

# **Final Year Project Report**

## **Project Name**

**Agriculture Training and Management System**



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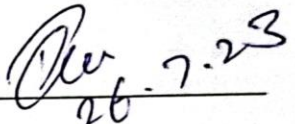
## **Dedication**

The **Agriculture Training and Management System** dedicated to the poor farmers in the Pakistan because this project is especially designed for the poor farmers of the Pakistan. They worked hard but their production is very low and we will help to increase their agriculture production and wants to get fruits according to their hard working. Thanks all of our respectable teachers they encourage us and support us throughout the project.


# Final Approval

## Panel of Examiners

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26-7-23

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# Acknowledgment

We have the full support of our **Final Year Project** supervisor in completing the **Project. Muhammad Asif Subhani** assists us greatly throughout all the project and leads us through numerous challenges. We want to thank a few people and **Organizations** for their assistance and guidance throughout my graduation. First and foremost, I would want to express my heartfelt appreciation to my **Final Year Project** supervisor, **Muhammad Asif Subhani** for his affections, love, inspiration, committed support, and never-ending ideas that have aided me in the growth of my project at all times. His professional competence and experience in programming and database management systems enabled me to effectively accomplish this job.

This endeavor would not be feasible without the supervision of **Muhammad Asif Subhani**.

**Thanks for all your encouragement!**

<b>Project Title</b>	<b>Agriculture Training and Management System</b>
<b>Objective</b>	It is web-based application which facilitate Farmers to increae their production of and crops manage their annual accountigs.
<b>Undertaken by</b>	<b>Jawad Hassan</b> <b>Riaz Ahmad Hakimudin</b> <b>Hira Saleem</b>
<b>Supervised by</b>	<b>Muhammad Asif Subhani</b>
<b>Starting Date</b>	<b>3<sup>rd</sup> October,2022</b>
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<b>Tools Used</b>	HTML, CSS, Bootstrap, JavaScript, React JS,  Chrome Web Browser, Weather.
<b>Operating System</b>	Window 10,11
<b>Documentation</b>	Microsoft Word

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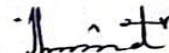
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Signature: \_\_\_\_\_

Date: \_\_\_\_\_

## Abstract

This software is related to the **poor farmers** because they work hard but don't get fruit according to their hard work because the work of the farmers is very hard and we observed that they do not get as much out production as the work. **Agriculture Training and Management System** aims at increasing agricultural production which will give farmers different ways to get maximum benefit from agriculture. Generally, the farmers are not so advanced due to which they are ignorant of many things and they do not know how they can increase the average of their crops. Thus, if any disease attacks their crops, they consult the people around them to save their crops, they provide different advices to Farmers according to their skills, while the farmers use these things to protect their crops from different type of diseases and he has face two types of loss one is the destruction of his crops and the other is the financial loss that he spends on the crops without understanding the matter. And the purpose of **Agriculture Training and Management System** is to teach the farmer how he can protect his crops from agricultural diseases and how to maximize his annual average yield and avoid losses. The software will also keep a record of the farmer's financial expenses so that the farmer knows how much he has spent on the crop and how much he has earned. The **purpose** and function of this software has been mentioned above that with the help of this software the farmers can maximize their crop average to get their benefit at minimum cost if the farmer uses this software. If he works on the right path, he can get maximum benefit.

## REVISION CHART

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**Table 0.1: Revision Chart**

<b>Version</b>	<b>Primary Author(s)</b>	<b>Description of Version</b>	<b>Date Completed</b>
<b>Capstone-1</b>	<b>Riaz Ahmad Jawad Hassan Hira Saleem</b>	Chapter 1 and 2 completed of Agriculture Training and Management Systems' Documentation.	10/12/2022
<b>Capstone-1</b>	<b>Riaz Ahmad Jawad Hassan Hira Saleem</b>	Chapter 3 and 4 completed of Agriculture Training and Management Systems' Documentation.	15/02/2023
<b>Capstone-1</b>	<b>Riaz Ahmad Jawad Hassan Hira Saleem</b>	Chapter 5 completed of Agriculture Training and Management Systems' Documentation.	20/03/2023
<b>Capstone-2</b>	<b>Riaz Ahmad Jawad Hassan Hira Saleem</b>	Chapter 6 and 7 completed of Agriculture Training and Management Systems' Documentation.	20/07/2023
<b>Capstone-2</b>	<b>Riaz Ahmad Jawad Hassan Hira Saleem</b>	Chapter 8, 9 and 10 completed of Agriculture Training and Management Systems' Documentation.	25/07/2023
<b>Capstone-2</b>	<b>Riaz Ahmad Jawad Hassan Hira Saleem</b>	Chapter 11 and 12 completed of Agriculture Training and Management Systems' Documentation.	01/08/2023

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## Definitions and Acronyms

**Table 0.1: Table of acronyms and definitions**

<b>Acronym</b>	<b>Definition</b>
UMT	University of Management and Technology
DFD	Data Flow Diagram
ERD	Entity Relationship Diagram
HTML	Hyper Text Markup Language
CSS	Cascading Style Sheet

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# 1. INTRODUCTION

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Agriculture Training and Management System aims at increasing agricultural production which will give farmers different ways to get maximum benefit from agriculture. Generally, the farmers are not so advanced due to which they are ignorant of many things and they do not know how they can increase the average of their crops. Thus, if any disease attacks their crops, they consult the people around them to save their crops, they provide different advices to Farmers according to their skills, while the farmers use these things to protect their crops from different type of diseases and he has face two types of loss one is the destruction of his crops and the other is the financial loss that he spends on the crops without understanding the matter. And the purpose of Agriculture Training and Management System is to teach the farmer how he can protect his crops from agricultural diseases and how to maximize his annual average yield and avoid losses. The software will also keep a record of the farmer's financial expenses so that the farmer knows how much he has spent on the crop and how much he has earned. The purpose and function of this software has been mentioned above that with the help of this software the farmers can maximize their crop average to get their benefit at minimum cost if the farmer uses this software. If he works on the right path, he can get maximum benefit. By using this web-based application farmer contact and buy fertilizers from fertilizer shops.

## 1.1 Motivations

The main aim for building this Web-Based Application to increase the agricultural production and better management of financial expenses that the farmers spend on their crops. The purpose of this software is to promote the development of agriculture because Pakistan is an agricultural country and many crops can be grown here. This software will specifically educate the farmer on how he can get the most out of his crops and at the same time this software will also have the ability to calculate the annual income of the farmer. How much has he benefited or lost? Apart from this, this software will inform about medicines, agricultural tools and some other things related to agriculture. The software's capabilities include storing farmer information in a database, managing financial records, and educating the farmer to maximize profits. We have to see that all Farmers are dependent on other Farmers, they are not well educated and experienced about agriculture so this thing motivates us to create an Agriculture Training and management system for farmers. We have to create an online Agriculture Training and management system which helps the farmers to find fertilizers according to their crop's diseases. This application helps the farmers to buy fertilizers from fertilizer shops. Farmers can easily use this application and find the solutions of their crop's diseases and they manage their financial expenses that they spend on their crops and they are able calculate after cutting the crops what they are actually earn from their crops. This application helps the farmers how to move forward step by step and which fertilizers are useful on which stage of crop. If they follow instructions, they will get maximum benefits from this application. This application will make farmer's life easy and more manageable.

## **1.2 Project Overview**

Agriculture Training and Management System is introduced to farmers for increasing agricultural production. Everyone is a Mobile user and world is shifted from offline to online Technology. Usually most of the farmers do not have time to visit the fertilizer shops. So, the farmers prefer online shops. Agriculture Training and Management System is a system that save farmer's time and provide ease to its farmers. Farmers get different discounts if they buy fertilizers from online fertilizer shops. Fertilizer Companies are giving discount to fertilizer shops and fertilizer shops are giving discounts to the farmers. Agriculture Training and Management System Farmers can view and search about diseases and find solution of disease that they want. Farmer can manage his annual accounting. The User can comment about seeds, fertilizers and Agricultural medicines. This System will show the input and output details of their costs and profit. The System will show the notification for sowing seeds, fertilizers Agricultural medicines and water management for accurate time. Basically, this application will provide total guidelines about agriculture like how to manage water, which fertilizer is best and why, it will tell the former about time management step by step. The System will show the Weather condition of the specific area. The User will search the crops production rate in the specific area. The System will show the various categories of the seeds with price and production status to the user. The system will show the accurate route for best agricultural production to the user. The System will train the farmer with videos and audio clips.

## **1.3 Problem Statement**

The Current System required additional time to consult with experience farmer. It demands physical effort. This current system is not working well and not reliable, at the end former faces financial issues that is not good for every farmer. The farmers are not so advanced due to which they are ignorant of many things and they do not know how they can increase the average of their crops. Thus, if any disease attacks their crops, they consult the people around them to save their crops, they provide different advices to Farmers according to their skills, while the farmers use these things to protect their crops from different type of diseases and he has face two types of loss one is the destruction of his crops and the other is the financial loss that he spends on the crops without understanding the matter. The software will also keep a record of the farmer's financial expenses so that the farmer knows how much he has spent on the crop and how much he has earned. Time of users will be saved and they manage their things easily.

## **1.4 Objectives**

Agriculture Training and Management System provides all the information related to Seeds, Water Management, Time Management, crops diseases, Treatment of crop diseases and better management of financial expenses. This System will educate the formers how they grow their crops step by step. Our main objective is to provide a software which is freely available to use publicly for the farmers. We want to produce a software that reduces the problems that are faced due to crops diseases. We want to produce a software that is user-friendly and interactive. Former

can easily manage his Basically, this software is made for the easy of formers to increase the production of crops.

## 2. DOMAIN ANALYSIS

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### 2.1 Customer

A synopsis of the client is that with whom you are collaborating. The company, its products/services, and so on could be included in this client's synopsis. The end user who consumed the power can be the customer at some point

### 2.2 Stakeholders

**Table 2.1: List of stakeholders**

Stakeholder	Role in System
<b>Admin</b>	<b>Admin</b> will be Maintain and troubleshoot the Website.
<b>Farmer</b>	<b>Farmer</b> should get training from this website and Farmer is the main actor of this project because this project is working on the training of the farmer.  Also, Former can be managing their annual accounting and keep on this website.
<b>Agriculture Experts</b>	<b>Agriculture Experts</b> will guide the Farmers for their improvement and development in this website.
<b>Fertilizer Companies</b>	<b>Fertilizer Companies</b> advertise their fertilizer in the website with complete detail according to the website rules.
<b>Medicine Companies</b>	<b>Medicines Companies</b> advertise their Agriculture medicines in the website with complete detail according to the website rules.
<b>Agriculture Department Govt</b>	<b>Agriculture Department Govt</b> will check agriculture experts, fertilizer companies and medicines companies are working correct or not and will the information given by them not be a discussion of any loss.?
<b>Fertilizer experts</b>	<b>Fertilizer Expert</b> can give his opinion on agriculture fertilizers and medicine.
<b>Medicine Experts</b>	<b>Medicine Experts</b> will check the medicine post and report to the admin. He will manage fertilizer medicines and pesticides

## 2.3 Affected Groups with social or economic impact

Admin, Farmers, and Agricultural Businesses are all impacted economically in terms of commerce and service, as well as socially in terms of technology use.

## 2.4 Dependencies/ External Systems

The Project depends on the Crops through which the farmers and the Agriculture Department will do trading.

## 2.5 Reference Documents

### 2.5.1 Related Projects

Make a list of all the documents and projects you have researched for this project, together with their connections and references. E.g.

We researched a number of comparable systems before developing Agriculture Training and Management System. Their information is provided below.

- **GrowPak App**  
GROWTECH is an agricultural-based technology company, providing digital agri solutions to eliminate inefficiencies in the agricultural sector.
- **FFC Website**  
Fauji Fertilizer Company Limited was incorporated in 1978 as a joint venture between Fauji Foundation, a charitable trust incorporated under The Charitable Endowment Act, 1890 and Haldor Topsoe A/S of Denmark.
- **WikiFarmer Website**  
Wikifarmer is a global platform with the mission of empowering and educating farmers across the world and at the same time connecting them with the open market to sell their products at fair prices.
- **AgriPunjab Website**  
The mission is to sustain food security and support the national economy, making agriculture cost effective and knowledge based, with emphasis on farmer's welfare and maintenance of the yield potentials.

## 2.5.2 Feature Comparison

Table 2.2: Feature Comparison

⇒ Feature ⇩ Project	Crops Info	Fertilizer info	Medicine info	Crops Sow Time	Disease info	Water management	Department Checking	Actor Profile	Accounting Management
GrowPak (App)	✓	✗	✗	✗	✓	✓	✗	✓	✓
FFC (Website)	✗	✓	✓	✗	✗	✗	✓	✓	✗
WikiFarmer (Website)	✓	✗	✗	✗	✓	✗	✓	✓	✗
Agripunjab (Website)	✓	✓	✗	✗	✓	✓	✓	✗	✗
Agriculture Training and Management System	✓	✓	✓	✓	✓	✓	✓	✓	✓

<b>(website)</b>									
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### 3. REQUIREMENTS ANALYSIS

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#### 3.1 Requirements

Table 3.1: Requirements

RID	Description	Category	Attribute
FR1	Sign Up	Functional	System shall be able to provide Signup to the user.
FR2	Log In	Functional	System shall be able to provide Login to the user.
FR3	Show Main Menu	Functional	System shall be able to show the Main Menu.
FR4	Crops Training	Functional	System shall be able to show the Crops Training to the user.
FR5	Fertilizer Advisory	Functional	System shall be able to show the Fertilizer Advisory to the user.
FR6	Agriculture Equipment	Functional	System shall be able to show the information about Agriculture Equipment to the user.
FR7	Management	Functional	System shall be able show the Management to the user.
FR10	Calculate Area	Functional	System shall be able to calculate the Farms Area in Kanals, Acr and Marlas.
FR11	Contact	Functional	The User shall be able to Contact with Admin.
FR12	Add Fertilizer	Functional	The Fertilizer Companies shall be able to show their fertilizers to the user
FR13	Check Fertilizer Accuracy	Functional	The Fertilizer Expert shall be able to check the accuracy of Fertilizer information.
FR14	Add Medicine	Functional	The Medicine Companies shall be able to show their medicines to the user
FR15	Check Medicine Accuracy	Functional	The Medicine Expert shall be able to check the accuracy of medicine information.
FR16	Add Comment	Functional	The User shall be able to comment about seeds, fertilizers and Agricultural medicines.
FR17	Manage Annual Accounting	Functional	The Farmer shall be able to manage their annual accounting.

<b>FR18</b>	Print Accounting	Functional	The Farmer shall be able to print their accounting at any time.
<b>FR19</b>	Show Cost and Profit	Functional	System shall be able to show the input and output detail of their costs and profit.
<b>FR20</b>	Show Notification	Functional	System shall be able to show the notification for sowing seeds, fertilizers agricultural medicines and water management on accurate time.
<b>FR21</b>	Authenticate	Functional	The Agriculture Department shall be able to check and authenticate the agricultural information.
<b>FR22</b>	Report	Functional	The Agriculture Department shall be able to notify the admin for removing the wrong information about agriculture,
<b>FR23</b>	Water Management	Functional	System shall be able to show the water management for crops with detail.
<b>FR24</b>	Portfolio	Functional	System shall be able to show portfolio of the developer team to the user.
<b>FR25</b>	Fertilizer Effect	Functional	System shall be able to show fertilizers with good and bad effect.
<b>FR26</b>	Suggest Area	Functional	System shall be able to show Areas and nominate which area is best for which crops.
<b>FR27</b>	Weather Condition	Functional	System shall be able to show the Weather condition of the specific area.
<b>FR28</b>	Search	Functional	System Shall be able to Search the agriculture details.

<b>FR29</b>	Show Categories	Functional	System shall be able to show categories of the seeds with price and production status.
<b>FR30</b>	Accurate Route	Functional	System shall be able to show the accurate route for best agricultural production to the user.
<b>FR31</b>	Show Crop Stages	Functional	System shall be able to show the different stages of the crops.
<b>FR32</b>	Crops Life cycle	Functional	System shall be able to show the life cycle of crops in days.
<b>FR33</b>	Show Crops Diseases	Functional	System shall be able to show the diseases of the crops with crops stages.
<b>FR34</b>	Train Farmer	Functional	System shall be able to train the farmer with videos and audio clips.
<b>NFR1</b>	Web Application Accessibility	Non-Functional	The Database of Application shall be centralized and accessible from any location in the world.
<b>NFR2</b>	Storage Capacity	Non-Functional	The application shall not initially need a lot of storage, but as more users come online, we'll need to spread the workload across numerous servers.
<b>NFR3</b>	Documentation	Non-Functional	The user manual and all of the application's features shall be covered in detail in the documentation.
<b>NFR4</b>	Efficiency	Non-Functional	The Application shall be able to show user's search results within 5 seconds.
<b>NFR5</b>	Disaster Recovery	Non-Functional	The Application shall be able to recover user's data if the system perform malfunction

<b>NFR6</b>	Flexibility	Non-Functional	The system shall be able to support addition of Prediction Average of crops feature in the future updates.
<b>NFR7</b>	Availability	Non-Functional	The System shall be available to use 24/7.
<b>NFR8</b>	Interoperability	Non-Functional	The user shall be able to pay by using credit card.
<b>NFR9</b>	Maintainability	Non-Functional	The function of module shall not be greater than 15 line.
<b>NFR10</b>	Portability	Non-Functional	The system shall be able to support Windows, Android and I Phone operating systems.
<b>NFR11</b>	Compatibility	Non-Functional	The application shall be compatible with smart devices like Laptops, Mobile Phones.
<b>NFR12</b>	Privacy	Non-Functional	The application shall be able to protect the user's data and information from theft.
<b>NFR13</b>	Reusability	Non-Functional	The Registration module shall be designed in a way that it can be used in other applications in the future.
<b>NFR14</b>	Correctness	Non-Functional	The User shall be able to use the System after login into the application.
<b>NFR15</b>	Security	Non-Functional	The system shall lock a user's account after four consecutive unsuccessful login attempts within a period of five minutes.
<b>NFR16</b>	Usability	Non-Functional	The new User shall take minimum 10 minutes for learning about the System.

### 3.2 List of Actors

The Actors in our application are as follows:

**Farmer:** Farmer should get training from this website and Farmer is the main actor of this project because this project is working on the training of the farmer. Farmer after training use this website according to his need. He will follow this website for weather, soil, fertilizers, Crop Equipment. He will use this application according to his needs at different stages of Crops. Former can be managing their annual accounting and keep on this website

**Admin:** Admin will remove the post, remove user, manage rules and perform actions depending upon the report that experts or farmer will send to the admin

**Agriculture Experts:** Agriculture Experts will guide the Farmers for their improvement and development in this website. Agriculture Experts will manage fertilizers, manage pesticides, manage medicines, test the soil, give advice, give equipment in information, give weather condition information and if he will find something wrong the report to the admin.

**Fertilizer Advertising Officer:** Fertilizer Advertising Officer advertise the fertilizer in the website with complete detail according to the website rules. Fertilizer Advertising Officer will manage fertilizers and add fertilizer post for farmers.

**Medicine Advertising Officer:** Medicine Advertising Officer advertise the agriculture medicines in the website with complete detail according to the website rules. Medicine Advertising Officer will add medicine post, manage medicines and manage pesticides.

**Director Agriculture Department:** Director Agriculture Department will check agriculture experts; fertilizer companies and medicines companies are working correct or not. Director Agriculture Department will check equipment information, weather condition information, authenticate the agriculture post and if Director Agriculture Department will find things that are not authenticate then the Director Agriculture Department will send report to the admin and then admin will take actions.

**Fertilizer experts:** Fertilizer Expert can give his opinion on agriculture fertilizers and medicine. Fertilizer Expert will check the fertilizer post and report to the admin, then admin will take actions accordingly. He will manage fertilizer medicines, pesticides and test the soil.

**Medicine experts:** Medicine Expert will check the medicine post and report to the admin. He will manage medicines and pesticides.

### 3.3 List of use cases

The use cases in our application are as follows:

**Login:** Allow Actor to provide account information to get access of system.

**Register:** Allow Actor to provide account information to create a new account.

**Manage Crop:** System will train the farmer and manage the crops according to the Expert advice.

**Watering Schedule:** Watering Schedule show the water management to the farmer according to the location of the farmer.

**Manage Crop Advise:** Agriculture expert will advise to the farmer for crop management.

**Manage Cultivation/Harvesting Time:** System will show the time period of each crop with Cultivation and Harvesting time.

**Manage Fertilizers:** System will show the proper management of fertilizer for each crop according to soil test report.

**Manage Medicines:** System will show the proper management of Medicines for each crop according to Pesticides report.

**Manage Pesticides:** System will show the Pesticides with all effects in detail.

**Test Soil:** Test soil show the soil information according to the location of the farmer.

**Expert Advice:** Experts will be able to advise the farmer for extra agriculture information.

**Give Equipment Info:** System shall be able to show the latest agriculture equipment info to the farmer with short description.

**Give Weather Info:** System shall be able to show the weather condition to the farmer for water management.

**Manage Records:** Farmer shall be able to view, add, delete and update the record of his/her annual accountings. Farmer shall be able to print his annual report.

**Manage Accounts:** Farmer shall be able to manage their profile/accounts.

**Manage Fertilizer Post:** Actor shall be able to add, delete, view, check, update, report, and authenticate the post of fertilizer.

**Manage Medicine Post:** Actor shall be able to add, delete, view, update, check, report, and authenticate the post of medicine.

**Remove Post:** Admin shall be able to remove any post against report of the experts.

**Manage Roles:** Admin shall be able to manage the other users.

**Disable User:** Admin shall be able disable any user.

### 3.4 System use case diagram

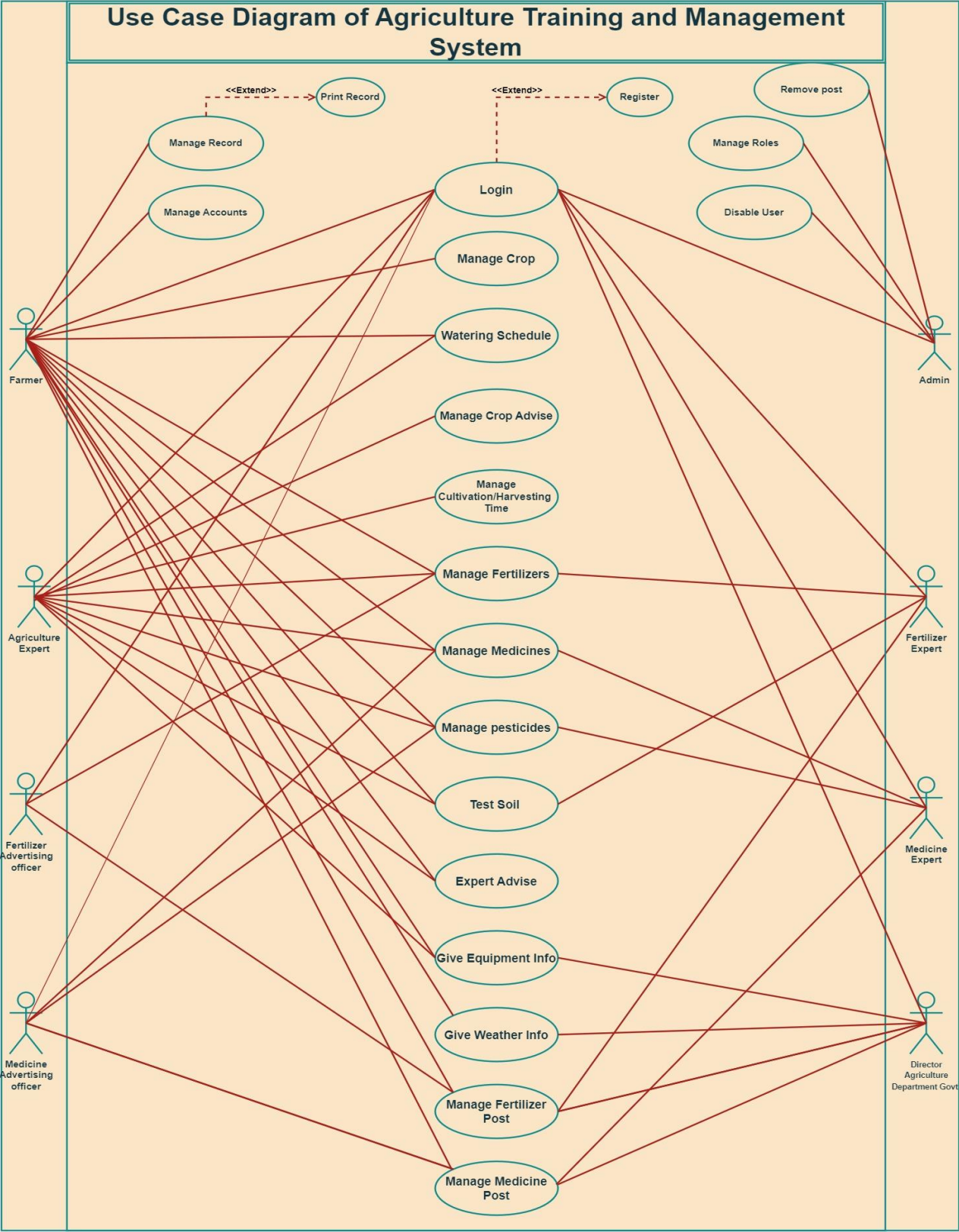


Figure 3.1: Sample use case Diagram with Explanation

### 3.5 Extended use cases

Table 3.2: Use case of Register

<b>Use Case ID:</b>	UC-1		
<b>Use Case Name:</b>	Register		
<b>Created By:</b>	Riaz Ahmad	<b>Last Updated By:</b>	12 <sup>th</sup> January, 2023
<b>Date Created:</b>	28 <sup>th</sup> December, 2023	<b>Last Revision Date:</b>	15 <sup>th</sup> January, 2023
<b>Actors:</b>	Farmer, Admin, Agriculture Expert, Fertilizer Advertising Officer, Medicine Advertising Officer, Fertilizer Expert, Medicine Expert, Director Agriculture Department Govt.		
<b>Description:</b>	The Actor will enter Registration Requirements for Register in our system.		
<b>Trigger:</b>	Actor wants to Register into the System.		
<b>Preconditions:</b>	Actor must have valid required information for Register into the System.		
<b>Post conditions:</b>	Actor Registration Data Will be saved. Database will be update. Actor will register into the System successfully.		
<b>Normal Flow:</b>	<ol style="list-style-type: none"> <li>1. Actor enters First name.</li> <li>2. Actor enters Last name.</li> <li>3. Actor enters Password.</li> <li>4. Actor enters Confirm Password.</li> <li>5. Actor enters Phone Number.</li> <li>6. Actor enters Land Location.</li> <li>7. Actor enters Designation.</li> <li>8. Actor enters Organization.</li> <li>9. Actor enters Email.</li> <li>10. Actor chooses Role from List of Roles.</li> <li>11. Actor will press the Register option.</li> <li>12. System prompts the Actor for successfully register into the System.</li> </ol>		
<b>Alternative Flows: [Alternative Flow 1 – Not in Network]</b>	No Alternative Flow		
<b>Exceptions:</b>	<ol style="list-style-type: none"> <li>1a. First Name field is empty. <ol style="list-style-type: none"> <li>i. The system shows an error message to the Actor. This field cannot be empty.</li> <li>ii. Actor enters valid First Name.</li> </ol> </li> </ol>		

- 1b. First Name field contains number
  - i. The system shows an error message to the Actor.
  - ii. Actor enters valid First Name.
- 1c. First Name field is containing special characters
  - i. The system shows an error message to the Actor.
  - ii. Actor enters valid First Name.
- 2a. Last Name field is empty.
  - i. The system shows an error message to the Actor. This field cannot be empty.
  - ii. Actor enters valid Last Name.
- 2b. Last Name field contains number
  - i. The system shows an error message to the Actor.
  - ii. Actor enters valid Last Name.
- 2c. Last Name field contains special character
  - i. The system shows an error message to the Actor.
  - ii. Actor enters valid Last Name.
- 3a. Password field is empty.
  - i. The system shows an error message to the Actor. This field cannot be empty.
  - ii. Actor enters valid Password.
- 3b. Password field does not contain at least one special character.
  - i. The system shows an error message to the Actor.
  - ii. Actor enters valid Password.
- 3c. Password field does not contain at least one Number.
  - i. The system shows an error message to the Actor.
  - ii. Actor enters valid Password.
- 3d. Password field does not contain at least one Small Character.
  - i. The system shows an error message to the Actor.
  - ii. Actor enters valid Password.
- 3e. Password field does not contain at least one Capital Character.
  - i. The system shows an error message to the Actor.
  - ii. Actor enters valid Password.
- 3f. Password field does not contain 8-digit.
  - i. The system shows an error message to the Actor.

ii. Actor enters valid 8-digit Password.

4a. Confirm Password field is empty.

- i. The system shows an error message to the Actor. This field cannot be empty.
- ii. Actor enters valid Confirm Password.

4b. Confirm Password field does not match the above New Password Field.

- i. The system shows an error message to the Actor.
- ii. Actor enters Confirm Password that is match the above Password.

5a. Phone Number field is empty.

- i. The system shows an error message to the Actor. This field cannot be empty.
- ii. Actor enters valid Phone Number.

5b. Phone Number field is invalid.

- i. The system shows an error message to the Actor.
- ii. Actor enters valid Phone Number.

5c. Phone Number field does not contain 11-digit.

- i. The system shows an error message to the Actor.
- ii. Actor enters valid 11-digit Phone Number.

6a. Land Location field is empty.

- i. The system shows an error message to the Actor. This field cannot be empty.
- ii. Actor enters valid Land Location.

6b. Land Location field is invalid.

- i. The system shows an error message to the Actor.
- ii. Actor enters valid Land Location.

7a. Designation field is empty.

- i. The system shows an error message to the Actor. This field cannot be empty.
- ii. Actor enters valid Designation.

7b. Designation field is invalid.

- i. The system shows an error message to the Actor.
- ii. Actor enters valid Designation.

8a. Organization field is empty.

- i. The system shows an error message to the Actor. This field cannot be empty.
- ii. Actor enters valid Organization.

	<p>8b. Designation field is invalid.</p> <ul style="list-style-type: none"> <li>i. The system shows an error message to the Actor.</li> <li>ii. Actor enters valid Designation.</li> </ul> <p>9a. Email field is empty.</p> <ul style="list-style-type: none"> <li>i. The system shows an error message to the Actor. This field cannot be empty.</li> <li>ii. Actor enters valid Email.</li> </ul> <p>9b. Email field is invalid.</p> <ul style="list-style-type: none"> <li>i. The system shows an error message to the Actor.</li> <li>ii. Actor enter valid Email.</li> </ul> <p>10a. Role field does not choose.</p> <ul style="list-style-type: none"> <li>i. The system shows an error message to the Actor.</li> <li>ii. System asks to the user to choose the Role option.</li> </ul>
<b>Includes</b>	None
<b>Frequency of Use:</b>	On Demand
<b>Special Requirements:</b>	User must be able to understand Urdu and English language
<b>Assumptions:</b>	The Actor should know how to access the web page by using internet and log in by giving correct credentials.
<b>Notes and Issues:</b>	None

**Table 3.3: Use case of Login**

<b>Use Case ID:</b>	UC-2		
<b>Use Case Name:</b>	Login		
<b>Created By:</b>	Riaz Ahmad	<b>Last Updated By:</b>	12 <sup>th</sup> January, 2023
<b>Date Created:</b>	28 <sup>th</sup> December, 2023	<b>Last Revision Date:</b>	15 <sup>th</sup> January, 2023
<b>Actors:</b>	Farmer, Agriculture Expert, Fertilizer Advertising Officer, Medicine Advertising Officer, Fertilizer Expert, Medicine Expert, Director Agriculture Department Govt.		
<b>Description:</b>	The Actor will enter credentials for login in our system.		
<b>Trigger:</b>	Actor wants to Login into the System.		

<b>Preconditions:</b>	Actor must be registered into the System.
<b>Post conditions:</b>	Actor will log in successfully. System will Show the Home Page to the user.
<b>Normal Flow:</b>	<ol style="list-style-type: none"> <li>1. Actor enters Email.</li> <li>2. Actor enters Password.</li> <li>3. Actor will press the login option.</li> <li>4. System validates if Actor is in the system record.</li> <li>5. System prompts the Actor for successfully login.</li> </ol>
<b>Alternative Flows:</b> <b>[Alternative Flow 1 – Not in Network]</b>	<ol style="list-style-type: none"> <li>6. Actor forget the password</li> <li>1. The system will ask the Actor to enter phone number. <ol style="list-style-type: none"> <li>1a. Phone Number field is empty. <ol style="list-style-type: none"> <li>i. The system shows an error message to the Actor. This field cannot be empty.</li> <li>ii. Actor enters valid Phone Number.</li> </ol> </li> <li>1b. Phone Number field is invalid. <ol style="list-style-type: none"> <li>i. The system shows an error message to the Actor.</li> <li>ii. Actor enters valid Phone Number.</li> </ol> </li> <li>1c. Phone Number field does not contain 11-digit. <ol style="list-style-type: none"> <li>i. The system shows an error message to the Actor.</li> <li>ii. Actor enters valid 11-digit Phone Number.</li> </ol> </li> </ol> </li> <li>2. Actor will select the Reset Password option.</li> <li>3. System will ask to the Actor to enter New Password. <ol style="list-style-type: none"> <li>3a. New Password field is empty. <ol style="list-style-type: none"> <li>i. The system shows an error message to the Actor. This field cannot be empty.</li> <li>ii. Actor enters valid New Password.</li> </ol> </li> <li>3b. New Password field does not contain at least one special character. <ol style="list-style-type: none"> <li>i. The system shows an error message to the Actor.</li> <li>ii. Actor enters valid New Password.</li> </ol> </li> <li>3c. New Password field does not contain at least one Number. <ol style="list-style-type: none"> <li>i. The system shows an error message to the Actor.</li> <li>ii. Actor enters valid New Password.</li> </ol> </li> <li>3d. New Password field does not contain at least one Small Character. <ol style="list-style-type: none"> <li>i. The system shows an error message to the Actor.</li> <li>ii. Actor enters valid New Password.</li> </ol> </li> </ol> </li> </ol>

	<p>3e. New Password field does not contain at least one Capital Character.</p> <ul style="list-style-type: none"> <li>i. The system shows an error message to the Actor.</li> <li>ii. Actor enters valid New Password.</li> </ul> <p>3f. New Password field does not contain 8-digit.</p> <ul style="list-style-type: none"> <li>i. The system shows an error message to the Actor.</li> <li>ii. Actor enters valid 8-digit New Password.</li> </ul> <p>4. System will ask to the Actor to enter Confirm New Password.</p> <p>4a. Confirm Password field is empty.</p> <ul style="list-style-type: none"> <li>i. The system shows an error message to the Actor. This field cannot be empty.</li> <li>ii. Actor enters valid Confirm Password.</li> </ul> <p>4b. Confirm Password field does not match the above New Password Field.</p> <ul style="list-style-type: none"> <li>i. The system shows an error message to the Actor.</li> <li>ii. Actor enters Confirm Password that is match the above Password.</li> </ul> <p>5. Actor will press the Change Password option.</p>
<b>Exceptions:</b>	<p>1a. Email field is empty.</p> <ul style="list-style-type: none"> <li>i. The system shows an error message to the Actor. This field cannot be empty.</li> <li>ii. Actor enters valid Email.</li> </ul> <p>1b. Email field is invalid</p> <ul style="list-style-type: none"> <li>i. The system shows an error message to the Actor.</li> <li>ii. Actor enters valid Email.</li> </ul> <p>2a. Password field is empty.</p> <ul style="list-style-type: none"> <li>i. The system shows an error message to the Actor. This field cannot be empty.</li> <li>ii. Actor enters valid Password.</li> </ul> <p>2b. Password is invalid</p> <ul style="list-style-type: none"> <li>i. The system shows an error message to the Actor.</li> <li>ii. Actor enters valid Password.</li> </ul>
<b>Includes:</b>	UC-1: Register
<b>Frequency of Use:</b>	On Demand
<b>Special Requirements:</b>	. Actor will get Login authorization response within 30 seconds 90% of the time.
<b>Assumptions:</b>	The Actor should know how to access the web page by using internet and log in by giving

	correct credentials.
<b>Notes and Issues:</b>	None

**Table 3.4: Use Case of Disable User**

<b>Use Case ID:</b>	UC-3		
<b>Use Case Name:</b>	Disable User		
<b>Created By:</b>	Riaz Ahmad	<b>Last Updated By:</b>	12 <sup>th</sup> January, 2023
<b>Date Created:</b>	28 <sup>th</sup> December, 2023	<b>Last Revision Date:</b>	15 <sup>th</sup> January, 2023
<b>Actors:</b>	Admin		
<b>Description:</b>	Admin will Disable the Reported User.		
<b>Trigger:</b>	Admin wants to disable the Reported User that is reported from other users.		
<b>Preconditions:</b>	Admin must be Logged in into the system. Admin must have Users in the List.		
<b>Post conditions:</b>	Admin will Successfully disable the user. Database will be updated.		
<b>Normal Flow:</b>	<ol style="list-style-type: none"> <li>1. Admin will select the List of Reported Users.</li> <li>2. Admin will select Reported User to disable.</li> <li>3. Admin will disable the Reported User by clicking on disable option.</li> </ol>		
<b>Alternative Flows: [Alternative Flow 1 – Not in Network]</b>	No Alternative Flow.		
<b>Exceptions:</b>	<ol style="list-style-type: none"> <li>1a. List of Reported Users is empty. <ol style="list-style-type: none"> <li>i. The system shows an error you do not have any Reported User List. System must have at least one Reported User List.</li> </ol> </li> <li>1a. List of Reported Users did not Select. <ol style="list-style-type: none"> <li>i. The system shows an error you do not select any Reported User List.</li> <li>ii. Admin select the Reported User List.</li> </ol> </li> <li>2a. Reported Users List is empty. <ol style="list-style-type: none"> <li>i. The system shows an error you do not have any Reported User in the List. System must have at least one Reported User in the List.</li> </ol> </li> <li>2b. Reported User did not Select.</li> </ol>		

	<ul style="list-style-type: none"> <li>i. The system shows an error you do not select any Reported User from the List.</li> <li>ii. Admin select the Reported User.</li> </ul>
<b>Includes:</b>	UC-2: Login
<b>Frequency of Use:</b>	On Demand
<b>Special Requirements:</b>	Admin will get deletion of Reported User response within 30 seconds 90% of the time.
<b>Assumptions:</b>	The Actor should know how to access the web page by using internet and log in by giving correct credentials. Admin must be able how to delete the user from the list and how to access user list.
<b>Notes and Issues:</b>	None

**Table 3.5: Use Case of Remove Post**

<b>Use Case ID:</b>	UC-4		
<b>Use Case Name:</b>	Remove Post		
<b>Created By:</b>	Riaz Ahmad	<b>Last Updated By:</b>	12 <sup>th</sup> January, 2023
<b>Date Created:</b>	28 <sup>th</sup> December, 2023	<b>Last Revision Date:</b>	15 <sup>th</sup> January, 2023
<b>Actors:</b>	Admin		
<b>Description:</b>	Admin will Remove the Post.		
<b>Trigger:</b>	Admin wants to remove the Post that is reported from Experts and other users.		
<b>Preconditions:</b>	Admin must be Logged into the system. Admin must have Posts in the Report List.		
<b>Post conditions:</b>	Admin will Successfully remove the Post. Database will be updated.		
<b>Normal Flow:</b>	<ol style="list-style-type: none"> <li>1. Admin will select the List of Report Post.</li> <li>2. Admin will select Post to delete.</li> <li>3. Admin will delete the Post by clicking on delete option.</li> </ol>		
<b>Alternative Flows: [Alternative Flow 1 – Not in Network]</b>	No Alternative Flow		
<b>Exceptions:</b>	<ol style="list-style-type: none"> <li>1a. List of Reported Posts is empty. <ul style="list-style-type: none"> <li>i. The system shows an error you don't have any Reported Post List. System must</li> </ul> </li> </ol>		

	<p>have at least one Reported Post List.</p> <p>1a. List of Reported Post did not Select.</p> <ol style="list-style-type: none"> <li>i. The system shows an error you don't select any Reported Post List.</li> <li>ii. Admin select the Reported Post List.</li> </ol> <p>2a. Reported Post List is empty.</p> <ol style="list-style-type: none"> <li>i. The system shows an error you don't have any Reported Post in the List. System must have at least one Reported Post in the List.</li> </ol> <p>2b. Reported Post did not Select.</p> <ol style="list-style-type: none"> <li>i. The system shows an error you do not select any Reported Post from the List.</li> <li>ii. Admin select the Reported Post.</li> </ol>
<b>Includes:</b>	UC-2: Login
<b>Frequency of Use:</b>	On Demand
<b>Special Requirements:</b>	Admin will get deletion of Reported Post response within 30 seconds 90% of the time.
<b>Assumptions:</b>	The Admin should know how to access the web page by using internet and log in by giving correct credentials. Admin must be able how to delete the Reported Post from the list and how to access Report Post list.
<b>Notes and Issues:</b>	None

**Table 3.6: Use Case of Manage Roles**

<b>Use Case ID:</b>	UC-5		
<b>Use Case Name:</b>	Manage Roles		
<b>Created By:</b>	Riaz Ahmad	<b>Last Updated By:</b>	12 <sup>th</sup> January, 2023
<b>Date Created:</b>	28 <sup>th</sup> December, 2023	<b>Last Revision Date:</b>	15 <sup>th</sup> January, 2023
<b>Actors:</b>	Admin		
<b>Description:</b>	Admin will Manage Roles.		
<b>Trigger:</b>	Admin wants to manage roles such as Add, Update, delete, View and Block.		
<b>Preconditions:</b>	Admin must be logged into the system. Admin must have Users in the List.		

<b>Post conditions:</b>	Admin will Successfully Manage Roles. Database will be updated.
<b>Normal Flow:</b>	<p>Admin will select the manage Roles option.</p> <p><b>View User</b></p> <ol style="list-style-type: none"> <li>1. Admin will view the list of users.</li> </ol> <p><b>Create User</b></p> <ol style="list-style-type: none"> <li>1. Admin will press Add User option.</li> <li>2. Admin enters First name.</li> <li>3. Admin enters Last name.</li> <li>4. Admin enters Password.</li> <li>5. Admin enters Confirm Password.</li> <li>6. Admin enters Phone Number.</li> <li>7. Admin enters Location.</li> <li>8. Admin enters Designation.</li> <li>9. Admin enters Organization.</li> <li>10. Admin will press the Create User Account option.</li> <li>11. System prompts the admin for successfully Add User.</li> </ol> <p><b>Update User</b></p> <ol style="list-style-type: none"> <li>1. Admin will press Edit User option.</li> <li>2. Admin enters First name.</li> <li>3. Admin enters Last name.</li> <li>4. Admin enters Password.</li> <li>5. Admin enters Confirm Password.</li> <li>6. Admin enters Phone Number.</li> <li>7. Admin enters Location.</li> <li>8. Admin enters Designation.</li> <li>9. Admin enters Organization.</li> <li>10. Admin will press the Update User option.</li> <li>11. System prompts the admin for successfully Update User.</li> </ol> <p><b>Delete User</b></p> <ol style="list-style-type: none"> <li>1. Admin will select User List Option.</li> <li>2. Admin will select User.</li> <li>3. Admin will press Delete User option to delete User.</li> </ol>
<b>Alternative Flows: [Alternative Flow 1 – Not in Network]</b>	No Alternative Flow

**Exceptions:****View User**

1a. User List is empty.

- i. The system shows an error you do not have any User in the List. System must have at least one User in the List.

1b. User did not Select.

- i. The system shows an error you do not select any Reported Post from the List.
- ii. Admin selects the Reported Post.

**Create User**

1a. Add User Option did not Select

- i. The system shows an error you do not select Add User Option.
- ii. Admin selects Add User Option.

2a. First Name field is empty.

- i. The system shows an error message to the Actor. This field cannot be empty.
- ii. Admin enters valid First Name.

2b. First Name field contains number

- i. The system shows an error message to the Actor.
- ii. Admin enters valid First Name.

2c. First Name field contains special characters

- i. The system shows an error message to the Actor.
- ii. Admin enters valid First Name.

3a. Last Name field is empty.

- i. The system shows an error message to the Actor. This field cannot be empty.
- ii. Admin enters valid Last Name.

3b. Last Name field contains number

- i. The system shows an error message to the Actor.
- ii. Admin enters valid Last Name.

3c. Last Name field contains special character

- i. The system shows an error message to the Actor.
- ii. Admin enters valid Last Name.

4a. Password field is empty.

- i. The system shows an error message to the Actor. This field cannot be empty.
- ii. Admin enters valid Password.

