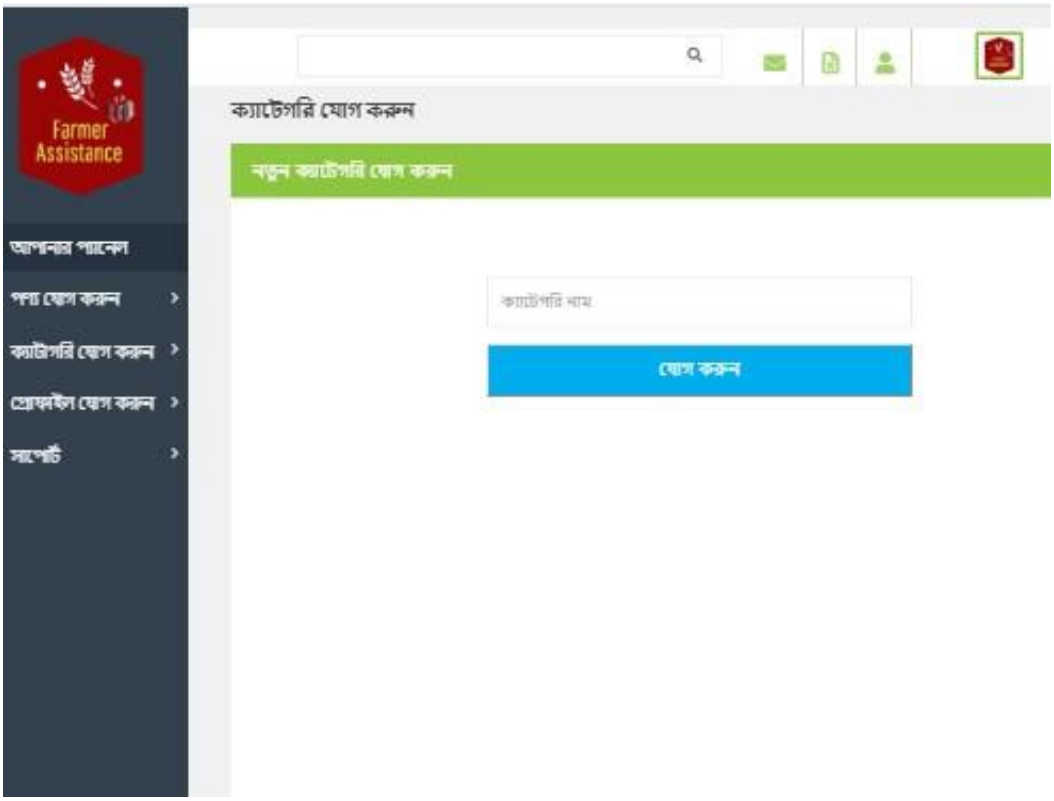

Figure 6.1.9 : Farmer Panel (2)