4b. Password field does not contain at least one special character.

	<ul style="list-style-type: none"> <li>i. The system shows an error message to the Actor.</li> <li>ii. Admin enters valid Password.</li> </ul> <p>4c. Password field does not contain at least one Number.</p> <ul style="list-style-type: none"> <li>i. The system shows an error message to the Actor.</li> <li>ii. Admin enters valid Password.</li> </ul> <p>4d. Password field does not contain at least one Small Character.</p> <ul style="list-style-type: none"> <li>i. The system shows an error message to the Actor.</li> <li>ii. Admin enters valid Password.</li> </ul> <p>4e. Password field does not contain at least one Capital Character.</p> <ul style="list-style-type: none"> <li>i. The system shows an error message to the Actor.</li> <li>ii. Admin enters valid Password.</li> </ul> <p>4f. Password field does not contain 8-digit.</p> <ul style="list-style-type: none"> <li>i. The system shows an error message to the Actor.</li> <li>ii. Admin enters valid 8-digit Password.</li> </ul> <p>5a. Confirm Password field is empty.</p> <ul style="list-style-type: none"> <li>i. The system shows an error message to the Actor. This field cannot be empty.</li> <li>ii. Admin enters valid Confirm Password.</li> </ul> <p>5b. Confirm Password field does not match the above New Password Field.</p> <ul style="list-style-type: none"> <li>i. The system shows an error message to the Actor.</li> <li>ii. Admin enters Confirm Password that is match the above Password.</li> </ul> <p>6a. Phone Number field is empty.</p> <ul style="list-style-type: none"> <li>i. The system shows an error message to the Actor. This field cannot be empty.</li> <li>ii. Admin enters valid Phone Number.</li> </ul> <p>6b. Phone Number field is invalid.</p> <ul style="list-style-type: none"> <li>i. The system shows an error message to the Actor.</li> <li>ii. Admin enters valid Phone Number.</li> </ul> <p>6c. Phone Number field does not contain 11-digit.</p> <ul style="list-style-type: none"> <li>i. The system shows an error message to the Actor.</li> <li>ii. Admin enters valid 11-digit Phone Number.</li> </ul> <p>7a. Location field is empty.</p> <ul style="list-style-type: none"> <li>i. The system shows an error message to the Actor. This field cannot be empty.</li> </ul>
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ii. Admin enters valid Location.

7b. Location field is invalid.

- i. The system shows an error message to the Actor.
- ii. Admin enters valid Location.

8a. Designation field is empty.

- i. The system shows an error message to the Actor. This field cannot be empty.
- ii. Admin enters valid Designation.

8b. Designation field is invalid.

- i. The system shows an error message to the Actor.
- ii. Admin enters valid Designation.

9a. Organization field is empty.

- i. The system shows an error message to the Actor. This field cannot be empty.
- ii. Admin enters valid Organization.

9b. Designation field is invalid.

- i. The system shows an error message to the Actor.
- ii. Admin enters valid Designation.

### **Update User**

1a. Edit User Option did not Select

- i. The system shows an error you do not select Edit User Option.
- ii. Admin selects Edit User Option.

2a. First Name field is empty.

- i. The system shows an error message to the Actor. This field cannot be empty.
- ii. Admin enters valid First Name.

2b. First Name field contains number

- i. The system shows an error message to the Actor.
- ii. Admin enters valid First Name.

2c. First Name field is containing special characters

- i. The system shows an error message to the Actor.
- ii. Admin enters valid First Name.

3a. Last Name field is empty.

- i. The system shows an error message to the Actor. This field cannot be empty.
- ii. Admin enters valid Last Name.

- 3b. Last Name field contains number
- i. The system shows an error message to the Actor.
  - ii. Admin enters valid Last Name.
- 3c. Last Name field contains special character
- i. The system shows an error message to the Actor.
  - ii. Admin enters valid Last Name.
- 4a. Password field is empty.
- i. The system shows an error message to the Actor. This field cannot be empty.
  - ii. Admin enters valid Password.
- 4b. Password field does not contain at least one special character.
- i. The system shows an error message to the Actor.
  - ii. Admin enters valid Password.
- 4c. Password field does not contain at least one Number.
- i. The system shows an error message to the Actor.
  - ii. Admin enters valid Password.
- 4d. Password field does not contain at least one Small Character.
- i. The system shows an error message to the Actor.
  - ii. Admin enters valid Password.
- 4e. Password field does not contain at least one Capital Character.
- i. The system shows an error message to the Actor.
  - ii. Admin enters valid Password.
- 4f. Password field does not contain 8-digit.
- i. The system shows an error message to the Actor.
  - ii. Admin enters valid 8-digit Password.
- 5a. Confirm Password field is empty.
- i. The system shows an error message to the Actor. This field cannot be empty.
  - ii. Admin enters valid Confirm Password.
- 5b. Confirm Password field does not match the above New Password Field.
- i. The system shows an error message to the Actor.
  - ii. Admin enters Confirm Password that is match the above Password.
- 6a. Phone Number field is empty.
- i. The system shows an error message to the Actor. This field cannot be empty.

	<ul style="list-style-type: none"> <li>ii. Admin enters valid Phone Number.</li> </ul> <p>6b. Phone Number field is invalid.</p> <ul style="list-style-type: none"> <li>i. The system shows an error message to the Actor.</li> <li>ii. Admin enters valid Phone Number.</li> </ul> <p>6c. Phone Number field does not contain 11-digit.</p> <ul style="list-style-type: none"> <li>i. The system shows an error message to the Actor.</li> <li>ii. Admin enters valid 11-digit Phone Number.</li> </ul> <p>7a. Location field is empty.</p> <ul style="list-style-type: none"> <li>i. The system shows an error message to the Actor. This field cannot be empty.</li> <li>ii. Admin enters valid Location.</li> </ul> <p>7b. Location field is invalid.</p> <ul style="list-style-type: none"> <li>i. The system shows an error message to the Actor.</li> <li>ii. Admin enters valid Location.</li> </ul> <p>8a. Designation field is empty.</p> <ul style="list-style-type: none"> <li>i. The system shows an error message to the Actor. This field cannot be empty.</li> <li>ii. Admin enters valid Designation.</li> </ul> <p>8b. Designation field is invalid.</p> <ul style="list-style-type: none"> <li>i. The system shows an error message to the Actor.</li> <li>ii. Admin enters valid Designation.</li> </ul> <p><b>Delete User</b></p> <p>1a. List of Users is empty.</p> <ul style="list-style-type: none"> <li>i. The system shows an error you do not have any User's List. System must have at least one User List.</li> </ul> <p>1a. List of Users did not Select.</p> <ul style="list-style-type: none"> <li>i. The system shows an error you do not select any User List.</li> <li>ii. Admin selects the User List.</li> </ul> <p>2a. Users List is empty.</p> <ul style="list-style-type: none"> <li>i. The system shows an error you do not have any User in the List. System must have at least one User in the List.</li> </ul> <p>2b. User did not Select.</p> <ul style="list-style-type: none"> <li>i. The system shows an error you do not select any User from the List.</li> </ul>
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	ii. Admin selects the User.
<b>Includes:</b>	UC-2: Login
<b>Frequency of Use:</b>	On Demand
<b>Special Requirements:</b>	Admin will get CRUDD Operation response within 30 seconds 90% of the time.
<b>Assumptions:</b>	The admin should know how to access the web page by using internet and log in by giving correct credentials. Admin must be able how to delete the Reported Post from the list and how to access Report Post list.
<b>Notes and Issues:</b>	None

**Table 3.7: Use Case of Add Fertilizer Post**

<b>Use Case ID:</b>	UC-6		
<b>Use Case Name:</b>	Add Fertilizer Post		
<b>Created By:</b>	Riaz Ahmad	<b>Last Updated By:</b>	12 <sup>th</sup> January, 2023
<b>Date Created:</b>	28 <sup>th</sup> December, 2023	<b>Last Revision Date:</b>	15 <sup>th</sup> January, 2023
<b>Actors:</b>	Farmer, Fertilizer Advertising Officer, Fertilizer Expert, Director Agriculture Department govt.		
<b>Description:</b>	Actor will Manage Fertilizer post.		
<b>Trigger:</b>	Actor wants to Manage Fertilizer Post such as Add, Delete, Update, View, Report, check and Authenticate Fertilizer post.		
<b>Preconditions:</b>	Actor must be logged in and have a proper permission to Add, Delete, Update, View, Report, check and Authenticate post.		
<b>Post conditions:</b>	Database will be updated. Post visible to the home page of director department govt.		
<b>Normal Flow:</b>	<p><b>View Fertilizer Post</b></p> <ol style="list-style-type: none"> <li>1. Actor will view the list of posts.</li> </ol> <p><b>Add Fertilizer Post</b></p> <ol style="list-style-type: none"> <li>1. Actor will press on the Add Post Option</li> <li>2. Actor enters Name.</li> <li>3. Actor enters Designation.</li> <li>4. Actor enters Phone Number.</li> </ol>		

	<ol style="list-style-type: none"> <li>5. Actor enters Fertilizer Name.</li> <li>6. Actor enters Fertilizer formula.</li> <li>7. Actor enters Fertilizer good effects.</li> <li>8. Actor enters Description.</li> <li>9. Actor attach picture.</li> <li>10. Actor will press Upload Post Option.</li> </ol> <p><b>Update Fertilizer Post</b></p> <ol style="list-style-type: none"> <li>1. Actor Will Press on the Edit Post Option</li> <li>2. Actor enters Name.</li> <li>3. Actor enters Designation.</li> <li>4. Actor enters Phone Number.</li> <li>5. Actor enters Fertilizer Name.</li> <li>6. Actor enters Fertilizer formula.</li> <li>7. Actor enters Fertilizer good effects.</li> <li>8. Actor enters Description.</li> <li>9. Actor attach picture.</li> <li>10. Actor will press Update Post Option.</li> </ol> <p><b>Delete Fertilizer Post</b></p> <ol style="list-style-type: none"> <li>1. Actor will select Fertilizer Post Option.</li> <li>2. Actor will press Delete User option to delete Post.</li> </ol> <p><b>Report Fertilizer Post</b></p> <ol style="list-style-type: none"> <li>1. Actor will view the post.</li> <li>2. Actor press on the Report Post Option.</li> <li>3. Actor enters reason.</li> <li>4. Actor presses on the done option.</li> </ol> <p><b>Authenticate Fertilizer Post</b></p> <ol style="list-style-type: none"> <li>1. Director Agriculture Department govt will view the post from Post List</li> <li>2. Director Agriculture Department govt press on the Authenticate Post Option.</li> </ol>
<p><b>Alternative Flows:</b>  <b>[Alternative Flow 1 – Not in Network]</b></p>	<p>No Alternative Flow</p>
<p><b>Exceptions:</b></p>	<p><b>View Fertilizer Post</b></p> <ol style="list-style-type: none"> <li>1a. Post List is empty. <ol style="list-style-type: none"> <li>i. The system shows an error you do not have any Post. System must have at least</li> </ol> </li> </ol>

one Post.

**Add Fertilizer Post**

2a. Name field is empty.

- i. The system shows an error message to the Actor. This field cannot be empty.
- ii. Actor enters Name.

2b. Name field contains number

- i. The system shows an error message to the Actor.
- ii. Actor enters Name.

2c. Name field contains special characters

- i. The system shows an error message to the Actor.
- ii. Actor enters valid Name.

3a. Designation field is empty.

- i. The system shows an error message to the Actor. This field cannot be empty.
- ii. Actor enters valid Designation.

3b. Designation field is invalid.

- i. The system shows an error message to the Actor.
- ii. Actor enters valid Designation.

4a. Phone Number field is empty.

- i. The system shows an error message to the Actor. This field cannot be empty.
- ii. Actor enters valid Phone Number.

4b. Phone Number field is invalid.

- i. The system shows an error message to the Actor.
- ii. Actor enters valid Phone Number.

4c. Phone Number field does not contain 11-digit.

- i. The system shows an error message to the Actor.
- ii. Actor enters valid 11-digit Phone Number.

5a. Fertilizer Name field is empty.

- i. The system shows an error message to the Actor. This field cannot be empty.
- ii. Actor enters Fertilizer Name.

6a. Fertilizer Formula field is empty.

- i. The system shows an error message to the Actor. This field cannot be empty.
- ii. Actor enters Fertilizer Formula.

7a. Fertilizer Good Effects field is empty.

- i. The system shows an error message to the Actor. This field cannot be empty.
- ii. Actor enters Fertilizer Good Effects.

8a. Description field is empty.

- i. The system shows an error message to the Actor. This field cannot be empty.
- ii. Actor enters Description.

### **Update Fertilizer Post**

2a. Name field is empty.

- i. The system shows an error message to the Actor. This field cannot be empty.
- ii. Actor enters valid Name.

2b. Name field contains number

- i. The system shows an error message to the Actor.
- ii. Actor enters valid Name.

2c. Name field is containing special characters

- i. The system shows an error message to the Actor.
- ii. Actor enters valid Name.

3a. Designation field is empty.

- i. The system shows an error message to the Actor. This field cannot be empty.
- ii. Actor enters valid Designation.

3b. Designation field is invalid.

- i. The system shows an error message to the Actor.
- ii. Actor enters valid Designation.

4a. Phone Number field is empty.

- i. The system shows an error message to the Actor. This field cannot be empty.
- ii. Actor enters valid Phone Number.

4b. Phone Number field is invalid.

- i. The system shows an error message to the Actor.
- ii. Actor enters valid Phone Number.

	<p>4c. Phone Number field does not contain 11-digit.</p> <ul style="list-style-type: none"> <li>i. The system shows an error message to the Actor.</li> <li>ii. Actor enters valid 11-digit Phone Number.</li> </ul> <p>5a. Fertilizer Name field is empty.</p> <ul style="list-style-type: none"> <li>i. The system shows an error message to the Actor. This field cannot be empty.</li> <li>ii. Actor enters Fertilizer Name.</li> </ul> <p>6a. Fertilizer Formula field is empty.</p> <ul style="list-style-type: none"> <li>i. The system shows an error message to the Actor. This field cannot be empty.</li> <li>ii. Actor enters Fertilizer Formula.</li> </ul> <p>7a. Fertilizer Good Effects field is empty.</p> <ul style="list-style-type: none"> <li>i. The system shows an error message to the Actor. This field cannot be empty.</li> <li>ii. Actor enters Fertilizer Good Effects.</li> </ul> <p>8a. Description field is empty.</p> <ul style="list-style-type: none"> <li>i. The system shows an error message to the Actor. This field cannot be empty.</li> <li>ii. Actor enters Description.</li> </ul> <p><b>Delete Fertilizer Post</b></p> <p>1a. List of Fertilizer post is empty.</p> <ul style="list-style-type: none"> <li>i. The system shows an error you do not have any post. System must have at least one Post.</li> </ul> <p>1a. Post did not Select.</p> <ul style="list-style-type: none"> <li>i. The system shows an error you do not select post.</li> <li>ii. Actor selects the post.</li> </ul> <p><b>Report Fertilizer Post</b></p> <p>3a. Reason fields is empty.</p> <ul style="list-style-type: none"> <li>i. The system shows an error message to the Actor. This field cannot be empty.</li> <li>ii. Actor enters Reason.</li> </ul> <p>3b. Reason field's text is greater than limit</p> <ul style="list-style-type: none"> <li>i. The system shows an error message to the Actor.</li> <li>ii. Actor enters reason text within the limit.</li> </ul>
<b>Includes:</b>	UC-2: Login
<b>Frequency of</b>	On Demand

<b>Use:</b>	
<b>Special Requirements:</b>	Actor will get Manage Fertilizer Post response within 40 seconds 90% of the time. Good internet connection is necessary for Manage fertilizer Post.
<b>Assumptions:</b>	Actor should know how to access the web page by using internet and log in by giving correct credentials Actor must be able how to Manage Fertilizer Post.
<b>Notes and Issues:</b>	None

**Table 3.8: Use Case of Manage Medicine Post**

<b>Use Case ID:</b>	UC-7		
<b>Use Case Name:</b>	Manage Medicine Post		
<b>Created By:</b>	Riaz Ahmad	<b>Last Updated By:</b>	12 <sup>th</sup> January, 2023
<b>Date Created:</b>	28 <sup>th</sup> December, 2023	<b>Last Revision Date:</b>	15 <sup>th</sup> January, 2023
<b>Actors:</b>	Farmer, Medicine Advertising Officer, Medicine Expert, Director Agriculture Department govt.		
<b>Description:</b>	Actor Expert will Manage Medicine post.		
<b>Trigger:</b>	Actor wants to Manage Medicine Post such as Add, Delete, Update, View, Report, check and Authenticate Fertilizer post.		
<b>Preconditions:</b>	Actor must be logged in and have a proper permission to Add, Delete, Update, View, Report, check and Authenticate post.		
<b>Post conditions:</b>	Database will be updated. Post visible to the home page of director department govt.		
<b>Normal Flow:</b>	<p><b>View Medicine Post</b></p> <ol style="list-style-type: none"> <li>1. Actor will view the list of users.</li> </ol> <p><b>Add Fertilizer Post</b></p> <ol style="list-style-type: none"> <li>1. Actor will press on the Add Post Option</li> <li>2. Actor enters Name.</li> <li>3. Actor enters Designation.</li> <li>4. Actor enters Phone Number.</li> <li>5. Actor enters Medicine Name.</li> <li>6. Actor enters Medicine formula.</li> <li>7. Actor enters Medicine good effects.</li> <li>8. Actor enters Description.</li> <li>9. Actor attach picture.</li> </ol>		

	<p>10. Actor will press Upload Post Option.</p> <p><b>Update Medicine Post</b></p> <ol style="list-style-type: none"> <li>1. Actor Will Press on the Edit Post Option</li> <li>2. Actor enters Name.</li> <li>3. Actor enters Designation.</li> <li>4. Actor enters Phone Number.</li> <li>5. Actor enters Medicine Name.</li> <li>6. Actor enters Medicine formula.</li> <li>7. Actor enters Medicine good effects.</li> <li>8. Actor enters Description.</li> <li>9. Actor attach picture.</li> <li>10. Actor will press Update Post Option.</li> </ol> <p><b>Delete Medicine Post</b></p> <ol style="list-style-type: none"> <li>1. Actor will select Medicine Post Option.</li> <li>2. Actor will press Delete User option to delete post.</li> </ol> <p><b>Report Medicine Post</b></p> <ol style="list-style-type: none"> <li>1. Actor will view the post.</li> <li>2. Actor press on the Report Post Option.</li> <li>3. Actor enters reason.</li> <li>4. Actor press on the Done option.</li> </ol> <p><b>Authenticate Medicine Post</b></p> <ol style="list-style-type: none"> <li>1. Director Agriculture Department govt will view the post from Post List</li> <li>2. Director Agriculture Department govt press on the Authenticate Post Option.</li> </ol>
<p><b>Alternative Flows:</b>  <b>[Alternative Flow 1 – Not in Network]</b></p>	<p>No Alternative Flow</p>
<p><b>Exceptions:</b></p>	<p><b>View Medicine Post</b></p> <p>1a. Post List is empty.</p> <ol style="list-style-type: none"> <li>i. The system shows an error you do not have any Post. System must have at least one Post.</li> </ol> <p><b>Add Medicine Post</b></p> <p>2a. Name field is empty.</p> <ol style="list-style-type: none"> <li>i. The system shows an error message to the Actor. This field cannot be empty.</li> </ol>

- ii. Actor enters Name.
- 2b. Name field contains number
- i. The system shows an error message to the Actor.
  - ii. Actor enters Name.
- 2c. Name field contains special characters
- i. The system shows an error message to the Actor.
  - ii. Actor enters Name.
- 3a. Designation field is empty.
- i. The system shows an error message to the Actor. This field cannot be empty.
  - ii. Actor enters valid Designation.
- 3b. Designation field is invalid.
- i. The system shows an error message to the Actor.
  - ii. Actor enters Designation.
- 4a. Phone Number field is empty.
- i. The system shows an error message to the Actor. This field cannot be empty.
  - ii. Actor enters Phone Number.
- 4b. Phone Number field is invalid.
- i. The system shows an error message to the Actor.
  - ii. Actor enters Phone Number.
- 4c. Phone Number field does not contain 11-digit.
- i. The system shows an error message to the Actor.
  - ii. Actor enters valid 11-digit Phone Number.
- 5a. Medicine Name field is empty.
- i. The system shows an error message to the Actor. This field cannot be empty.
  - ii. Actor enters Medicine Name.
- 6a. Medicine Formula field is empty.
- i. The system shows an error message to the Actor. This field cannot be empty.
  - ii. Actor enters Medicine Formula.
- 7a. Medicine Good Effects field is empty.
- iii. The system shows an error message to the Actor. This field cannot be empty.
  - iv. Actor enters Medicine Good Effects.

- 8a. Description field is empty.
- iii. The system shows an error message to the Actor. This field cannot be empty.
- iv. Actor enters Description.

### **Update Medicine Post**

- 2a. Name field is empty.
  - i. The system shows an error message to the Actor. This field cannot be empty.
  - ii. Actor enters Name.
- 2b. Name field contains number
  - i. The system shows an error message to the Actor.
  - ii. Actor enters Name.
- 2c. Name field contains special characters
  - i. The system shows an error message to the Actor.
  - ii. Actor enters Name.
- 3a. Designation field is empty.
  - i. The system shows an error message to the Actor. This field cannot be empty.
  - ii. Actor enters Designation.
- 3b. Designation field is invalid.
  - i. The system shows an error message to the Actor.
  - ii. Actor enters Designation
- 4a. Phone Number field is empty.
  - i. The system shows an error message to the Actor. This field cannot be empty.
  - ii. Actor enters Phone Number.
- 4b. Phone Number field is invalid.
  - i. The system shows an error message to the Actor.
  - ii. Actor enters Phone Number.
- 4c. Phone Number field does not contain 11-digit.
  - i. The system shows an error message to the Actor.
  - ii. Actor enters valid 11-digit Phone Number.
- 5a. Medicine Name field is empty.
  - i. The system shows an error message to the Actor. This field cannot be empty.
  - ii. Actor enters Medicine Name.

	<p>6a. Medicine Formula field is empty.</p> <ul style="list-style-type: none"> <li>i. The system shows an error message to the Actor. This field cannot be empty.</li> <li>ii. Actor enters Medicine Formula.</li> </ul> <p>7a. Medicine Good Effects field is empty.</p> <ul style="list-style-type: none"> <li>i. The system shows an error message to the Actor. This field cannot be empty.</li> <li>ii. Actor enters Medicine Good Effects.</li> </ul> <p>8a. Description field is empty.</p> <ul style="list-style-type: none"> <li>i. The system shows an error message to the Actor. This field cannot be empty.</li> <li>ii. Actor enters Description.</li> </ul> <p><b>Delete Medicine Post</b></p> <p>1a. List of Medicine post is empty.</p> <ul style="list-style-type: none"> <li>i. The system shows an error you do not have any post. System must have at least one Post.</li> </ul> <p>1a. Post did not Select.</p> <ul style="list-style-type: none"> <li>i. The system shows an error you do not select post.</li> <li>ii. Actor selects the post.</li> </ul> <p><b>Report Medicine Post</b></p> <p>3a. Reason fields is empty.</p> <ul style="list-style-type: none"> <li>i. The system shows an error message to the Actor. This field cannot be empty.</li> <li>ii. Actor enters Reason.</li> </ul> <p>3b. Reason field's text is greater than limit</p> <ul style="list-style-type: none"> <li>i. The system shows an error message to the Actor.</li> <li>ii. Actor enters reason text within the limit.</li> </ul>
<b>Includes:</b>	UC-2: Login
<b>Frequency of Use:</b>	On Demand
<b>Special Requirements:</b>	Actor will get Manage Medicine Post response within 40 seconds 90% of the time. Good internet connection is necessary for Manage Medicine Post.
<b>Assumptions:</b>	Actor should know how to access the web page by using internet and log in by giving correct credentials Actor must be able how to Manage Medicine Post.
<b>Notes and Issues:</b>	None

**Table 3.9: Use Case of Manage Records**

<b>Use Case ID:</b>	UC-8		
<b>Use Case Name:</b>	Manage Records		
<b>Created By:</b>	Riaz Ahmad	<b>Last Updated By:</b>	12 <sup>th</sup> January, 2023
<b>Date Created:</b>	28 <sup>th</sup> December, 2023	<b>Last Revision Date:</b>	15 <sup>th</sup> January, 2023
<b>Actors:</b>	Farmer		
<b>Description:</b>	Farmer will Manage Records.		
<b>Trigger:</b>	Farmer wants to manage records such as Add, Update, delete and print annual accountings.		
<b>Preconditions:</b>	Farmer must be logged into the system. Farmer must have Annual Accounting Records in the List.		
<b>Post conditions:</b>	Farmer will Successfully Manage Records. Database will be updated.		
<b>Normal Flow:</b>	<p>Farmer will select the manage Records option.</p> <p><b>View User</b></p> <ol style="list-style-type: none"> <li>Farmer will view the list of his/her Annual Accounting Records.</li> </ol> <p><b>Add Record</b></p> <ol style="list-style-type: none"> <li>Farmer will press on the Add Record option.</li> <li>Farmer enters Sequence Number.</li> <li>Farmer will select Fertilizer/Medicine/other Expenses Name from drop down menu.</li> <li>Farmer enters Price.</li> <li>Farmer enters Quantity.</li> <li>Farmer will press the Add Record option.</li> <li>System prompts the Farmer for successfully Add Record.</li> </ol> <p><b>Update Record</b></p> <ol style="list-style-type: none"> <li>Farmer will press on the Update Record option.</li> <li>Farmer enters Sequence Number.</li> <li>Farmer will select Fertilizer/Medicine/other Expenses Name from drop down menu.</li> <li>Farmer enters Price.</li> <li>Farmer enters Quantity.</li> <li>Farmer will press the Update Record option.</li> <li>System prompts the Farmer for successfully Update Record.</li> </ol>		

	<p><b>Delete Record</b></p> <ol style="list-style-type: none"> <li>1. Farmer will press Record List Option.</li> <li>2. Farmer will select Record.</li> <li>3. Farmer will press Delete Record option to delete the Record.</li> </ol> <p><b>Print Record</b></p> <ol style="list-style-type: none"> <li>1. Farmer will press on Print Record Option.</li> <li>2. Farmer press on Export as Option.</li> <li>3. Farmer choose the Export File Format.</li> <li>4. System will Successfully Generate File.</li> <li>5. Farmer will press on Download Option.</li> <li>6. System Successfully Download the file on Farmer's specific Location.</li> </ol>
<p><b>Alternative Flows:</b> [Alternative Flow 1 – Not in Network]</p>	<p>No Alternative Flow</p>
<p><b>Exceptions:</b></p>	<p><b>View Record</b></p> <ol style="list-style-type: none"> <li>1a. Record List is empty.       <ol style="list-style-type: none"> <li>i. The system shows an error you do not have any Record in the List. System must have at least one Record in the List.</li> </ol> </li> </ol> <p><b>Add Record</b></p> <ol style="list-style-type: none"> <li>1a. Add Record Option did not Select       <ol style="list-style-type: none"> <li>i. The system shows an error you do not select Add Record Option.</li> <li>ii. Farmer selects Add Record Option.</li> </ol> </li> <li>2a. Sequence Number field is empty.       <ol style="list-style-type: none"> <li>i. The system shows an error message to the Farmer. This field cannot be empty.</li> <li>ii. Farmer enters Sequence Number.</li> </ol> </li> <li>3a. Fertilizer/Medicine Name did not select from drop down menu.       <ol style="list-style-type: none"> <li>i. The system shows an error message to the Farmer.</li> <li>ii. Farmer selects Fertilizer Name from drop down menu.</li> </ol> </li> <li>4a. Price field is empty.       <ol style="list-style-type: none"> <li>i. The system shows an error message to the Farmer. This field cannot be empty.</li> <li>ii. Farmer enters Price.</li> </ol> </li> <li>5a. Quantity field is empty.       <ol style="list-style-type: none"> <li>i. The system shows an error message to the Farmer. This field cannot be empty.</li> </ol> </li> </ol>

- ii. Farmer enters Quantity.

### **Update Record**

#### 1a. Update Record Option did not Select

- i. The system shows an error you do not select Update Record Option.
- ii. Farmer selects Update Record Option.

#### 2a. Sequence Number field is empty.

- i. The system shows an error message to the Farmer. This field cannot be empty.
- ii. Farmer enters Sequence Number.

#### 3a. Fertilizer/Medicine Name did not select from drop down menu.

- i. The system shows an error message to the Farmer.
- ii. Farmer selects Fertilizer Name from drop down menu.

#### 4a. Price field is empty.

- i. The system shows an error message to the Farmer. This field cannot be empty.
- ii. Farmer enters Price.

#### 5a. Quantity field is empty.

- i. The system shows an error message to the Farmer. This field cannot be empty.
- ii. Farmer enters Quantity.

### **Delete Record**

#### 1a. List of Record is empty.

- i. The system shows an error you do not have any Record's List. System must have at least one Record List.

#### 1a. List of Records did not Select.

- i. The system shows an error you do not select any Record List.
- ii. Farmer selects the Record List.

#### 2a. Record List is empty.

- i. The system shows an error you do not have any Record in the List. System must have at least one Record in the List.

#### 2b. Record did not Select.

- i. The system shows an error you do not select any Record from the List.
- ii. Farmer selects the Record.

### **Print Record**

#### 3a. Export File Format did not choose.

	<ul style="list-style-type: none"> <li>i. The system shows an error message to the Farmer.</li> <li>ii. Farmer choose the Export File Format.</li> </ul>
<b>Includes:</b>	UC-2: Login
<b>Frequency of Use:</b>	On Demand
<b>Special Requirements:</b>	Farmer will get CRUD Operation response within 30 seconds 90% of the time.
<b>Assumptions:</b>	The Farmer should know how to access the web page by using internet and log in by giving correct credentials. Farmer must be able how to view, add, update and delete the record.

**Table 3.10: Use Case of Manage Accounts**

<b>Use Case ID:</b>	UC-9		
<b>Use Case Name:</b>	Manage Accounts		
<b>Created By:</b>	Riaz Ahmad	<b>Last Updated By:</b>	12 <sup>th</sup> January, 2023
<b>Date Created:</b>	28 <sup>th</sup> December, 2023	<b>Last Revision Date:</b>	15 <sup>th</sup> January, 2023
<b>Actors:</b>	Farmer, Admin, Agriculture Expert, Fertilizer Advertising Officer, Medicine Advertising Officer, Fertilizer Expert, Medicine Expert, Director Agriculture Department Govt.		
<b>Description:</b>	Actor will Manage Accounts.		
<b>Trigger:</b>	Farmer wants to manage records such as Add, Update, delete and view annual accountings.		
<b>Preconditions:</b>	The Actor must be logged in to his/her account. The Actor must have access to the edit Account Page.		
<b>Post conditions:</b>	Actor Account Information is Updated and saved in the System. Database will be updated.		
<b>Normal Flow:</b>	<ol style="list-style-type: none"> <li>1. Actor will press on the Edit Account Information option.</li> <li>2. Actor enters First name.</li> <li>3. Actor enters Last name.</li> <li>4. Actor enters Old Password.</li> <li>5. Actor enters New Password.</li> <li>6. Actor enters Phone Number.</li> <li>7. Actor enters Location.</li> <li>8. Actor enters Designation.</li> <li>9. Actor enters Organization.</li> </ol>		

	<p>10. Actor upload profile pic.</p> <p>11. Actor will press the Update Profile option.</p> <p>12. System prompts the Actor for successfully Update Profile Information in the System.</p>
<b>Alternative Flows:</b> <b>[Alternative Flow 1 – Not in Network]</b>	No Alternative Flow
<b>Exceptions:</b>	<p>2a. First Name field is empty.</p> <ul style="list-style-type: none"> <li>i. The system shows an error message to the Actor. This field cannot be empty.</li> <li>ii. Actor enters valid First Name.</li> </ul> <p>2b. First Name field contains number</p> <ul style="list-style-type: none"> <li>i. The system shows an error message to the Actor.</li> <li>ii. Actor enters valid First Name.</li> </ul> <p>2c. First Name field is containing special characters</p> <ul style="list-style-type: none"> <li>i. The system shows an error message to the Actor.</li> <li>ii. Actor enters valid First Name.</li> </ul> <p>3a. Last Name field is empty.</p> <ul style="list-style-type: none"> <li>i. The system shows an error message to the Actor. This field cannot be empty.</li> <li>ii. Actor enters valid Last Name.</li> </ul> <p>3b. Last Name field contains number</p> <ul style="list-style-type: none"> <li>i. The system shows an error message to the Actor.</li> <li>ii. Actor enters valid Last Name.</li> </ul> <p>3c. Last Name field contains special character</p> <ul style="list-style-type: none"> <li>i. The system shows an error message to the Actor.</li> <li>ii. Actor enters valid Last Name.</li> </ul> <p>4a. Old Password field is empty.</p> <ul style="list-style-type: none"> <li>i. The system shows an error message to the Actor. This field cannot be empty.</li> <li>ii. Actor enters valid Old Password.</li> </ul> <p>4b. Old Password field is invalid.</p> <ul style="list-style-type: none"> <li>i. The system shows an error message to the Actor.</li> <li>ii. Actor enters valid Old Password.</li> </ul>

- 5a. New Password field is empty.
- i. The system shows an error message to the Actor. This field cannot be empty.
  - ii. Actor enters valid New Password.
- 5b. New Password field does not contain at least one special character.
- i. The system shows an error message to the Actor.
  - ii. Actor enters valid New Password.
- 5c. New Password field does not contain at least one Number.
- i. The system shows an error message to the Actor.
  - ii. Actor enters valid New Password.
- 5d. New Password field does not contain at least one Small Character.
- i. The system shows an error message to the Actor.
  - ii. Actor enters valid New Password.
- 5e. New Password field does not contain at least one Capital Character.
- i. The system shows an error message to the Actor.
  - ii. Actor enters valid New Password.
- 5f. New Password field does not contain 8-digit.
- i. The system shows an error message to the Actor.
  - ii. Actor enters valid 8-digit New Password.
- 6a. Phone Number field is empty.
- i. The system shows an error message to the Actor. This field cannot be empty.
  - ii. Actor enters valid Phone Number.
- 6b. Phone Number field is invalid.
- i. The system shows an error message to the Actor.
  - ii. Actor enters valid Phone Number.
- 6c. Phone Number field does not contain 11-digit.
- i. The system shows an error message to the Actor.
  - ii. Actor enters valid 11-digit Phone Number.
- 7a. Location field is empty.
- i. The system shows an error message to the Actor. This field cannot be empty.
  - ii. Actor enters valid Location.
- 7b. Location field is invalid.
- i. The system shows an error message to the Actor.

	<ul style="list-style-type: none"> <li>ii. Actor enters valid Location.</li> </ul> <p>8a. Designation field is empty.</p> <ul style="list-style-type: none"> <li>i. The system shows an error message to the Actor. This field cannot be empty.</li> <li>ii. Actor enters valid Designation.</li> </ul> <p>8b. Designation field is invalid.</p> <ul style="list-style-type: none"> <li>i. The system shows an error message to the Actor.</li> <li>ii. Actor enters valid Designation.</li> </ul> <p>9a. Organization field is empty.</p> <ul style="list-style-type: none"> <li>i. The system shows an error message to the Actor. This field cannot be empty.</li> <li>ii. Actor enters valid Organization.</li> </ul> <p>9b. Organization field is invalid.</p> <ul style="list-style-type: none"> <li>i. The system shows an error message to the Actor.</li> <li>ii. Actor enters Organization.</li> </ul> <p>9a. Profile picture did not choose.</p> <ul style="list-style-type: none"> <li>i. The system shows an error message to the Actor.</li> <li>ii. Actor choose profile picture.</li> </ul>
<b>Includes:</b>	UC-2: Login
<b>Frequency of Use:</b>	On Demand
<b>Special Requirements:</b>	Actor will get Update account information Operation response within 30 seconds 90% of the time.
<b>Assumptions:</b>	The Actor should know how to access the web page by using internet and log in by giving correct credentials. Actor must be able know how to access the manage accounts page and how to edit account information.

**Table 3.11: Use Case of Manage Fertilizer**

<b>Use Case ID:</b>	UC-11		
<b>Use Case Name:</b>	Manage Fertilizers		
<b>Created By:</b>	Riaz Ahmad	<b>Last Updated By:</b>	12 <sup>th</sup> January, 2023
<b>Date Created:</b>	28 <sup>th</sup> December, 2023	<b>Last Revision Date:</b>	15 <sup>th</sup> January, 2023

<b>Actors:</b>	Farmer, Agriculture Expert, Fertilizer Advertising Officer, Fertilizer Expert.
<b>Description:</b>	Actor will Manage Fertilizers.
<b>Trigger:</b>	Actor wants to manage Fertilizers.
<b>Preconditions:</b>	Actor must be logged into the system. Actor must have permissions to manage fertilizers.
<b>Post conditions:</b>	Actor will Successfully Manage Fertilizers. Database will be updated.
<b>Normal Flow:</b>	<ol style="list-style-type: none"> <li>1. Actor will press on the Add fertilizer post.</li> <li>2. Actor enters name of crop.</li> <li>3. Actor selects type of soil.</li> <li>4. Actor enters formula of fertilizer.</li> <li>5. Actor enters quantity of fertilizer according to stages of crop.</li> <li>6. Actor enters the benefits of fertilizer according to crop.</li> <li>7. Actor will press on upload post option.</li> </ol>
<b>Alternative Flows:</b> [Alternative Flow 1 – Not in Network]	No Alternative Flow
<b>Exceptions:</b>	<p>2a. Name of Crop field is empty.</p> <ol style="list-style-type: none"> <li>i. The system shows an error message to the Actor. This field cannot be empty.</li> <li>ii. Actor enters name of crop.</li> </ol> <p>3a. Type of Soil did not select.</p> <ol style="list-style-type: none"> <li>i. The system shows an error message to the Actor.</li> <li>ii. Actor selects the Type of soil.</li> </ol> <p>4a. Name of Fertilizer field is empty.</p> <ol style="list-style-type: none"> <li>i. The system shows an error message to the Actor. This field cannot be empty.</li> <li>ii. Actor enters name of fertilizer.</li> </ol> <p>5a. Formula of Fertilizer field is empty.</p> <ol style="list-style-type: none"> <li>i. The system shows an error message to the Actor. This field cannot be empty.</li> <li>ii. Actor enters name of fertilizer.</li> </ol> <p>6a. Quantity of Fertilizer field is empty.</p> <ol style="list-style-type: none"> <li>i. The system shows an error message to the Actor. This field cannot be empty.</li> <li>ii. Actor enters quantity of fertilizer.</li> </ol> <p>7a. Benefits of fertilizer field is empty.</p>

	<ul style="list-style-type: none"> <li>i. The system shows an error message to the Actor. This field cannot be empty.</li> <li>ii. Actor enters benefits of fertilizer.</li> </ul>
<b>Includes:</b>	UC-2: Login
<b>Frequency of Use:</b>	On Demand
<b>Special Requirements:</b>	Actor will get manage Fertilizer Operation response within 35 seconds 90% of the time.
<b>Assumptions:</b>	The Actor should know how to access the web page by using internet and log in by giving correct credentials. Actor must be able how to manage fertilizers.
<b>Notes and Issues:</b>	None

**Table 3.12: Use Case of Manage Medicines**

<b>Use Case ID:</b>	UC-11		
<b>Use Case Name:</b>	Manage Medicines		
<b>Created By:</b>	Riaz Ahmad	<b>Last Updated By:</b>	12 <sup>th</sup> January, 2023
<b>Date Created:</b>	28 <sup>th</sup> December, 2023	<b>Last Revision Date:</b>	15 <sup>th</sup> January, 2023
<b>Actors:</b>	Farmer, Agriculture Expert, Medicine Advertising Officer, Medicine Expert.		
<b>Description:</b>	Actor will Manage Medicines.		
<b>Trigger:</b>	Actor wants to Manage Medicines.		
<b>Preconditions:</b>	Actor must be logged into the system. Actor must have permissions to manage medicines.		
<b>Post conditions:</b>	Actor will Successfully Manage Medicines. Database will be updated.		
<b>Normal Flow:</b>	<ol style="list-style-type: none"> <li>1. Actor will press on the Add Medicine post.</li> <li>2. Actor enters name of crop.</li> <li>3. Actor selects type of pesticide.</li> <li>4. Actor enters formula of medicine.</li> <li>5. Actor enters quantity of medicine according to stages of crop.</li> <li>6. Actor enters the benefits of medicine according to crop.</li> <li>7. Actor will press on upload post option.</li> </ol>		
<b>Alternative Flows: [Alternative Flow 1 – Not in</b>	No Alternative Flow		

<b>Network]</b>	
<b>Exceptions:</b>	<p>2a. Name of Crop field is empty.</p> <ul style="list-style-type: none"> <li>i. The system shows an error message to the Actor. This field cannot be empty.</li> <li>ii. Actor enters name of crop.</li> </ul> <p>3a. Type of Pesticides did not select.</p> <ul style="list-style-type: none"> <li>i. The system shows an error message to the Actor.</li> <li>ii. Actor selects the Type of pesticides.</li> </ul> <p>4a. Name of Medicine field is empty.</p> <ul style="list-style-type: none"> <li>i. The system shows an error message to the Actor. This field cannot be empty.</li> <li>ii. Actor enters name of medicine.</li> </ul> <p>5a. Formula of Medicine field is empty.</p> <ul style="list-style-type: none"> <li>i. The system shows an error message to the Actor. This field cannot be empty.</li> <li>ii. Actor enters name of medicine.</li> </ul> <p>6a. Quantity of Medicine field is empty.</p> <ul style="list-style-type: none"> <li>i. The system shows an error message to the Actor. This field cannot be empty.</li> <li>ii. Actor enters quantity of medicine.</li> </ul> <p>7a. Benefits of Medicine field is empty.</p> <ul style="list-style-type: none"> <li>i. The system shows an error message to the Actor. This field cannot be empty.</li> <li>ii. Actor enters benefits of medicine.</li> </ul>
<b>Includes:</b>	UC-2: Login
<b>Frequency of Use:</b>	On Demand
<b>Special Requirements:</b>	Actor will get Manage Medicines Operation response within 45 seconds 90% of the time.
<b>Assumptions:</b>	The Actor should know how to access the web page by using internet and log in by giving correct credentials. Actor must be able how to Manage Medicines.
<b>Notes and Issues:</b>	None

**Table 3.13: Use Case of Manage Pesticides**

<b>Use Case ID:</b>	UC-13		
<b>Use Case Name:</b>	Manage Pesticides		
<b>Created By:</b>	Riaz Ahmad	<b>Last Updated By:</b>	12 <sup>th</sup> January, 2023
<b>Date Created:</b>	28 <sup>th</sup> December, 2023	<b>Last Revision Date:</b>	15 <sup>th</sup> January, 2023
<b>Actors:</b>	Farmer, Agriculture Expert, Medicine Advertising Officer, Medicine Expert.		
<b>Description:</b>	Actor will Manage Pesticides.		
<b>Trigger:</b>	Actor wants to Manage Pesticides.		
<b>Preconditions:</b>	Actor must be logged into the system. Actor must have permissions to Manage Pesticides.		
<b>Post conditions:</b>	Actor will Successfully Manage Pesticides. Database will be updated.		
<b>Normal Flow:</b>	<ol style="list-style-type: none"> <li>1. Actor will press on the Add Pesticides post.</li> <li>2. Actor enters name of crop.</li> <li>3. Actor enters name of pesticide.</li> <li>4. Actor attach the picture.</li> <li>5. Actor enters name of medicine.</li> <li>6. Actor enters quantity of medicine according to the pesticide</li> <li>7. Actor enters the benefits of medicine according to crop.</li> <li>8. Actor enters the bad effects of medicine on the crop.</li> <li>9. Actor will press on upload post option.</li> </ol>		
<b>Alternative Flows: [Alternative Flow 1 – Not in Network]</b>	No Alternative Flow		
<b>Exceptions:</b>	<p>2a. Name of Crop field is empty.</p> <ol style="list-style-type: none"> <li>i. The system shows an error message to the Actor. This field cannot be empty.</li> <li>ii. Actor enters name of crop.</li> </ol> <p>3a. Name of Pesticide is empty.</p> <ol style="list-style-type: none"> <li>i. The system shows an error message to the Actor.</li> <li>ii. Actor enters name of pesticide.</li> </ol> <p>4a. Picture did not choose.</p> <ol style="list-style-type: none"> <li>i. The system shows an error message to the Actor.</li> </ol>		

	<ul style="list-style-type: none"> <li>ii. Actor choose profile picture.</li> </ul> <p>5a. Name of Medicine field is empty.</p> <ul style="list-style-type: none"> <li>i. The system shows an error message to the Actor. This field cannot be empty.</li> <li>ii. Actor enters name of Medicine.</li> </ul> <p>6a. Quantity of Medicine field is empty.</p> <ul style="list-style-type: none"> <li>i. The system shows an error message to the Actor. This field cannot be empty.</li> <li>ii. Actor enters quantity of medicine.</li> </ul> <p>7a. Benefits of Medicine field is empty.</p> <ul style="list-style-type: none"> <li>i. The system shows an error message to the Actor. This field cannot be empty.</li> <li>ii. Actor enters benefits of medicine.</li> </ul> <p>8a. Bad Effects of Medicine field is empty.</p> <ul style="list-style-type: none"> <li>i. The system shows an error message to the Actor. This field cannot be empty.</li> <li>ii. Actor enters bad effects of medicine.</li> </ul>
<b>Includes:</b>	UC-2: Login
<b>Frequency of Use:</b>	On Demand
<b>Special Requirements:</b>	Actor will get Manage Pesticides Operation response within 40 seconds 90% of the time.
<b>Assumptions:</b>	The Actor should know how to access the web page by using internet and log in by giving correct credentials. Actor must be able how to Manage Pesticides.
<b>Notes and Issues:</b>	None

**Table 3.14: Use Case of Manage Crop**

<b>Use Case ID:</b>	UC-13		
<b>Use Case Name:</b>	Manage Crop		
<b>Created By:</b>	Hira Saleem	<b>Last Updated By:</b>	12 <sup>th</sup> January, 2023
<b>Date Created:</b>	28 <sup>th</sup> December, 2023	<b>Last Revision Date:</b>	15 <sup>th</sup> January, 2023
<b>Actors:</b>	Farmer		
<b>Description:</b>	Farmer will broadcast the problem to the Expert Advisor to get advice.		