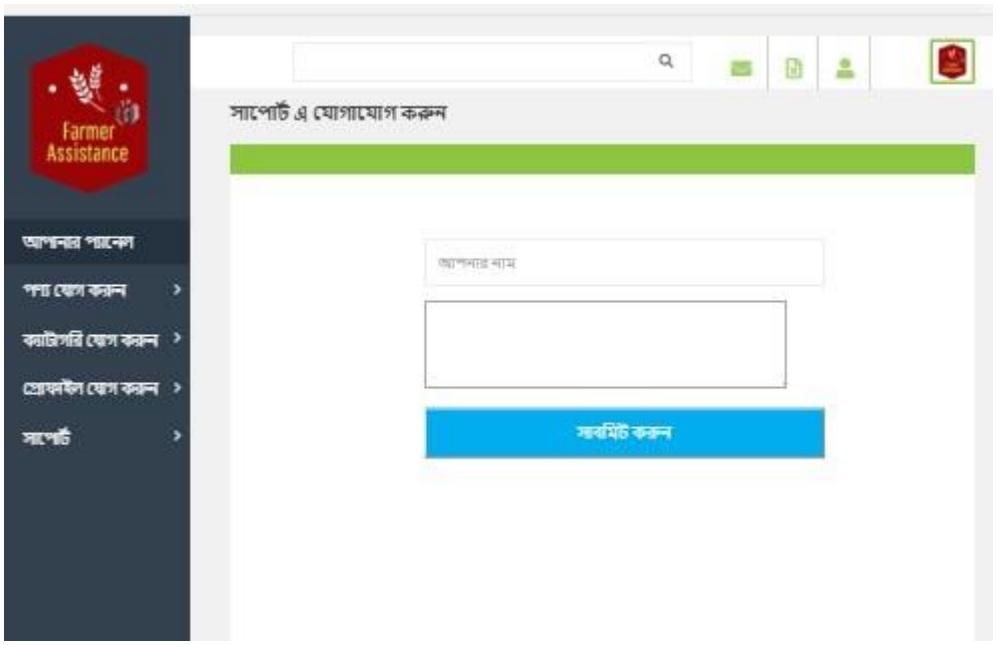

Figure 6.1.9 : Farmer Panel (3)

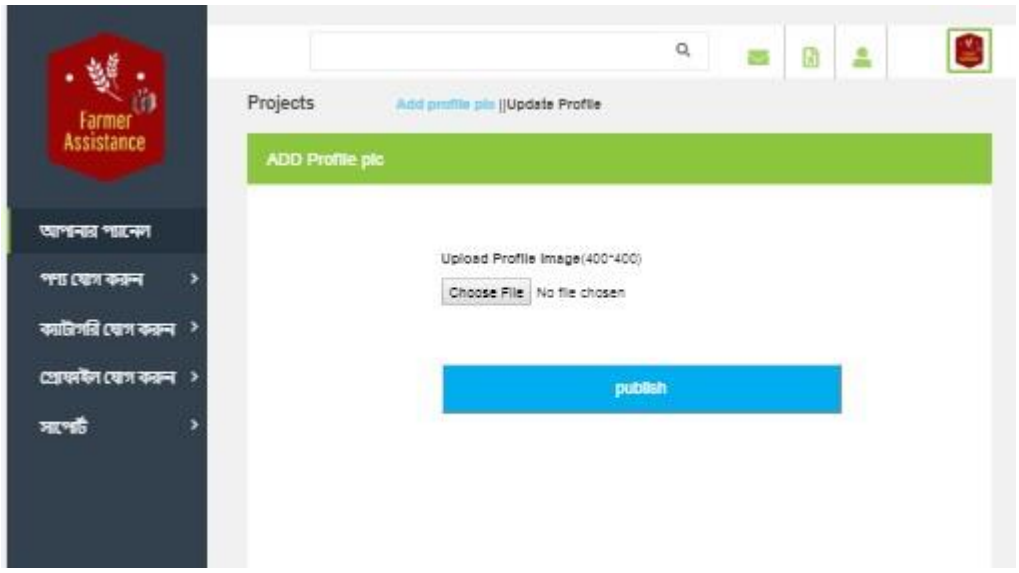

Figure 6.1.9 : Farmer Panel (4)