<b>Trigger:</b>	Farmer wants the best advice for current problem.
<b>Preconditions:</b>	Farmer must know the exact problem to get advice.
<b>Post conditions:</b>	Expert Advisor will see the broadcaster problem and will provide with best possible solution.
<b>Normal Flow:</b>	<ol style="list-style-type: none"> <li>1. Farmer will enter the name of crop.</li> <li>2. Farmer will enter the location of crop.</li> <li>3. The system will fetch the type of soil according to given location.</li> <li>4. Farmer will elaborate the problem.</li> <li>5. Farmer will broadcast the problem to Expert Advisor.</li> </ol>
<b>Alternative Flows:</b> [Alternative Flow 1 – Not in Network]	No Alternative Flow
<b>Exceptions:</b>	<ol style="list-style-type: none"> <li>1a. Crop Name field is empty. <ol style="list-style-type: none"> <li>i. The system shows an error message to the Farmer. This field cannot be empty.</li> <li>ii. Farmer enters valid Crop Name.</li> </ol> </li> <li>1b. Crop Name field contains number <ol style="list-style-type: none"> <li>i. The system shows an error message to the Farmer.</li> <li>ii. Farmer enters valid Crop Name.</li> </ol> </li> <li>1c. Crop Name field is containing special characters <ol style="list-style-type: none"> <li>i. The system shows an error message to the Farmer.</li> <li>ii. Farmer enters valid Crop Name.</li> </ol> </li> <li>2a. Location field is empty. <ol style="list-style-type: none"> <li>i. The system shows an error message to the Farmer. This field cannot be empty.</li> <li>ii. Farmer enters valid Location.</li> </ol> </li> <li>2b. Location field is invalid. <ol style="list-style-type: none"> <li>i. The system shows an error message to the Farmer.</li> <li>ii. Farmer enters valid Location.</li> </ol> </li> <li>3a. Soil Type field is empty. <ol style="list-style-type: none"> <li>i. The system shows an error message to the Farmer. This field cannot be empty.</li> <li>ii. Farmer enters valid Soil Type.</li> </ol> </li> <li>3b. Soil Type field is invalid. <ol style="list-style-type: none"> <li>i. The system shows an error message to the Farmer.</li> <li>ii. Farmer enters valid Soil Type.</li> </ol> </li> <li>4a. Problem field is empty. <ol style="list-style-type: none"> <li>i. The system shows an error message to the Farmer. This field cannot be empty.</li> </ol> </li> </ol>

	<ul style="list-style-type: none"> <li>ii. Farmer enters valid Problem.</li> </ul> <p>4b. Problem field is invalid.</p> <ul style="list-style-type: none"> <li>i. The system shows an error message to the Farmer.</li> <li>ii. Farmer enters valid Problem.</li> </ul> <p>5. Problem is not broadcast to the Expert Advisor.</p> <ul style="list-style-type: none"> <li>i. The system shows an error message to the Actor.</li> <li>ii. Farmer will broadcast the problem.</li> </ul>
<b>Includes</b>	Expert Advice use-case.
<b>Frequency of Use:</b>	On Demand
<b>Special Requirements:</b>	. User must be able to understand the exact problem of crop.
<b>Assumptions:</b>	Farmer should know how to elaborate the problem in explicit language.
<b>Notes and Issues:</b>	None

**Table 3.15: Use Case of Watering Schedule**

<b>Use Case ID:</b>	UC-14		
<b>Use Case Name:</b>	Watering Schedule		
<b>Created By:</b>	Hira Saleem	<b>Last Updated By:</b>	12 <sup>th</sup> January, 2023
<b>Date Created:</b>	28 <sup>th</sup> December, 2023	<b>Last Revision Date:</b>	15 <sup>th</sup> January, 2023
<b>Actors:</b>	Farmer, Agriculture Expert		
<b>Description:</b>	The Farmer will enter crops details and Agriculture Expert will provide with proper watering schedule.		
<b>Trigger:</b>	Farmer wants proper watering schedule for their crops.		
<b>Preconditions:</b>	Farmer must enter valid and correct crop location.		
<b>Post conditions:</b>	Expert Advisor will give proper watering schedule by considering crops details.		
<b>Normal Flow:</b>	<ol style="list-style-type: none"> <li>1. Farmer will enter crop name.</li> <li>2. Farmer will enter location of crop.</li> <li>3. The system will fetch the type of soil according to location of crop.</li> <li>4. Expert Advisor will give watering schedule according to the current area and crop.</li> </ol>		

<b>Alternative Flows:</b> <b>[Alternative Flow 1 – Not in Network]</b>	No Alternative Flow
<b>Exceptions:</b>	<p>1a. Crop Name field is empty.</p> <ul style="list-style-type: none"> <li>i. The system shows an error message to the Actor. This field cannot be empty.</li> <li>ii. Actor enters valid Crop Name.</li> </ul> <p>1b. Crop Name field contains number</p> <ul style="list-style-type: none"> <li>i. The system shows an error message to the Actor.</li> <li>ii. Actor enters valid Crop Name.</li> </ul> <p>1c. Crop Name field is containing special characters</p> <ul style="list-style-type: none"> <li>i. The system shows an error message to the Actor.</li> <li>ii. Actor enters valid Crop Name.</li> </ul> <p>2a. Location field is empty.</p> <ul style="list-style-type: none"> <li>i. The system shows an error message to the Actor. This field cannot be empty.</li> <li>ii. Actor enters valid Location.</li> </ul> <p>2b. Location field is invalid.</p> <ul style="list-style-type: none"> <li>i. The system shows an error message to the Actor.</li> <li>ii. Actor enters valid Location.</li> </ul>
<b>Includes</b>	None
<b>Frequency of Use:</b>	On Demand
<b>Special Requirements:</b>	User must enter correct location of crop.
<b>Assumptions:</b>	The Actor should know how to access the web page by using internet and log in by giving correct credentials.
<b>Notes and Issues:</b>	None

**Table 3.16: Use Case of Manage Crop Advice**

<b>Use Case ID:</b>	UC-15		
<b>Use Case Name:</b>	Manage Crop Advice		
<b>Created By:</b>	Hira Saleem	<b>Last Updated By:</b>	12 <sup>th</sup> January, 2023
<b>Date Created:</b>	28 <sup>th</sup> December, 2023	<b>Last Revision Date:</b>	15 <sup>th</sup> January, 2023
<b>Actors:</b>	Agriculture Expert		
<b>Description:</b>	Agriculture Expert will appear with best possible solution of the problems regarding crops.		
<b>Trigger:</b>	Agriculture Expert wants to broadcast the solution of crop's problems.		
<b>Preconditions:</b>	Agriculture Expert must be registered in this website.		
<b>Post conditions:</b>	Proper solution will be broadcast to every farmer.		
<b>Normal Flow:</b>	<ol style="list-style-type: none"> <li>1. Agriculture Expert login to the system.</li> <li>2. Agriculture Expert go to the crop's problems option.</li> <li>3. Agriculture Expert selects the Give Solution option.</li> <li>4. Solution template will pop up on Expert's screen.</li> <li>5. Agriculture Expert enters First Name.</li> <li>6. Agriculture Expert enters Last Name.</li> <li>7. Agriculture Expert enters Contact Number.</li> <li>8. Agriculture Expert enters details of solution in receptive way.</li> <li>9. Agriculture Expert will broadcast the solution to every registered farmer.</li> </ol>		
<b>Alternative Flows: [Alternative Flow 1 – Not in Network]</b>	No Alternative Flow		
<b>Exceptions:</b>	<ol style="list-style-type: none"> <li>5a. First Name field is empty. <ol style="list-style-type: none"> <li>i. The system shows an error message to the Actor. This field cannot be empty.</li> <li>ii. Actor enters valid First Name.</li> </ol> </li> <li>5b. First Name field contains number <ol style="list-style-type: none"> <li>i. The system shows an error message to the Actor.</li> <li>ii. Actor enters valid First Name.</li> </ol> </li> <li>5c. First Name field is containing special characters <ol style="list-style-type: none"> <li>i. The system shows an error message to the Actor.</li> </ol> </li> </ol>		

	<ul style="list-style-type: none"> <li>ii. Actor enters valid First Name.</li> </ul> <p>6a. Last Name field is empty.</p> <ul style="list-style-type: none"> <li>i. The system shows an error message to the Actor. This field cannot be empty.</li> <li>ii. Actor enters valid Last Name.</li> </ul> <p>6b. Last Name field contains number</p> <ul style="list-style-type: none"> <li>i. The system shows an error message to the Actor.</li> <li>ii. Actor enters valid Last Name.</li> </ul> <p>6c. Last Name field contains special character</p> <ul style="list-style-type: none"> <li>i. The system shows an error message to the Actor.</li> <li>ii. Actor enters valid Last Name.</li> </ul> <p>7a. Phone Number field is empty.</p> <ul style="list-style-type: none"> <li>i. The system shows an error message to the Actor. This field cannot be empty.</li> <li>ii. Actor enters valid Phone Number.</li> </ul> <p>7b. Phone Number field is invalid.</p> <ul style="list-style-type: none"> <li>i. The system shows an error message to the Actor.</li> <li>ii. Actor enters valid Phone Number.</li> </ul> <p>7c. Phone Number field does not contain 11-digit.</p> <ul style="list-style-type: none"> <li>i. The system shows an error message to the Actor.</li> <li>ii. Actor enters valid 11-digit Phone Number.</li> </ul> <p>8a. Solution field is empty.</p> <ul style="list-style-type: none"> <li>i. The system shows an error message to the Actor. This field cannot be empty.</li> <li>ii. Actor enters valid Phone Number.</li> </ul> <p>8b. Solution field contains special character</p> <ul style="list-style-type: none"> <li>i. The system shows an error message to the Actor.</li> <li>ii. Actor enters valid Solution.</li> </ul>
<b>Includes</b>	None
<b>Frequency of Use:</b>	On Demand
<b>Special Requirements:</b>	.User must be able to understand Urdu and English language
<b>Assumptions:</b>	Agriculture Expert should know how to access the Solution template to give solution.
<b>Notes and Issues:</b>	None

**Table 3.17: Use Case of Manage Harvesting Time**

<b>Use Case ID:</b>	UC-16		
<b>Use Case Name:</b>	Manage Cultivation/Harvesting Time		
<b>Created By:</b>	Hira Saleem	<b>Last Updated By:</b>	12 <sup>th</sup> January, 2023
<b>Date Created:</b>	28 <sup>th</sup> December, 2023	<b>Last Revision Date:</b>	15 <sup>th</sup> January, 2023
<b>Actors:</b>	Agriculture Expert		
<b>Description:</b>	Agriculture Expert will appear with best time of Cultivation and Harvesting time for crops.		
<b>Trigger:</b>	Agriculture Expert wants to broadcast the Cultivation and Harvesting time for crops.		
<b>Preconditions:</b>	Agriculture Expert must be registered in this website.		
<b>Post conditions:</b>	Cultivation and Harvesting time for crops will be broadcast to every farmer.		
<b>Normal Flow:</b>	<ol style="list-style-type: none"> <li>1. Agriculture Expert enters crop name.</li> <li>2. Agriculture Expert enters crop cycle in days.</li> <li>3. Agriculture Expert enters crop stages.</li> <li>4. Agriculture Expert enters crop location.</li> <li>5. Agriculture Expert enters Cultivation time.</li> <li>6. Agriculture Expert enters Harvesting time.</li> </ol>		
<b>Alternative Flows: [Alternative Flow 1 – Not in Network]</b>	No Alternative Flow		
<b>Exceptions:</b>	<ol style="list-style-type: none"> <li>1a. Crop Name field is empty. <ol style="list-style-type: none"> <li>i. The system shows an error message to the Agriculture Expert. This field cannot be empty.</li> <li>ii. Agriculture Expert enters valid Crop Name.</li> </ol> </li> <li>1b. Crop Name field contains number <ol style="list-style-type: none"> <li>i. The system shows an error message to the Agriculture Expert.</li> <li>ii. Agriculture Expert enters valid Crop Name.</li> </ol> </li> <li>1c. Crop Name field is containing special characters <ol style="list-style-type: none"> <li>i. The system shows an error message to the Agriculture Expert.</li> <li>ii. Agriculture Expert enters valid Crop Name.</li> </ol> </li> <li>2a. Crop Cycle field is empty. <ol style="list-style-type: none"> <li>i. The system shows an error message to the Agriculture Expert. This field cannot be</li> </ol> </li> </ol>		

	<p>empty.</p> <p>ii. Agriculture Expert enters valid Crop Cycle.</p> <p>2b. Crop Cycle field is invalid.</p> <p>i. The system shows an error message to the Agriculture Expert.</p> <p>ii. Agriculture Expert enters valid Crop Cycle.</p> <p>3a. Crop Stages field is empty.</p> <p>i. The system shows an error message to the Agriculture Expert. This field cannot be empty.</p> <p>ii. Agriculture Expert enters valid Crop Stages.</p> <p>3b. Crop Stages are less than 5.</p> <p>i. The system shows an error message to the Agriculture Expert.</p> <p>ii. Agriculture Expert enters correct Crop Stages.</p> <p>4a. Location field is empty.</p> <p>i. The system shows an error message to the Agriculture Expert. This field cannot be empty.</p> <p>ii. Agriculture Expert enters valid Location.</p> <p>4b. Location field is invalid.</p> <p>i. The system shows an error message to the Agriculture Expert.</p> <p>ii. Agriculture Expert enters valid Location.</p> <p>5a. Cultivation Time field is having invalid entry.</p> <p>i. The system shows an error message to the Agriculture Expert.</p> <p>ii. Agriculture Expert enters valid Cultivation Time.</p> <p>5b. Cultivation Time field is empty.</p> <p>i. The system shows an error message to the Agriculture Expert. This field cannot be empty.</p> <p>ii. Agriculture Expert enters valid Cultivation Time.</p> <p>6a. Harvesting Time field is having invalid entry.</p> <p>i. The system shows an error message to the Agriculture Expert.</p> <p>ii. Agriculture Expert enters valid Harvesting Time.</p> <p>6b. Harvesting Time field is empty.</p> <p>i. The system shows an error message to the Agriculture Expert. This field cannot be empty.</p> <p>ii. Agriculture Expert enters valid Harvesting Time.</p>
<b>Includes</b>	None
<b>Frequency of Use:</b>	On Demand
<b>Special Requirements:</b>	Agriculture Expert must know the cycle of crop.

<b>Assumptions:</b>	Agriculture Expert should know stages of every crop.
<b>Notes and Issues:</b>	None

**Table 3.18: Use Case of test Soil**

<b>Use Case ID:</b>	UC-17		
<b>Use Case Name:</b>	Test Soil		
<b>Created By:</b>	Hira Saleem	<b>Last Updated By:</b>	12 <sup>th</sup> January, 2023
<b>Date Created:</b>	28 <sup>th</sup> December, 2023	<b>Last Revision Date:</b>	15 <sup>th</sup> January, 2023
<b>Actors:</b>	Agriculture Expert, Fertilizer Expert		
<b>Description:</b>	Fertilizer Expert will test the soil according to specific location or area.		
<b>Trigger:</b>	Fertilizer Expert wants to test the soil.		
<b>Preconditions:</b>	Fertilizer Expert should have access to test the soil.		
<b>Post conditions:</b>	Soil's type has been tested and a report will be generated.		
<b>Normal Flow:</b>	<ol style="list-style-type: none"> <li>1. Fertilizer Expert enters location where they want to test the soil.</li> <li>2. System will generate report according to the selected location.</li> <li>3. Fertilizer Expert enters First Name.</li> <li>4. Fertilizer Expert enters Last Name.</li> <li>5. Fertilizer Expert enters designation.</li> <li>6. Fertilizer Expert enters Phone Number.</li> <li>7. Fertilizer Expert enters description of Soil that has been tested.</li> <li>8. Fertilizer Expert selects 'POST' option.</li> <li>9. Agriculture Expert will authenticate this information.</li> <li>10. Agriculture Expert will broadcast this information to Farmers.</li> </ol>		
<b>Alternative Flows:</b> [Alternative Flow 1 – Not in Network]	No Alternative Flow		
<b>Exceptions:</b>	<ol style="list-style-type: none"> <li>1a. Location field is empty. <ol style="list-style-type: none"> <li>i. The system shows an error message to the Fertilizer Expert. This field cannot be empty.</li> <li>ii. Fertilizer Expert enters valid Location.</li> </ol> </li> <li>1b. Location field is invalid.</li> </ol>		

	<ul style="list-style-type: none"> <li>i. The system shows an error message to the Fertilizer Expert.</li> <li>ii. Fertilizer Expert enters valid Location.</li> </ul> <p>2a. First Name field is empty.</p> <ul style="list-style-type: none"> <li>i. The system shows an error message to the Fertilizer Expert. This field cannot be empty.</li> <li>ii. Fertilizer Expert enters valid First Name.</li> </ul> <p>2b. First Name field contains number</p> <ul style="list-style-type: none"> <li>i. The system shows an error message to the Fertilizer Expert.</li> <li>ii. Fertilizer Expert enters valid First Name.</li> </ul> <p>2c. First Name field is containing special characters</p> <ul style="list-style-type: none"> <li>i. The system shows an error message to the Fertilizer Expert.</li> <li>ii. Fertilizer Expert enters valid First Name.</li> </ul> <p>3a. Last Name field is empty.</p> <ul style="list-style-type: none"> <li>i. The system shows an error message to the Fertilizer Expert. This field cannot be empty.</li> <li>ii. Fertilizer Expert enters valid Last Name.</li> </ul> <p>3b. Last Name field contains number</p> <ul style="list-style-type: none"> <li>i. The system shows an error message to the Fertilizer Expert.</li> <li>ii. Actor enters valid Last Name.</li> </ul> <p>3c. Last Name field contains special character</p> <ul style="list-style-type: none"> <li>i. The system shows an error message to the Fertilizer Expert.</li> <li>ii. Fertilizer Expert enters valid Last Name.</li> </ul> <p>4a. Designation field is empty.</p> <ul style="list-style-type: none"> <li>i. The system shows an error message to the Fertilizer Expert. This field cannot be empty.</li> <li>ii. Fertilizer Expert enters valid Designation.</li> </ul> <p>4b. Designation field is invalid.</p> <ul style="list-style-type: none"> <li>i. The system shows an error message to the Fertilizer Expert.</li> <li>ii. Fertilizer Expert enters valid Designation.</li> </ul> <p>5a. Phone Number field is empty.</p> <ul style="list-style-type: none"> <li>i. The system shows an error message to the Fertilizer Expert. This field cannot be empty.</li> </ul>
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	<ul style="list-style-type: none"> <li>ii. Fertilizer Expert enters valid Phone Number.</li> </ul> <p>5b. Phone Number field is invalid.</p> <ul style="list-style-type: none"> <li>i. The system shows an error message to the Fertilizer Expert.</li> <li>ii. Fertilizer Expert enters valid Phone Number.</li> </ul> <p>5c. Phone Number field does not contain 11-digit.</p> <ul style="list-style-type: none"> <li>i. The system shows an error message to the Fertilizer Expert.</li> <li>ii. Fertilizer Expert enters valid 11-digit Phone Number.</li> </ul> <p>6a. Description field is empty.</p> <ul style="list-style-type: none"> <li>i. The system shows an error message to the Fertilizer Expert. This field cannot be empty.</li> <li>ii. Fertilizer Expert enters valid Description.</li> </ul> <p>6b. Description field exceed the word limit.</p> <ul style="list-style-type: none"> <li>i. The system shows an error message to the Fertilizer Expert.</li> <li>ii. Fertilizer Expert enters valid Description.</li> </ul>
<b>Includes</b>	None
<b>Frequency of Use:</b>	On Demand
<b>Special Requirements:</b>	Fertilizer Expert must be able to recognize the soil type.
<b>Assumptions:</b>	Fertilizer Expert should know the soil conditions.
<b>Notes and Issues:</b>	None

**Table 3.19: Use Case of give Equipment Info**

<b>Use Case ID:</b>	UC-18		
<b>Use Case Name:</b>	Give Equipment Info		
<b>Created By:</b>	Hira Saleem	<b>Last Updated By:</b>	12 <sup>th</sup> January, 2023
<b>Date Created:</b>	28 <sup>th</sup> December, 2023	<b>Last Revision Date:</b>	15 <sup>th</sup> January, 2023
<b>Actors:</b>	Director Agriculture Department		
<b>Description:</b>	Director Agriculture Department will educate the Farmers about the agricultural equipment.		

<b>Trigger:</b>	Director Agriculture Department wants to spread knowledge among farmers about equipment.
<b>Preconditions:</b>	Director Agriculture Department must login to the system.
<b>Post conditions:</b>	Every Farmer will be able to read the detailed information of equipment.
<b>Normal Flow:</b>	<ol style="list-style-type: none"> <li>1. Director Agriculture Department enters Identification No.</li> <li>2. Director Agriculture Department enters Name of equipment.</li> <li>3. Director Agriculture Department attaches the picture of equipment.</li> <li>4. Director Agriculture Department enters the purpose of equipment.</li> <li>5. Director Agriculture Department posts the detailed information.</li> </ol>
<b>Alternative Flows: [Alternative Flow 1 – Not in Network]</b>	No Alternative Flow
<b>Exceptions:</b>	<ol style="list-style-type: none"> <li>1a. Identification No. Field is empty <ol style="list-style-type: none"> <li>i. The system shows an error message to the Director Agriculture Department. This field cannot be empty.</li> <li>ii. Director Agriculture Department enters valid Identification No.</li> </ol> </li> <li>1b. Identification No. Field is invalid. <ol style="list-style-type: none"> <li>i. The system shows an error message to the Director Agriculture Department.</li> <li>ii. Director Agriculture Department enters valid Identification No.</li> </ol> </li> <li>2a. Equipment Name field is empty. <ol style="list-style-type: none"> <li>i. The system shows an error message to the Director Agriculture Department. This field cannot be empty.</li> <li>ii. Director Agriculture Department enters valid Equipment Name.</li> </ol> </li> <li>2b. Equipment Name field contains number <ol style="list-style-type: none"> <li>i. The system shows an error message to the Director Agriculture Department.</li> <li>ii. Director Agriculture Department enters valid Equipment Name.</li> </ol> </li> <li>2c. Equipment Name field is containing special characters <ol style="list-style-type: none"> <li>i. The system shows an error message to the Director Agriculture Department.</li> <li>ii. Director Agriculture Department enters valid Equipment Name.</li> </ol> </li> <li>3a. Equipment Picture Field is empty <ol style="list-style-type: none"> <li>i. The system shows an error message to the Director Agriculture Department. This field cannot be empty.</li> <li>ii. Director Agriculture Department enters valid Equipment Picture.</li> </ol> </li> </ol>

	<p>3b. Equipment Picture Field is invalid extension.</p> <ol style="list-style-type: none"> <li>i. The system shows an error message to the Director Agriculture Department.</li> <li>ii. Director Agriculture Department enters valid Picture extension.</li> </ol> <p>4a. Equipment Purpose Field is empty</p> <ol style="list-style-type: none"> <li>i. The system shows an error message to the Director Agriculture Department. This field cannot be empty.</li> <li>ii. Director Agriculture Department enters valid Equipment Purpose.</li> </ol> <p>4b. Equipment Purpose Field is invalid extension.</p> <ol style="list-style-type: none"> <li>i. The system shows an error message to the Director Agriculture Department.</li> <li>ii. Director Agriculture Department enters valid Equipment Purpose.</li> </ol>
<b>Includes</b>	None
<b>Frequency of Use:</b>	On Demand
<b>Special Requirements:</b>	.Director Agriculture Department must have knowledge about pros and cons of equipment.
<b>Assumptions:</b>	Director Agriculture Department should know how to access the web page by using internet and log in by giving correct credentials.
<b>Notes and Issues:</b>	None

**Table 3.20: Use Case of Give Weather Info**

<b>Use Case ID:</b>	UC-19		
<b>Use Case Name:</b>	Give Weather Info		
<b>Created By:</b>	Hira Saleem	<b>Last Updated By:</b>	12 <sup>th</sup> January, 2023
<b>Date Created:</b>	28 <sup>th</sup> December, 2023	<b>Last Revision Date:</b>	15 <sup>th</sup> January, 2023
<b>Actors:</b>	Farmer		
<b>Description:</b>	System will provide Weather conditions to the Farmers according to their Current location.		
<b>Trigger:</b>	Farmer wants weather conditions of his location to manage his crops.		
<b>Preconditions:</b>	Farmer must enter his current location to fetch weather condition.		
<b>Post conditions:</b>	Weather conditions could be visible at every registered Farmer's screen.		

<b>Normal Flow:</b>	<ol style="list-style-type: none"> <li>1. Farmer enters his current location.</li> <li>2. System retrieve and display the weather condition according to the entered location by user.</li> </ol>
<b>Alternative Flows: [Alternative Flow 1 – Not in Network]</b>	No Alternative Flow
<b>Exceptions:</b>	<ol style="list-style-type: none"> <li>1a. Location field is empty. <ol style="list-style-type: none"> <li>i. The system shows an error message to the Fertilizer Expert. This field cannot be empty.</li> <li>ii. Fertilizer Expert enters valid Location.</li> </ol> </li> <li>1b. Location field is invalid. <ol style="list-style-type: none"> <li>i. The system shows an error message to the Fertilizer Expert.</li> <li>ii. Fertilizer Expert enters valid Location.</li> </ol> </li> </ol>
<b>Includes</b>	None
<b>Frequency of Use:</b>	On Demand
<b>Special Requirements:</b>	Farmer must enter his current and correct location.
<b>Assumptions:</b>	System should provide weather information accurately.
<b>Notes and Issues:</b>	None

**Table 3.21: Use Case of Expert Advice**

<b>Use Case ID:</b>	UC-20		
<b>Use Case Name:</b>	Expert Advice		
<b>Created By:</b>	Hira Saleem	<b>Last Updated By:</b>	12 <sup>th</sup> January, 2023
<b>Date Created:</b>	28 <sup>th</sup> December, 2023	<b>Last Revision Date:</b>	15 <sup>th</sup> January, 2023
<b>Actors:</b>	Farmer, Agriculture Expert		
<b>Description:</b>	Agriculture Expert will give extra information about the crops to get more benefit.		
<b>Trigger:</b>	Farmer wants to educate himself about crop to avoid from loss.		

<b>Preconditions:</b>	Agriculture Expert must login to the system.
<b>Post conditions:</b>	Extra information about crops will be visible at every Farmer's screen.
<b>Normal Flow:</b>	<ol style="list-style-type: none"> <li>1. Agriculture Expert enters crop's name.</li> <li>2. Agriculture Expert enters location.</li> <li>3. Agriculture Expert enters soil type.</li> <li>4. Agriculture Expert enters agricultural tips about selected crops.</li> <li>5. Agriculture Expert will broadcast these details to the Farmer.</li> </ol>
<b>Alternative Flows: [Alternative Flow 1 – Not in Network]</b>	No Alternative Flow
<b>Exceptions:</b>	<p>2a. Crop Name field is empty.</p> <ol style="list-style-type: none"> <li>i. The system shows an error message to the Agriculture Expert. This field cannot be empty.</li> <li>ii. Agriculture Expert enters valid Crop Name.</li> </ol> <p>2b. Crop Name field contains number</p> <ol style="list-style-type: none"> <li>i. The system shows an error message to the Agriculture Expert.</li> <li>ii. Agriculture Expert enters valid Crop Name.</li> </ol> <p>2c. Crop Name field is containing special characters</p> <ol style="list-style-type: none"> <li>i. The system shows an error message to the Agriculture Expert.</li> <li>ii. Agriculture Expert enters valid Crop Name.</li> </ol> <p>3a. Location field is empty.</p> <ol style="list-style-type: none"> <li>i. The system shows an error message to the Agriculture Expert. This field cannot be empty.</li> <li>ii. Agriculture Expert enters valid Location.</li> </ol> <p>3b. Location field is invalid.</p> <ol style="list-style-type: none"> <li>i. The system shows an error message to the Agriculture Expert.</li> <li>ii. Agriculture Expert enters valid Location.</li> </ol> <p>4a. Soil Type field is empty.</p> <ol style="list-style-type: none"> <li>i. The system shows an error message to the Agriculture Expert. This field cannot be empty.</li> <li>ii. Agriculture Expert enters valid Soil Type.</li> </ol> <p>4b. Soil Type field is invalid.</p> <ol style="list-style-type: none"> <li>i. The system shows an error message to the Agriculture Expert.</li> <li>ii. Agriculture Expert enters valid Soil Type.</li> </ol>

	<p>5a. Tips field is empty.</p> <ul style="list-style-type: none"> <li>i. The system shows an error message to the Agriculture Expert. This field cannot be empty.</li> <li>ii. Agriculture Expert enters valid Tips.</li> </ul> <p>5b. Tips field exceed the word limit.</p> <ul style="list-style-type: none"> <li>i. The system shows an error message to the Agriculture Expert.</li> <li>ii. Agriculture Expert enters valid Tips.</li> </ul>
<b>Includes</b>	None
<b>Frequency of Use:</b>	On Demand
<b>Special Requirements:</b>	Agriculture Expert must give them useful tips along with advantages.
<b>Assumptions:</b>	Farmers should get expected benefits as result.
<b>Notes and Issues:</b>	None

**Table 3.22: Use Case of Farmer Registration**

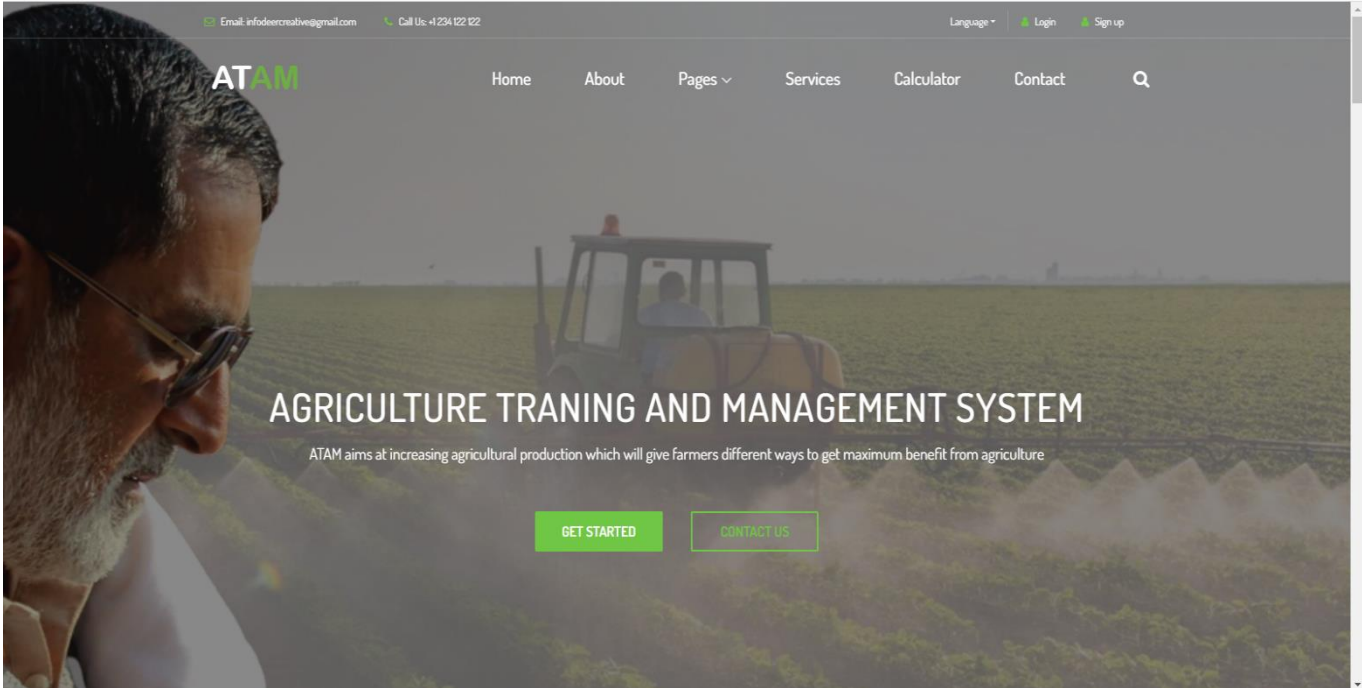
<b>Use Case ID:</b>	UC-21		
<b>Use Case Name:</b>	Farmer-Register		
<b>Created By:</b>	Riaz Ahmad	<b>Last Updated By:</b>	12 <sup>th</sup> January, 2023
<b>Date Created:</b>	28 <sup>th</sup> December, 2023	<b>Last Revision Date:</b>	15 <sup>th</sup> January, 2023
<b>Actors:</b>	Farmer		
<b>Description:</b>	The Farmer will enter Registration Requirements for Register in our system.		
<b>Trigger:</b>	Farmer wants to Register into the System.		
<b>Preconditions:</b>	Farmer must have valid required information for Register into the System.		
<b>Post conditions:</b>	Farmer Registration Data Will be saved. Database will be update. Actor will register into the System successfully.		
<b>Normal Flow:</b>	<ol style="list-style-type: none"> <li>1. Farmer enters First name.</li> <li>2. Farmer enters Last name.</li> <li>3. Farmer enters Password.</li> <li>4. Farmer enters Confirm Password.</li> </ol>		

	<ol style="list-style-type: none"> <li>5. Farmer enters Phone Number.</li> <li>6. Farmer enters Land Location.</li> <li>7. Farmer enters Email.</li> <li>8. Farmer chooses Role from List of Roles.</li> <li>9. Farmer will press the Register option.</li> <li><b>10. System prompts the Actor for successfully register into the System.</b></li> </ol>
<p><b>Alternative Flows:</b>  <b>[Alternative Flow 1 – Not in Network]</b></p>	<p>No Alternative Flow</p>
<p><b>Exceptions:</b></p>	<ol style="list-style-type: none"> <li>1a. First Name field is empty. <ol style="list-style-type: none"> <li>i. The system shows an error message to the Actor. This field cannot be empty.</li> <li>ii. Actor enters valid First Name.</li> </ol> </li> <li>1b. First Name field contains number <ol style="list-style-type: none"> <li>i. The system shows an error message to the Actor.</li> <li>ii. Actor enters valid First Name.</li> </ol> </li> <li>1c. First Name field is containing special characters <ol style="list-style-type: none"> <li>i. The system shows an error message to the Actor.</li> <li>ii. Actor enters valid First Name.</li> </ol> </li> <li>2a. Last Name field is empty. <ol style="list-style-type: none"> <li>i. The system shows an error message to the Actor. This field cannot be empty.</li> <li>ii. Actor enters valid Last Name.</li> </ol> </li> <li>2b. Last Name field contains number <ol style="list-style-type: none"> <li>i. The system shows an error message to the Actor.</li> <li>ii. Actor enters valid Last Name.</li> </ol> </li> <li>2c. Last Name field contains special character <ol style="list-style-type: none"> <li>i. The system shows an error message to the Actor.</li> <li>ii. Actor enters valid Last Name.</li> </ol> </li> <li>3a. Password field is empty. <ol style="list-style-type: none"> <li>i. The system shows an error message to the Actor. This field cannot be empty.</li> <li>ii. Actor enters valid Password.</li> </ol> </li> <li>3b. Password field does not contain at least one special character.</li> </ol>

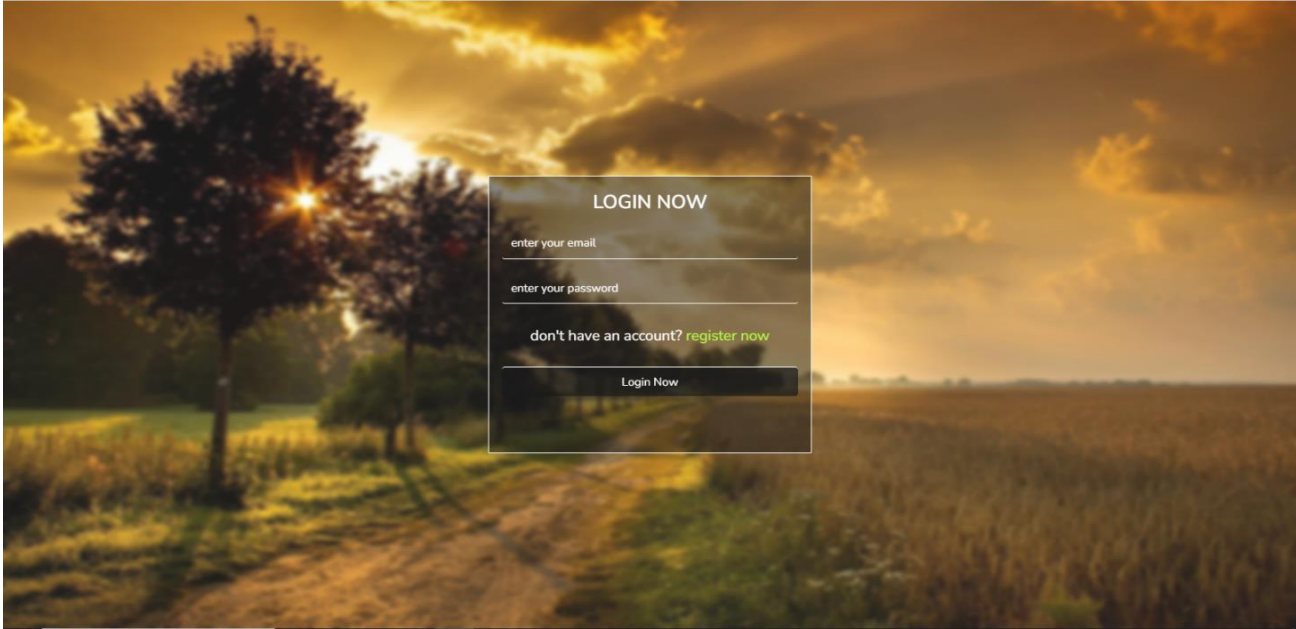
	<ul style="list-style-type: none"> <li>i. The system shows an error message to the Actor.</li> <li><b>ii.</b> Actor enters valid Password.</li> </ul> <p>3c. Password field does not contain at least one Number.</p> <ul style="list-style-type: none"> <li>i. The system shows an error message to the Actor.</li> <li>ii. Actor enters valid Password.</li> </ul> <p>3d. Password field does not contain at least one Small Character.</p> <ul style="list-style-type: none"> <li>i. The system shows an error message to the Actor.</li> <li>ii. Actor enters valid Password.</li> </ul> <p>3e. Password field does not contain at least one Capital Character.</p> <ul style="list-style-type: none"> <li>i. The system shows an error message to the Actor.</li> <li>ii. Actor enters valid Password.</li> </ul> <p>3f. Password field does not contain 8-digit.</p> <ul style="list-style-type: none"> <li>i. The system shows an error message to the Actor.</li> <li><b>ii.</b> Actor enters valid 8-digit Password.</li> </ul> <p>4a. Confirm Password field is empty.</p> <ul style="list-style-type: none"> <li>i. The system shows an error message to the Actor. This field cannot be empty.</li> <li><b>ii.</b> Actor enters valid Confirm Password.</li> </ul> <p>4b. Confirm Password field does not match the above New Password Field.</p> <ul style="list-style-type: none"> <li>i. The system shows an error message to the Actor.</li> <li><b>ii.</b> Actor enters Confirm Password that is match the above Password.</li> </ul> <p>5a. Phone Number field is empty.</p> <ul style="list-style-type: none"> <li>i. The system shows an error message to the Actor. This field cannot be empty.</li> <li><b>ii.</b> Actor enters valid Phone Number.</li> </ul> <p>5b. Phone Number field is invalid.</p> <ul style="list-style-type: none"> <li>i. The system shows an error message to the Actor.</li> <li>ii. Actor enters valid Phone Number.</li> </ul> <p>5c. Phone Number field does not contain 11-digit.</p> <ul style="list-style-type: none"> <li>i. The system shows an error message to the Actor.</li> <li>ii. Actor enters valid 11-digit Phone Number.</li> </ul> <p>6a. Land Location field is empty.</p> <ul style="list-style-type: none"> <li>i. The system shows an error message to the Actor. This field cannot be empty.</li> <li>ii. Actor enters valid Land Location.</li> </ul> <p>6b. Land Location field is invalid.</p>
--	--

	<ul style="list-style-type: none"> <li>i. The system shows an error message to the Actor.</li> <li>ii. Actor enters valid Land Location.</li> </ul> <p>7a. Email field is empty.</p> <ul style="list-style-type: none"> <li>i. The system shows an error message to the Actor. This field cannot be empty.</li> <li>ii. Actor enters valid Email.</li> </ul> <p>7b. Email field is invalid.</p> <ul style="list-style-type: none"> <li>i. The system shows an error message to the Actor.</li> <li>ii. Actor enter valid Email.</li> </ul> <p>8a. Role field does not choose.</p> <ul style="list-style-type: none"> <li>i. The system shows an error message to the Actor.</li> <li>ii. System asks to the user to choose the Role option.</li> </ul>
<b>Includes</b>	None
<b>Frequency of Use:</b>	On Demand
<b>Special Requirements:</b>	User must be able to understand Urdu and English language
<b>Assumptions:</b>	The Farmer should know how to access the web page by using internet and log in by giving correct credentials.
<b>Notes and Issues:</b>	None

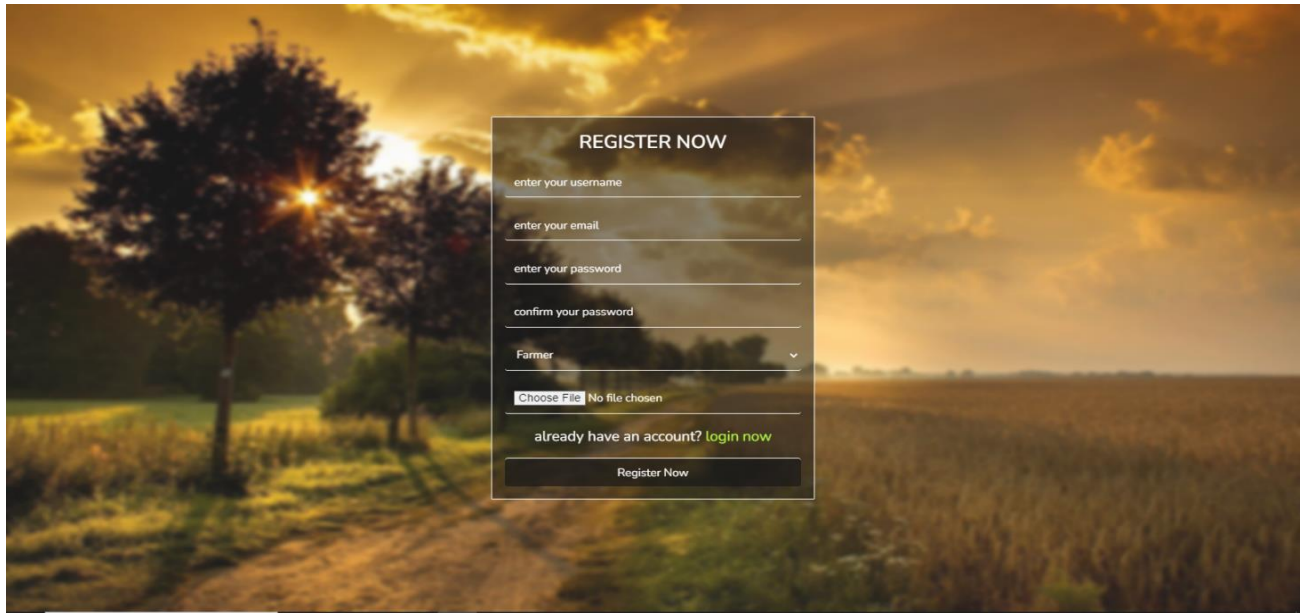
### 3.6 User interfaces (mock screens)