6.1.10 Agri consultant panel and Features

Agri consultant can use all feature for his product

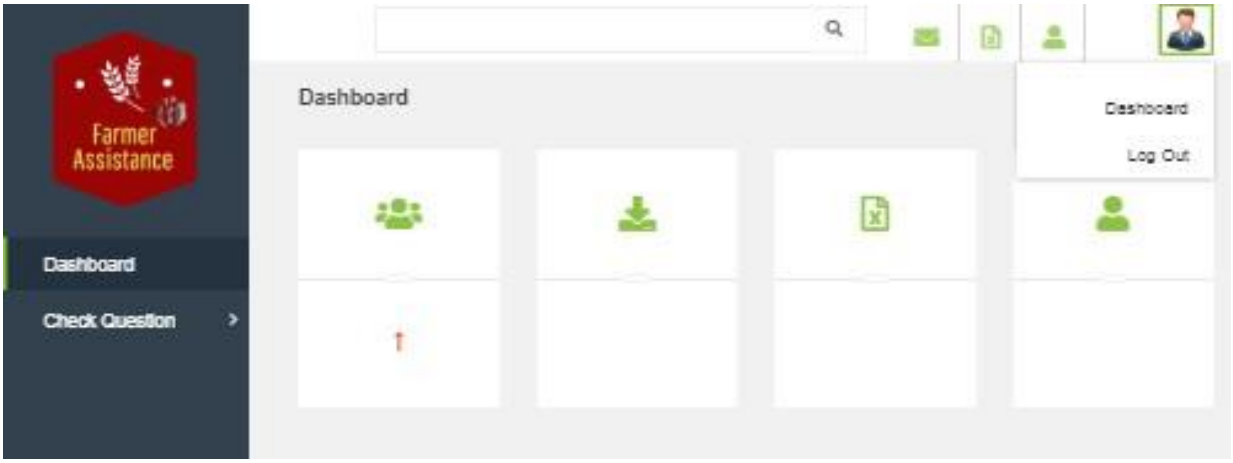

Figure 6.1.10 : **Agri consultant** Panel (1)

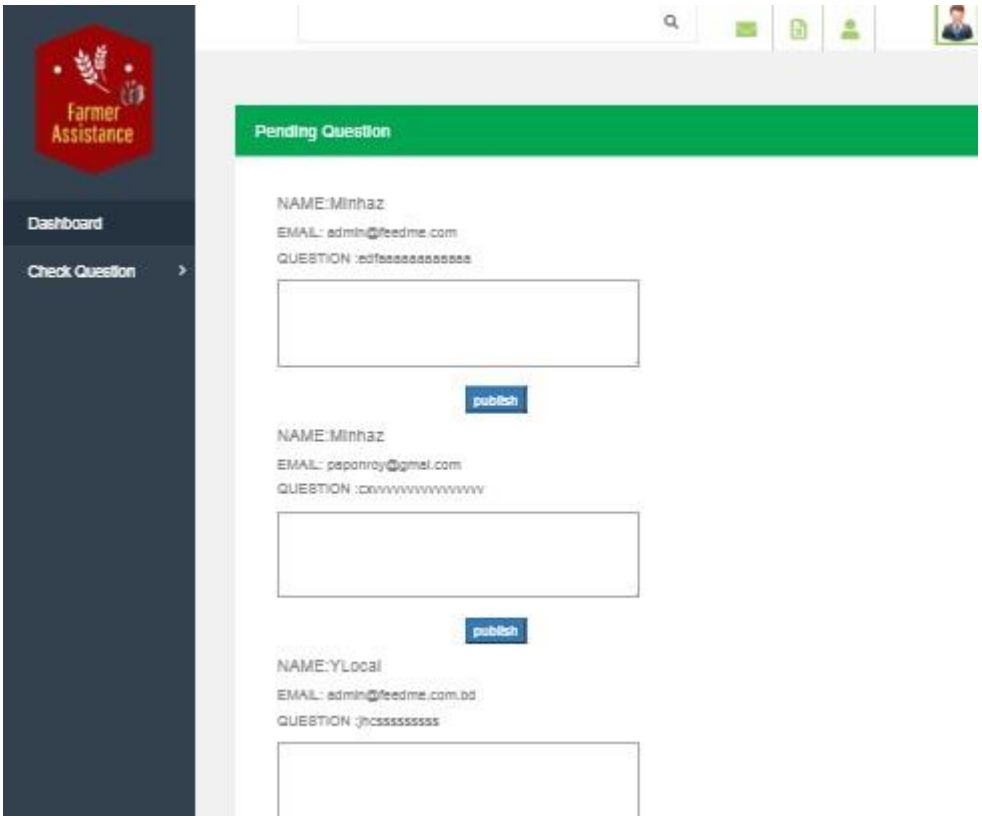

Figure 6.1.10 : **Agri consultant** Panel (2)