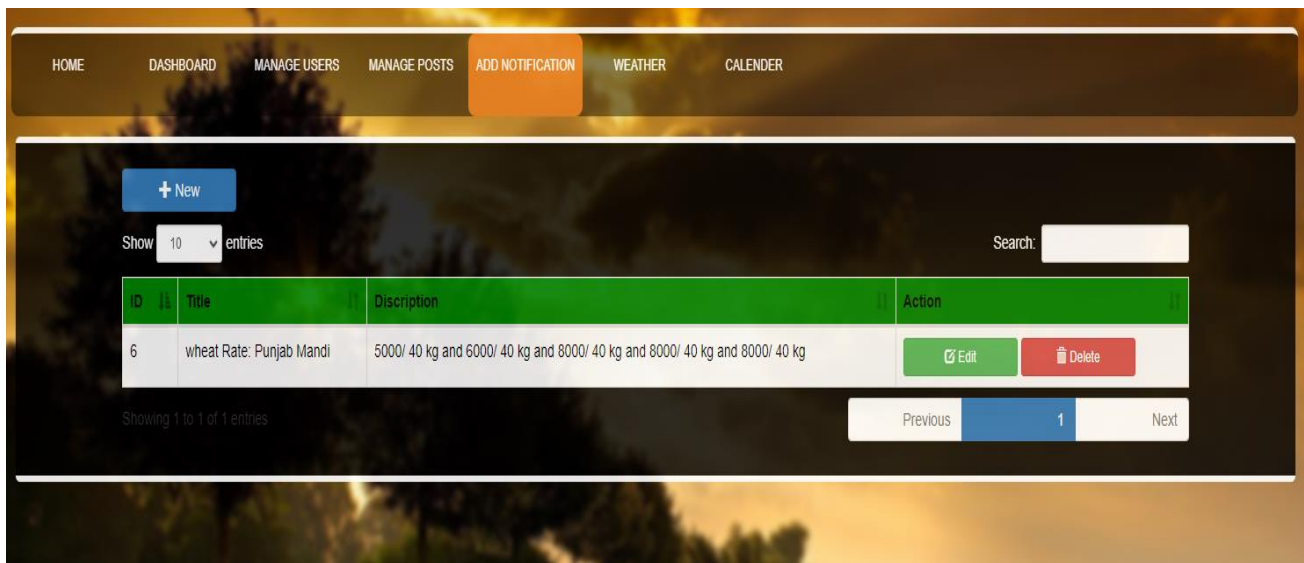
Prototype 1: Home - Page



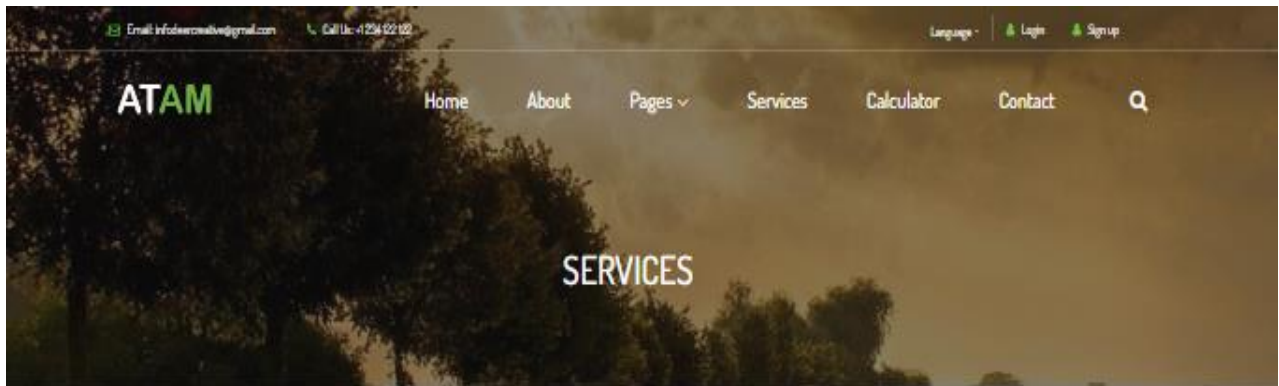
Prototype 2: Login



**Prototype 3: User Registration**



**Prototype 4:Notification**



Home > Services



Crops Training



Fertilizer Advisory



Agriculture Equipment



Weather



Management



Farms Area Calculator



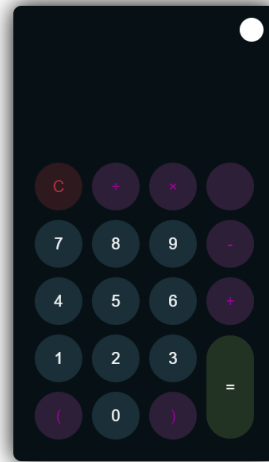
### Prototype 5: Services - Page

Go To Home

Name  Title

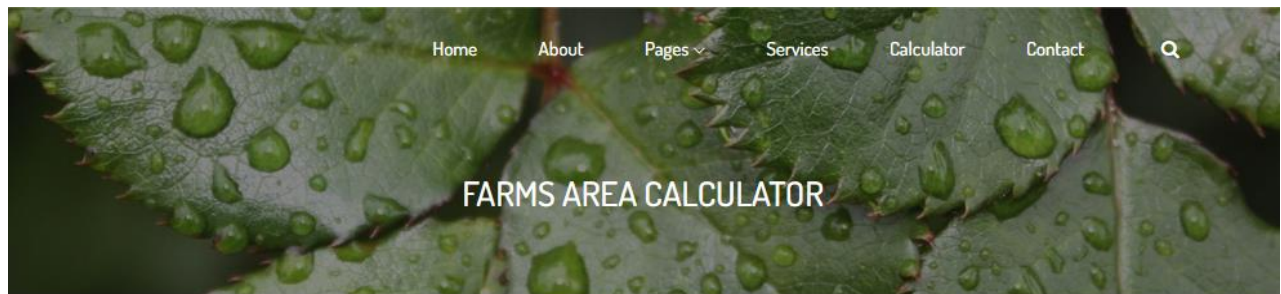
Another Field  Another Field

Add More Remove Field



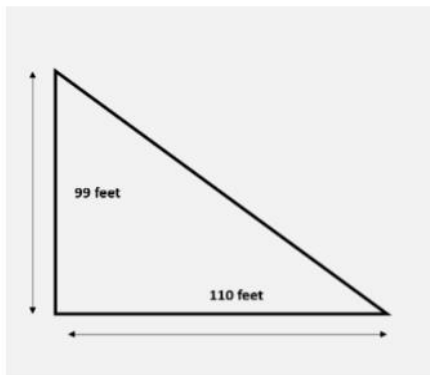
Print

### Prototype 6: Generate Record Using Calculator



Home > Services > Forms Area Calculator

- Squar Land
- Rectangular Regular Land
- Rectangular Irregular Land
- Triangular Land



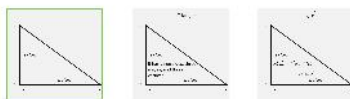
#### AREA CALCULATOR

##### Trinagular Land

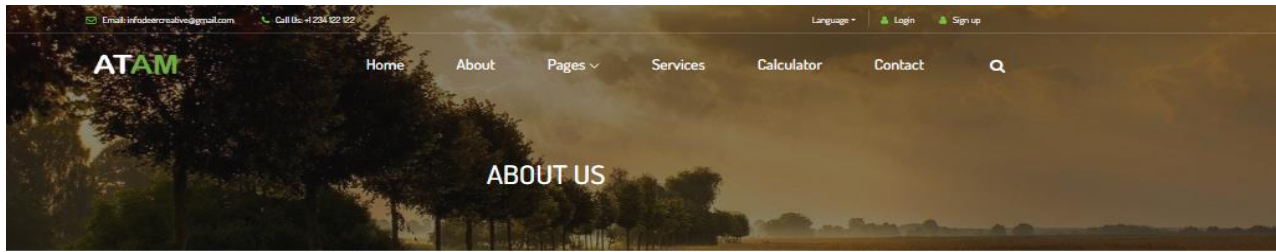
Calculate

Acar	Kanal	Marla
0	1	0.00

Refresh



### Prototype 7: Farmer Area Calculation

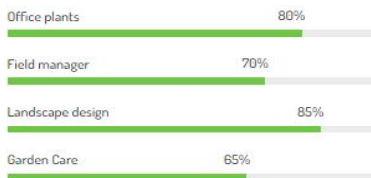


Home > About

## ABOUT US

We are leading to increase the production of crops and plants.

The purpose of this software is to promote the development of agriculture because Pakistan is an agricultural country and many crops can be grown here. This software will specifically educate the farmer on how he can get the most out of his crop and at the same time this software will also have the ability to calculate the annual income of the farmer which the farmer can easily see. How much has he benefited or lost? Apart from this, this software will inform about medicines, agricultural tools and some other things related to agriculture. The software's capabilities include storing farmer information in a database, managing financial records, and educating the farmer to maximize profits.



### Quality Products

Intiam eu sagittis est, at commodo lacini libero. Praesent dignissim sed odio vel aliquam manta lagorn.



### Perfect Service

Intiam eu sagittis est, at commodo lacini libero. Praesent dignissim sed odio vel aliquam manta lagorn.



### 100% Natural

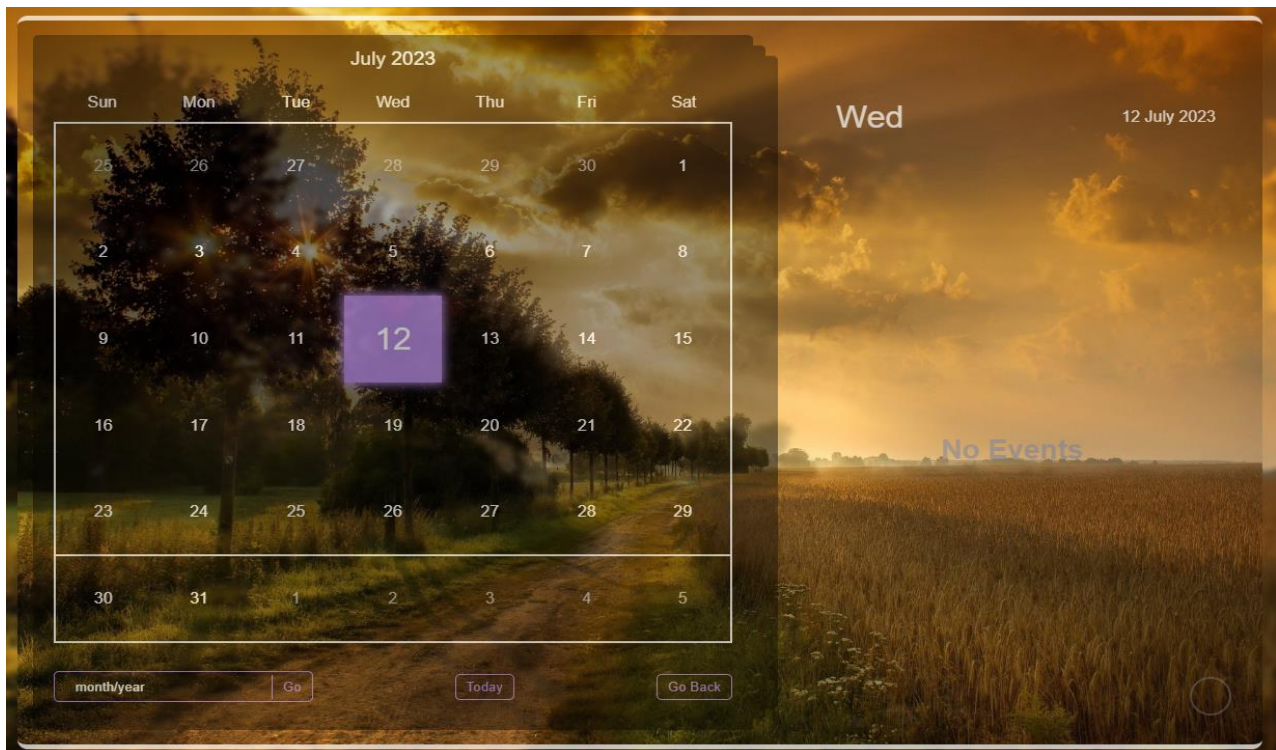
Intiam eu sagittis est, at commodo lacini libero. Praesent dignissim sed odio vel aliquam manta lagorn.



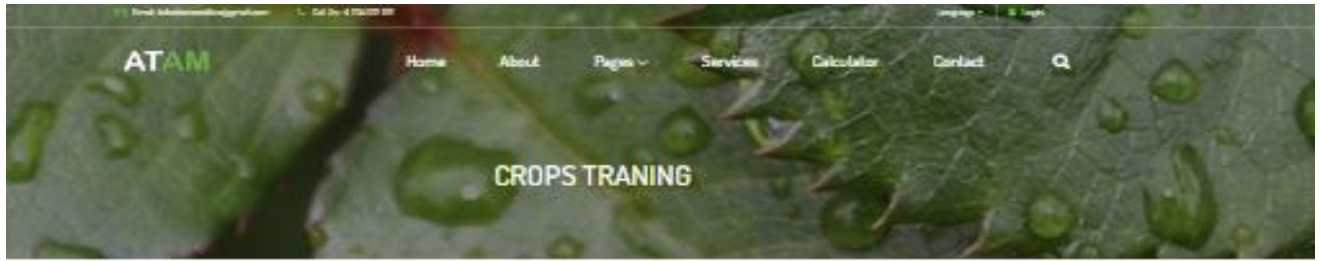
### Environmentally friendly

Intiam eu sagittis est, at commodo lacini libero. Praesent dignissim sed odio vel aliquam manta lagorn.

## Prototype 8: System About



## Prototype 9: Calendar



Home > Services



Wheat



Sugarcane



Rice



Cotton



Canola



Rice



Sunflower



Tomato



Potato



Sweet Potato



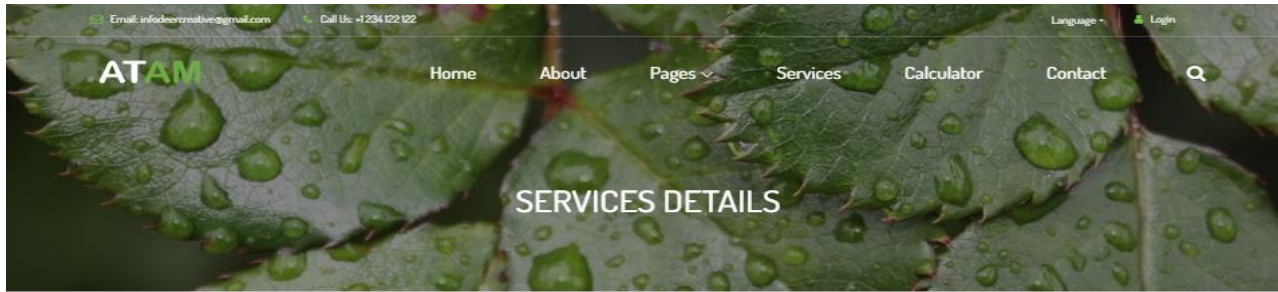
Sorghum



Onion



## Prototype 10: Crops Training



Home > Services > Services Details



## CEREAL GRASS

### Wheat

Wheat is a type of cereal grain that is widely cultivated around the world. It is an important crop that provides a significant source of food for humans and livestock. Wheat is a member of the grass family and is one of the oldest and most widely grown crops in the world. It is primarily grown for its edible seeds, which are commonly ground into flour to make bread, pasta, and other baked goods. Wheat is also used in the production of beer, distilled spirits, biofuels, and livestock feed. There are several different types of wheat, including hard red winter wheat, soft red winter wheat, hard red spring wheat, soft white wheat, and durum wheat. Each type of wheat has different characteristics that make it suitable for different applications, such as bread making or pasta production.

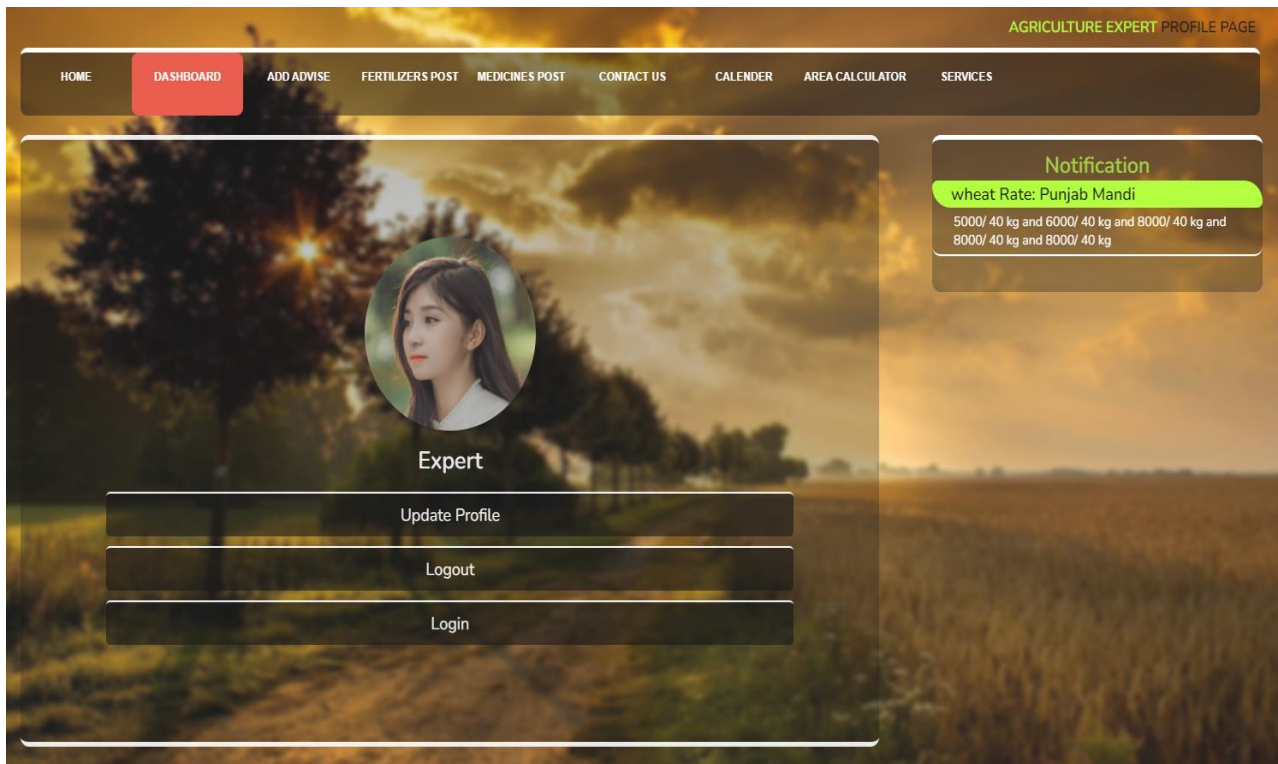
Crop Cycle: 135-Days

Diseases: 11

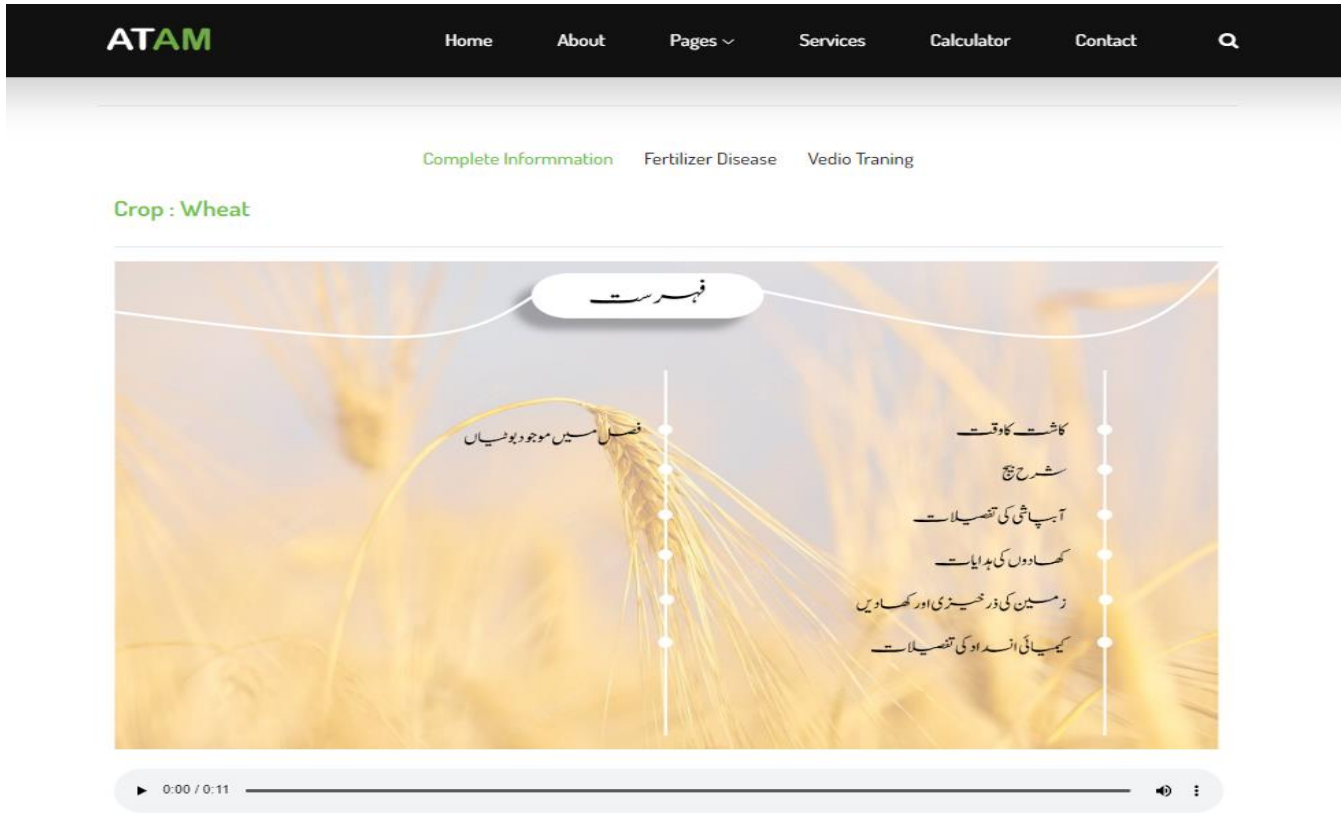
Stages: 4

Share on: [f](#) [t](#) [@](#) [G+](#)

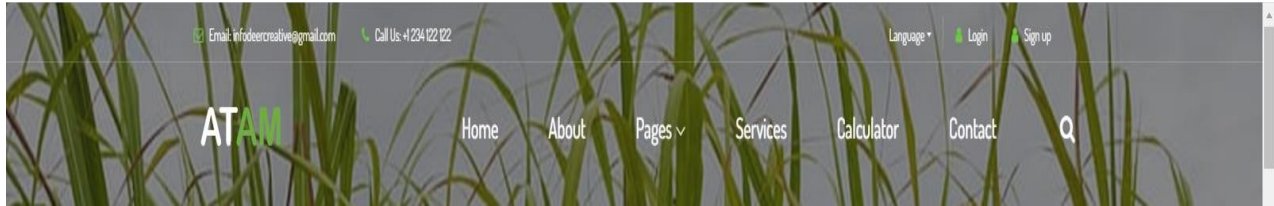
## Prototype 11: Service Details



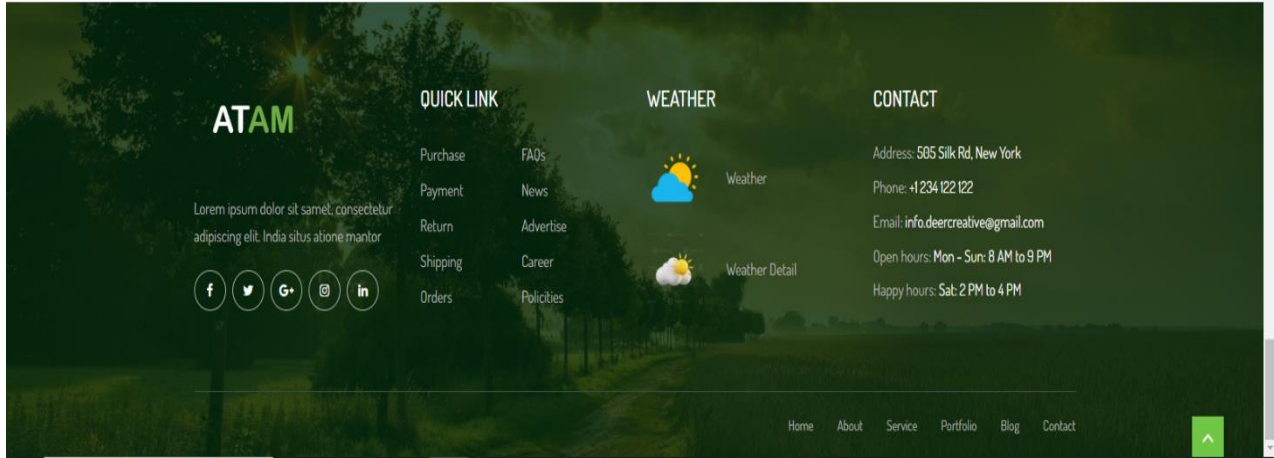
## Prototype 12: Expert Profile



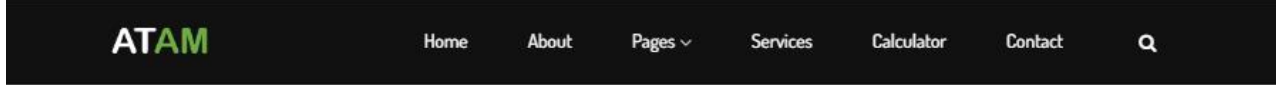
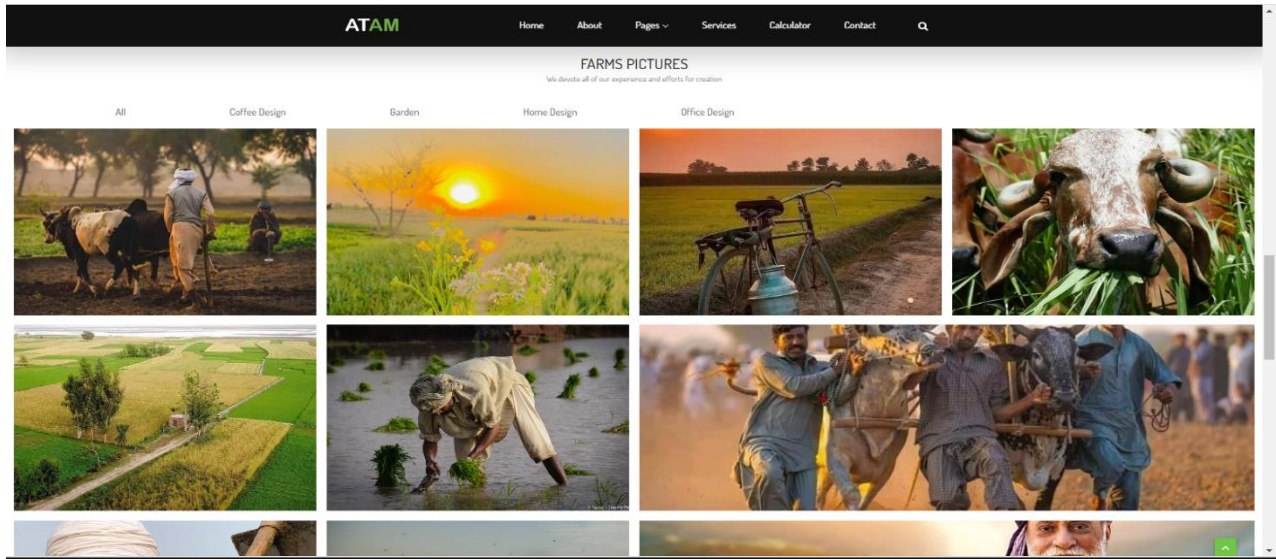
Prototype 13: Crop Training in Urdu



Prototype 14: Header



Prototype 15: Footer



## OUR SERVICES

We provide the perfect service for you.



### Crops Training

In Aenean purus, pretium sito amet sapien denim moste consectet sedoni urna placerat sodales.service its.



### Fertilizer Advisory

In Aenean purus, pretium sito amet sapien denim moste consectet sedoni urna placerat sodales.service its.



### Agriculture Equipment

In Aenean purus, pretium sito amet sapien denim moste consectet sedoni urna placerat sodales.service its.



### Wheather

In Aenean purus, pretium sito amet sapien denim moste consectet sedoni urna placerat sodales.service its.



### Management

In Aenean purus, pretium sito amet sapien denim moste consectet sedoni urna placerat sodales.service its.



### Farms Area Calculator

In Aenean purus, pretium sito amet sapien denim moste consectet sedoni urna placerat sodales.service its.