6.1.11 Admin Panel

This is the feature of admin

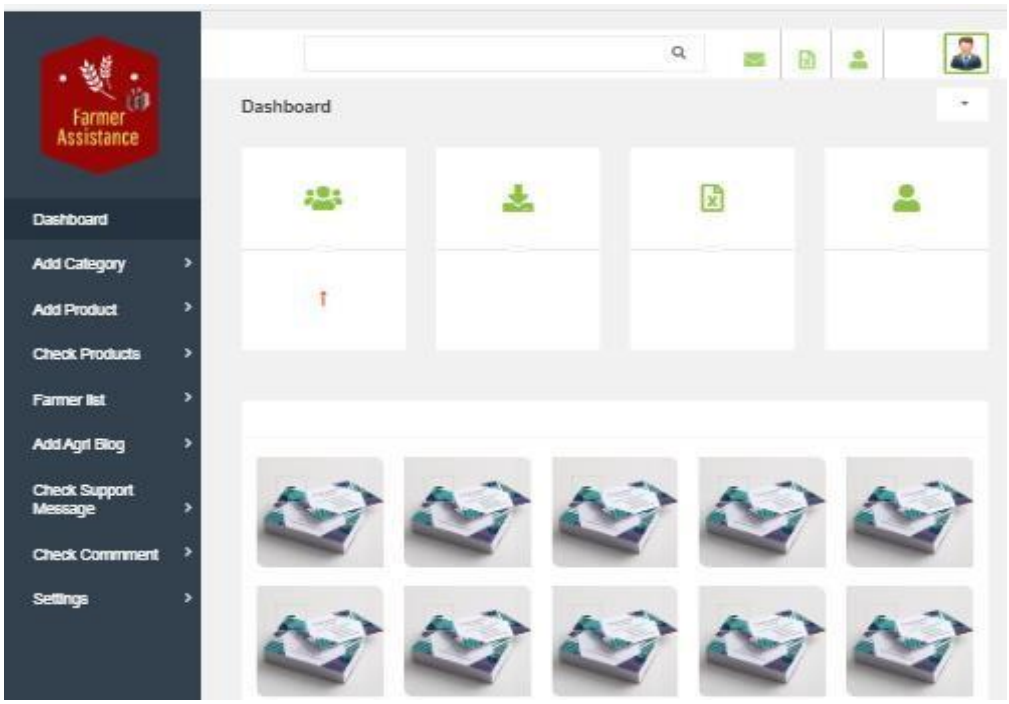

Figure 6.1.11 : Admin Panel (1)