## Prototype 16: All Services

Home

Dashboard

Update Profile

Fertilizers Post

Medicines Post

Expert Advise

Notifications

Contact Us

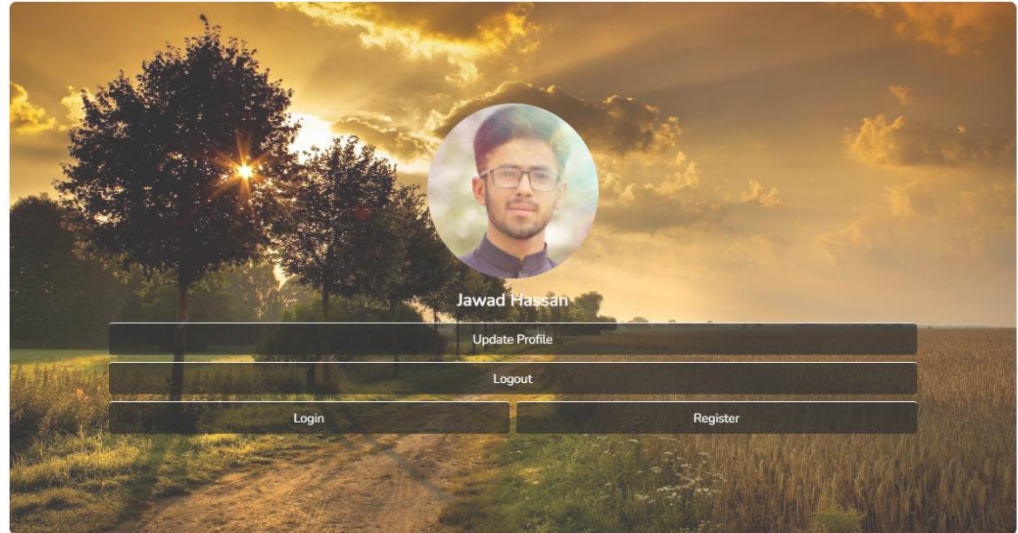
Weather

Calender

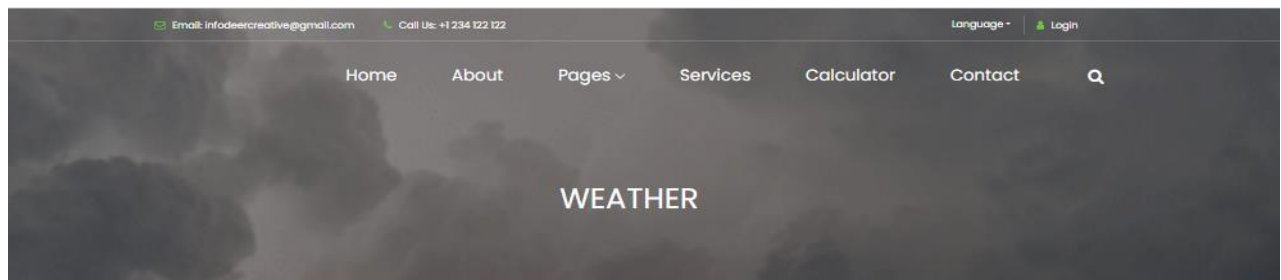
Area Calculator

Transcript

Services



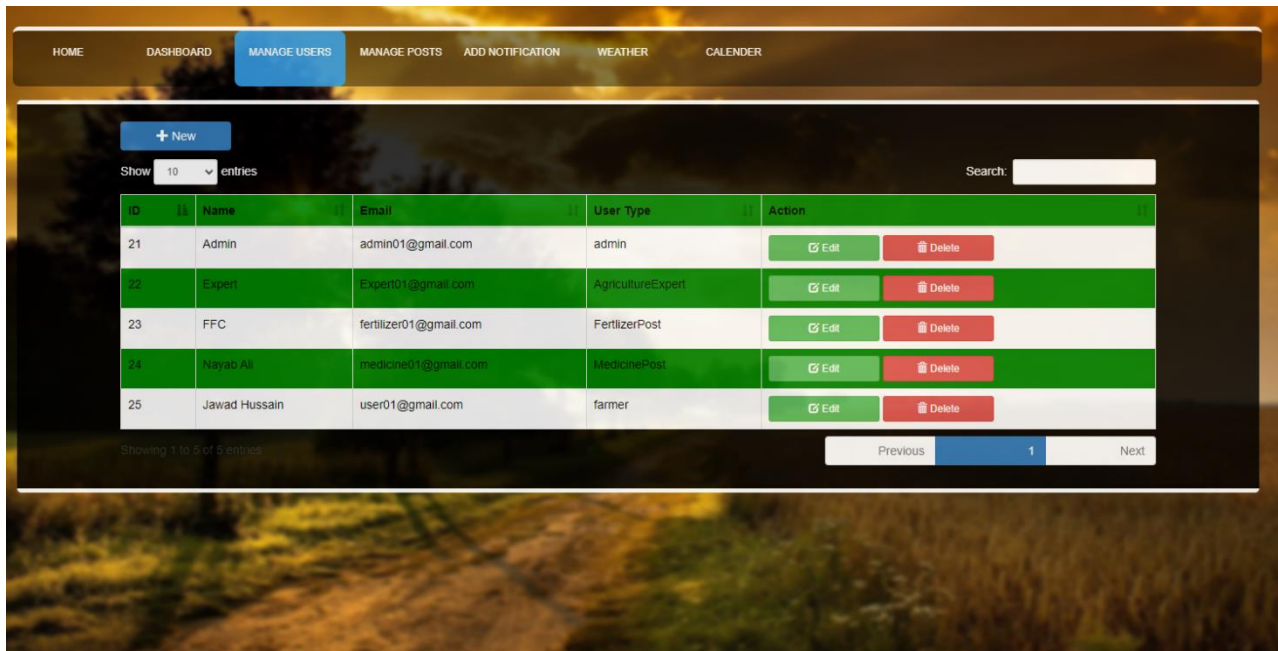
### Prototype 17: User Profile



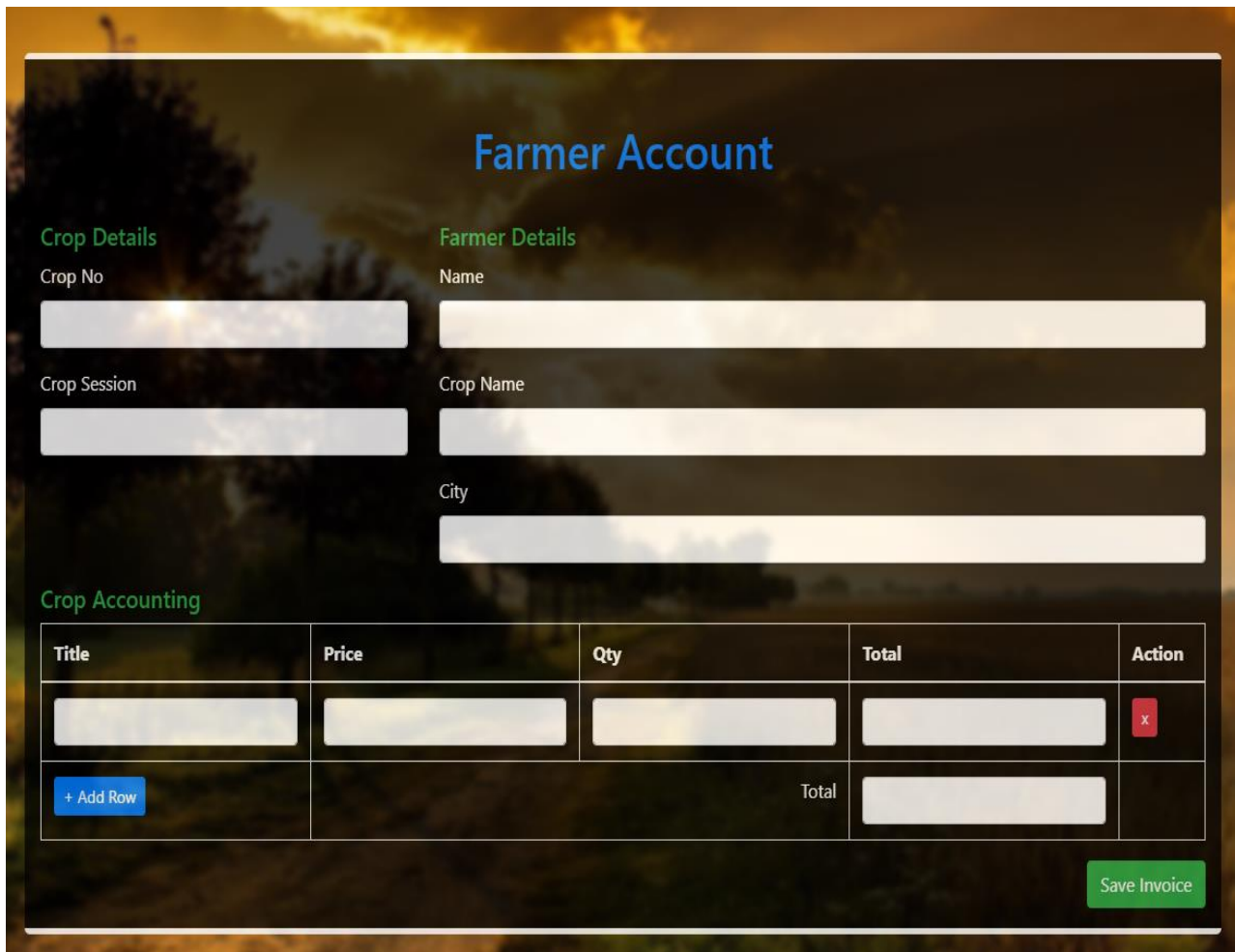
Home > Services



### Prototype 18: Weather Forecast



**Prototype 19: Manage User**



**Prototype 20: Farmer Transcript**

# 4. DATA FLOW DIAGRAM (OPTIONAL)

## 4.1 Data Flow Diagram Level 0

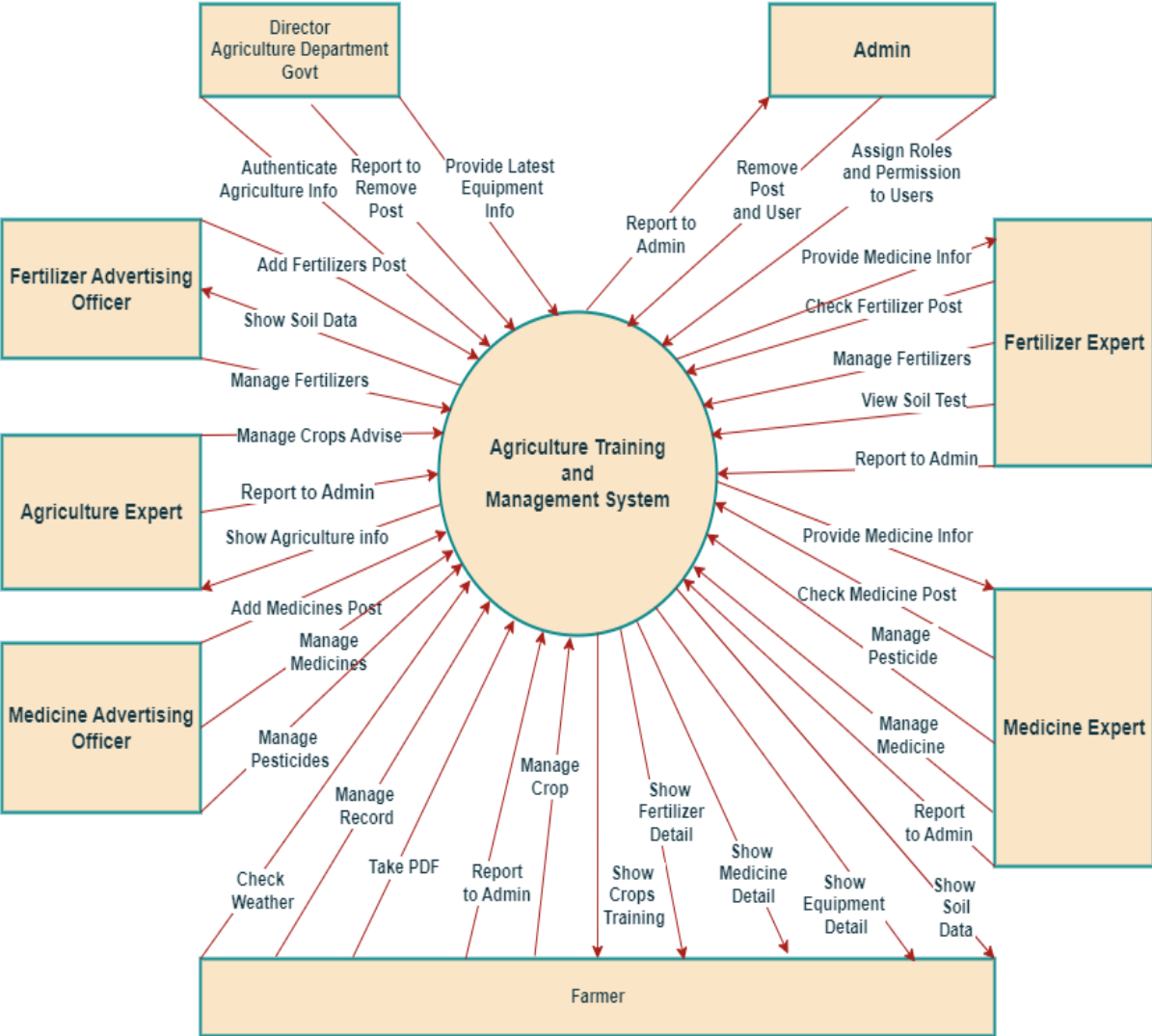


Figure 4.1: Data Flow Diagram Level 0

## 4.2 Data Flow Diagram Level 1

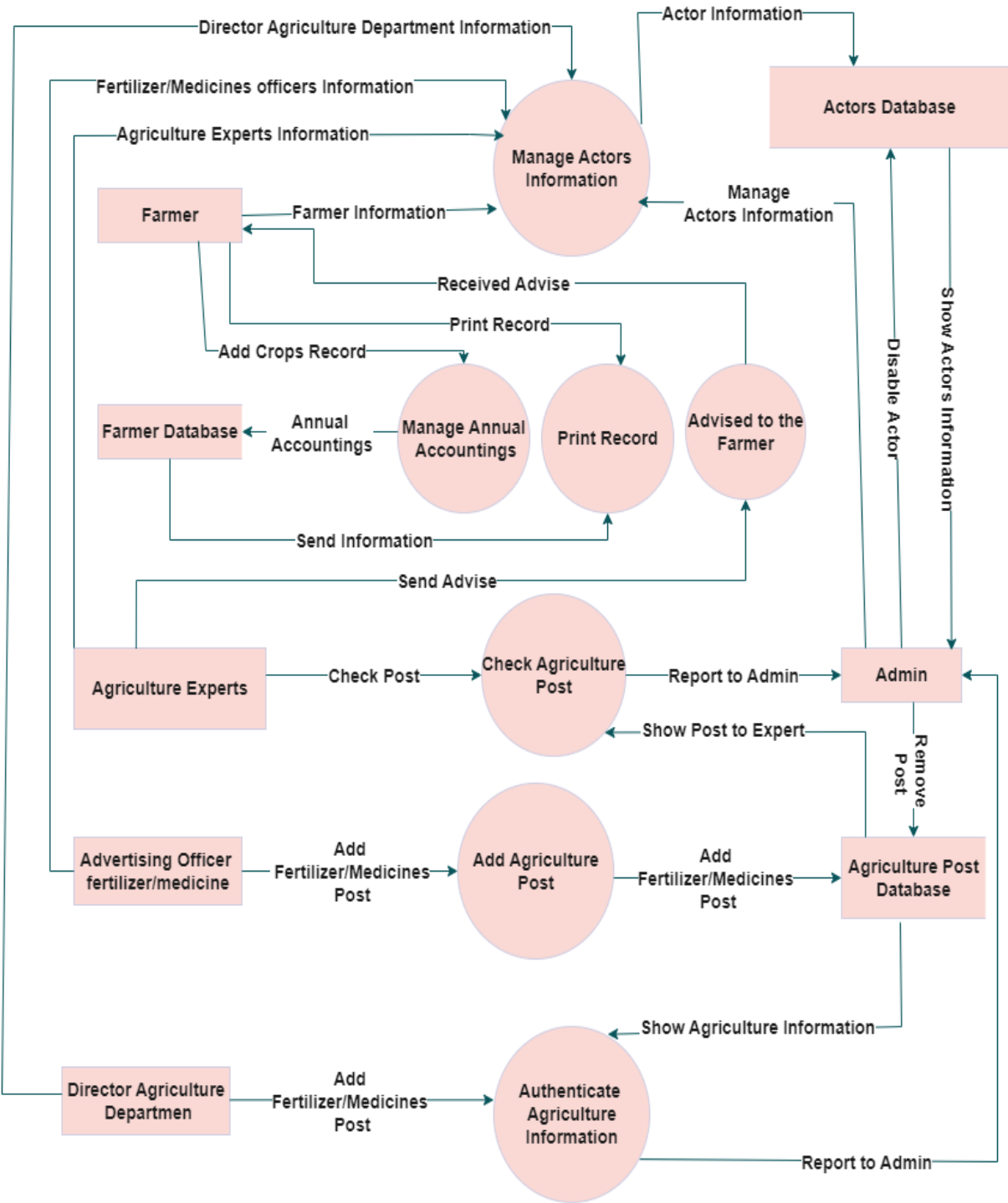


Figure 4.2: Data Flow Diagram level 1

# 5. SYSTEM DESIGN

## 5.1 System Architecture Diagram

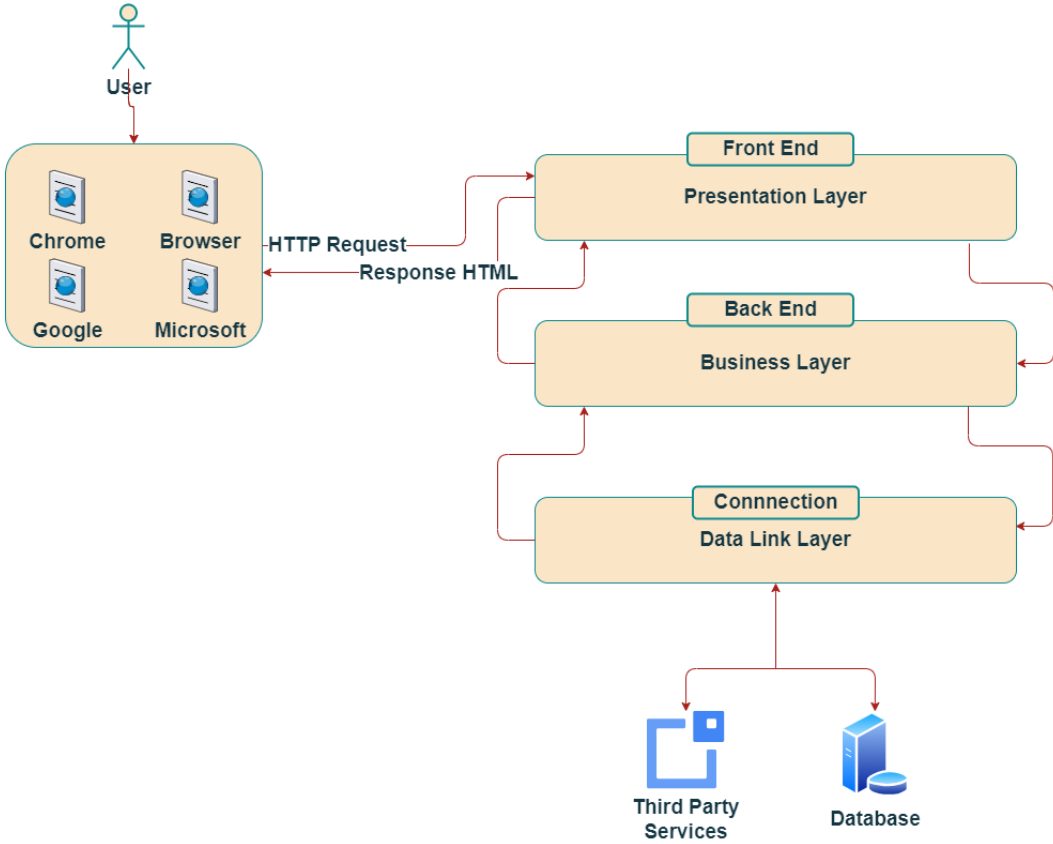


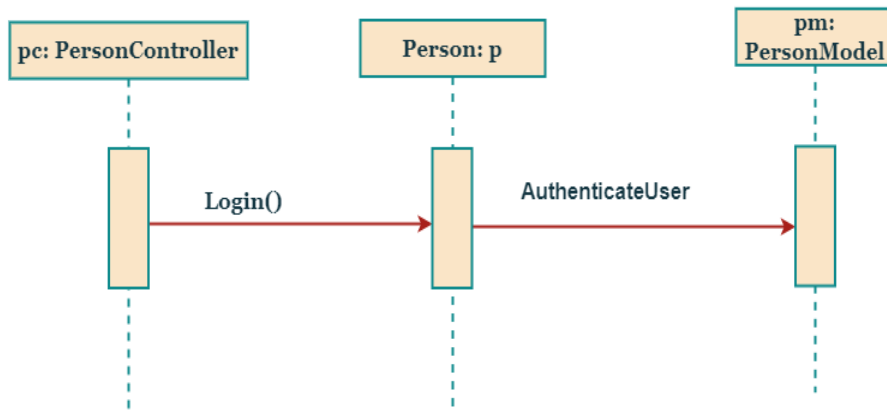
Figure 5.1: System Architecture

## 5.2 Class Diagram



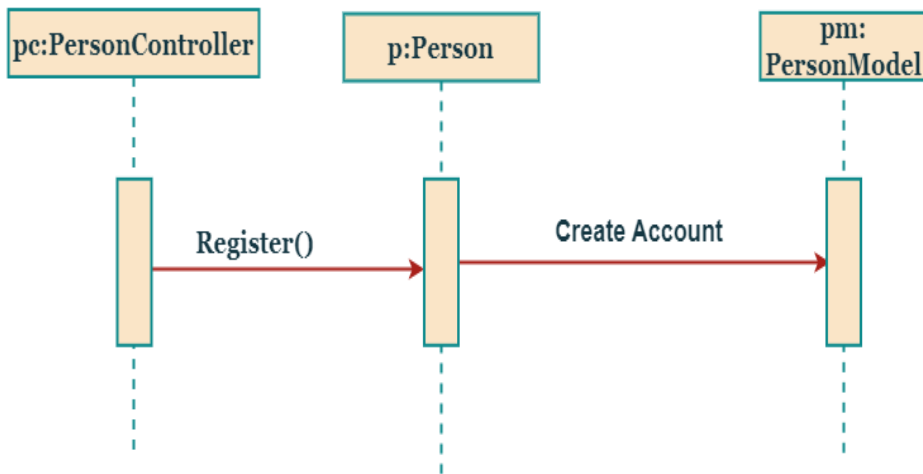
## 5.3 Sequence Diagrams

Figure 5.2: Class Diagram



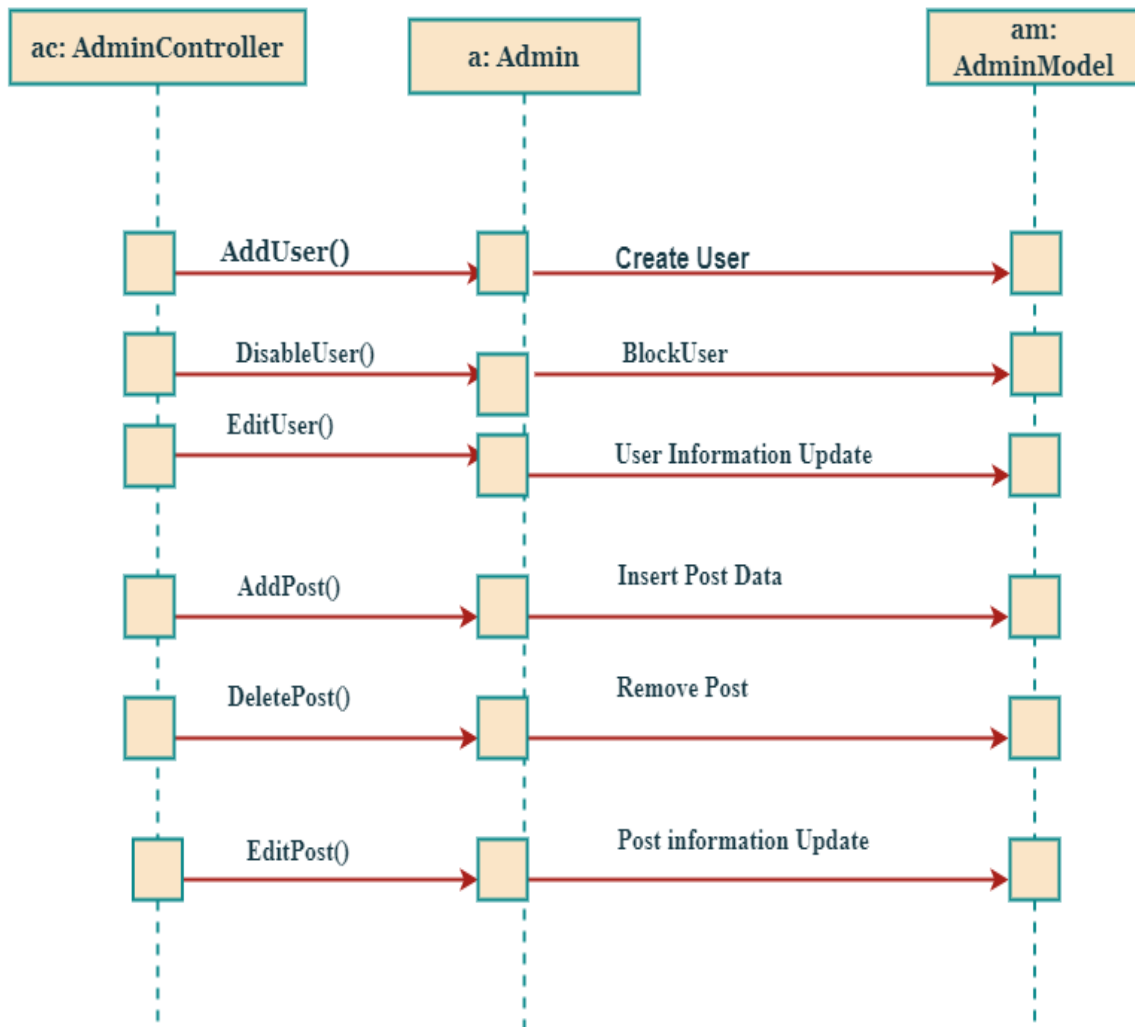
## Login- Sequence Diagram

Figure 5.3: Login Sequence Diagram



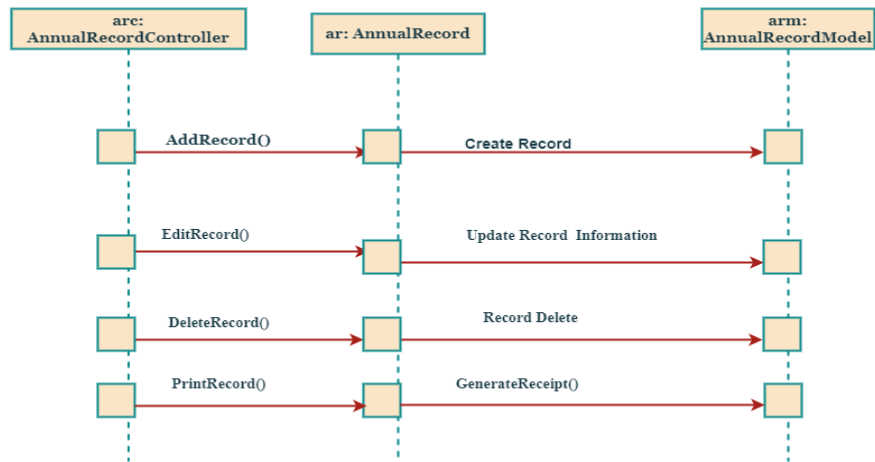
## Register- Sequence Diagram

Figure 5.4: Register Sequence Diagram



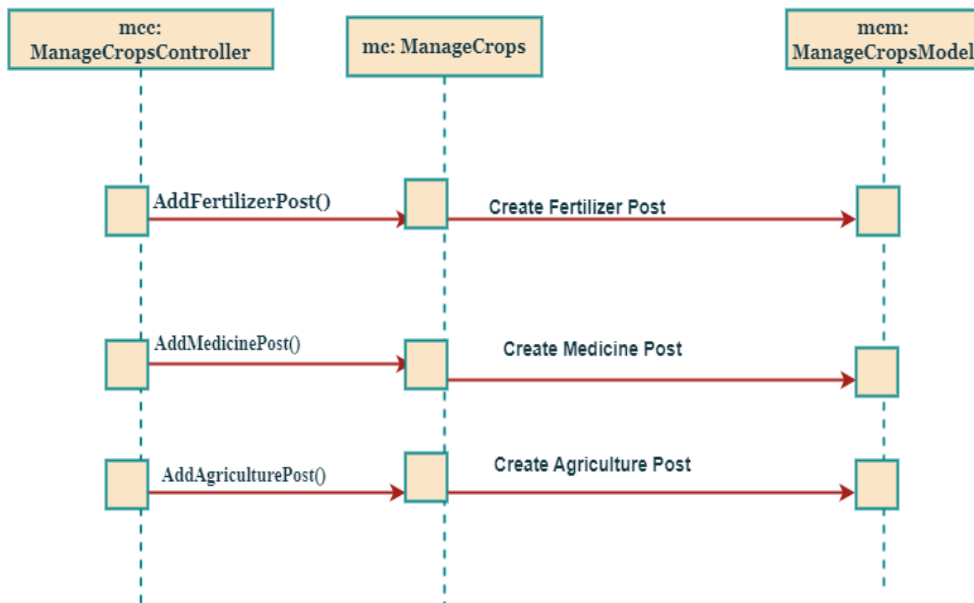
# Manage Roles- Sequence Diagram

Figure 5.5: Manage Role Sequence Diagram



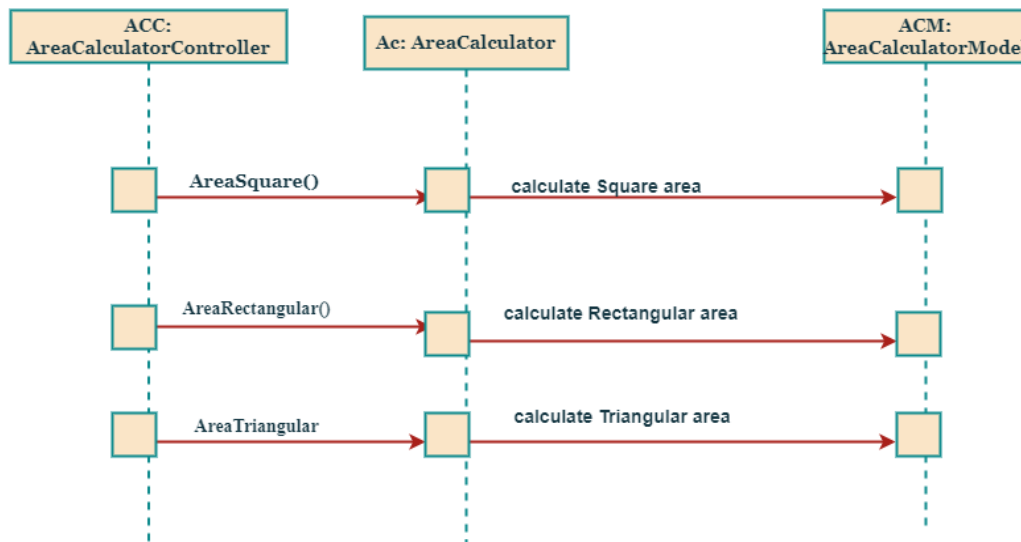
## Manage Records- Sequence Diagram

Figure 5.6: Manage Records Sequence Diagram



## Manage Crops- Sequence Diagram

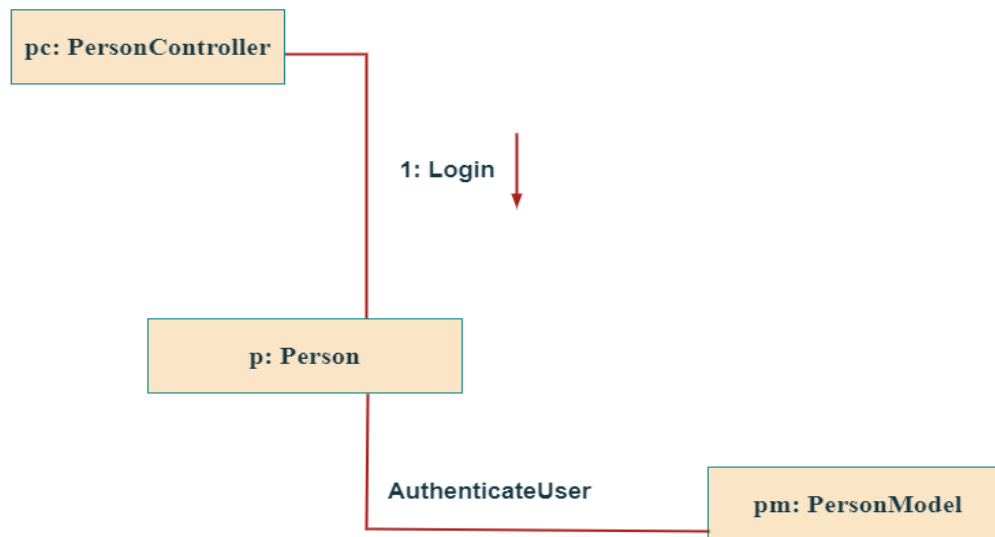
Figure 5.7: Manage Crops Sequence Diagram



## Calculate Area- Sequence Diagram

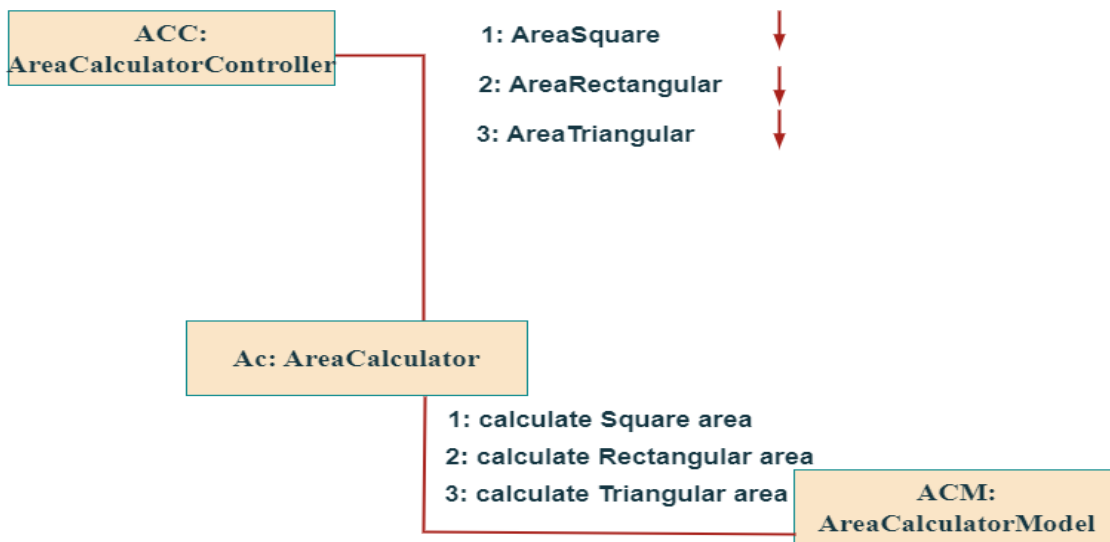
Figure 5.8: Calculate Area Sequence Diagram

### 5.4 Collaboration Diagrams



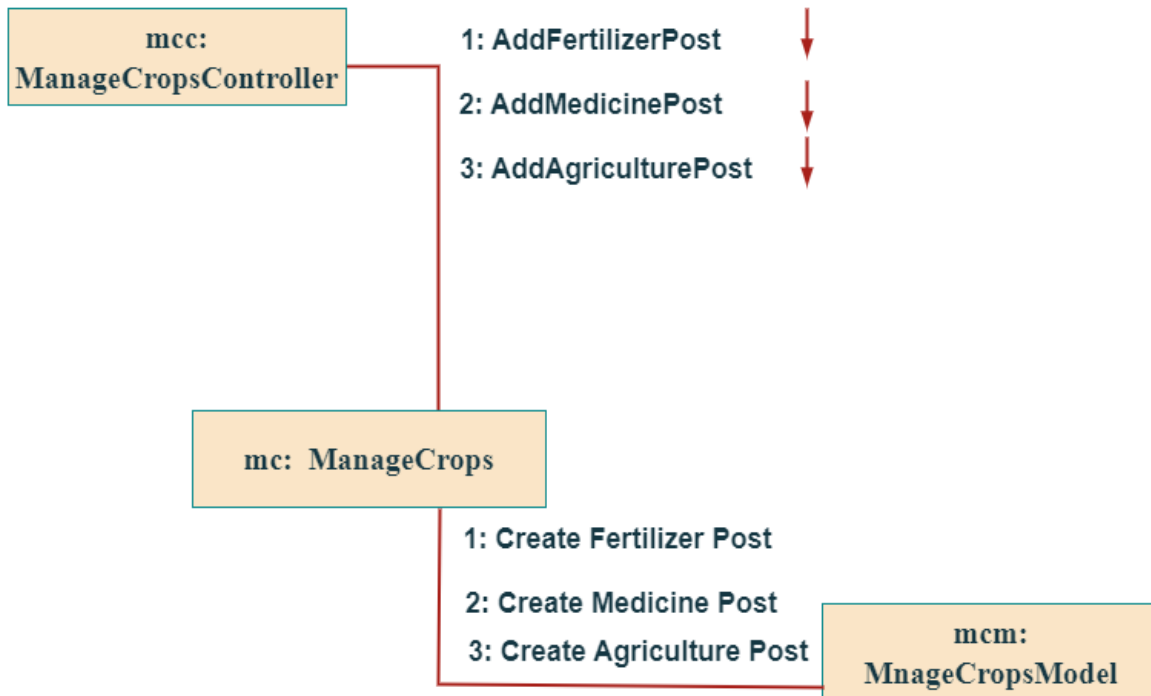
## Login- Collaboration Diagram

Figure 5.9: Login Collaboration Diagram



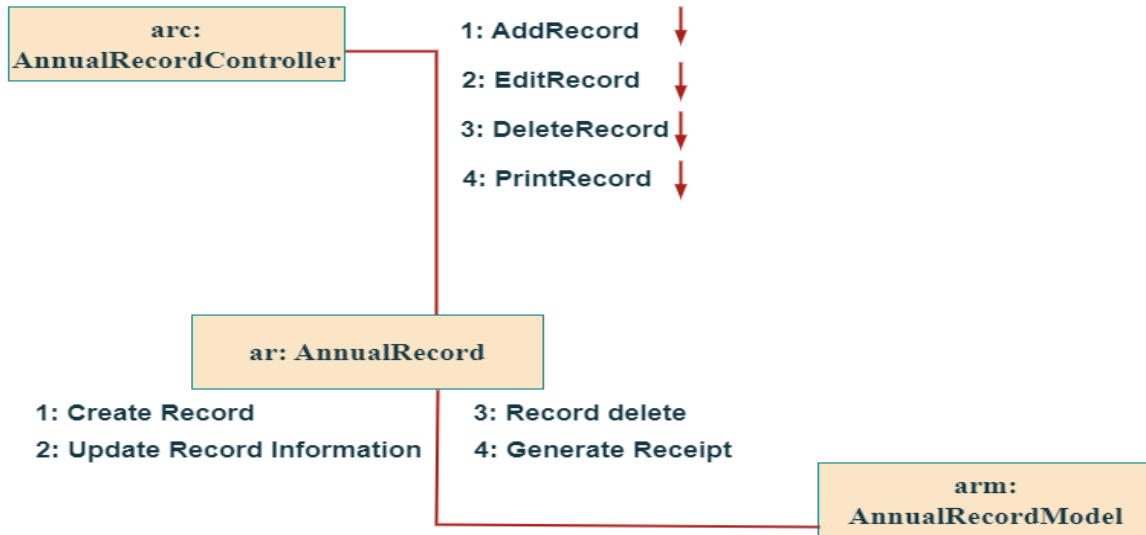
## Calculate Area- Collaboration Diagram

Figure 5.10: Calculate Area Collaboration Diagram



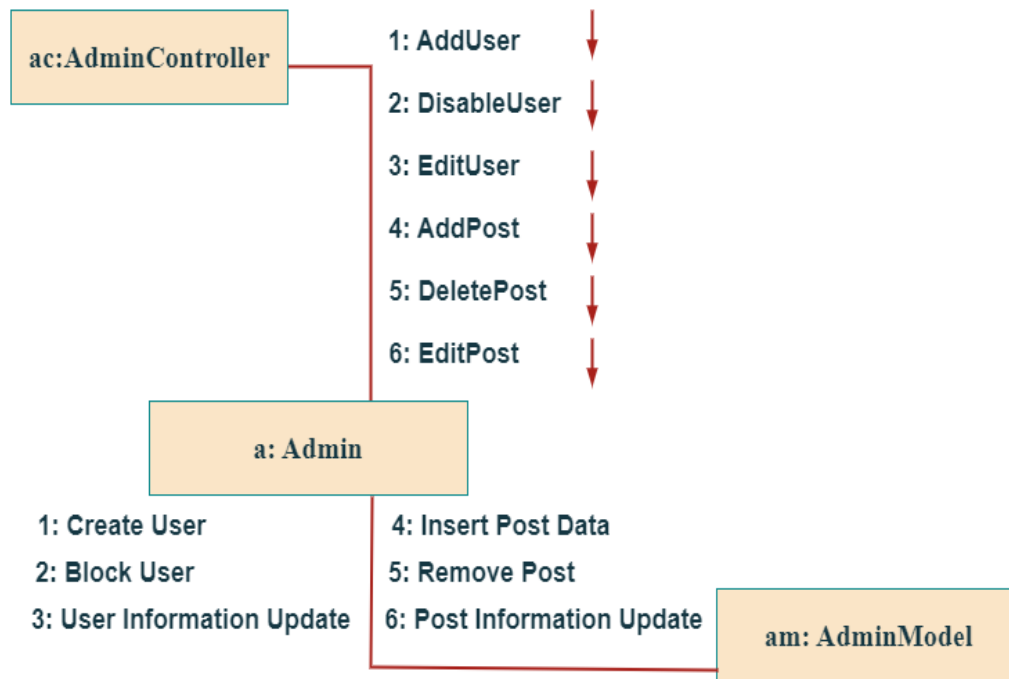
## Manage Crops- Collaboration Diagram

Figure 5.11: Manage Crops Collaboration Diagram



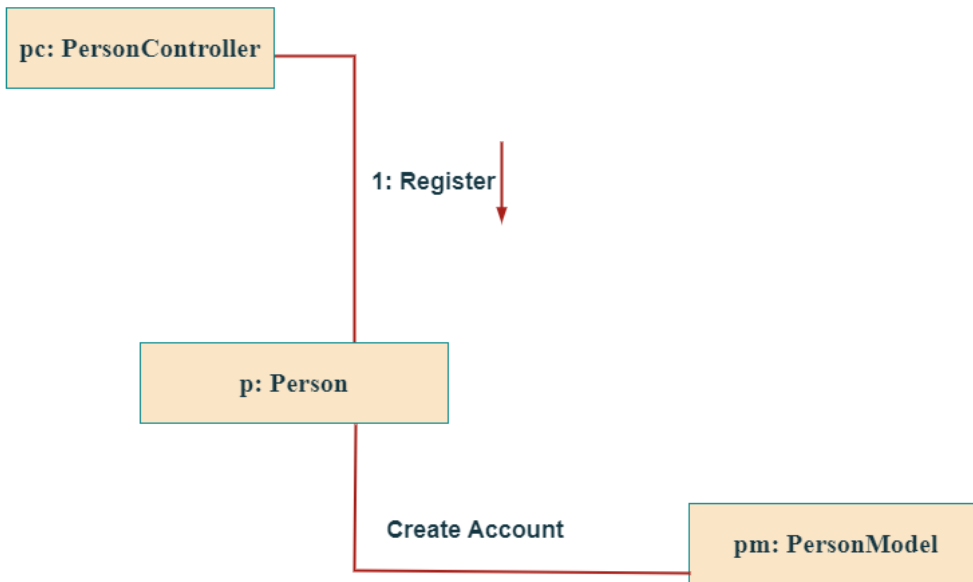
## Manage Records- Collaboration Diagram

Figure 5.12: Manage Records Collaboration Diagram



## Manage Roles- Collaboration Diagram

Figure 5.13: Manage Roles Collaboration Diagram



## Register- Collaboration Diagram

Figure 5.14: Register Collaboration Diagram

### 5.5 Other UMLs

# 5.6 ERD

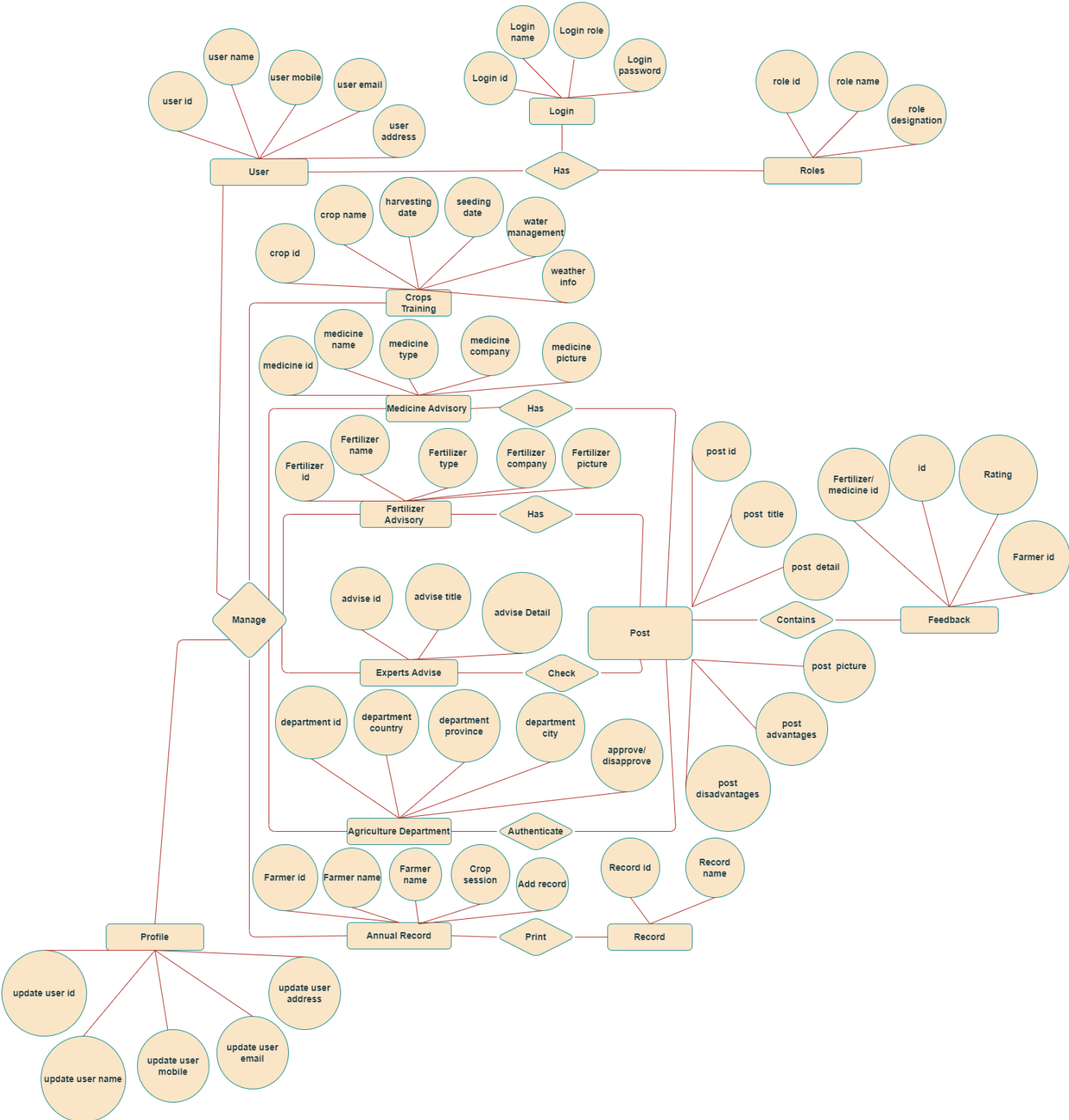


Figure 5.15: ERD (Entity Relationship Diagram)

## 5.7 Data Dictionary

Table 5.1: Data Dictionary

Element Name	Data Type	Validation	Mandatory	Remarks
User-name	STRING	Yes	Yes	INPUT
User-ID	INTEGER	Yes	Yes	INPUT
Location	STRING	Yes	Yes	INPUT
First-Name	STRING	No	Yes	INPUT
Last-Name	STRING	No	Yes	INPUT
Password	STRING	Yes	Yes	INPUT
Phone-No.	INTEGER	Yes	Yes	INPUT
Designation	STRING	YES	Yes	INPUT
Organization	STRING	YES	Yes	INPUT
Fertilizer-Name	STRING	NO	Yes	INPUT
Fertilizer Formula	STRING	Yes	Yes	INPUT
Fertilizer Description	STRING	No	NO	INPUT
Medicine-Name	STRING	NO	Yes	INPUT
Medicine Formula	STRING	YES	Yes	INPUT
Medicine Description	STRING	NO	NO	INPUT
Sequence-No	INTEGER	NO	YES	INPUT
Price	INTEGER	YES	YES	INPUT
Quantity	INTEGER	YES	YES	INPUT

## 6. IMPLEMENTATION DETAILS

---

### 6.1 Development Setup

Following are the Tools and Technologies that are used in Agriculture Training and Management System.

#### Technologies:

1. **HMTL**

HTML is the standard markup language for structuring and presenting web information, and it provides a foundation for generating and organizing our webpages.

2. **CSS**

CSS (Cascading Style Sheets) is used to style and format the visual look of webpages, allowing us to alter the colors, fonts, layout, and overall aesthetic presentation of HTML components, so improving the user experience and overall website design.

3. **PHP**

PHP is a server-side scripting language that is used to produce dynamic online content and interact with databases. It allows us for the production of dynamic and interactive webpages as well as the implementation of functions such as user authentication, form management, and database manipulation.

4. **JavaScript**

JavaScript is a client-side programming language that adds interactivity and dynamic behavior to webpages by enabling functionalities such as form validation, DOM manipulation, event handling, and asynchronous communication with servers, thereby improving user interaction and overall website functionality.

5. **Bootstrap**

Bootstrap is a front-end framework that gives a collection of pre-designed CSS and JavaScript components to us, allowing them to effortlessly construct responsive and aesthetically attractive webpages with consistent style and layout across multiple devices and screen sizes.

#### Tools:

1. **XAMPP**

XAMPP is a software package that includes an Apache web server, a MySQL database, and a PHP interpreter, allowing us to build and test websites locally before deploying them to a live server.

2. **Visual Studio Code**

Visual Studio Code is a robust code editor with several features and extensions, making it a popular choice for website development. It has an easy-to-use interface and powerful tools for creating, editing, and debugging code, which increases productivity and efficiency in website creation.

3. **Chrome**

Google Chrome is a popular web browser that allows users to access and view webpages. It delivers a fast and secure surfing experience, supports latest web technologies, and includes development tools for testing and debugging websites.

## 6.2 Deployment setup

The deployment was put up with the help of advisers, professors, seniors, and our group mates. It will function as an admin-based server, with the admin in charge of the entire server. We had various errors and obstacles during the project construction and deployment process, but it gave us with important experience

## 6.3 Algorithms

```
protected function unserializeTCPDFtagParameters($data) {
    $hash = substr($data, 0, 32);
    $encoded = substr($data, 32);
    if ($hash != $this->getHashForTCPDFtagParams($encoded)) {
        $this->Error('Invalid parameters');
    }
    return json_decode(urldecode($encoded), true);
}
```

Figure 6.1: Hash Algorithm

```
$old_pass = $_POST['old_pass'];
$previous_pass = md5($_POST['previous_pass']);
$previous_pass = filter_var($previous_pass, FILTER_SANITIZE_STRING);
$new_pass = md5($_POST['new_pass']);
$new_pass = filter_var($new_pass, FILTER_SANITIZE_STRING);
$confirm_pass = md5($_POST['confirm_pass']);
$confirm_pass = filter_var($confirm_pass, FILTER_SANITIZE_STRING);
```

Figure 6.2: Hashing Algorithm (MD5)

```
ksort($log);
$c = array_fill(0, ($nc + 1), 0);
$c[0] = 1;
for ($i = 1; $i <= $nc; ++$i) {
    $c[$i] = $c[($i-1)];
    for ($j = ($i - 1); $j >= 1; --$j) {
        $c[$j] = $c[($j - 1)] ^ $this->getGFProduct($c[$j], $alog[$i], $log, $alog, $gf);
    }
    $c[0] = $this->getGFProduct($c[0], $alog[$i], $log, $alog, $gf);
}
```

Figure 6.3: K-Sort Algorithm

```

for ($i = 0; $i < $codelen; ++$i) {
    $chval = ord($code{$i});
    if (($k = array_search($chval, $this->textsubmodes[$submode])) !== false) {
        // we are on the same sub-mode
        $txtarr[] = $k;
    } else {
        // the sub-mode is changed
        for ($s = 0; $s < 4; ++$s) {
            // search new sub-mode
            if (($s != $submode) AND (($k = array_search($chval, $this->textsubmodes[$s])) !== false)) {
                // $s is the new submode
                if (((($i + 1) == $codelen) OR (((($i + 1) < $codelen) AND (array_search(ord($code{($i + 1)}), $this->textsubmode
                    // shift (temporary change only for this char)
                    if ($s == 3) {
                        // shift to punctuation
                        $txtarr[] = 29;
                    } else {
                        // shift from lower to alpha
                        $txtarr[] = 27;
                    }
                } else {
                    // latch
                    $txtarr = array_merge($txtarr, $this->textlatch[''.$submode.$s]);
                    // set new submode
                    $submode = $s;
                }
                // add characted code to array
                $txtarr[] = $k;
                break;
            }
        }
    }
}
}

```

**Figure 6.4: Search Array-Algorithm**

```

protected function sortBookmarks() {
    // get sorting columns
    $outline_p = array();
    $outline_y = array();
    foreach ($this->outlines as $key => $row) {
        $outline_p[$key] = $row['p'];
        $outline_k[$key] = $key;
    }
    // sort outlines by page and original position
    array_multisort($outline_p, SORT_NUMERIC, SORT_ASC, $outline_k, SORT_NUMERIC, SORT_ASC, $this->outlines);
}

```

**Figure 6.5: Sorting Algorithm**

```

document.querySelector(".weather__search").addEventListener('submit', e => {
  let search = document.querySelector(".weather__searchform");

  e.preventDefault();

  currCity = search.value;

  getWeather();

  search.value = ""
})

```

**Figure 6.6: Weather Search Algorithm**

## Constraints

### 6.3.1 Assumptions

Following are the assumptions in Agriculture Training and Management System.

1. To see the Registered Entities in our System database connectivity must be needed.
2. Our development group will handle the Agriculture Training and Management System.
3. Agriculture Training and Management System's Maintenance will be done by our development group.
4. The User must be connected to the internet

### 6.3.2 System Constraints

Following are the System Constraints in Agriculture Training and Management System.

1. Internet Connection must be needed in order to use the web-based Agriculture Training and Management System.
2. Our website must be hosted in the latest version. It means we updated our website time by time

### 6.3.3 Restrictions

- Agriculture training and management system can only be accessible or used by using internet connection and browser because it is a Web-Based Agriculture application.

### 6.3.4 Limitations

- The agriculture training and management system will be accessible only to those who purchase the software, and only authorized individuals will be allowed to use this web-based application.

## 7. TESTING

### 7.1 Extended Test Cases

Test cases of Agriculture training and management system are as follow:

**Table 7.1: Test Case of Register, Add User, Update User (Valid Case)**

<b>TCID_1.1</b>		<b>Test Case Designed By: Riaz Ahmad</b>		
<b>Module Name:</b> Register, Add User, Update User		<b>Date of Test Case Designed:</b> 05/07/2023		
<b>Test Case Priority:</b> High		<b>Test Case Executed By:</b> Riaz Ahmad		
<b>Date of the Test Case Execution:</b> 09/26/2022				
<b>Test Case Scenario:</b> Check the Register, Add User and Update User Functionality.				
<b>Description of Test Case:</b> Check system behavior when the Valid First name, Last name, Password, Confirm Password, Phone Number, Location, Designation, Organization, Email and Role are entered.				
<b>Pre-Conditions:</b>				
<ol style="list-style-type: none"> <li>1. The website registration page and Admin Panel is accessible and functional.</li> <li>2. Admin must have rights to add and update user</li> </ol>				
Steps	Test Data	Expected Results	Actual Result	Fail/Pas
<ol style="list-style-type: none"> <li>1. Go to website: <a href="https://atams.com">https://atams.com</a>.</li> <li>2. Enter First name.</li> <li>3. Enter Last name.</li> <li>4. Enter the Password.</li> <li>5. Enter the Confirm Password.</li> <li>6. Enter Phone Number.</li> <li>7. Enter Location.</li> <li>8. Enter Designation.</li> <li>9. Enter Organization.</li> <li>10. Enter Email.</li> <li>11. Choose Role.</li> <li>12. Click on Button.</li> </ol>	First name: Riaz Last name: Ahmad Password: riaz@1234 Confirm Password: riaz@1234 Phone Number: 03004698363 Location: Pattoki Designation: Farmer Organization: ABC Email: <a href="mailto:ali2@gmail.com">ali2@gmail.com</a> Role: Medicine Expert	User should be successfully Register into the System.	As we were Expected.	Pass

<b>Post Condition:</b>				
<ol style="list-style-type: none"> <li>1. Dashboard Should be Displayed to the User.</li> <li>2. Database will be updated.</li> </ol>				

**Table 7.2: Test Case of Register (Invalid Case)**

<b>TCID_1.2</b>		<b>Test Case Designed By:</b> Riaz Ahmad		
<b>Module Name:</b> Register, Add User, Update User		<b>Date of Test Case Designed:</b> 05/07/2023		
<b>Test Case Priority:</b> High		<b>Test Case Executed By:</b> Riaz Ahmad		
<b>Date of the Test Case Execution:</b> 09/26/2022				
<b>Test Case Scenario:</b> Check the Register, Add User, Update User Functionality.				
<b>Description of Test Case:</b> Check system behavior when the invalid First name, Last name, Password, Confirm Password, Phone Number, Location, Designation, Organization, Email and Role are entered.				
<b>Pre-Conditions:</b>				
<ol style="list-style-type: none"> <li>1. The website registration page and Admin Panel is accessible and functional.</li> <li>2. Admin must have rights to add and update user.</li> </ol>				
<b>Steps</b>	<b>Test Data</b>	<b>Expected Results</b>	<b>Actual Result</b>	<b>Fail/Pas</b>
<ol style="list-style-type: none"> <li>1. Go to website: <a href="https://atams.com">https://atams.com</a>.</li> <li>2. Enter First name.</li> <li>3. Enter Last name.</li> <li>4. Enter the Password.</li> <li>5. Enter the Confirm Password.</li> <li>6. Enter Phone Number.</li> <li>7. Enter Location.</li> <li>8. Enter Designation.</li> <li>9. Enter Organization.</li> <li>10. Enter Email.</li> </ol>	First name: RiaZ Last name: Ahma Password: riaz@123 Confirm Password: riaz@12 Phone Number: 03004698369 Location: Pattoki Designation: Farmerr Organization: ABC1 Email: <a href="mailto:ali@gmail.com">ali@gmail.com</a>	User should not be Register into the System.	As we were Expected.	Pass

11. Choose Role. 12. Click on Button.	Role: Medicine Exper			
<b>Post Condition:</b> Error message Should be Displayed to the User about wrong information that User Entered.				

**Table 7.3: Test Case of Register (Invalid Case-Inputs Left Blank)**

<b>TCID__1.3</b>		<b>Test Case Designed By:</b> Riaz Ahmad		
<b>Module Name:</b> Register, Add User, Update User		<b>Date of Test Case Designed:</b> 05/07/2023		
<b>Test Case Priority:</b> High		<b>Test Case Executed By:</b> Riaz Ahmad		
<b>Date of the Test Case Execution:</b> 09/26/2022				
<b>Test Case Scenario:</b> Check the Register, Add User, Update User Functionality.				
<b>Description of Test Case:</b> Check system behavior when the First name, Last name, Password, Confirm Password, Phone Number, Location, Designation, Organization, Email and Role are left blank and Register button is pressed.				
<b>Pre-Conditions:</b>				
<ol style="list-style-type: none"> <li>1. The website registration page and Admin Panel is accessible and functional.</li> <li>2. Admin must have rights to add and update user.</li> </ol>				
<b>Steps</b>	<b>Test Data</b>	<b>Expected Results</b>	<b>Actual Result</b>	<b>Fail/Pas</b>
<ol style="list-style-type: none"> <li>1. Go to website: <a href="https://atams.com">https://atams.com</a>.</li> <li>2. Click on Register Button.</li> </ol>	NULL	User should not be Register into the System.	As we were Expected.	Pass
<b>Post Condition:</b> Error message Should be Displayed to the User about wrong information that User Entered.				

**Table 7.4: Test Case of Register (Invalid Case-invalid First name)**

<b>TCID__1.4</b>		<b>Test Case Designed By:</b> Riaz Ahmad		
<b>Module Name:</b> Register, Add User, Update User		<b>Date of Test Case Designed:</b> 05/07/2023		
<b>Test Case Priority:</b> High		<b>Test Case Executed By:</b> Riaz Ahmad		
<b>Date of the Test Case Execution:</b> 09/26/2022				
<b>Test Case Scenario:</b> Check the Register, Add User, Update User Functionality.				
<b>Description of Test Case:</b> Check system behavior when the invalid First name, valid Last name, valid Password, valid Confirm Password, valid Phone Number, valid Location, valid Designation, valid Organization, valid Email and Valid Role are entered.				
<b>Pre-Conditions:</b>				
<ol style="list-style-type: none"> <li>1. The website registration page and Admin Panel is accessible and functional.</li> <li>2. Admin must have rights to add and update user.</li> </ol>				
<b>Steps</b>	<b>Test Data</b>	<b>Expected Results</b>	<b>Actual Result</b>	<b>Fail/Pas</b>
<ol style="list-style-type: none"> <li>1. Go to website: <a href="https://atams.com">https://atams.com</a>.</li> <li>2. Enter First name.</li> <li>3. Enter Last name.</li> <li>4. Enter the Password.</li> <li>5. Enter the Confirm Password.</li> <li>6. Enter Phone Number.</li> <li>7. Enter Location.</li> <li>8. Enter Designation.</li> <li>9. Enter Organization.</li> <li>10. Enter Email.</li> <li>11. Choose Role.</li> <li>12. Click on Register Button.</li> </ol>	First name: RiaZ Last name: Ahmad Password: riaz@1234 Confirm Password: riaz@1234 Phone Number: 03004698363 Location: Pattoki Designation: Farmer Organization: ABC Email: <a href="mailto:ali2@gmail.com">ali2@gmail.com</a> Role: Medicine Expert	User should not be Register into the System.	As we were Expected.	Pass
<b>Post Condition:</b> Error message Should be Displayed to the User about wrong information that User Entered.				

**Table 30: TCID\_\_1.5-Register (Invalid Case-invalid Last name)**

<b>TCID__1.5</b>		<b>Test Case Designed By: Riaz Ahmad</b>		
<b>Module Name: Register</b>		<b>Date of Test Case Designed: 05/07/2023</b>		
<b>Test Case Priority: High</b>		<b>Test Case Executed By: Riaz Ahmad</b>		
<b>Date of the Test Case Execution: 09/26/2022</b>				
<b>Test Case Scenario:</b> Check the Register, Add User, Update User Functionality.				
<b>Description of Test Case:</b> Check system behavior when the valid First name, invalid Last name, valid Password, valid Confirm Password, valid Phone Number, valid Location, valid Designation, valid Organization, valid Email and valid Role are entered.				
<b>Pre-Conditions:</b>				
<ol style="list-style-type: none"> <li>1. The website registration page and Admin Panel is accessible and functional.</li> <li>2. Admin must have rights to add and update user.</li> </ol>				
<b>Steps</b>	<b>Test Data</b>	<b>Expected Results</b>	<b>Actual Result</b>	<b>Fail/Pas</b>
<ol style="list-style-type: none"> <li>1. Go to website: <a href="https://atams.com">https://atams.com</a>.</li> <li>2. Enter First name.</li> <li>3. Enter Last name.</li> <li>4. Enter the Password.</li> <li>5. Enter the Confirm Password.</li> <li>6. Enter Phone Number.</li> <li>7. Enter Location.</li> <li>8. Enter Designation.</li> <li>9. Enter Organization.</li> <li>10. Enter Email.</li> <li>11. Choose Role.</li> <li>12. Click on Register Button.</li> </ol>	First name: Riaz Last name: Ahmad1 Password: riaz@1234 Confirm Password: riaz@1234 Phone Number: 03004698363 Location: Pattoki Designation: Farmer Organization: ABC Email: <a href="mailto:ali2@gmail.com">ali2@gmail.com</a> Role: Medicine Expert	User should not be Register into the System.	As we were Expected.	Pass
<b>Post Condition:</b> Error message Should be Displayed to the User about wrong information that User Entered.				

**Table 7.5: Test Case of Register (Invalid Case-invalid Password)**

<b>TCID__1.6</b>		<b>Test Case Designed By:</b> Riaz Ahmad		
<b>Module Name:</b> Register, Add User, Update User		<b>Date of Test Case Designed:</b> 05/07/2023		
<b>Test Case Priority:</b> High		<b>Test Case Executed By:</b> Riaz Ahmad		
<b>Date of the Test Case Execution:</b> 09/26/2022				
<b>Test Case Scenario:</b> Check the Register, Add User, Update User Functionality.				
<b>Description of Test Case:</b> Check system behavior when the valid First name, valid Last name, invalid Password, valid Confirm Password, valid Phone Number, valid Location, valid Designation, valid Organization, valid Email and valid Role are entered.				
<b>Pre-Conditions:</b>				
<ol style="list-style-type: none"> <li>1. The website registration page and Admin Panel is accessible and functional.</li> <li>2. Admin must have rights to add and update user.</li> </ol>				
<b>Steps</b>	<b>Test Data</b>	<b>Expected Results</b>	<b>Actual Result</b>	<b>Fail/Pas</b>
<ol style="list-style-type: none"> <li>1. Go to website: <a href="https://atams.com">https://atams.com</a>.</li> <li>2. Enter First name.</li> <li>3. Enter Last name.</li> <li>4. Enter the Password.</li> <li>5. Enter the Confirm Password.</li> <li>6. Enter Phone Number.</li> <li>7. Enter Location.</li> <li>8. Enter Designation.</li> <li>9. Enter Organization.</li> <li>10. Enter Email.</li> <li>11. Choose Role.</li> <li>12. Click on Register Button.</li> </ol>	First name: Riaz Last name: Ahmad1 Password: riaz@123 Confirm Password: riaz@123 Phone Number: 03004698363 Location: Pattoki Designation: Farmer Organization: ABC Email: <a href="mailto:ali2@gmail.com">ali2@gmail.com</a> Role: Medicine Expert	User should not be Register into the System.	As we were Expected.	Pass
<b>Post Condition:</b> Error message Should be Displayed to the User about wrong information that User Entered.				

**Table 7.6: Test Case of Register (Invalid Case-invalid Confirm Password)**

<b>TCID__1.7</b>		<b>Test Case Designed By:</b> Riaz Ahmad		
<b>Module Name:</b> Register, Add User, Update User		<b>Date of Test Case Designed:</b> 05/07/2023		
<b>Test Case Priority:</b> High		<b>Test Case Executed By:</b> Riaz Ahmad		
<b>Date of the Test Case Execution:</b> 09/26/2022				
<b>Test Case Scenario:</b> Check the Register, Add User, Update User Functionality.				
<b>Description of Test Case:</b> Check system behavior when the valid First name, valid Last name, valid Password, invalid Confirm Password, valid Phone Number, valid Location, valid Designation, valid Organization, valid Email and Valid are entered.				
<b>Pre-Conditions:</b>				
<ol style="list-style-type: none"> <li>1. The website registration page and Admin Panel is accessible and functional.</li> <li>2. Admin must have rights to add and update user.</li> </ol>				
<b>Steps</b>	<b>Test Data</b>	<b>Expected Results</b>	<b>Actual Result</b>	<b>Fail/Pas</b>
<ol style="list-style-type: none"> <li>1. Go to website: <a href="https://atams.com">https://atams.com</a>.</li> <li>2. Enter First name.</li> <li>3. Enter Last name.</li> <li>4. Enter the Password.</li> <li>5. Enter the Confirm Password.</li> <li>6. Enter Phone Number.</li> <li>7. Enter Location.</li> <li>8. Enter Designation.</li> <li>9. Enter Organization.</li> <li>10. Enter Email.</li> <li>11. Choose Role.</li> <li>12. Click on Register Button.</li> </ol>	First name: Riaz Last name: Ahmad1 Password: riaz@1234 Confirm Password: riaz@123 Phone Number: 03004698363 Location: Pattoki Designation: Farmer Organization: ABC Email: <a href="mailto:ali2@gmail.com">ali2@gmail.com</a> Role: Medicine Expert	User should not be Register into the System.	As we were Expected.	Pass
<b>Post Condition:</b> Error message Should be Displayed to the User about wrong information that User Entered.				

**Table 7.7: Test case of Register (Invalid Case-invalid Phone Number)**

<b>TCID__1.8</b>		<b>Test Case Designed By:</b> Riaz Ahmad		
<b>Module Name:</b> Register, Add User, Update User		<b>Date of Test Case Designed:</b> 05/07/2023		
<b>Test Case Priority:</b> High		<b>Test Case Executed By:</b> Riaz Ahmad		
<b>Date of the Test Case Execution:</b> 09/26/2022				
<b>Test Case Scenario:</b> Check the Register, Add User, Update User Functionality.				
<b>Description of Test Case:</b> Check system behavior when the valid First name, valid Last name, valid Password, valid Confirm Password, invalid Phone Number, valid Location, valid Designation, valid Organization, valid Email and valid Role are entered.				
<b>Pre-Conditions:</b>				
<ol style="list-style-type: none"> <li>1. The website registration page and Admin Panel is accessible and functional.</li> <li>2. Admin must have rights to add and update user.</li> </ol>				
<b>Steps</b>	<b>Test Data</b>	<b>Expected Results</b>	<b>Actual Result</b>	<b>Fail/Pas</b>
<ol style="list-style-type: none"> <li>1. Go to website: <a href="https://atams.com">https://atams.com</a>.</li> <li>2. Enter First name.</li> <li>3. Enter Last name.</li> <li>4. Enter the Password.</li> <li>5. Enter the Confirm Password.</li> <li>6. Enter Phone Number.</li> <li>7. Enter Location.</li> <li>8. Enter Designation.</li> <li>9. Enter Organization.</li> <li>10. Enter Email.</li> <li>11. Choose Email.</li> <li>12. Click on Register Button.</li> </ol>	First name: Riaz Last name: Ahmad1 Password: riaz@1234 Confirm Password: riaz@1234 Phone Number: 03004698369 Location: Pattoki Designation: Farmer Organization: ABC Email: <a href="mailto:ali2@gmail.com">ali2@gmail.com</a> Role: Medicine Expert	User should not be Register into the System.	As we were Expected.	Pass

**Post Condition:** Error message Should be Displayed to the User about wrong information that User Entered.

**Table 7.8: Test case of Register (Invalid Case-invalid Location)**

<b>TCID__1.9</b>		<b>Test Case Designed By:</b> Riaz Ahmad		
<b>Module Name:</b> Register, Add User, Update User		<b>Date of Test Case Designed:</b> 05/07/2023		
<b>Test Case Priority:</b> High		<b>Test Case Executed By:</b> Riaz Ahmad		
<b>Date of the Test Case Execution:</b> 09/26/2022				
<b>Test Case Scenario:</b> Check the Register, Add User, Update User Functionality.				
<b>Description of Test Case:</b> Check system behavior when the valid First name, valid Last name, valid Password, valid Confirm Password, valid Phone Number, invalid Location, valid Designation, valid Organization, valid Email and valid Role are entered.				
<b>Pre-Conditions:</b>				
<ol style="list-style-type: none"> <li>1. The website registration page and Admin Panel is accessible and functional.</li> <li>2. Admin must have rights to add and update user.</li> </ol>				
<b>Steps</b>	<b>Test Data</b>	<b>Expected Results</b>	<b>Actual Result</b>	<b>Fail/Pas</b>
<ol style="list-style-type: none"> <li>1. Go to website: <a href="https://atams.com">https://atams.com</a>.</li> <li>2. Enter First name.</li> <li>3. Enter Last name.</li> <li>4. Enter the Password.</li> <li>5. Enter the Confirm Password.</li> <li>6. Enter Phone Number.</li> <li>7. Enter Location.</li> <li>8. Enter Designation.</li> <li>9. Enter Organization.</li> <li>10. Enter Email.</li> <li>11. Choose Role.</li> <li>12. Click on Register Button.</li> </ol>	First name: Riaz Last name: Ahmad1 Password: riaz@1234 Confirm Password: riaz@1234 Phone Number: 03004698369 Location: atki12 Designation: Farmer Organization: ABC Email: <a href="mailto:ali2@gmail.com">ali2@gmail.com</a> Role: Medicine Expert	User should not be Register into the System.	As we were Expected.	Pass

<b>Post Condition:</b> Error message Should be Displayed to the User about wrong information that User Entered.				

**Table 7.9: Test Case of Register (Invalid Case-invalid Designation)**

<b>TCID__1.10</b>		<b>Test Case Designed By:</b> Riaz Ahmad		
<b>Module Name:</b> Register, Add User, Update User		<b>Date of Test Case Designed:</b> 05/07/2023		
<b>Test Case Priority:</b> High		<b>Test Case Executed By:</b> Riaz Ahmad		
<b>Date of the Test Case Execution:</b> 09/26/2022				
<b>Test Case Scenario:</b> Check the Register, Add User, Update User Functionality.				
<b>Description of Test Case:</b> Check system behavior when the valid First name, valid Last name, valid Password, valid Confirm Password, valid Phone Number, valid Location, invalid Designation, valid Organization, valid Email and valid Role are entered.				
<b>Pre-Conditions:</b>				
<ol style="list-style-type: none"> <li>1. The website registration page and Admin Panel is accessible and functional.</li> <li>2. Admin must have rights to add and update user.</li> </ol>				
<b>Steps</b>	<b>Test Data</b>	<b>Expected Results</b>	<b>Actual Result</b>	<b>Fail/Pas</b>
<ol style="list-style-type: none"> <li>1. Go to website: <a href="https://atams.com">https://atams.com</a>.</li> <li>2. Enter First name.</li> <li>3. Enter Last name.</li> <li>4. Enter the Password.</li> <li>5. Enter the Confirm Password.</li> <li>6. Enter Phone Number.</li> <li>7. Enter Location.</li> <li>8. Enter Designation.</li> <li>9. Enter Organization.</li> <li>10. Enter Email.</li> <li>11. Choose Role.</li> <li>12. Click on Register</li> </ol>	First name: Riaz Last name: Ahmad1 Password: riaz@1234 Confirm Password: riaz@1234 Phone Number: 03004698369 Location: Pattoki Designation: Farmerr Organization: ABC Email: <a href="mailto:ali2@gmail.com">ali2@gmail.com</a> Role: Medicine	User should not be Register into the System.	As we were Expected.	Pass

Button.	Expert			
<b>Post Condition:</b> Error message Should be Displayed to the User about wrong information that User Entered.				

**Table 7.10: Test Case of Register (Invalid Case-invalid Organization)**

<b>TCID__1.11</b>		<b>Test Case Designed By:</b> Riaz Ahmad		
<b>Module Name:</b> Register, Add User, Update User		<b>Date of Test Case Designed:</b> 05/07/2023		
<b>Test Case Priority:</b> High		<b>Test Case Executed By:</b> Riaz Ahmad		
<b>Date of the Test Case Execution:</b> 09/26/2022				
<b>Test Case Scenario:</b> Check the Register, Add User, Update User Functionality.				
<b>Description of Test Case:</b> Check system behavior when the valid First name, valid Last name, valid Password, valid Confirm Password, valid Phone Number, valid Location, valid Designation, invalid Organization, valid Email and valid Role are entered.				
<b>Pre-Conditions:</b>				
<ol style="list-style-type: none"> <li>1. The website registration page and Admin Panel is accessible and functional.</li> <li>2. Admin must have rights to add and update user.</li> </ol>				
Steps	Test Data	Expected Results	Actual Result	Fail/Pas
<ol style="list-style-type: none"> <li>1. Go to website: <a href="https://atams.com">https://atams.com</a>.</li> <li>2. Enter First name.</li> <li>3. Enter Last name.</li> <li>4. Enter the Password.</li> <li>5. Enter the Confirm Password.</li> <li>6. Enter Phone Number.</li> <li>7. Enter Location.</li> <li>8. Enter Designation.</li> <li>9. Enter Organization.</li> </ol>	First name: Riaz Last name: Ahmad1 Password: riaz@1234 Confirm Password: riaz@1234 Phone Number: 03004698369 Location: Pattoki Designation: Farmer Organization: ABC1 Email:	User should not be Register into the System.	As we were Expected.	Pass

10. Enter Email. 11. Choose Role. 12. Click on Register Button.	<a href="mailto:ali2@gmail.com">ali2@gmail.com</a> Role: Medicine Expert			
<b>Post Condition:</b> Error message Should be Displayed to the User about wrong information that User Entered.				

**Table 7.11: Test Case of Register (Invalid Case-invalid Email)**

<b>TCID_1.12</b>		<b>Test Case Designed By:</b> Riaz Ahmad		
<b>Module Name:</b> Register, Add User, Update User		<b>Date of Test Case Designed:</b> 05/07/2023		
<b>Test Case Priority:</b> High		<b>Test Case Executed By:</b> Riaz Ahmad		
<b>Date of the Test Case Execution:</b> 09/26/2022				
<b>Test Case Scenario:</b> Check the Register, Add User, Update User Functionality.				
<b>Description of Test Case:</b> Check system behavior when the valid First name, valid Last name, valid Password, valid Confirm Password, valid Phone Number, valid Location, valid Designation, valid Organization, invalid Email and valid Role are entered.				
<b>Pre-Conditions:</b>				
<ol style="list-style-type: none"> <li>1. The website registration page and Admin Panel is accessible and functional.</li> <li>2. Admin must have rights to add and update user.</li> </ol>				
<b>Steps</b>	<b>Test Data</b>	<b>Expected Results</b>	<b>Actual Result</b>	<b>Fail/Pas</b>
<ol style="list-style-type: none"> <li>1. Go to website: <a href="https://atams.com">https://atams.com</a>.</li> <li>2. Enter First name.</li> <li>3. Enter Last name.</li> <li>4. Enter the Password.</li> <li>5. Enter the Confirm Password.</li> <li>6. Enter Phone Number.</li> </ol>	First name: Riaz Last name: Ahmad1 Password: riaz@1234 Confirm Password: riaz@1234 Phone Number: 03004698369	User should not be Register into the System.	As we were Expected.	Pass

7. Enter Location.	Location: Pattoki			
8. Enter Designation.	Designation: Farmer			
9. Enter Organization.	Organization: ABC1			
10. Enter Email.	Email:			
11. Choose Role.	<a href="mailto:ali@gmail.com">ali@gmail.com</a>			
12. Click on Register Button.	Role: Medicine Expert			
<b>Post Condition:</b> Error message Should be Displayed to the User about wrong information that User Entered.				

**Table 7.12: Test Case of Register (Invalid Case-invalid Role)**

<b>TCID__1.13</b>		<b>Test Case Designed By:</b> Riaz Ahmad		
<b>Module Name:</b> Register, Add User, Update User		<b>Date of Test Case Designed:</b> 05/07/2023		
<b>Test Case Priority:</b> High		<b>Test Case Executed By:</b> Riaz Ahmad		
<b>Date of the Test Case Execution:</b> 09/26/2022				
<b>Test Case Scenario:</b> Check the Register, Add User, Update User Functionality.				
<b>Description of Test Case:</b> Check system behavior when the valid First name, valid Last name, valid Password, valid Confirm Password, valid Phone Number, valid Location, valid Designation, valid Organization, valid Email and invalid Role are entered.				
<b>Pre-Conditions:</b>				
<ol style="list-style-type: none"> <li>1. The website registration page and Admin Panel is accessible and functional.</li> <li>2. Admin must have rights to add and update user.</li> </ol>				
<b>Steps</b>	<b>Test Data</b>	<b>Expected Results</b>	<b>Actual Result</b>	<b>Fail/Pas</b>
<ol style="list-style-type: none"> <li>1. Go to website: <a href="https://atams.com">https://atams.com</a>.</li> <li>2. Enter First name.</li> <li>3. Enter Last name.</li> <li>4. Enter the Password.</li> <li>5. Enter the Confirm</li> </ol>	First name: Riaz Last name: Ahmad1 Password: riaz@1234 Confirm Password: riaz@1234	User should not be Register into the System.	As we were Expected.	Pass

Password. 6. Enter Phone Number. 7. Enter Location. 8. Enter Designation. 9. Enter Organization. 10. Enter Email. 11. Choose Role. 12. Click on Register Button.	Phone Number: 03004698369  Location: Pattoki  Designation: Farmer  Organization: ABC1  Email: <a href="mailto:ali@gmail.com">ali@gmail.com</a>  Role: Medicine			
<b>Post Condition:</b> Error message Should be Displayed to the User about wrong information that User Entered.				

**Table 7.13: Test Case of Register (Invalid Case-invalid Role)**

<b>TCID__2.1</b>		<b>Test Case Designed By:</b> Riaz Ahmad		
<b>Module Name:</b> Login		<b>Date of Test Case Designed:</b> 05/07/2023		
<b>Test Case Priority:</b> High		<b>Test Case Executed By:</b> Riaz Ahmad		
<b>Date of the Test Case Execution:</b> 09/26/2022				
<b>Test Case Scenario:</b> Check the Login Functionality.				
<b>Description of Test Case:</b> Check system behavior when the Valid Email and Password are entered.				
<b>Pre Condition:</b> The user must be Register into the System.				
Steps	Test Data	Expected Results	Actual Result	Fail/Pas
13. Go to website: <a href="https://atams.com">https://atams.com</a> . 14. Enter the Email. 15. Enter the Password. 16. Click on Login Button.	Username: <a href="mailto:riazhakimudin@gmail.com">riazhakimudin@gmail.com</a>  Password: Riaz@1234	User should be successfully Login into the System.	As we were Expected.	Pass

**Post Condition:** Dashboard Should be Displayed to the User.

**Table 7.14: Test Case of Login (Invalid Case)**

<b>TCID__2.2</b>		<b>Test Case Designed By:</b> Riaz Ahmad		
<b>Module Name:</b> Login		<b>Date of Test Case Designed:</b> 05/07/2023		
<b>Test Case Priority:</b> High		<b>Test Case Executed By:</b> Riaz Ahmad		
<b>Date of the Test Case Execution:</b> 09/26/2022				
<b>Test Case Scenario:</b> Check the Login Functionality.				
<b>Description of Test Case:</b> Check system behavior when the invalid Email and Password are entered.				
<b>Pre Condition:</b> The user must be Register into the System.				
<b>Steps</b>	<b>Test Data</b>	<b>Expected Results</b>	<b>Actual Result</b>	<b>Fail/Pas</b>
<ol style="list-style-type: none"> <li>1. Go to website: <a href="https://atams.com">https://atams.com</a>.</li> <li>2. Enter the Email.</li> <li>3. Enter the Password.</li> <li>4. Click on Login Button.</li> </ol>	Username: <a href="mailto:riazhakimudin@gmail.com">riazhakimudin@gmail.com</a> Password: Riaz@1234	User should not be Login into the System.	As we were Expected.	Pass
<b>Post Condition:</b> Error message Should be Displayed to the User about wrong Login Credentials.				

**Table 7.15: Test Case of Login (Invalid Case-Inputs Left Blank)**

<b>TCID__2.3</b>		<b>Test Case Designed By:</b> Riaz Ahmad		
<b>Module Name:</b> Login		<b>Date of Test Case Designed:</b> 05/07/2023		
<b>Test Case Priority:</b> High		<b>Test Case Executed By:</b> Riaz Ahmad		
<b>Date of the Test Case Execution:</b> 09/26/2022				

<b>Test Case Scenario:</b> Check the Login Functionality.				
<b>Description of Test Case:</b> Check system behavior when the Valid Email and Password are left blank and Login Button is Pressed.				
<b>Pre Condition:</b> The user must be Register into the System.				
Steps	Test Data	Expected Results	Actual Result	Fail/Pas
<ol style="list-style-type: none"> <li>Go to website: <a href="https://atams.com">https://atams.com</a>.</li> <li>Click on Login Button.</li> </ol>	NULL	User should not be Login into the System.	As we were Expected.	Pass
<b>Post Condition:</b> Error message Should be Displayed to the User about wrong Login Credentials.				

**Table 7.16: Test Case of Login (Invalid Case-Password)**

<b>TCID__2.4</b>		<b>Test Case Designed By:</b> Riaz Ahmad		
<b>Module Name:</b> Login		<b>Date of Test Case Designed:</b> 05/07/2023		
<b>Test Case Priority:</b> High		<b>Test Case Executed By:</b> Riaz Ahmad		
<b>Date of the Test Case Execution:</b> 09/26/2022				
<b>Test Case Scenario:</b> Check the Login Functionality.				
<b>Description of Test Case:</b> Check system behavior when the Valid Email and invalid Password are entered.				
<b>Pre Condition:</b> The user must be Register into the System.				
Steps	Test Data	Expected Results	Actual Result	Fail/Pas

<ol style="list-style-type: none"> <li>Go to website: <a href="https://atams.com">https://atams.com</a>.</li> <li>Enter the Email.</li> <li>Enter the Password.</li> <li>Click on Login Button.</li> </ol>	Email: <a href="mailto:riazhakimudin@gmail.com">riazhakimudin@gmail.com</a> Password: Riaz@123	User should not be Login into the System.	As we were Expected.	Pass
<b>Post Condition:</b> Error message Should be Displayed to the User about wrong Login Credentials.				

**Table 7.17: Test Case of Login (Invalid Case-Username)**

<b>TCID_2.5</b>		<b>Test Case Designed By:</b> Riaz Ahmad		
<b>Module Name:</b> Login		<b>Date of Test Case Designed:</b> 05/07/2023		
<b>Test Case Priority:</b> High		<b>Test Case Executed By:</b> Riaz Ahmad		
<b>Date of the Test Case Execution:</b> 09/26/2022				
<b>Test Case Scenario:</b> Check the Login Functionality.				
<b>Description of Test Case:</b> Check system behavior when the invalid Email and Password are entered.				
<b>Pre Condition:</b> The user must be Register into the System.				
<b>Steps</b>	<b>Test Data</b>	<b>Expected Results</b>	<b>Actual Result</b>	<b>Fail/Pas</b>
<ol style="list-style-type: none"> <li>Go to website: <a href="https://atams.com">https://atams.com</a>.</li> <li>Enter the Email.</li> <li>Enter the Password.</li> <li>Click on Login Button.</li> </ol>	Email: <a href="mailto:riazhakimudin@gmail.com">riazhakimudin@gmail.com</a> Password: Riaz@1234	User should not be Login into the System.	As we were Expected.	Pass
<b>Post Condition:</b> Error message Should be Displayed to the User about wrong Login Credentials.				

**Table 7.18: Test Case of Disable User (Valid Case)**

<b>TCID__3.1</b>		<b>Test Case Designed By:</b> Riaz Ahmad		
<b>Module Name:</b> Disable User		<b>Date of Test Case Designed:</b> 05/07/2023		
<b>Test Case Priority:</b> High		<b>Test Case Executed By:</b> Riaz Ahmad		
<b>Date of the Test Case Execution:</b> 09/26/2022				
<b>Test Case Scenario:</b> Check the Disable User Functionality.				
<b>Description of Test Case:</b> Check system behavior when the disabling a user by enter valid user-id in the system restricts their access and disables their functionality as intended.				
<b>Pre-Conditions:</b>				
<ol style="list-style-type: none"> <li>1. A user account exists in the system that you want to disable.</li> <li>2. The admin has access rights to disable the user.</li> </ol>				
<b>Steps</b>	<b>Test Data</b>	<b>Expected Results</b>	<b>Actual Result</b>	<b>Fail/Pas</b>
<ol style="list-style-type: none"> <li>1. Navigate to the Admin management Panel.</li> <li>2. Locate the user account by Searching that needs to be disabled.</li> <li>3. Disable the user account by selecting the Disable option.</li> <li>4. Save the changes by clicking on Save Button.</li> <li>5. Verify that the user's account status has been updated to "disabled" or not.</li> </ol>	User-ID: 1	User should be Disable.	As we were Expected.	Pass
<b>Post Condition:</b> User Should be Disabled and Database will be updated.				

**Table 7.19: Test Case of Disable User (Invalid Case)**

<b>TCID__3.2</b>		<b>Test Case Designed By:</b> Riaz Ahmad		
<b>Module Name:</b> Disable User		<b>Date of Test Case Designed:</b> 05/07/2023		

<b>Test Case Priority:</b> High		<b>Test Case Executed By:</b> Riaz Ahmad		
<b>Date of the Test Case Execution:</b> 09/26/2022				
<b>Test Case Scenario:</b> Check the Disable User Functionality.				
<b>Description of Test Case:</b> Check system behavior when the disabling a user by enter invalid user-id in the system restricts their access and disables their functionality as intended.				
<b>Pre-Conditions:</b>				
<ol style="list-style-type: none"> <li>1. A user account exists in the system that you want to disable.</li> <li>2. The admin has access rights to disable the user.</li> </ol>				
<b>Steps</b>	<b>Test Data</b>	<b>Expected Results</b>	<b>Actual Result</b>	<b>Fail/Pas</b>
<ol style="list-style-type: none"> <li>1. Navigate to the Admin management Panel.</li> <li>2. Locate the user account by Searching that needs to be disabled.</li> <li>3. Disable the user account by selecting the Disable option.</li> <li>4. Save the changes by clicking on Save Button.</li> <li>5. Verify that the user's account status has been updated to "disabled" or not.</li> </ol>	User-ID: 00	User should not be Disable.	As we were Expected.	Pass
<b>Post Condition:</b> System ask the User to enter valid user-id for search the user.				

**Table 7.20: Test Case of Remove Post (Valid Case)**

<b>TCID__4.1</b>	<b>Test Case Designed By:</b> Riaz Ahmad
<b>Module Name: Remove Post</b>	<b>Date of Test Case Designed:</b> 05/07/2023
<b>Test Case Priority:</b> High	<b>Test Case Executed By:</b> Riaz Ahmad
<b>Date of the Test Case Execution:</b> 09/26/2022	
<b>Test Case Scenario:</b> Check the Remove Post Functionality.	
<b>Description of Test Case:</b> Check system behavior when the Post is removed by enter valid user-id and post-id.	

<b>Pre-Conditions:</b>				
<ol style="list-style-type: none"> <li>1. A Post exists in the system that you want to remove.</li> <li>2. The admin has access rights to remove the post.</li> </ol>				
Steps	Test Data	Expected Results	Actual Result	Fail/Pas
<ol style="list-style-type: none"> <li>1. Navigate to the Admin management Panel.</li> <li>2. Locate the Post by Searching that needs to be remove.</li> <li>3. Remove the Post by selecting the Remove Post option.</li> <li>4. Save the changes by clicking on Save Button.</li> <li>5. Verify that the Post has been remove or not.</li> </ol>	User-ID: 1 Post-ID: 1122	Post should be removed.	As we were Expected.	Pass
<b>Post Condition:</b> Post Should be removed and Database will be updated.				

**Table 7.21: Test Case of Remove Post (Invalid Case)**

<b>TCID__4.2</b>		<b>Test Case Designed By:</b> Riaz Ahmad		
<b>Module Name: Remove Post</b>		<b>Date of Test Case Designed:</b> 05/07/2023		
<b>Test Case Priority:</b> High		<b>Test Case Executed By:</b> Riaz Ahmad		
<b>Date of the Test Case Execution:</b> 09/26/2022				
<b>Test Case Scenario:</b> Check the Remove Post Functionality.				
<b>Description of Test Case:</b> Check system behavior when the Post is removed by enter invalid user-id and post-id.				
<b>Pre-Conditions:</b>				
<ol style="list-style-type: none"> <li>1. A Post exists in the system that you want to remove.</li> <li>2. The admin has access rights to remove the post.</li> </ol>				
Steps	Test Data	Expected Results	Actual Result	Fail/Pas

<ol style="list-style-type: none"> <li>1. Navigate to the Admin management Panel.</li> <li>2. Locate the Post by Searching that needs to be remove.</li> <li>3. Remove the Post by selecting the Remove Post option.</li> <li>4. Save the changes by clicking on Save Button.</li> <li>5. Verify that the Post has been remove or not.</li> </ol>	User-ID: 00 Post-ID: 112	Post should not be removed.	As we were Expected.	Pass
<b>Post Condition:</b> System ask the User to enter valid user-id and post-id for search the user.				

**Table 7.22: Test Case of Remove Medicine Post (Valid Case)**

<b>TCID__5.1</b>		<b>Test Case Designed By:</b> Riaz Ahmad		
<b>Module Name: Remove Medicine Post</b>		<b>Date of Test Case Designed:</b> 05/07/2023		
<b>Test Case Priority:</b> High		<b>Test Case Executed By:</b> Riaz Ahmad		
<b>Date of the Test Case Execution:</b> 09/26/2022				
<b>Test Case Scenario:</b> Check the Remove Medicine Post Functionality.				
<b>Description of Test Case:</b> Check system behavior when the Post is removed by enter valid user-id and post-id.				
<b>Pre-Conditions:</b>				
<ol style="list-style-type: none"> <li>1. A Post exists in the system that you want to remove.</li> <li>2. The admin has access rights to remove the post.</li> </ol>				
<b>Steps</b>	<b>Test Data</b>	<b>Expected Results</b>	<b>Actual Result</b>	<b>Fail/Pas</b>

<ol style="list-style-type: none"> <li>1. Navigate to the Admin management Panel.</li> <li>2. Locate the Post by Searching that needs to be remove.</li> <li>3. Remove the Post by selecting the Remove Post option.</li> <li>4. Save the changes by clicking on Save Button.</li> <li>5. Verify that the Post has been remove or not.</li> </ol>	User-ID: 1 Post-ID: 1122	Post should be removed.	As we were Expected.	Pass
<b>Post Condition:</b> Post Should be removed and Database will be updated.				

**Table 7.23: Test Case of Remove Medicine Post (Invalid Case)**

<b>TCID__5.2</b>		<b>Test Case Designed By:</b> Riaz Ahmad		
<b>Module Name: Remove Medicine Post</b>		<b>Date of Test Case Designed:</b> 05/07/2023		
<b>Test Case Priority:</b> High		<b>Test Case Executed By:</b> Riaz Ahmad		
<b>Date of the Test Case Execution:</b> 09/26/2022				
<b>Test Case Scenario:</b> Check the Remove Medicine Post Functionality.				
<b>Description of Test Case:</b> Check system behavior when the Post is removed by enter invalid user-id and post-id.				
<b>Pre-Conditions:</b>				
<ol style="list-style-type: none"> <li>1. A Post exists in the system that you want to remove.</li> <li>2. The admin has access rights to remove the post.</li> </ol>				
<b>Steps</b>	<b>Test Data</b>	<b>Expected Results</b>	<b>Actual Result</b>	<b>Fail/Pas</b>
<ol style="list-style-type: none"> <li>1. Navigate to the Admin management Panel.</li> <li>2. Locate the Post by Searching that needs to be remove.</li> <li>3. Remove the Post by selecting the Remove Post option.</li> <li>4. Save the changes by</li> </ol>	User-ID: 00 Post-ID: 112	Post should not be removed.	As we were Expected.	Pass

clicking on Save Button. 5. Verify that the Post has been remove or not.				
<b>Post Condition:</b> System ask the User to enter valid user-id and post-id for search the user.				

**Table 7.24: Test Case of Remove Fertilizer Post (Valid Case)**

<b>TCID__6.1</b>		<b>Test Case Designed By:</b> Riaz Ahmad		
<b>Module Name:</b> Remove Fertilizer Post		<b>Date of Test Case Designed:</b> 05/07/2023		
<b>Test Case Priority:</b> High		<b>Test Case Executed By:</b> Riaz Ahmad		
<b>Date of the Test Case Execution:</b> 09/26/2022				
<b>Test Case Scenario:</b> Check the Remove Fertilizer Post Functionality.				
<b>Description of Test Case:</b> Check system behavior when the Post is removed by enter valid user-id and post-id.				
<b>Pre-Conditions:</b>				
<ol style="list-style-type: none"> <li>1. A Post exists in the system that you want to remove.</li> <li>2. The admin has access rights to remove the post.</li> </ol>				
<b>Steps</b>	<b>Test Data</b>	<b>Expected Results</b>	<b>Actual Result</b>	<b>Fail/Pas</b>
<ol style="list-style-type: none"> <li>1. Navigate to the Admin management Panel.</li> <li>2. Locate the Post by Searching that needs to be remove.</li> <li>3. Remove the Post by selecting the Remove Post option.</li> <li>4. Save the changes by clicking on Save Button.</li> <li>5. Verify that the Post has been remove or not.</li> </ol>	User-ID: 1 Post-ID: 1122	Post should be removed.	As we were Expected.	Pass
<b>Post Condition:</b> Post Should be removed and Database will be updated.				

**Table 7.25: Test Case of Remove Fertilizer Post (Invalid Case)**

<b>TCID__6.2</b>		<b>Test Case Designed By:</b> Riaz Ahmad		
<b>Module Name: Remove Fertilizer Post</b>		<b>Date of Test Case Designed:</b> 05/07/2023		
<b>Test Case Priority:</b> High		<b>Test Case Executed By:</b> Riaz Ahmad		
<b>Date of the Test Case Execution:</b> 09/26/2022				
<b>Test Case Scenario:</b> Check the Remove Fertilizer Post Functionality.				
<b>Description of Test Case:</b> Check system behavior when the Post is removed by enter invalid user-id and post-id.				
<b>Pre-Conditions:</b>				
<ol style="list-style-type: none"> <li>1. A Post exists in the system that you want to remove.</li> <li>2. The admin has access rights to remove the post.</li> </ol>				
<b>Steps</b>	<b>Test Data</b>	<b>Expected Results</b>	<b>Actual Result</b>	<b>Fail/Pas</b>
<ol style="list-style-type: none"> <li>1. Navigate to the Admin management Panel.</li> <li>2. Locate the Post by Searching that needs to be remove.</li> <li>3. Remove the Post by selecting the Remove Post option.</li> <li>4. Save the changes by clicking on Save Button.</li> <li>5. Verify that the Post has been remove or not.</li> </ol>	User-ID: 00 Post-ID: 112	Post should not be removed.	As we were Expected.	Pass
<b>Post Condition:</b> System ask the User to enter valid user-id and post-id for search the user.				

**Table 7.26: Test Case of Add Fertilizer Post, Update Fertilizer Post (Valid Case)**

<b>TCID__7.1</b>		<b>Test Case Designed By:</b> Riaz Ahmad		
<b>Module Name:</b> Add Fertilizer Post, Update Fertilizer Post		<b>Date of Test Case Designed:</b> 05/07/2023		
<b>Test Case Priority:</b> High		<b>Test Case Executed By:</b> Riaz Ahmad		

<b>Date of the Test Case Execution:</b> 09/26/2022				
<b>Test Case Scenario:</b> Check the Add Fertilizer Post, Update Fertilizer Post Functionality.				
<b>Description of Test Case:</b> Check system behavior when the Valid Name, Designation, Phone Number, Fertilizer name, Fertilizer formula, Fertilizer good Effects, Description are entered and picture is attached with post.				
<b>Pre-Conditions:</b> User must be logged in and have a proper permission to Add and Update Post.				
Steps	Test Data	Expected Results	Actual Result	Fail/Pas
11. Press on the Add/Update Post Option 12. Enter Name. 13. Enter Designation. 14. Enter Phone Number. 15. Enter Fertilizer Name. 16. Enter Fertilizer formula. 17. Enter Fertilizer good effects. 18. Enter Description. 19. Attach the picture by Selecting from User device/Gallery. 20. Press Button Option.	<b>Name:</b> Riaz <b>Designation:</b> Director <b>Phone Number:</b> 03004698363 <b>Fertilizer Name:</b> DAP <b>Fertilizer formula:</b> (NH4)2HPO4 <b>Fertilizer good Effects:</b> helps in boosting a plant's overall growth and development. <b>Description:</b> one of the most widely used phosphate fertilizer in agriculture across the world today. <b>Image:</b> fertilizer.jpg	Post should be Uploaded/Updated successfully.	As we were Expected.	Pass
<b>Post Condition:</b> Database will be updated. Post visible to the home page of director department govt for authentication.				

**Table 7.27: Test Case of Add Fertilizer Post, Update Fertilizer Post (Invalid Case)**

<b>TCID__7.2</b>		<b>Test Case Designed By: Riaz Ahmad</b>		
<b>Module Name:</b> Add Fertilizer Post, Update Fertilizer Post		<b>Date of Test Case Designed:</b> 05/07/2023		
<b>Test Case Priority:</b> High		<b>Test Case Executed By:</b> Riaz Ahmad		
<b>Date of the Test Case Execution:</b> 09/26/2022				
<b>Test Case Scenario:</b> Check the Add Fertilizer Post, Update Fertilizer Post Functionality.				
<b>Description of Test Case:</b> Check system behavior when the invalid Name, Designation, Phone Number, Fertilizer name, Fertilizer formula, Fertilizer good Effects, Description are entered and picture is not attached with post.				
<b>Pre-Conditions:</b> User must be logged in and have a proper permission to Add and Update Post				
<b>Steps</b>	<b>Test Data</b>	<b>Expected Results</b>	<b>Actual Result</b>	<b>Fail/Pas</b>
<ol style="list-style-type: none"> <li>1. Press on the Add/Update Post Option</li> <li>2. Enter Name.</li> <li>3. Enter Designation.</li> <li>4. Enter Phone Number.</li> <li>5. Enter Fertilizer Name.</li> <li>6. Enter Fertilizer formula.</li> <li>7. Enter Fertilizer good effects.</li> <li>8. Enter Description.</li> <li>9. Attach the picture by Selecting from User device/Gallery.</li> <li>10. Press Button Option.</li> </ol>	<p><b>Name:</b> Ria  <b>Designation:</b> Direct  <b>Phone Number:</b> 03004698  <b>Fertilizer Name:</b> DA  <b>Fertilizer formula:</b> (NH4)2HPO  <b>Fertilizer good Effects:</b> Null  <b>Description:</b> Null  <b>Image:</b> Null</p>	Post should not be Uploaded/Updated.	As we were Expected.	Pass

**Post Condition:** System will show the message about wrong information that the user entered.

**Table 7.28: Test Case of Add Fertilizer Post, Update Fertilizer Post (Invalid Case-Input fields left blank)**

<b>TCID__7.3</b>		<b>Test Case Designed By:</b> Riaz Ahmad		
<b>Module Name:</b> Add Fertilizer Post, Update Fertilizer Post		<b>Date of Test Case Designed:</b> 05/07/2023		
<b>Test Case Priority:</b> High		<b>Test Case Executed By:</b> Riaz Ahmad		
<b>Date of the Test Case Execution:</b> 09/26/2022				
<b>Test Case Scenario:</b> Check the Add Fertilizer Post, Update Fertilizer Post Functionality.				
<b>Description of Test Case:</b> Check system behavior when the Name, Designation, Phone Number, Fertilizer name, Fertilizer formula, Fertilizer good Effects, Description are left blank and picture is not attached with post.				
<b>Pre-Conditions:</b> User must be logged in and have a proper permission to Add and Update Post				
<b>Steps</b>	<b>Test Data</b>	<b>Expected Results</b>	<b>Actual Result</b>	<b>Fail/Pas</b>
<ol style="list-style-type: none"> <li>1. Press on the Add/Update Post Option</li> <li>2. Press Button Option.</li> </ol>	NULL	Post should not be Uploaded/Updated.	As we were Expected.	Pass
<b>Post Condition:</b> System will show the message about wrong information that the user entered.				