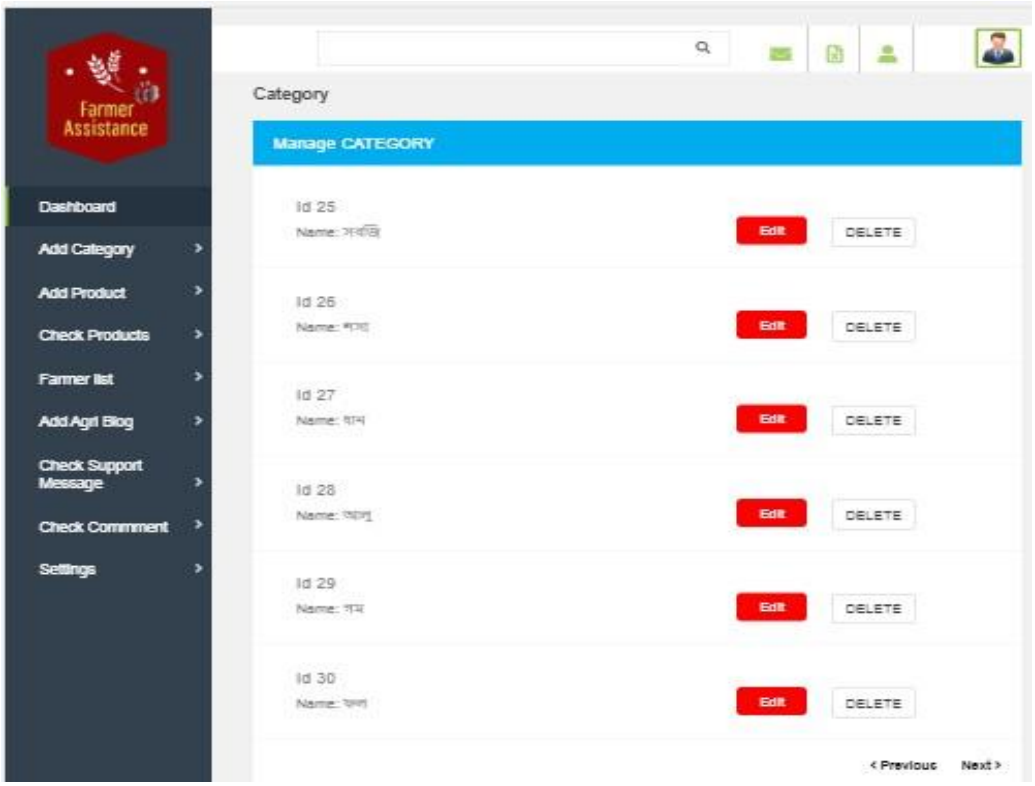

Figure 6.1.11 : Admin Panel (2)

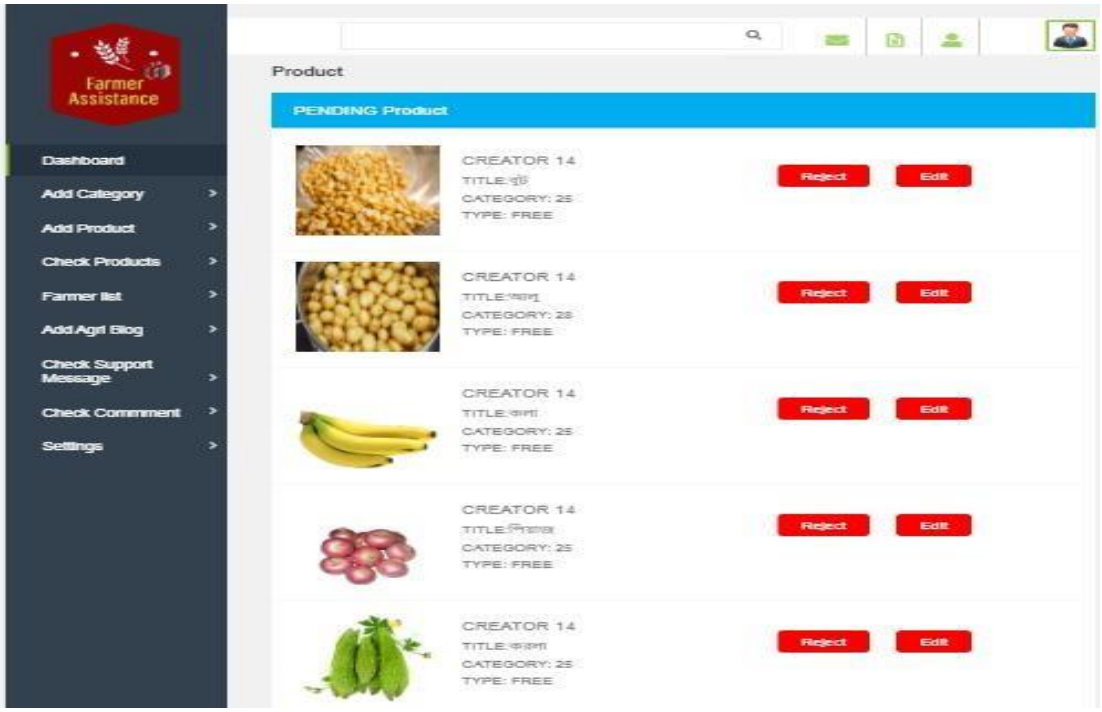

Figure 6.1.11 : Admin Panel (3)