**Table 7.29: Test Case of Add Fertilizer Post, Update Fertilizer Post (Invalid Case-invalid Name)**

<b>TCID__7.4</b>		<b>Test Case Designed By:</b> Riaz Ahmad		
<b>Module Name:</b> Add Fertilizer Post, Update Fertilizer Post		<b>Date of Test Case Designed:</b> 05/07/2023		
<b>Test Case Priority:</b> High		<b>Test Case Executed By:</b> Riaz Ahmad		
<b>Date of the Test Case Execution:</b> 09/26/2022				

<b>Test Case Scenario:</b> Check the Add Fertilizer Post, Update Fertilizer Post Functionality.				
<b>Description of Test Case:</b> Check system behavior when the invalid Name, valid Designation, valid Phone Number, valid Fertilizer name, valid Fertilizer formula, Fertilizer good Effects, Description are entered and picture is attached with post.				
<b>Pre-Conditions:</b> User must be logged in and have a proper permission to Add and Update Post				
Steps	Test Data	Expected Results	Actual Result	Fail/Pas
<ol style="list-style-type: none"> <li>1. Press on the Add/Update Post Option</li> <li>2. Enter Name.</li> <li>3. Enter Designation.</li> <li>4. Enter Phone Number.</li> <li>5. Enter Fertilizer Name.</li> <li>6. Enter Fertilizer formula.</li> <li>7. Enter Fertilizer good effects.</li> <li>8. Enter Description.</li> <li>9. Attach the picture by Selecting from User device/Gallery.</li> <li>10. Press Button Option.</li> </ol>	<p><b>Name:</b> Ria</p> <p><b>Designation:</b> Director</p> <p><b>Phone Number:</b> 03004698363</p> <p><b>Fertilizer Name:</b> DAP</p> <p><b>Fertilizer formula:</b> (NH4)2HPO4</p> <p><b>Fertilizer good Effects:</b> helps in boosting a plant's overall growth and development.</p> <p><b>Description:</b> one of the most widely used phosphate fertilizer in agriculture across the world today.</p> <p><b>Image:</b> fertilizer.jpg</p>	Post should not be Uploaded/Updated.	As we were Expected.	Pass
<b>Post Condition:</b> System will show the message about wrong information that the user entered.				

**Table 7.30: Test case of Add Fertilizer Post, Update Fertilizer Post (Invalid Case-invalid Designation)**

<b>TCID__7.5</b>	<b>Test Case Designed By:</b> Riaz Ahmad
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<b>Module Name:</b> Add Fertilizer Post, Update Fertilizer Post		<b>Date of Test Case Designed:</b> 05/07/2023		
<b>Test Case Priority:</b> High		<b>Test Case Executed By:</b> Riaz Ahmad		
<b>Date of the Test Case Execution:</b> 09/26/2022				
<b>Test Case Scenario:</b> Check the Add Fertilizer Post, Update Fertilizer Post Functionality.				
<b>Description of Test Case:</b> Check system behavior when the valid Name, invalid Designation, valid Phone Number, valid Fertilizer name, valid Fertilizer formula, Fertilizer good Effects, Description are entered and picture is attached with post.				
<b>Pre-Conditions:</b> User must be logged in and have a proper permission to Add and Update Post				
Steps	Test Data	Expected Results	Actual Result	Fail/Pas
<ol style="list-style-type: none"> <li>1. Press on the Add/Update Post Option</li> <li>2. Enter Name.</li> <li>3. Enter Designation.</li> <li>4. Enter Phone Number.</li> <li>5. Enter Fertilizer Name.</li> <li>6. Enter Fertilizer formula.</li> <li>7. Enter Fertilizer good effects.</li> <li>8. Enter Description.</li> <li>9. Attach the picture by Selecting from User device/Gallery.</li> <li>10. Press Button Option.</li> </ol>	<p><b>Name:</b> Riaz</p> <p><b>Designation:</b> Direct</p> <p><b>Phone Number:</b> 03004698363</p> <p><b>Fertilizer Name:</b> DAP</p> <p><b>Fertilizer formula:</b> (NH4)2HPO4</p> <p><b>Fertilizer good Effects:</b> helps in boosting a plant's overall growth and development.</p> <p><b>Description:</b> one of the most widely used phosphate fertilizer in agriculture across the world today.</p> <p><b>Image:</b> fertilizer.jpg</p>	Post should not be Uploaded/Updated.	As we were Expected.	Pass

**Post Condition:** System will show the message about wrong information that the user entered.

**Table 7.31: Test case of Add Fertilizer Post, Update Fertilizer Post (Invalid Case-invalid Phone Number)**

<b>TCID__7.6</b>		<b>Test Case Designed By:</b> Riaz Ahmad		
<b>Module Name:</b> Add Fertilizer Post, Update Fertilizer Post		<b>Date of Test Case Designed:</b> 05/07/2023		
<b>Test Case Priority:</b> High		<b>Test Case Executed By:</b> Riaz Ahmad		
<b>Date of the Test Case Execution:</b> 09/26/2022				
<b>Test Case Scenario:</b> Check the Add Fertilizer Post, Update Fertilizer Post Functionality.				
<b>Description of Test Case:</b> Check system behavior when the valid Name, valid Designation, invalid Phone Number, valid Fertilizer name, valid Fertilizer formula, Fertilizer good Effects, Description are entered and picture is attached with post.				
<b>Pre-Conditions:</b> User must be logged in and have a proper permission to Add and Update Post				
<b>Steps</b>	<b>Test Data</b>	<b>Expected Results</b>	<b>Actual Result</b>	<b>Fail/Pas</b>
<ol style="list-style-type: none"> <li>1. Press on the Add/Update Post Option</li> <li>2. Enter Name.</li> <li>3. Enter Designation.</li> <li>4. Enter Phone Number.</li> <li>5. Enter Fertilizer Name.</li> <li>6. Enter Fertilizer formula.</li> <li>7. Enter Fertilizer good effects.</li> <li>8. Enter Description.</li> <li>9. Attach the picture by Selecting from User device/Gallery.</li> <li>10. Press Button</li> </ol>	<p><b>Name:</b> Riaz <b>Designation:</b> Director <b>Phone Number:</b> 030046983 <b>Fertilizer Name:</b> DAP <b>Fertilizer formula:</b> (NH4)2HPO4 <b>Fertilizer good Effects:</b> helps in boosting a plant's overall growth and development. <b>Description:</b> one of the most widely used</p>	Post should not be Uploaded/Updated.	As we were Expected.	Pass

Option.	phosphate fertilizer in agriculture across the world today.  <b>Image:</b> fertilizer.jpg			
<b>Post Condition:</b> System will show the message about wrong information that the user entered.				

**Table 7.32: Test case of Add Fertilizer Post, Update Fertilizer Post (Invalid Case-invalid Fertilizer Name)**

<b>TCID__7.7</b>		<b>Test Case Designed By:</b> Riaz Ahmad		
<b>Module Name:</b> Add Fertilizer Post, Update Fertilizer Post		<b>Date of Test Case Designed:</b> 05/07/2023		
<b>Test Case Priority:</b> High		<b>Test Case Executed By:</b> Riaz Ahmad		
<b>Date of the Test Case Execution:</b> 09/26/2022				
<b>Test Case Scenario:</b> Check the Add Fertilizer Post, Update Fertilizer Post Functionality.				
<b>Description of Test Case:</b> Check system behavior when the valid Name, valid Designation, valid Phone Number, invalid Fertilizer name, valid Fertilizer formula, Fertilizer good Effects, Description are entered and picture is attached with post.				
<b>Pre-Conditions:</b> User must be logged in and have a proper permission to Add and Update Post				
Steps	Test Data	Expected Results	Actual Result	Fail/Pas
<ol style="list-style-type: none"> <li>1. Press on the Add/Update Post Option</li> <li>2. Enter Name.</li> <li>3. Enter Designation.</li> <li>4. Enter Phone Number.</li> <li>5. Enter Fertilizer Name.</li> <li>6. Enter Fertilizer formula.</li> <li>7. Enter Fertilizer</li> </ol>	<b>Name:</b> Riaz <b>Designation:</b> Director <b>Phone Number:</b> 03004698363 <b>Fertilizer Name:</b> DA <b>Fertilizer formula:</b> (NH4)2HPO4 <b>Fertilizer good Effects:</b> helps	Post should not be Uploaded/Updated.	As we were Expected.	Pass

<p>good effects.</p> <p>8. Enter Description.</p> <p>9. Attach the picture by Selecting from User device/Gallery.</p> <p>10. Press Button Option.</p>	<p>in boosting a plant's overall growth and development.</p> <p><b>Description:</b> one of the most widely used phosphate fertilizer in agriculture across the world today.</p> <p><b>Image:</b> fertilizer.jpg</p>			
<p><b>Post Condition:</b> System will show the message about wrong information that the user entered.</p>				

**Table 7.33: Test Case of Add Fertilizer Post, Update Fertilizer Post (Invalid Case-invalid Fertilizer Formula)**

<b>TCID__7.8</b>		<b>Test Case Designed By:</b> Riaz Ahmad		
<b>Module Name:</b> Add Fertilizer Post, Update Fertilizer Post		<b>Date of Test Case Designed:</b> 05/07/2023		
<b>Test Case Priority:</b> High		<b>Test Case Executed By:</b> Riaz Ahmad		
<b>Date of the Test Case Execution:</b> 09/26/2022				
<b>Test Case Scenario:</b> Check the Add Fertilizer Post, Update Fertilizer Post Functionality.				
<b>Description of Test Case:</b> Check system behavior when the valid Name, valid Designation, valid Phone Number, valid Fertilizer name, invalid Fertilizer formula, Fertilizer good Effects, Description are entered and picture is attached with post.				
<b>Pre-Conditions:</b> User must be logged in and have a proper permission to Add and Update Post				
<b>Steps</b>	<b>Test Data</b>	<b>Expected Results</b>	<b>Actual Result</b>	<b>Fail/Pas</b>
<p>1. Press on the Add/Update Post Option</p> <p>2. Enter Name.</p> <p>3. Enter Designation.</p> <p>4. Enter Phone</p>	<p><b>Name:</b> Riaz</p> <p><b>Designation:</b> Director</p> <p><b>Phone Number:</b> 03004698363</p> <p><b>Fertilizer Name:</b></p>	Post should not be Uploaded/Updated.	As we were Expected.	Pass

Number. 5. Enter Fertilizer Name. 6. Enter Fertilizer formula. 7. Enter Fertilizer good effects. 8. Enter Description. 9. Attach the picture by Selecting from User device/Gallery. 10. Press Button Option.	DAP <b>Fertilizer formula:</b> (NH <sub>4</sub> ) <sub>2</sub> HP <b>Fertilizer good Effects:</b> helps in boosting a plant's overall growth and development. <b>Description:</b> one of the most widely used phosphate fertilizer in agriculture across the world today. <b>Image:</b> fertilizer.jpg			
<b>Post Condition:</b> System will show the message about wrong information that the user entered.				

**Table 7.34: Test Case of Add Fertilizer Post, Update Fertilizer Post (Invalid Case-invalid Picture)**

<b>TCID__7.9</b>		<b>Test Case Designed By:</b> Riaz Ahmad		
<b>Module Name:</b> Add Fertilizer Post, Update Fertilizer Post		<b>Date of Test Case Designed:</b> 05/07/2023		
<b>Test Case Priority:</b> High		<b>Test Case Executed By:</b> Riaz Ahmad		
<b>Date of the Test Case Execution:</b> 09/26/2022				
<b>Test Case Scenario:</b> Check the Add Fertilizer Post, Update Fertilizer Post Functionality.				
<b>Description of Test Case:</b> Check system behavior when the valid Name, valid Designation, valid Phone Number, valid Fertilizer name, valid Fertilizer formula, Fertilizer good Effects, Description are entered and picture is not attached with post.				
<b>Pre-Conditions:</b> User must be logged in and have a proper permission to Add and Update Post				
<b>Steps</b>	<b>Test Data</b>	<b>Expected Results</b>	<b>Actual Result</b>	<b>Fail/Pas</b>

<ol style="list-style-type: none"> <li>1. Press on the Add/Update Post Option</li> <li>2. Enter Name.</li> <li>3. Enter Designation.</li> <li>4. Enter Phone Number.</li> <li>5. Enter Fertilizer Name.</li> <li>6. Enter Fertilizer formula.</li> <li>7. Enter Fertilizer good effects.</li> <li>8. Enter Description.</li> <li>9. Attach the picture by Selecting from User device/Gallery.</li> <li>10. Press Button Option.</li> </ol>	<p><b>Name:</b> Riaz <b>Designation:</b> Director</p> <p><b>Phone Number:</b> 03004698363</p> <p><b>Fertilizer Name:</b> DAP</p> <p><b>Fertilizer formula:</b> (NH<sub>4</sub>)<sub>2</sub>HPO<sub>4</sub></p> <p><b>Fertilizer good Effects:</b> helps in boosting a plant's overall growth and development.</p> <p><b>Description:</b> one of the most widely used phosphate fertilizer in agriculture across the world today.</p> <p><b>Image:</b> Null</p>	Post should not be Uploaded/Updated.	As we were Expected.	Pass
<p><b>Post Condition:</b> System will show the message about wrong information that the user entered.</p>				

**Table 7.35: Test Case of Add Medicine Post, Update Medicine Post (Valid Case)**

<b>TCID_ 8.1</b>	<b>Test Case Designed By:</b> Riaz Ahmad
<b>Module Name:</b> Add Medicine Post, Update Medicine Post	<b>Date of Test Case Designed:</b> 05/07/2023
<b>Test Case Priority:</b> High	<b>Test Case Executed By:</b> Riaz Ahmad
<b>Date of the Test Case Execution:</b> 09/26/2022	
<b>Test Case Scenario:</b> Check the Add Medicine Post, Update Medicine Post Functionality.	
<b>Description of Test Case:</b> Check system behavior when the Valid Name, Designation, Phone Number, Medicine name, Medicine formula, Medicine good Effects, Description are entered and picture is attached with post.	

<b>Pre-Conditions:</b> User must be logged in and have a proper permission to Add and Update Post.				
<b>Steps</b>	<b>Test Data</b>	<b>Expected Results</b>	<b>Actual Result</b>	<b>Fail/Pas</b>
<ol style="list-style-type: none"> <li>1. Press on the Add/Update Post Option</li> <li>2. Enter Name.</li> <li>3. Enter Designation.</li> <li>4. Enter Phone Number.</li> <li>5. Enter Medicine Name.</li> <li>6. Enter Medicine formula.</li> <li>7. Enter Medicine good effects.</li> <li>8. Enter Description.</li> <li>9. Attach the picture by Selecting from User device/Gallery.</li> <li>10. Press Save Button.</li> </ol>	<p><b>Name:</b> Riaz  <b>Designation:</b> Director  <b>Phone Number:</b> 03004698363  <b>Medicine Name:</b> Glyphosate  <b>Medicine formula:</b> C3H8NO5P  <b>Medicine good Effects:</b> Broad-spectrum herbicide for weed control.  <b>Description:</b> Glyphosate is a widely used herbicide that effectively controls weeds in various agricultural settings.  <b>Image:</b> medicine.jpg</p>	Post should be Uploaded/Updated successfully.	As we were Expected.	Pass
<b>Post Condition:</b> Database will be updated. Post visible to the home page of director department govt for authentication.				

**Table 7.36: Test Case of Add Medicine Post, Update Medicine Post (Invalid Case)**

<b>TCID_8.2</b>	<b>Test Case Designed By:</b> Riaz Ahmad
<b>Module Name:</b> Add Medicine Post, Update Medicine Post	<b>Date of Test Case Designed:</b> 05/07/2023
<b>Test Case Priority:</b> High	<b>Test Case Executed By:</b> Riaz Ahmad

<b>Date of the Test Case Execution:</b> 09/26/2022				
<b>Test Case Scenario:</b> Check the Add Medicine Post, Update Medicine Post Functionality.				
<b>Description of Test Case:</b> Check system behavior when the invalid Name, Designation, Phone Number, Medicine name, Medicine formula, Medicine good Effects, Description are entered and picture is not attached with post.				
<b>Pre-Conditions:</b> User must be logged in and have a proper permission to Add and Update Post.				
Steps	Test Data	Expected Results	Actual Result	Fail/Pas
<ol style="list-style-type: none"> <li>1. Press on the Add/Update Post Option</li> <li>2. Enter Name.</li> <li>3. Enter Designation.</li> <li>4. Enter Phone Number.</li> <li>5. Enter Medicine Name.</li> <li>6. Enter Medicine formula.</li> <li>7. Enter Medicine good effects.</li> <li>8. Enter Description.</li> <li>9. Attach the picture by Selecting from User device/Gallery.</li> <li>10. Press Save Button.</li> </ol>	<p><b>Name:</b> Ria</p> <p><b>Designation:</b> Direct</p> <p><b>Phone Number:</b> 030046983</p> <p><b>Medicine Name:</b> Glyphosa</p> <p><b>Medicine formula:</b> C3H8NO</p> <p><b>Medicine good Effects:</b> Broad-spectrum herbicide for not weed control.</p> <p><b>Description:</b> Glyphosate is a widely not used herbicide that effectively controls weeds in various agricultural settings.</p> <p><b>Image:</b> Null</p>	Post should not be Uploaded/Updated.	As we were Expected.	Pass
<b>Post Condition:</b> System will show the message about wrong information that the user entered.				

**Post Condition:** Database will be updated. Post visible to the home page of director department govt for authentication.

**Table 7.37: Test Case of Add Medicine Post, Update Medicine Post (Invalid Case-Inputs left blank)**

<b>TCID__8.3</b>		<b>Test Case Designed By:</b> Riaz Ahmad		
<b>Module Name:</b> Add Medicine Post, Update Medicine Post		<b>Date of Test Case Designed:</b> 05/07/2023		
<b>Test Case Priority:</b> High		<b>Test Case Executed By:</b> Riaz Ahmad		
<b>Date of the Test Case Execution:</b> 09/26/2022				
<b>Test Case Scenario:</b> Check the Add Medicine Post, Update Medicine Post Functionality.				
<b>Description of Test Case:</b> Check system behavior when the Valid Name, Designation, Phone Number, Medicine name, Medicine formula, Medicine good Effects, Description are left blank and picture does not attach with post.				
<b>Pre-Conditions:</b> User must be logged in and have a proper permission to Add and Update Post.				
<b>Steps</b>	<b>Test Data</b>	<b>Expected Results</b>	<b>Actual Result</b>	<b>Fail/Pas</b>
<ol style="list-style-type: none"> <li>1. Press on the Add/Update Post Option</li> <li>2. Press Save Button.</li> </ol>	Null	Post should not be Uploaded/Updated.	As we were Expected.	Pass
<b>Post Condition:</b> System will show the message about wrong information that the user entered.				

**Table 7.38: Test Case of Add Medicine Post, Update Medicine Post (Invalid Case-Invalid Name)**

<b>TCID__8.4</b>		<b>Test Case Designed By:</b> Riaz Ahmad		
<b>Module Name:</b> Add Medicine Post, Update Medicine Post		<b>Date of Test Case Designed:</b> 05/07/2023		
<b>Test Case Priority:</b> High		<b>Test Case Executed By:</b> Riaz Ahmad		
<b>Date of the Test Case Execution:</b> 09/26/2022				

<b>Test Case Scenario:</b> Check the Add Medicine Post, Update Medicine Post Functionality.				
<b>Description of Test Case:</b> Check system behavior when the invalid Name, valid Designation, valid Phone Number, valid Medicine name, valid Medicine formula, Medicine good Effects, Description are entered and picture is attached with post.				
<b>Pre-Conditions:</b> User must be logged in and have a proper permission to Add and Update Post.				
Steps	Test Data	Expected Results	Actual Result	Fail/Pas
<ol style="list-style-type: none"> <li>1. Press on the Add/Update Post Option</li> <li>2. Enter Name.</li> <li>3. Enter Designation.</li> <li>4. Enter Phone Number.</li> <li>5. Enter Medicine Name.</li> <li>6. Enter Medicine formula.</li> <li>7. Enter Medicine good effects.</li> <li>8. Enter Description.</li> <li>9. Attach the picture by Selecting from User device/Gallery.</li> <li>10. Press Save Button.</li> </ol>	<p><b>Name:</b> Ria</p> <p><b>Designation:</b> Director</p> <p><b>Phone Number:</b> 03004698363</p> <p><b>Medicine Name:</b> Glyphosate</p> <p><b>Medicine formula:</b> C3H8NO5P</p> <p><b>Medicine good Effects:</b> Broad-spectrum herbicide for weed control.</p> <p><b>Description:</b> Glyphosate is a widely used herbicide that effectively controls weeds in various agricultural settings.</p> <p><b>Image:</b> medicine.jpg</p>	Post should not be Uploaded/Updated.	As we were Expected.	Pass
<b>Post Condition:</b> System will show the message about wrong information that the user entered.				

**Table 7.39: Test Case of Add Medicine Post, Update Medicine Post (Invalid Case-Invalid Phone Number)**

<b>TCID_ 8.5</b>		<b>Test Case Designed By:</b> Riaz Ahmad		
<b>Module Name:</b> Add Medicine Post, Update Medicine Post		<b>Date of Test Case Designed:</b> 05/07/2023		
<b>Test Case Priority:</b> High		<b>Test Case Executed By:</b> Riaz Ahmad		
<b>Date of the Test Case Execution:</b> 09/26/2022				
<b>Test Case Scenario:</b> Check the Add Medicine Post, Update Medicine Post Functionality.				
<b>Description of Test Case:</b> Check system behavior when the valid Name, valid Designation, invalid Phone Number, valid Medicine name, valid Medicine formula, Medicine good Effects, Description are entered and picture is attached with post.				
<b>Pre-Conditions:</b> User must be logged in and have a proper permission to Add and Update Post.				
<b>Steps</b>	<b>Test Data</b>	<b>Expected Results</b>	<b>Actual Result</b>	<b>Fail/Pas</b>
<ol style="list-style-type: none"> <li>1. Press on the Add/Update Post Option</li> <li>2. Enter Name.</li> <li>3. Enter Designation.</li> <li>4. Enter Phone Number.</li> <li>5. Enter Medicine Name.</li> <li>6. Enter Medicine formula.</li> <li>7. Enter Medicine good effects.</li> <li>8. Enter Description.</li> <li>9. Attach the picture by Selecting from User device/Gallery.</li> <li>10. Press Save Button.</li> </ol>	<p><b>Name:</b> Riaz  <b>Designation:</b> Director  <b>Phone Number:</b> 03004698  <b>Medicine Name:</b> Glyphosate  <b>Medicine formula:</b> C3H8NO5P  <b>Medicine good Effects:</b> Broad-spectrum herbicide for weed control.  <b>Description:</b> Glyphosate is a widely used herbicide that effectively controls weeds in various agricultural settings.</p>	Post should not be Uploaded/Updated.	As we were Expected.	Pass

	<b>Image:</b> medicine.jpg			
<b>Post Condition:</b> System will show the message about wrong information that the user entered.				

**Table 7.40: Test Case of Add Medicine Post, Update Medicine Post (Invalid Case-Invalid Medicine Name)**

<b>TCID__8.6</b>		<b>Test Case Designed By:</b> Riaz Ahmad		
<b>Module Name:</b> Add Medicine Post, Update Medicine Post		<b>Date of Test Case Designed:</b> 05/07/2023		
<b>Test Case Priority:</b> High		<b>Test Case Executed By:</b> Riaz Ahmad		
<b>Date of the Test Case Execution:</b> 09/26/2022				
<b>Test Case Scenario:</b> Check the Add Medicine Post, Update Medicine Post Functionality.				
<b>Description of Test Case:</b> Check system behavior when the valid Name, valid Designation, valid Phone Number, invalid Medicine name, valid Medicine formula, Medicine good Effects, Description are entered and picture is attached with post.				
<b>Pre-Conditions:</b> User must be logged in and have a proper permission to Add and Update Post.				
<b>Steps</b>	<b>Test Data</b>	<b>Expected Results</b>	<b>Actual Result</b>	<b>Fail/Pas</b>
<ol style="list-style-type: none"> <li>1. Press on the Add/Update Post Option</li> <li>2. Enter Name.</li> <li>3. Enter Designation.</li> <li>4. Enter Phone Number.</li> <li>5. Enter Medicine Name.</li> <li>6. Enter Medicine formula.</li> <li>7. Enter Medicine</li> </ol>	<b>Name:</b> Riaz <b>Designation:</b> Director <b>Phone Number:</b> 03004698363 <b>Medicine Name:</b> Glyphosa <b>Medicine formula:</b> C3H8NO5P <b>Medicine good Effects:</b> Broad-	Post should not be Uploaded/Updated.	As we were Expected.	Pass

<p>good effects.</p> <p>8. Enter Description.</p> <p>9. Attach the picture by Selecting from User device/Gallery.</p> <p>10. Press Save Button.</p>	<p>spectrum herbicide for weed control.</p> <p><b>Description:</b> Glyphosate is a widely used herbicide that effectively controls weeds in various agricultural settings.</p> <p><b>Image:</b> medicine.jpg</p>			
<p><b>Post Condition:</b> System will show the message about wrong information that the user entered.</p>				

**Table 7.41: Test Case of Add Medicine Post, Update Medicine Post (Invalid Case-Invalid Designation)**

<b>TCID_8.7</b>		<b>Test Case Designed By:</b> Riaz Ahmad		
<b>Module Name:</b> Add Medicine Post, Update Medicine Post		<b>Date of Test Case Designed:</b> 05/07/2023		
<b>Test Case Priority:</b> High		<b>Test Case Executed By:</b> Riaz Ahmad		
<b>Date of the Test Case Execution:</b> 09/26/2022				
<b>Test Case Scenario:</b> Check the Add Medicine Post, Update Medicine Post Functionality.				
<b>Description of Test Case:</b> Check system behavior when the valid Name, invalid Designation, valid Phone Number, valid Medicine name, valid Medicine formula, Medicine good Effects, Description are entered and picture is attached with post.				
<b>Pre-Conditions:</b> User must be logged in and have a proper permission to Add and Update Post.				
<b>Steps</b>	<b>Test Data</b>	<b>Expected Results</b>	<b>Actual Result</b>	<b>Fail/Pas</b>

<ol style="list-style-type: none"> <li>1. Press on the Add/Update Post Option</li> <li>2. Enter Name.</li> <li>3. Enter Designation.</li> <li>4. Enter Phone Number.</li> <li>5. Enter Medicine Name.</li> <li>6. Enter Medicine formula.</li> <li>7. Enter Medicine good effects.</li> <li>8. Enter Description.</li> <li>9. Attach the picture by Selecting from User device/Gallery.</li> <li>10. Press Save Button.</li> </ol>	<p><b>Name:</b> Riaz  <b>Designation:</b> Direct  <b>Phone Number:</b> 03004698363  <b>Medicine Name:</b> Glyphosate  <b>Medicine formula:</b> C3H8NO5P  <b>Medicine good Effects:</b> Broad-spectrum herbicide for weed control.  <b>Description:</b> Glyphosate is a widely used herbicide that effectively controls weeds in various agricultural settings.  <b>Image:</b> medicine.jpg</p>	<p>Post should not be Uploaded/Updated.</p>	<p>As we were Expected.</p>	<p>Pass</p>
<p><b>Post Condition:</b> System will show the message about wrong information that the user entered.</p>				

**Table 7.42: Test Case of Add Medicine Post, Update Medicine Post (Invalid Case-Invalid Medicine Formula)**

<b>TCID__8.8</b>	<b>Test Case Designed By:</b> Riaz Ahmad
<b>Module Name:</b> Add Medicine Post, Update Medicine Post	<b>Date of Test Case Designed:</b> 05/07/2023
<b>Test Case Priority:</b> High	<b>Test Case Executed By:</b> Riaz Ahmad
<b>Date of the Test Case Execution:</b> 09/26/2022	
<b>Test Case Scenario:</b> Check the Add Medicine Post, Update Medicine Post Functionality.	
<b>Description of Test Case:</b> Check system behavior when the valid Name, valid Designation, valid	

Phone Number, valid Medicine name, invalid Medicine formula, Medicine good Effects, Description are entered and picture is attached with post.				
<b>Pre-Conditions:</b> User must be logged in and have a proper permission to Add and Update Post.				
Steps	Test Data	Expected Results	Actual Result	Fail/Pas
<ol style="list-style-type: none"> <li>1. Press on the Add/Update Post Option</li> <li>2. Enter Name.</li> <li>3. Enter Designation.</li> <li>4. Enter Phone Number.</li> <li>5. Enter Medicine Name.</li> <li>6. Enter Medicine formula.</li> <li>7. Enter Medicine good effects.</li> <li>8. Enter Description.</li> <li>9. Attach the picture by Selecting from User device/Gallery.</li> <li>10. Press Save Button.</li> </ol>	<p><b>Name:</b> Riaz  <b>Designation:</b> Director  <b>Phone Number:</b> 03004698363  <b>Medicine Name:</b> Glyphosate  <b>Medicine formula:</b> C3H8NO  <b>Medicine good Effects:</b> Broad-spectrum herbicide for weed control.  <b>Description:</b> Glyphosate is a widely used herbicide that effectively controls weeds in various agricultural settings.  <b>Image:</b> medicine.jpg</p>	Post should not be Uploaded/Updated.	As we were Expected.	Pass
<b>Post Condition:</b> System will show the message about wrong information that the user entered.				

**Table 7.43: Test Case of Add Medicine Post, Update Medicine Post (Invalid Case-Invalid Name)**

<b>TCID__8.9</b>	<b>Test Case Designed By:</b> Riaz Ahmad
<b>Module Name:</b> Add Medicine Post, Update	<b>Date of Test Case Designed:</b> 05/07/2023

Medicine Post				
<b>Test Case Priority:</b> High		<b>Test Case Executed By:</b> Riaz Ahmad		
<b>Date of the Test Case Execution:</b> 09/26/2022				
<b>Test Case Scenario:</b> Check the Add Medicine Post, Update Medicine Post Functionality.				
<b>Description of Test Case:</b> Check system behavior when the valid Name, valid Designation, valid Phone Number, valid Medicine name, valid Medicine formula, Medicine good Effects, Description are entered and picture does not attach with post.				
<b>Pre-Conditions:</b> User must be logged in and have a proper permission to Add and Update Post.				
Steps	Test Data	Expected Results	Actual Result	Fail/Pas
<ol style="list-style-type: none"> <li>1. Press on the Add/Update Post Option</li> <li>2. Enter Name.</li> <li>3. Enter Designation.</li> <li>4. Enter Phone Number.</li> <li>5. Enter Medicine Name.</li> <li>6. Enter Medicine formula.</li> <li>7. Enter Medicine good effects.</li> <li>8. Enter Description.</li> <li>9. Attach the picture by Selecting from User device/Gallery.</li> <li>10. Press Save Button.</li> </ol>	<p><b>Name:</b> Riaz <b>Designation:</b> Director <b>Phone Number:</b> 03004698363 <b>Medicine Name:</b> Glyphosate <b>Medicine formula:</b> C3H8NO5P <b>Medicine good Effects:</b> Broad-spectrum herbicide for weed control. <b>Description:</b> Glyphosate is a widely used herbicide that effectively controls weeds in various agricultural settings. <b>Image:</b> Null</p>	Post should not be Uploaded/Updated.	As we were Expected.	Pass
<b>Post Condition:</b> System will show the message about wrong information that the user entered.				

**Table 7.44: Test Case of Authenticate/Report Post (Valid Case)**

<b>TCID__9.1</b>		<b>Test Case Designed By:</b> Riaz Ahmad		
<b>Module Name: Authenticate/Report Post</b>		<b>Date of Test Case Designed:</b> 05/07/2023		
<b>Test Case Priority:</b> High		<b>Test Case Executed By:</b> Riaz Ahmad		
<b>Date of the Test Case Execution:</b> 09/26/2022				
<b>Test Case Scenario:</b> Check the Authenticate/Report Post Functionality.				
<b>Description of Test Case:</b> Check system behavior when the Post is Reported and Authenticated.				
<b>Pre-Conditions:</b>				
<ol style="list-style-type: none"> <li>1. A Post exists in the system that you want to Authenticate/Report.</li> <li>2. The User has access rights to Authenticate/Report the post.</li> </ol>				
<b>Steps</b>	<b>Test Data</b>	<b>Expected Results</b>	<b>Actual Result</b>	<b>Fail/Pas</b>
<ol style="list-style-type: none"> <li>3. View the post from Post List.</li> <li>4. Press on the Authenticate/Report Post Option.</li> </ol>	Null	Post should be Authenticated/Reported Successfully.	As we were Expected.	Pass
<b>Post Condition:</b> Post Should be Authenticated/Reported and Database will be updated.				

**Table 7.45: Test Case of Delete Record (Valid Case)**

<b>TCID__10.1</b>		<b>Test Case Designed By:</b> Riaz Ahmad		
<b>Module Name: Delete Record</b>		<b>Date of Test Case Designed:</b> 05/07/2023		
<b>Test Case Priority:</b> High		<b>Test Case Executed By:</b> Riaz Ahmad		
<b>Date of the Test Case Execution:</b> 09/26/2022				
<b>Test Case Scenario:</b> Check the Delete Record Functionality.				
<b>Description of Test Case:</b> Check system behavior when the Record will be deleted.				
<b>Pre-Conditions:</b>				
<ol style="list-style-type: none"> <li>1. A Record exists in the system that you want to Delete.</li> <li>2. The User has access rights to Delete the Record.</li> </ol>				

Steps	Test Data	Expected Results	Actual Result	Fail/Pas
<ol style="list-style-type: none"> <li>1. Press Record List Option.</li> <li>2. Select Record that user want to delete by Searching.</li> <li>3. Press Delete Record option to delete the Record.</li> </ol>	Null	Record should be Deleted Successfully.	As we were Expected.	Pass
<b>Post Condition:</b> Record Should be Deleted and Database will be updated.				

**Table 7.46: Test Case of Print Record (Valid Case)**

<b>TCID_11.1</b>		<b>Test Case Designed By:</b> Riaz Ahmad		
<b>Module Name: Print Record</b>		<b>Date of Test Case Designed:</b> 05/07/2023		
<b>Test Case Priority:</b> High		<b>Test Case Executed By:</b> Riaz Ahmad		
<b>Date of the Test Case Execution:</b> 09/26/2022				
<b>Test Case Scenario:</b> Check the Print Record Functionality.				
<b>Description of Test Case:</b> Check system behavior when the Record will be Printed.				
<b>Pre-Conditions:</b>				
<ol style="list-style-type: none"> <li>1. A Record exists in the system that you want to Print.</li> <li>2. The User has access rights to Print the Record.</li> </ol>				
Steps	Test Data	Expected Results	Actual Result	Fail/Pas
<ol style="list-style-type: none"> <li>7. Press on Print Record Option.</li> <li>8. Press on Export as Option.</li> <li>9. Choose the Export File Format.</li> <li>10. System will Successfully</li> </ol>	Null	Record should be Printed Successfully.	As we were Expected.	Pass

Generate File. 11. Press on Download Option.				
<b>Post Condition:</b> Record Should be Printed in user selected format.				

**Table 7.47: Test Case of Add/Update Record (Valid Case)**

<b>TCID__12.1</b>		<b>Test Case Designed By:</b> Riaz Ahmad		
<b>Module Name: Add/Update Record</b>		<b>Date of Test Case Designed:</b> 05/07/2023		
<b>Test Case Priority:</b> High		<b>Test Case Executed By:</b> Riaz Ahmad		
<b>Date of the Test Case Execution:</b> 09/26/2022				
<b>Test Case Scenario:</b> Check the Add/Update Record Functionality.				
<b>Description of Test Case:</b> Check system behavior when the valid Sequence Number, Expense Type, Price, and Quantity are entered.				
<b>Pre-Conditions:</b>				
<ol style="list-style-type: none"> <li>1. User must be logged into the system.</li> <li>2. The User has access rights to Add/Update the Record.</li> </ol>				
<b>Steps</b>	<b>Test Data</b>	<b>Expected Results</b>	<b>Actual Result</b>	<b>Fail/Pas</b>
<ol style="list-style-type: none"> <li>8. Press on the Add/Update Record option.</li> <li>9. Enter Sequence Number.</li> <li>10. Select Fertilizer/Medicine/other Expenses Name from drop down menu.</li> <li>11. Enter Price.</li> <li>12. Enter Quantity.</li> <li>13. Press the Add/Update Record</li> </ol>	<b>Sequence Number:</b> 06501  <b>Expense Type:</b> Fertilizer Expenses  <b>Price:</b> 15000  <b>Quantity:</b> 1	Record should be Added/Updated Successfully.	As we were Expected.	Pass

option.				
<b>Post Condition:</b> Database will be updated.				

**Table 7.48: Test Case of Add/Update Record (Invalid Case)**

<b>TCID__12.2</b>		<b>Test Case Designed By:</b> Riaz Ahmad		
<b>Module Name: Add/Update Record</b>		<b>Date of Test Case Designed:</b> 05/07/2023		
<b>Test Case Priority:</b> High		<b>Test Case Executed By:</b> Riaz Ahmad		
<b>Date of the Test Case Execution:</b> 09/26/2022				
<b>Test Case Scenario:</b> Check the Add/Update Record Functionality.				
<b>Description of Test Case:</b> Check system behavior when the invalid Sequence Number, Expense Type, Price, and Quantity are entered.				
<b>Pre-Conditions:</b>				
<ol style="list-style-type: none"> <li>1. User must be logged into the system.</li> <li>2. The User has access rights to Add/Update the Record.</li> </ol>				
<b>Steps</b>	<b>Test Data</b>	<b>Expected Results</b>	<b>Actual Result</b>	<b>Fail/Pas</b>
<ol style="list-style-type: none"> <li>1. Press on the Add/Update Record option.</li> <li>2. Enter Sequence Number.</li> <li>3. Select Fertilizer/Medicine/other Expenses Name from drop down menu.</li> <li>4. Enter Price.</li> <li>5. Enter Quantity.</li> <li>6. Press the Add/Update Record option.</li> </ol>	<b>Sequence Number:</b> 065 <b>Expense Type:</b> NULL <b>Price: -1</b> <b>Quantity: -2</b>	Record should not be Added/Updated.	As we were Expected.	Pass
<b>Post Condition:</b> Record should not be added/updated into the system. System will generate message about wrong information that user entered.				

**Table 7.49: Test Case of Add/Update Record (Invalid Case-Input Fields left blank)**

<b>TCID__12.3</b>		<b>Test Case Designed By: Riaz Ahmad</b>		
<b>Module Name: Add/Update Record</b>		<b>Date of Test Case Designed: 05/07/2023</b>		
<b>Test Case Priority: High</b>		<b>Test Case Executed By: Riaz Ahmad</b>		
<b>Date of the Test Case Execution: 09/26/2022</b>				
<b>Test Case Scenario:</b> Check the Add/Update Record Functionality.				
<b>Description of Test Case:</b> Check system behavior when the Sequence Number, Expense Type, Price, and Quantity are left blank.				
<b>Pre-Conditions:</b>				
<ol style="list-style-type: none"> <li>1. User must be logged into the system.</li> <li>2. The User has access rights to Add/Update the Record.</li> </ol>				
<b>Steps</b>	<b>Test Data</b>	<b>Expected Results</b>	<b>Actual Result</b>	<b>Fail/Pas</b>
<ol style="list-style-type: none"> <li>1. Press on the Add/Update Record option.</li> <li>2. Press the Add/Update Record option.</li> </ol>	<b>Null</b>	Record should not be Added/Updated.	As we were Expected.	Pass
<b>Post Condition:</b> Record should not be added/updated into the system. System will generate message about wrong information that user entered.				

**Table 7.50: Test Case of Add/Update Record (Invalid Case-Invalid Sequence Number)**

<b>TCID__12.4</b>		<b>Test Case Designed By: Riaz Ahmad</b>		
<b>Module Name: Add/Update Record</b>		<b>Date of Test Case Designed: 05/07/2023</b>		
<b>Test Case Priority: High</b>		<b>Test Case Executed By: Riaz Ahmad</b>		
<b>Date of the Test Case Execution: 09/26/2022</b>				
<b>Test Case Scenario:</b> Check the Add/Update Record Functionality.				
<b>Description of Test Case:</b> Check system behavior when the invalid Sequence Number, valid Expense Type, valid Price, and valid Quantity are entered.				
<b>Pre-Conditions:</b>				
<ol style="list-style-type: none"> <li>1. User must be logged into the system.</li> </ol>				

2. The User has access rights to Add/Update the Record.				
Steps	Test Data	Expected Results	Actual Result	Fail/Pas
<ol style="list-style-type: none"> <li>1. Press on the Add/Update Record option.</li> <li>2. Enter Sequence Number.</li> <li>3. Select Fertilizer/Medicine/other Expenses Name from drop down menu.</li> <li>4. Enter Price.</li> <li>5. Enter Quantity.</li> <li>6. Press the Add/Update Record option.</li> </ol>	<b>Sequence Number:</b> 065  <b>Expense Type:</b> Fertilizer Expenses  <b>Price:</b> 15000  <b>Quantity:</b> 1	Record should not be Added/Updated.	As we were Expected.	Pass
<b>Post Condition:</b> Record should not be added/updated into the system. System will generate message about wrong information that user entered.				

**Table 7.51: Test Case of Add/Update Record (Invalid Case-Invalid Expense Type)**

<b>TCID__12.5</b>		<b>Test Case Designed By:</b> Riaz Ahmad		
<b>Module Name: Add/Update Record</b>		<b>Date of Test Case Designed:</b> 05/07/2023		
<b>Test Case Priority:</b> High		<b>Test Case Executed By:</b> Riaz Ahmad		
<b>Date of the Test Case Execution:</b> 09/26/2022				
<b>Test Case Scenario:</b> Check the Add/Update Record Functionality.				
<b>Description of Test Case:</b> Check system behavior when the valid Sequence Number, invalid Expense Type, valid Price, and valid Quantity are entered.				
<b>Pre-Conditions:</b>				
<ol style="list-style-type: none"> <li>1. User must be logged into the system.</li> <li>2. The User has access rights to Add/Update the Record.</li> </ol>				
Steps	Test Data	Expected Results	Actual Result	Fail/Pas

<ol style="list-style-type: none"> <li>Press on the Add/Update Record option.</li> <li>Enter Sequence Number.</li> <li>Select Fertilizer/Medicine/other Expenses Name from drop down menu.</li> <li>Enter Price.</li> <li>Enter Quantity.</li> <li>Press the Add/Update Record option.</li> </ol>	<b>Sequence Number:</b> 06501 <b>Expense Type:</b> Null <b>Price:</b> 15000 <b>Quantity:</b> 1	Record should not be Added/Updated.	As we were Expected.	Pass
<b>Post Condition:</b> Record should not be added/updated into the system. System will generate message about wrong information that user entered.				

**Table 7.52: Test Case of Add/Update Record (Invalid Case-Invalid Price)**

<b>TCID_12.5</b>		<b>Test Case Designed By:</b> Riaz Ahmad		
<b>Module Name:</b> Add/Update Record		<b>Date of Test Case Designed:</b> 05/07/2023		
<b>Test Case Priority:</b> High		<b>Test Case Executed By:</b> Riaz Ahmad		
<b>Date of the Test Case Execution:</b> 09/26/2022				
<b>Test Case Scenario:</b> Check the Add/Update Record Functionality.				
<b>Description of Test Case:</b> Check system behavior when the valid Sequence Number, valid Expense Type, invalid Price, and valid Quantity are entered.				
<b>Pre-Conditions:</b>				
<ol style="list-style-type: none"> <li>User must be logged into the system.</li> <li>The User has access rights to Add/Update the Record.</li> </ol>				
<b>Steps</b>	<b>Test Data</b>	<b>Expected Results</b>	<b>Actual Result</b>	<b>Fail/Pas</b>
<ol style="list-style-type: none"> <li>Press on the Add/Update Record option.</li> <li>Enter Sequence Number.</li> <li>Select Fertilizer/Medicine/other Expenses Name from drop down menu.</li> <li>Enter Price.</li> </ol>	<b>Sequence Number:</b> 06501 <b>Expense Type:</b> Medicine <b>Expenses</b> <b>Price:</b> -2 <b>Quantity:</b> 1	Record should not be Added/Updated.	As we were Expected.	Pass

5. Enter Quantity. 6. Press the Add/Update Record option.				
<b>Post Condition:</b> Record should not be added/updated into the system. System will generate message about wrong information that user entered.				

**Table 7.53: Test Case of Add/Update Record (Invalid Case-Invalid Price)**

<b>TCID__12.7</b>		<b>Test Case Designed By:</b> Riaz Ahmad		
<b>Module Name:</b> Add/Update Record		<b>Date of Test Case Designed:</b> 05/07/2023		
<b>Test Case Priority:</b> High		<b>Test Case Executed By:</b> Riaz Ahmad		
<b>Date of the Test Case Execution:</b> 09/26/2022				
<b>Test Case Scenario:</b> Check the Add/Update Record Functionality.				
<b>Description of Test Case:</b> Check system behavior when the valid Sequence Number, valid Expense Type, valid Price, and invalid Quantity are entered.				
<b>Pre-Conditions:</b>				
<ol style="list-style-type: none"> <li>1. User must be logged into the system.</li> <li>2. The User has access rights to Add/Update the Record.</li> </ol>				
<b>Steps</b>	<b>Test Data</b>	<b>Expected Results</b>	<b>Actual Result</b>	<b>Fail/Pas</b>
<ol style="list-style-type: none"> <li>1. Press on the Add/Update Record option.</li> <li>2. Enter Sequence Number.</li> <li>3. Select Fertilizer/Medicine/other Expenses Name from drop down menu.</li> <li>4. Enter Price.</li> <li>5. Enter Quantity.</li> <li>6. Press the Add/Update Record option.</li> </ol>	<b>Sequence Number:</b> 06501  <b>Expense Type:</b> Medicine Expenses  <b>Price:</b> 15000  <b>Quantity:</b> -12	Record should not be Added/Updated.	As we were Expected.	Pass
<b>Post Condition:</b> Record should not be added/updated into the system. System will generate message about wrong information that user entered.				

**Table 7.54: Test Case of Manage Fertilizers (Valid Case)**

<b>TCID__13.1</b>		<b>Test Case Designed By:</b> Riaz Ahmad		
<b>Module Name:</b> Manage Fertilizers		<b>Date of Test Case Designed:</b> 05/07/2023		
<b>Test Case Priority:</b> High		<b>Test Case Executed By:</b> Riaz Ahmad		
<b>Date of the Test Case Execution:</b> 09/26/2022				
<b>Test Case Scenario:</b> Check the Manage Fertilizers Functionality.				
<b>Description of Test Case:</b> Check system behavior when the valid Crop name, Soil Type, Fertilizer Formula, Fertilizer Quantity and Fertilizer Benefits are entered.				
<b>Pre-Conditions:</b> User must be logged into the system. The User has access rights to Manage Fertilizers.				
<b>Steps</b>	<b>Test Data</b>	<b>Expected Results</b>	<b>Actual Result</b>	<b>Fail/Pass</b>
8. Press on the Add fertilizer post. 9. Enter name of crop. 10. Selects type of soil. 11. Enter formula of fertilizer. 12. Enter quantity of fertilizer according to stages of crop. 13. Enter the benefits of fertilizer according to crop. 14. Press on upload post option.	<b>Name of crop:</b> Tomato Type of soil: <b>Sandy loam</b> <b>Formula of fertilizer:</b> NPK 10-10-10 <b>Quantity of fertilizer according to stages of crop:</b> Seedling stage: 20 grams per plant Vegetative stage: 50 grams per plant Flowering stage: 40 grams per plant Fruit development stage: 60 grams per plant <b>Benefits of fertilizer according to crop (Tomato):</b> Promotes healthy growth and development of tomato plants	Post should be Added Successfully.	As we were Expected.	Pass

**Post Condition:** Fertilizer Record should be added into the system. System will generate message about Confirmation of post uploading.

**Table 7.55: Test Case of Manage Fertilizers (Invalid Case)**

<b>TCID__13.2</b>		<b>Test Case Designed By:</b> Riaz Ahmad		
<b>Module Name:</b> Manage Fertilizers		<b>Date of Test Case Designed:</b> 05/07/2023		
<b>Test Case Priority:</b> High		<b>Test Case Executed By:</b> Riaz Ahmad		
<b>Date of the Test Case Execution:</b> 09/26/2022				
<b>Test Case Scenario:</b> Check the Manage Fertilizers Functionality.				
<b>Description of Test Case:</b> Check system behavior when the invalid Crop name, Soil Type, Fertilizer Formula, Fertilizer Quantity and Fertilizer Benefits are entered.				
<b>Pre-Conditions:</b> User must be logged into the system. The User has access rights to Manage Fertilizers.				
<b>Steps</b>	<b>Test Data</b>	<b>Expected Results</b>	<b>Actual Result</b>	<b>Fail/Pass</b>
<ol style="list-style-type: none"> <li>1. Press on the Add fertilizer post.</li> <li>2. Enter name of crop.</li> <li>3. Selects type of soil.</li> <li>4. Enter formula of fertilizer.</li> <li>5. Enter quantity of fertilizer according to stages of crop.</li> <li>6. Enter the benefits of fertilizer according to crop.</li> <li>7. Press on upload post option.</li> </ol>	<p><b>Name of crop:</b> Tomat</p> <p>Type of soil: <b>Sandy</b></p> <p><b>Formula of fertilizer:</b> NPK 10-</p> <p><b>Quantity of fertilizer according to stages of crop:</b></p> <p>Seedling stage: 0 grams per plant</p> <p>Vegetative stage: 0 grams per plant</p> <p>Flowering stage: -2 grams per plant</p> <p>Fruit development stage: 60 grams per plant</p> <p><b>Benefits of fertilizer according to crop (Tomato):</b></p> <p>Promotes Does not healthy growth and development of</p>	Post should not be Added.	As we were Expected.	Pass

	tomato plants			
<b>Post Condition:</b> Fertilizer Record should not be added into the system. System will generate message about wrong information that the user entered.				

**Table 7.56: Test Case of Manage Fertilizers (Valid Case-Input fields left blank)**

<b>TCID__13.3</b>		<b>Test Case Designed By:</b> Riaz Ahmad		
<b>Module Name:</b> Manage Fertilizers		<b>Date of Test Case Designed:</b> 05/07/2023		
<b>Test Case Priority:</b> High		<b>Test Case Executed By:</b> Riaz Ahmad		
<b>Date of the Test Case Execution:</b> 09/26/2022				
<b>Test Case Scenario:</b> Check the Manage Fertilizers Functionality.				
<b>Description of Test Case:</b> Check system behavior when the Crop name, Soil Type, Fertilizer Formula, Fertilizer Quantity and Fertilizer Benefits are left blank.				
<b>Pre-Conditions:</b> User must be logged into the system. The User has access rights to Manage Fertilizers.				
<b>Steps</b>	<b>Test Data</b>	<b>Expected Results</b>	<b>Actual Result</b>	<b>Fail/Pass</b>
<ol style="list-style-type: none"> <li>1. Press on the Add fertilizer post.</li> <li>2. Press on upload post option.</li> </ol>	NULL	Post should not be Added.	As we were Expected.	Pass
<b>Post Condition:</b> Fertilizer Record should be added into the system. System will generate message about wrong information that the user entered.				

**Table 7.57: Test Case of Manage Medicines (Valid Case)**

<b>TCID__14.1</b>	<b>Test Case Designed By:</b> Riaz Ahmad
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<b>Module Name:</b> Manage Medicines		<b>Date of Test Case Designed:</b> 05/07/2023		
<b>Test Case Priority:</b> High		<b>Test Case Executed By:</b> Riaz Ahmad		
<b>Date of the Test Case Execution:</b> 09/26/2022				
<b>Test Case Scenario:</b> Check the Manage Medicines Functionality.				
<b>Description of Test Case:</b> Check system behavior when the valid Crop name, Pesticide Type, Medicine Formula, Medicine Quantity and Medicine Benefits are entered.				
<b>Pre-Conditions:</b> User must be logged into the system. The User has access rights to Manage Medicine.				
Steps	Test Data	Expected Results	Actual Result	Fail/Pass
<ol style="list-style-type: none"> <li>1. Press on the Add medicine post.</li> <li>2. Enter name of crop.</li> <li>3. Selects type of Pesticides.</li> <li>4. Enter formula of medicine.</li> <li>5. Enter quantity of medicine according to stages of crop.</li> <li>6. Enter the benefits of medicine according to crop.</li> <li>7. Press on upload post option.</li> </ol>	<p><b>Name of crop:</b> Wheat</p> <p><b>Type of Pesticides:</b> Insecticide</p> <p><b>Formula of medicine:</b> Imidacloprid</p> <p><b>Quantity of medicine according to stages of crop:</b></p> <p>Seedling stage: 10 milliliters per acre</p> <p>Vegetative stage: 20 milliliters per acre</p> <p>Flowering stage: 15 milliliters per acre</p> <p>Grain filling stage: 25 milliliters per acre</p> <p><b>Benefits of medicine according to crop (Wheat):</b></p> <p>Controls a wide range of insect pests, such as aphids, thrips, and leafhoppers</p>	Post should be Added Successfully.	As we were Expected.	Pass
<b>Post Condition:</b> Medicine Record should be added into the system. System will generate message about Confirmation of post uploading.				

**Table 7.58: Test Case of Manage Medicines (Invalid Case)**

<b>TCID__14.2</b>		<b>Test Case Designed By:</b> Riaz Ahmad		
<b>Module Name:</b> Manage Medicines		<b>Date of Test Case Designed:</b> 05/07/2023		
<b>Test Case Priority:</b> High		<b>Test Case Executed By:</b> Riaz Ahmad		
<b>Date of the Test Case Execution:</b> 09/26/2022				
<b>Test Case Scenario:</b> Check the Manage Medicines Functionality.				
<b>Description of Test Case:</b> Check system behavior when the invalid Crop name, Pesticide Type, Medicine Formula, Medicine Quantity and Medicine Benefits are entered.				
<b>Pre-Conditions:</b> User must be logged into the system. The User has access rights to Manage Medicine.				
<b>Steps</b>	<b>Test Data</b>	<b>Expected Results</b>	<b>Actual Result</b>	<b>Fail/Pass</b>
<ol style="list-style-type: none"> <li>1. Press on the Add medicine post.</li> <li>2. Enter name of crop.</li> <li>3. Selects type of Pesticides.</li> <li>4. Enter formula of medicine.</li> <li>5. Enter quantity of medicine according to stages of crop.</li> <li>6. Enter the benefits of medicine according to crop.</li> <li>7. Press on upload post option.</li> </ol>	<p><b>Name of crop:</b> Whe</p> <p><b>Type of Pesticides:</b> Insectic</p> <p><b>Formula of medicine:</b> Imidaclopr</p> <p><b>Quantity of medicine according to stages of crop:</b></p> <p>Seedling stage: -1 milliliters per acre</p> <p>Vegetative stage: 3 milliliters per acre</p> <p>Flowering stage: 5 milliliters per acre</p> <p>Grain filling stage: 0 milliliters per acre</p> <p><b>Benefits of medicine according to crop (Wheat):</b></p> <p>Can not controls a wide range of insect pests, such as aphids, thrips, and leafhoppers</p>	Post should not be Added.	As we were Expected.	Pass
<b>Post Condition:</b> Medicine Record should be added into the system. System will generate message				

about wrong information that the user entered.

**Table 7.59: Test Case of Manage Medicines (Invalid Case-Input fields left blank)**

<b>TCID__14.3</b>		<b>Test Case Designed By:</b> Riaz Ahmad		
<b>Module Name:</b> Manage Medicines		<b>Date of Test Case Designed:</b> 05/07/2023		
<b>Test Case Priority:</b> High		<b>Test Case Executed By:</b> Riaz Ahmad		
<b>Date of the Test Case Execution:</b> 09/26/2022				
<b>Test Case Scenario:</b> Check the Manage Medicines Functionality.				
<b>Description of Test Case:</b> Check system behavior when the valid Crop name, Pesticide Type, Medicine Formula, Medicine Quantity and Medicine Benefits are left blank				
<b>Pre-Conditions:</b> User must be logged into the system. The User has access rights to Manage Medicine.				
<b>Steps</b>	<b>Test Data</b>	<b>Expected Results</b>	<b>Actual Result</b>	<b>Fail/Pass</b>
<ol style="list-style-type: none"> <li>1. Press on the Add medicine post.</li> <li>2. Press on upload post option.</li> </ol>	Null	Post should not be Added.	As we were Expected.	Pass
<b>Post Condition:</b> Medicine Record should be added into the system. System will generate message about wrong information that the user entered.				

**Table 7.60: Test Case of Manage Pesticides (Valid Case)**

<b>TCID__15.1</b>		<b>Test Case Designed By:</b> Riaz Ahmad		
<b>Module Name:</b> Manage Pesticides		<b>Date of Test Case Designed:</b> 05/07/2023		
<b>Test Case Priority:</b> High		<b>Test Case Executed By:</b> Riaz Ahmad		

				Ahmad
<b>Date of the Test Case Execution:</b> 09/26/2022				
<b>Test Case Scenario:</b> Check the Manage Pesticides Functionality.				
<b>Description of Test Case:</b> Check system behavior when the valid Crop name, Pesticide name, attach picture, Medicine Name, Medicine Quantity, Medicine Benefits and Medicine bad effects are entered.				
<b>Pre-Conditions:</b> User must be logged into the system. The User has access rights to Manage Pesticides.				
Steps	Test Data	Expected Results	Actual Result	Fail/Pass
<p>10. Press on the Add Pesticides post.</p> <p>11. Enter name of crop.</p> <p>12. Actor enters name of pesticide.</p> <p>13. Attach the picture.</p> <p>14. Enter name of medicine.</p> <p>15. Enter quantity of medicine according to the pesticide</p> <p>16. Enter the benefits of medicine according to crop.</p> <p>17. Enter the bad effects of medicine on the crop.</p> <p>18. Actor will press on upload post option.</p>	<p><b>Name of crop:</b> Rice</p> <p><b>Name of pesticide:</b> Chlorpyrifos</p> <p><b>Attach the picture:</b> pesticides.jpg</p> <p><b>Name of medicine:</b> Potassium Phosphite</p> <p><b>Quantity of medicine</b> according to the pesticide (Chlorpyrifos):</p> <p>Seedling stage: 2 liters per hectare</p> <p>Vegetative stage: 3 liters per hectare</p> <p>Flowering stage: 2.5 liters per hectare</p> <p>Grain filling stage: 3.5 liters per hectare</p> <p><b>Benefits of medicine</b> according to crop (Rice):</p> <p>Enhances resistance to fungal and bacterial diseases</p> <p><b>Bad effects of medicine</b> on the crop (Rice):</p> <p>Potential negative impact on non-target organisms, including beneficial insects and soil</p>	Post should be Added Successfully.	As we were Expected.	Pass

<b>Post Condition:</b> Pesticides Record should be added into the system. System will generate message about Confirmation of post uploading.				

**Table 7.61: Test Case of Manage Pesticides (Invalid Case)**

<b>TCID__15.2</b>		<b>Test Case Designed By:</b> Riaz Ahmad		
<b>Module Name:</b> Manage Pesticides		<b>Date of Test Case Designed:</b> 05/07/2023		
<b>Test Case Priority:</b> High		<b>Test Case Executed By:</b> Riaz Ahmad		
<b>Date of the Test Case Execution:</b> 09/26/2022				
<b>Test Case Scenario:</b> Check the Manage Pesticides Functionality.				
<b>Description of Test Case:</b> Check system behavior when the invalid Crop name, Pesticide name, attach picture, Medicine Name, Medicine Quantity, Medicine Benefits and Medicine bad effects are entered.				
<b>Pre-Conditions:</b> User must be logged into the system. The User has access rights to Manage Pesticides.				
<b>Steps</b>	<b>Test Data</b>	<b>Expected Results</b>	<b>Actual Result</b>	<b>Fail/Pass</b>
<ol style="list-style-type: none"> <li>1. Press on the Add Pesticides post.</li> <li>2. Enter name of crop.</li> <li>3. Actor enters name of pesticide.</li> <li>4. Attach the picture.</li> <li>5. Enter name of medicine.</li> <li>6. Enter quantity of medicine according to the pesticide</li> <li>7. Enter the benefits of medicine according to</li> </ol>	<p><b>Name of crop:</b> Ri</p> <p><b>Name of pesticide:</b> Chlor</p> <p><b>Attach the picture:</b></p> <p><b>Name of medicine:</b> Potassi</p> <p><b>Quantity of medicine</b> according to the pesticide (Chlorpyrifos):</p> <p>Seedling stage: 0 liters per hectare</p> <p>Vegetative stage: -1 liters per hectare</p> <p>Flowering stage: 2.5 liters per</p>	Post should be Added Successfully.	As we were Expected.	Pass

crop. 8. Enter the bad effects of medicine on the crop. 9. Actor will press on upload post option.	hectare Grain filling stage: 3.5 liters per hectare <b>Benefits of medicine</b> according to crop (Rice): <b>Bad effects of medicine</b> on the crop (Rice): beneficial insects and soil			
<b>Post Condition:</b> Pesticide's Record should be added into the system. System will generate message about wrong information that the user entered.				

**Table 7.62: Tesst Case of Manage Pesticides (Invalid Case-Input fields left blank)**

<b>TCID__15.3</b>		<b>Test Case Designed By:</b> Riaz Ahmad		
<b>Module Name:</b> Manage Pesticides		<b>Date of Test Case Designed:</b> 05/07/2023		
<b>Test Case Priority:</b> High		<b>Test Case Executed By:</b> Riaz Ahmad		
<b>Date of the Test Case Execution:</b> 09/26/2022				
<b>Test Case Scenario:</b> Check the Manage Pesticides Functionality.				
<b>Description of Test Case:</b> Check system behavior when the invalid Crop name, Pesticide name, attach picture, Medicine Name, Medicine Quantity, Medicine Benefits and Medicine bad effects are left blank.				
<b>Pre-Conditions:</b> User must be logged into the system. The User has access rights to Manage Pesticides.				
<b>Steps</b>	<b>Test Data</b>	<b>Expected Results</b>	<b>Actual Result</b>	<b>Fail/Pass</b>
1. Press on the Add Pesticides post. 2. Press on upload post option.	Null	Post should not be Added.	As we were Expected.	Pass
<b>Post Condition:</b> Pesticide's Record should be added into the system. System will generate message about wrong information that the user entered.				

**Table 7.63: Test Case of Manage Crops (Valid Case)**

<b>TCID__16.1</b>		<b>Test Case Designed By:</b> Riaz Ahmad		
<b>Module Name:</b> Manage Crops		<b>Date of Test Case Designed:</b> 05/07/2023		
<b>Test Case Priority:</b> High		<b>Test Case Executed By:</b> Riaz Ahmad		
<b>Date of the Test Case Execution:</b> 09/26/2022				
<b>Test Case Scenario:</b> Check the Manage Crops Functionality.				
<b>Description of Test Case:</b> Check system behavior when the valid Crop name, Crop Location and Elaborate Problem are entered.				
<b>Pre-Conditions:</b> User must be logged into the system. The User has access rights to Manage Crops.				
<b>Steps</b>	<b>Test Data</b>	<b>Expected Results</b>	<b>Actual Result</b>	<b>Fail/Pass</b>
6. Enter the name of crop. 7. Enter the location of crop. 8. Elaborate the problem. 9. Broadcast the problem to Expert Advisor by clicking on send button.	<b>Crop Name:</b> Wheat  <b>Crop Location:</b> Pattoki  <b>Elaborate Problem:</b> The specific problem being faced with the wheat crop is the yellowing and stunted growth of the plants.	Problem should be sent Successfully.	As we were Expected.	Pass
<b>Post Condition:</b> Crops Problem should be sent. System will generate message about Confirmation of problem sending.				

**Table 7.64: Test Case of Manage Crops (Invalid Case)**

<b>TCID__16.2</b>		<b>Test Case Designed By:</b> Riaz Ahmad		
<b>Module Name:</b> Manage Crops		<b>Date of Test Case Designed:</b> 05/07/2023		
<b>Test Case Priority:</b> High		<b>Test Case Executed By:</b> Riaz Ahmad		
<b>Date of the Test Case Execution:</b> 09/26/2022				
<b>Test Case Scenario:</b> Check the Manage Crops Functionality.				

<b>Description of Test Case:</b> Check system behavior when the invalid Crop name, Crop Location and Elaborate Problem are entered.				
<b>Pre-Conditions:</b> User must be logged into the system. The User has access rights to Manage Crops.				
Steps	Test Data	Expected Results	Actual Result	Fail/Pass
<ol style="list-style-type: none"> <li>1. Enter the name of crop.</li> <li>2. Enter the location of crop.</li> <li>3. Elaborate the problem.</li> <li>4. Broadcast the problem to Expert Advisor by clicking on send button.</li> </ol>	<b>Crop Name:</b> Whea <b>Crop Location:</b> Patto <b>Elaborate Problem:</b> abc	Problem should not be sent Successfully.	As we were Expected.	Pass
<b>Post Condition:</b> Crops Problem should not be sent. System will generate message about wrong information that user entered.				

**Table 7.65: Test Case of Manage Crops (Invalid Case-Input fields left blank)**

<b>TCID_16.3</b>		<b>Test Case Designed By:</b> Riaz Ahmad		
<b>Module Name:</b> Manage Crops		<b>Date of Test Case Designed:</b> 05/07/2023		
<b>Test Case Priority:</b> High		<b>Test Case Executed By:</b> Riaz Ahmad		
<b>Date of the Test Case Execution:</b> 09/26/2022				
<b>Test Case Scenario:</b> Check the Manage Crops Functionality.				
<b>Description of Test Case:</b> Check system behavior when the Crop name, Crop Location and Elaborate Problem are left blank.				
<b>Pre-Conditions:</b> User must be logged into the system. The User has access rights to Manage Crops.				
Steps	Test Data	Expected Results	Actual Result	Fail/Pass
<ol style="list-style-type: none"> <li>1. Expert Advisor by clicking on send button.</li> </ol>	Null	Problem should not be sent.	As we were Expected.	Pass

**Post Condition:** Crops Problem should not be sent. System will generate message about wrong information that user entered.

**Table 7.66: Test Case of Watering Schedule (Valid Case)**

<b>TCID__17.1</b>		<b>Test Case Designed By:</b> Riaz Ahmad		
<b>Module Name:</b> Watering Schedule		<b>Date of Test Case Designed:</b> 05/07/2023		
<b>Test Case Priority:</b> High		<b>Test Case Executed By:</b> Riaz Ahmad		
<b>Date of the Test Case Execution:</b> 09/26/2022				
<b>Test Case Scenario:</b> Check the Watering Schedule Functionality.				
<b>Description of Test Case:</b> Check system behavior when the valid Crop name and Crop Location are entered.				
<b>Pre-Conditions:</b> User must be logged into the system. The User has access rights to Watering Schedule.				
<b>Steps</b>	<b>Test Data</b>	<b>Expected Results</b>	<b>Actual Result</b>	<b>Fail/Pass</b>
<ol style="list-style-type: none"> <li>1. Enter the name of crop.</li> <li>2. Enter the location of crop.</li> <li>3. Expert Advisor will give watering schedule according to the current area and crop.</li> </ol>	<b>Crop Name:</b> Wheat <b>Crop Location:</b> Pattoki	Watering Schedule should be sent Successfully to Farmer.	As we were Expected.	Pass
<b>Post Condition:</b> Watering Schedule should be sent. System will generate message about Confirmation of problem sending.				

**Table 7.67: Test Case of Watering Schedule (Invalid Case)**

<b>TCID__17.2</b>		<b>Test Case Designed By:</b> Riaz Ahmad		
<b>Module Name:</b> Watering Schedule		<b>Date of Test Case Designed:</b> 05/07/2023		
<b>Test Case Priority:</b> High		<b>Test Case Executed By:</b> Riaz Ahmad		

<b>Date of the Test Case Execution:</b> 09/26/2022				
<b>Test Case Scenario:</b> Check the Watering Schedule Functionality.				
<b>Description of Test Case:</b> Check system behavior when the invalid Crop name and Crop Location are entered.				
<b>Pre-Conditions:</b> User must be logged into the system. The User has access rights to Watering Schedule.				
Steps	Test Data	Expected Results	Actual Result	Fail/Pass
<ol style="list-style-type: none"> <li>1. Enter the name of crop.</li> <li>2. Enter the location of crop.</li> <li>3. Expert Advisor will give watering schedule according to the current area and crop.</li> </ol>	<b>Crop Name:</b> Whe  <b>Crop Location:</b> Patt	Watering Schedule should not be sent to Farmer.	As we were Expected.	Pass
<b>Post Condition:</b> Watering Schedule should not be sent. System will generate message about wrong information				

**Table 7.68: Test Case of Watering Schedule (Invalid Case-Input fields left blank)**

<b>TCID__17.3</b>	<b>Test Case Designed By:</b> Riaz Ahmad			
<b>Module Name:</b> Watering Schedule	<b>Date of Test Case Designed:</b> 05/07/2023			
<b>Test Case Priority:</b> High	<b>Test Case Executed By:</b> Riaz Ahmad			
<b>Date of the Test Case Execution:</b> 09/26/2022				
<b>Test Case Scenario:</b> Check the Watering Schedule Functionality.				
<b>Description of Test Case:</b> Check system behavior when the valid Crop name and Crop Location are left blank.				
<b>Pre-Conditions:</b> User must be logged into the system. The User has access rights to Watering Schedule.				
Steps	Test Data	Expected Results	Actual Result	Fail/Pass

1. Expert Advisor will give watering schedule according to the current area and crop.		Watering Schedule should not be sent to Farmer.	As we were Expected.	Pass
<b>Post Condition:</b> Watering Schedule should not be sent. System will generate message about wrong information				

## 7.2 Decision Table

### 7.2.1 Code snippet

```

<?php
    session_start();
    include_once('connection.php');

    if(isset($_POST['add'])){
        $title = $_POST['title'];
        $fertilizercompany = $_POST['fertilizercompany'];
        $description = $_POST['description'];
        $advantages = $_POST['advantages'];
        $disadvantages = $_POST['disadvantages'];
        $picture = $_POST['picture'];

        $sql = "INSERT INTO fertilizerpost (title, fertilizercompany, description, advantages, disadvantages, picture) VALUES ('$title', '$ferti:

        if($conn->query($sql)){
            $_SESSION['success'] = 'Post added successfully';
        }

        else{
            $_SESSION['error'] = 'Something went wrong while adding';
        }
    }
    else{
        $_SESSION['error'] = 'Fill up add form first';
    }

    header('location: index.php');
?>

```

**Figure 7.1: Add Fertilizer Post**

```

<?php
    session_start();
    include_once('connection.php');

    if(isset($_POST['add'])){
        $name = $_POST['name'];
        $email = $_POST['email'];
        $password = $_POST['password'];
        $user_type = $_POST['user_type'];
        $Image = $_POST['Image'];

        $sql = "INSERT INTO users (name, email,password, user_type, image) VALUES ('$name', '$email','$password','$user_type','$image)";

        //use for MySQLi OOP
        if($conn->query($sql){
            $_SESSION['success'] = 'Member added successfully';
        }
        ////////////

        //use for MySQLi Procedural
        // if(mysqli_query($conn, $sql)){
        //     $_SESSION['success'] = 'Member added successfully';
        // }
        ////////////

        else{
            $_SESSION['error'] = 'Something went wrong while adding';
        }
    }
    else{
        $_SESSION['error'] = 'Fill up add form first';
    }

    header('location: index.php');
?>

```

**Figure 7.2: Add Users**

```

<?php
    session_start();
    include_once('connection.php');

    if(isset($_GET['id'])){
        $sql = "DELETE FROM users WHERE id = '".$_GET['id']."'";

        //use for MySQLi OOP
        if($conn->query($sql)){
            $_SESSION['success'] = 'Member deleted successfully';
        }
        ////////////////

        //use for MySQLi Procedural
        // if(mysqli_query($conn, $sql)){
        //     $_SESSION['success'] = 'Member deleted successfully';
        // }
        ////////////////

        else{
            $_SESSION['error'] = 'Something went wrong in deleting member';
        }
    }
    else{
        $_SESSION['error'] = 'Select member to delete first';
    }

    header('location: index.php');
?>

```

**Figure 7.3: Delete Users**

```

<?php
    session_start();
    include_once('connection.php');

    if(isset($_POST['edit'])){
        $id = $_POST['id'];
        $name = $_POST['name'];
        $email = $_POST['email'];
        $user_type = $_POST['user_type'];
        $sql = "UPDATE users SET name = '$name', email = '$email', user_type = '$user_type' WHERE id = '$id'";

        //use for MySQLi OOP
        if($conn->query($sql)){
            $_SESSION['success'] = 'Member updated successfully';
        }
        ///////////////

        //use for MySQLi Procedural
        // if(mysqli_query($conn, $sql)){
        //     $_SESSION['success'] = 'Member updated successfully';
        // }
        ///////////////

        else{
            $_SESSION['error'] = 'Something went wrong in updating member';
        }
    }
    else{
        $_SESSION['error'] = 'Select member to edit first';
    }

    header('location: index.php');
?>

```

**Figure 7.4: Edit Users**

```

<body class>

<?php
    if(isset($message)){
        foreach($message as $message){
            echo '
                <div class="message">
                    <span>'.$message.'</span>
                    <i class="fas fa-times" onclick="this.parentElement.remove();"></i>
                </div>
            ';
        }
    }
?>

<section class="form-container">

    <form action="" method="post" enctype="multipart/form-data">
        <h3>login now</h3>
        <input type="email" required placeholder="enter your email" class="box" name="email">
        <input type="password" required placeholder="enter your password" class="box" name="pass">
        <br>
        <br>
        <p>don't have an account? <a href="register.php">register now</a></p>
        <br>
        <input style="width:100%" type="submit" value="login now" class="btn" name="submit">
        <br>
        <br>
        <br>
        <br>
        <br>
    </form>
</section>

</body>
</html>

```

**Figure 7.5: Login**

```

if(isset($_POST['submit'])){

    $name = $_POST['name'];
    $name = filter_var($name, FILTER_SANITIZE_STRING);
    $email = $_POST['email'];
    $email = filter_var($email, FILTER_SANITIZE_STRING);
    $address = $_POST['address'];
    $address = filter_var($address, FILTER_SANITIZE_STRING);

    $pass = md5($_POST['pass']);
    $pass = filter_var($pass, FILTER_SANITIZE_STRING);
    $cpass = md5($_POST['cpass']);
    $cpass = filter_var($cpass, FILTER_SANITIZE_STRING);

    $user_type = $_POST['user_type'];
    $user_type = filter_var($user_type, FILTER_SANITIZE_STRING);

    $image = $_FILES['image']['name'];
    $image_tmp_name = $_FILES['image']['tmp_name'];
    $image_size = $_FILES['image']['size'];
    $image_folder = 'uploaded_img/'.$image;

    $select = $conn->prepare("SELECT * FROM `users` WHERE email = ?");
    $select->execute([$email]);

    if($select->rowCount() > 0){
        $message[] = 'user already exist!';
    }else{
        if($pass != $cpass){
            $message[] = 'confirm password not matched!';
        }elseif($image_size > 2000000){
            $message[] = 'image size is too large!';
        }else{
            $insert = $conn->prepare("INSERT INTO `users` (name, email, address, password, user_type, image) VALUES(?,?,?,?,?,?)");
            $insert->execute([$name, $email, $address, $cpass, $user_type, $image]);
            if($insert){
                move_uploaded_file($image_tmp_name, $image_folder);
                $message[] = 'registered successfully!';
                header('location:login.php');
            }
        }
    }
}

```

**Figure 7.6: Register**

```

<div class="fertilizerpost">
  <h3> Fertilizer Post </h3>
  <?php
  foreach ($result as $row)
  {
    $title = $row['title'];
    $fertilizercompany = $row['fertilizercompany'];
    $description = $row['description'];
    $advantages = $row['advantages'];
    $disadvantages = $row['disadvantages'];
    $picture = $row['picture'];

    echo "<input type='text' class='fpost_input1' value=' Title : $title'><br>";
    echo "<input type='text' class='fpost_input1' value=' Company Name : $fertilizercompany'><br>";
    echo "<div class='fpost_input4'> Detail : <br><br>$description</div><br>";
    echo "<div class='fpost_input3'> Avantages : <br><br>$advantages</div><br>";
    echo "<div class='fpost_input3'> Disavantages : <br><br>$disadvantages</div><br>";
    echo '';

  }
  ?>
</div>

```

**Figure 7.7: Show Fertilizer Post**

```

<div class="fertilizerpost">
  <h3> Medicine Post </h3>
  <?php
  foreach ($result as $row)
  {
    $title = $row['title'];
    $medicinecompany = $row['medicinecompany'];
    $description = $row['description'];
    $advantages = $row['advantages'];
    $disadvantages = $row['disadvantages'];
    $picture = $row['picture'];

    echo "<input type='text' class='fpost_input1' value=' Title : $title'><br>";
    echo "<input type='text' class='fpost_input1' value=' Company Name : $medicinecompany'><br>";
    echo "<div class='fpost_input4'> Detail : <br><br>$description</div><br>";
    echo "<div class='fpost_input3'> Avantages : <br><br>$advantages</div><br>";
    echo "<div class='fpost_input3'> Disavantages : <br><br>$disadvantages</div><br>";
    echo '';

  }
  ?>
</div>

```

**Figure 7.8: Show Medicine Post**

```

<div class="notification">
  <h3> Notification </h3>
  <?php
  foreach ($result as $row)
  {
    $title = $row['title'];
    $description = $row['description'];
    echo "<input type='text' class='input1' value='$title'><br>";
    echo "<div class='input2'>$description</div><br>";
  }
  ?>
</div>

```

**Figure 7.9: Show Notification**

```

<div class="row">
  <table id="myTable" class="table table-bordered table-striped">
    <thead>
      <th>ID</th>
      <th>Name</th>
      <th>Email</th>
      <th>User Type</th>
      <th>Action</th>
    </thead>
    <tbody>
      <?php
      include_once('connection.php');
      $sql = "SELECT * FROM users";

      //use for MySQLi-OOP
      $query = $conn->query($sql);
      while($row = $query->fetch_assoc()){
        echo
        "<tr>
          <td>".$row['id']. "</td>
          <td>".$row['name']. "</td>
          <td>".$row['email']. "</td>
          <td>".$row['user_type']. "</td>
          <td>
            <a href='#edit_".$row['id']."' class='btn btn-success btn-sm' data-toggle='modal'><span class='glyphico
            <a href='#delete_".$row['id']."' class='btn btn-danger btn-sm' data-toggle='modal'><span class='glyphico
          </td>
        </tr>";
        include('edit_delete_modal.php');
      }
      ?>
    </tbody>
  </table>
</div>

```

**Figure 7.10: Show Users**

## 7.2.2 Decision coverage table

**Table 7.69: Login Decision Table**

Conditions	Rule 1	Rule 2	Rule 3	Rule 4
Email	T	T	F	F
Password	T	F	T	F
<b>Actions</b>				
Wrong Credentials		✓	✓	✓
Successfully log-in	✓			

**Table 7.70: Search Decision Table**

Conditions	Rule 1	Rule 2
Search Input Field	T	F
<b>Actions</b>		
Result of Search Find Successfully		✓
User Input is Invalid	✓	

## 7.3 Traceability Matrix

### 7.3.1 RID vs UCID (requirements vs use cases)

**Table 7.71: RID vs UCID**

UCID/ RID	F R	F R	F R	F R	F R	F R	F R	F R	F R	F R	F R	F R	F R	F R	F R	F R	F R	F R	F R	F R	
	1	2	3	4	5	6	7	8	9	0	1	2	3	4	5	6	7	8	9	0	1
UC-1	✓																				

UC-2		✓																		
UC-3			✓																	
UC-4				✓																
UC-5					✓															
UC-6						✓														
UC-7							✓													
UC-8								✓												
UC-9									✓											
UC-10										✓										
UC-11											✓									
UC-12												✓								
UC-13													✓							
UC-14														✓						
UC-15															✓					
UC-16																✓				
UC-17																	✓			
UC-18																		✓		
UC-19																			✓	
UC-20																				✓
UC-21																				✓

### 7.3.2 Prototypes (RID vs PID)

**Table 7.72: RID vs PID**

PID/ RID	F R	F R	F R	F R	F R	F R	F R	F R	F R	F R	F R	F R	F R	F R	F R	F R	F R	F R	F R	F R	
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21
P-1	✓																				
P-2		✓																			
P-3			✓																		
P-4				✓																	



TC-7							✓														
TC-8											✓										
TC-9									✓												
TC-10							✓														
TC-11									✓												
TC-12											✓										
TC-13												✓									
TC-14													✓								
TC-15														✓							
TC-16															✓						
TC-17																✓					
TC-18																	✓				
TC-19																		✓			
TC-20																				✓	
TC-21																					✓

### 7.3.4 Coverage (UCID vs TID)

**Table 7.74: UCID vs TID**

UCID/ TCID	T C 1	T C 2	T C 3	T C 4	T C 5	T C 6	T C 7	T C 8	T C 9	T C 10	T C 11	T C 12	T C 13	T C 14	T C 15	T C 16	T C 17	T C 18	T C 19	T C 20	T C 21	
UC-1	✓																					
UC-2		✓																				
UC-3			✓																			
UC-4				✓																		
UC-5					✓																	
UC-6					✓			✓														
UC-7								✓														
UC-8						✓																

UC-9											✓								
UC-10										✓									
UC-11								✓											
UC-12									✓										
UC-13											✓								
UC-14																	✓		
UC-15																		✓	
UC-16																		✓	
UC-17																			✓
UC-18																			✓
UC-19																			✓
UC-20																			✓
UC-21																			✓

## 8. RESULTS/OUTPUT/STATISTICS

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### 8.1 %completion

$\% \text{Completion} = (\text{fulfilled requirements} / \text{total requirements}) * 100$

$\% \text{Completion} = (21/21) * 100$

$\% \text{Completion} = 100$

This Weightage Suggest that The Project is 100% complete on time.

### 8.2 %accuracy

$\% \text{Accuracy} = (\text{implemented requirements} / \text{total requirements}) * 100$

$\% \text{Accuracy} = (21/21) * 100$

$\% \text{Accuracy} = 100$

This Weightage Suggest that The Project is 100% accurate and after Completion on time.

### 8.3 %correctness

$\% \text{Correctness} = (\text{tested requirements} / \text{total requirements}) * 100$

$\% \text{Correctness} = (20/21) * 100$

$\% \text{Correctness} = 95.23$

This Weightage Suggest that The Project is 95.23% correct.

## 9. CONCLUSION

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In agriculture training and management system is a web-based application that aims to provide farmers with comprehensive support and guidance throughout their farming journey. The application is designed to empower farmers by offering valuable information and tools to enhance crop management, increase productivity, and optimize resource utilization. The detailed conclusion is written as follows.

The application starts with a login feature, which allows farmers to access the system by providing their account information. This ensures secure access and personalized experiences for each user. Furthermore, the registration feature enables new users to create an account and join the application, expanding its user base and providing a platform for knowledge sharing among farmers.

A crucial aspect of the application is crop management. The system leverages expert advice to train farmers and assist them in managing their crops effectively. By analyzing factors such as location, the system generates watering schedules that guide farmers in optimal water management. This helps conserve water resources and ensures that crops receive the necessary hydration for healthy growth.

The application also provides crop advice from agriculture experts, offering farmers valuable insights into crop management techniques. This guidance covers a wide range of aspects, including cultivation and harvesting times for each crop. By aligning their practices with these recommendations, farmers can maximize yields and make informed decisions about their crops.

To support crop growth, the application offers comprehensive management of fertilizers, medicines, and pesticides. By considering soil test reports, the system suggests appropriate fertilizers for each crop. Similarly, it provides guidance on the proper usage of medicines and pesticides, taking into account potential effects and safety precautions. This empowers farmers to make informed choices and optimize their crop health.

In addition to crop-related features, the application offers several other functionalities. For instance, farmers can test their soil to obtain detailed information about its composition and quality, enabling them to make informed decisions regarding crop selection and fertilization. The system also allows agriculture experts to provide personalized advice, ensuring farmers have access to the latest agricultural information and practices.

Furthermore, the application keeps farmers updated with the latest agricultural equipment information. By providing short descriptions of equipment, farmers can make informed decisions about their purchases, potentially improving efficiency and productivity on their farms. Weather information is another crucial aspect of the application, enabling farmers to plan their water management strategies based on real-time weather conditions.

To facilitate record-keeping, the application allows farmers to manage their annual accountings, including viewing, adding, deleting, updating, and printing their annual reports. This feature streamlines administrative tasks and provides farmers with a clear overview of their financials.

Finally, the application ensures smooth user management and access control through features for managing user roles and disabling users when necessary. This maintains the integrity and security of the system.

This agriculture training and management system is a web-based application provides comprehensive support to farmers, enhancing crop management, productivity, and resource utilization, while promoting knowledge sharing and empowering farmers throughout their farming journey.

## 10. FUTURE WORK

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Some potential future additions and enhancements that could be considered for the agriculture training and management system:

**Market Integration:** Develop functionality to connect farmers directly with buyers, wholesalers, or markets, facilitating streamlined selling and distribution of their produce. This could involve features such as price tracking, market demand analysis, and communication channels to foster direct trade relationships.

**Crop Disease and Pest Management:** Integrate features to help farmers identify and manage crop diseases and pests effectively. This could include real-time disease detection using image recognition technology, providing recommendations for treatment options, and offering preventive measures to minimize the impact on crop health.

**Farm Equipment Rentals and Sharing:** Enable farmers to rent or share agricultural equipment through the application, promoting cost-sharing and resource optimization. This feature could include a marketplace for equipment rentals, reviews and ratings, and scheduling tools to manage equipment availability.

**Crop Price Forecasting:** Incorporate algorithms and market data to provide farmers with crop price forecasting, helping them make informed decisions on crop selection and timing for maximum profitability. This feature could provide historical price trends, market analysis, and price prediction models to guide farmers in their pricing strategies.

**Sustainability and Environmental Impact Assessment:** Integrate sustainability metrics and tools to help farmers assess and optimize their farming practices' environmental impact. This could include carbon footprint calculations, water usage analysis, and recommendations for eco-friendly farming techniques to promote sustainable agriculture.

**Remote Sensing and IoT Integration:** Explore the integration of remote sensing technologies and Internet of Things (IoT) devices to collect real-time data on soil moisture, temperature, and other environmental factors. This data can provide farmers with precise information for better decision-making, resource allocation, and proactive management.

**Crop Insurance Integration:** Collaborate with insurance providers to integrate crop insurance services within the application. This would allow farmers to easily access and manage their insurance policies, report crop losses, and receive timely compensation, providing financial security and risk mitigation.

**Enhanced Data Analytics:** Implement advanced data analytics capabilities to provide farmers with deeper insights into their crop performance, resource utilization, and market trends. This could involve predictive modeling, machine learning algorithms, and data visualization tools to help farmers make data-driven decisions.

**Collaborative Farming and Knowledge Sharing:** Foster a sense of community and collaboration among farmers by incorporating features for knowledge sharing, forums, and virtual communities. This would enable farmers to exchange experiences, best practices, and innovative ideas, ultimately promoting collective learning and growth.

**Mobile App Development:** Expand the application to include a mobile app version for enhanced accessibility and convenience, allowing farmers to access the features and functionalities on their smartphones or tablets.

These future enhancements aim to further empower farmers, improve productivity, and promote sustainable and efficient agricultural practices.

## 11. BIBLIOGRAPHY

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## 12. APPENDIX

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### 12.1 Glossary of terms

**Table 12.1: Glossary of terms**

Terms	Definition
User	User of Agriculture Training and management system who uses the Application would have to register themselves and get authorized rights.
Admin	Admin will be Maintain and troubleshoot the Website. Admin have main rights of the system. Admin is able to delete, add, update, view the user. Admin have rights to remove pot and disable user.
Farmer	Farmer should get training from this website and Farmer is the main actor of this project because this project is working on the training of the farmer.  Also, Former can be managing their annual accounting and keep on this website.
Agriculture Experts	Agriculture Experts will guide the Farmers for their improvement and development in this website.
Medicine Expert	Medicine Expert will check the medicine post and report to the admin. He will manage fertilizer medicines and pesticides
Medicine Companies	Medicines Companies advertise their Agriculture medicines in the website with complete detail according to the website rules.
Government Department	Agriculture Department will check agriculture experts, fertilizer companies and medicines companies are working correct or not and will the information given by them not be a discussion of any loss.?
Farmer Record	Farmer record maintain annually. So, the farmer knows about his expenses and revenues.

### 12.2 Pre-requisites

1. SCD (Software Construction and Development)
2. PF (Programming Fundamentals)
3. OOP (Object Oriented Programming)
4. DSA (Data Structures and Algorithms)
5. Web Engineering
6. Advanced Web Engineering
7. DBMS (Database Management System)