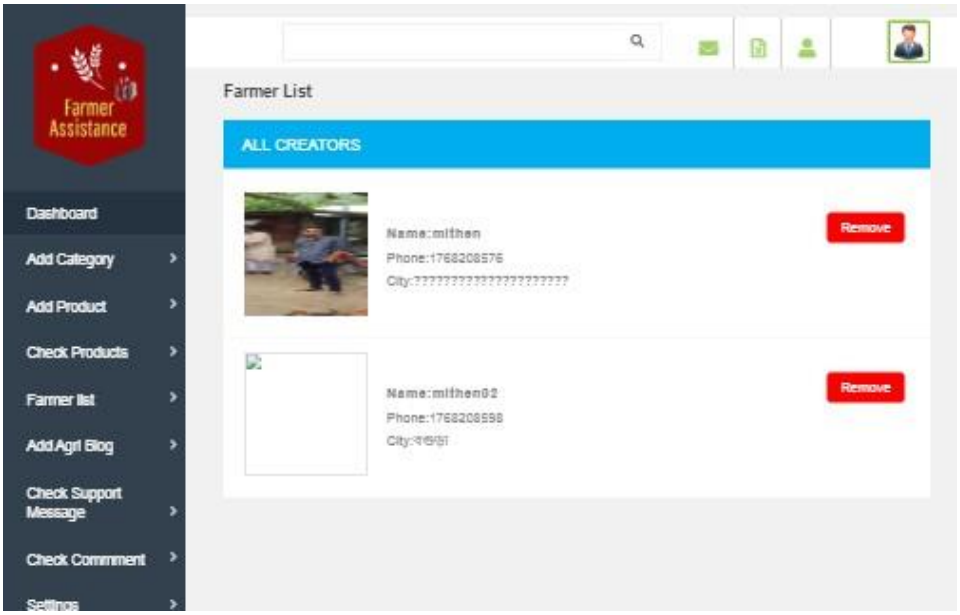

Figure 6.1.11 : Admin Panel (4)

CHAPTER 7
Conclusion

7.1 Limitations

1. System is not full error free.
2. System is not fully bug free.
3. System is full secure.

7.2 Obstacles & Achievements

Obstacles & Achievements are given in table 6.42

Table: 6.41: Obstacles & Achievements

Obstacles	Achievements
1.Form validation	1. Every field is validated.
2. Reduce response time.	2. Response time is within 4 seconds.
3. Showing update post on the top	3. Update posts are on top.
4. Matching user data with database when login.	4. User data matched when login.
5. Searching products on homepage.	6. Getting all data according the searched word.

7.3 Conclusion

Considering so many difficulties throughout the entire development process the web application and the system is ready to be used by the user with high accuracy and efficiency. The system will be very easy to use and maintain as the documentation and user manual is available for every user. There will be surely room for enhancement during development.

The web application and the system is better, more effective and faster than the existing all other existing system. The system is rich with information and available for everyone.
The system will support all type of screen.

This system is not developed for small purpose it has a long plan. Not just in our country we want to make our system available for every country in the world.

CHAPTER 8
References

There are the references of this Web Based Project Farmer Assistance

[1] http://dam.gov.bd

[2] http://www.w3school.com

[3] http://www.phptoit.com

[4] http://www.styleboost.com

[5] https://www.wikipedia.org/