



MY GARDEN HOME

Department of Computer Information Systems

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SOFTWARE ENGINEERING (SUMMER 2022/2023) (1902372) Date: [7/23/2023]

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Executive Summary

This document introduces the project of establishing an investment company that provides consulting services, information and professional guidance to farmers, investors in agriculture and garden owners, so that these services and applications produced by the project will be the main source of agricultural information in Jordan.

These services target the community interested in agriculture and build a network of agricultural producers and suppliers of agricultural materials and devices to develop the agriculture sector by providing agricultural guidance and choosing the appropriate agricultural tools and materials.

The project generates revenues through subscriptions that allow the farmer and gardener to obtain continuous professional information and advice, and by acting as an intermediary platform between sellers and farmers and obtaining a sale margin in exchange for that. The project also aims to obtain support and assistance from agencies that provide support for the development of agricultural production.

The project requires a team of employees to operate and develop the project consisting of management, marketing manager, marketing employees, customer support team, programmer and operator of programs and systems and an agricultural expert to write content.

The operation of the project requires the provision of software systems and applications, and a content management system. These systems will be installed on cloud services. The implementation of the project requires the participation of parties that produce information and studies in the field of agriculture to enrich the company's website with recent information and related studies.

The budget of the project was estimated in the third year so that it begins to achieve profits, as it is expected that the expenditures will reach 259,200 dinars, and the revenues will reach 290,000 so that the project will achieve the remaining profits of 30,800 dinars.

The business plan describes in detail the team working on the project, customers and the timetable for project implementation, and the establishment of a working company capable of operating the project.

1.0 Introduction.

1.1 Overview.

During the beginning stages of this project, our purpose would be to improve our country's vegetative covering and its protection. Since every house contains at least a single plant, even though most Jordanians don't know nearly enough to take care of them, most said plants die out, and after a while of that most people get gardeners for their yards/gardens. This project solves this problem in making it easier to take of smaller gardens and house plants by:

- Calculating the dirt's humidity.
- Giving quick tips in dealing with illness in plants.
- Taking care of plants during all four seasons.
- Giving the best amount of composite for the plants used.

1.2 The purpose of the project.

A. Background of the business.

In Jordan, agriculture plays a significant role in the socio-economic fabric. Yet, despite the considerable number of farming communities and home garden owners, there is a significant lack of accessible and professional advice. This lack of information prevents these stakeholders from optimizing their productivity and maintaining the health of their plants and crops.

B. Problem definition.

The current system for providing agricultural advice and products in Jordan is fragmented and outdated. Farmers and garden owners typically rely on disparate sources for advice, such as local communities,

traditional methods, or online resources which may not always be reliable or specific to their situation. The lack of a centralized platform for agricultural advice, products, and resources results in poor plant care, lower productivity, and ultimately a less profitable agricultural sector.

C. Issues with existing systems.

The existing systems for agriculture advice and products suffer from several issues:

Lack of comprehensive and professional advice. Difficult to access, especially for remote farmers. Lack of customization - advice is not tailored to specific crops or local conditions. No integration of technology to enable real-time advice or data-driven decision making.

D. Objectives.

- Helping people in taking care of their garden.
- Raising people's awareness and knowledge about gardening and plant-care.
- Extending the plants' life by giving them the right treatment and taking good care of it.
- Making garden-care available and affordable for a huge number of people.
- Reducing losses in plant-life that can be caused by the lack of knowledge and experience that is so common with Jordanians.
- Encouraging people to start gardening in their free time since our app is easy to use.

1.3 The scope of the work and project deliverables.

A. Business requirements.

- **Expert Agriculture Advice:** The platform must provide professional and expert advice to its users. This should include, but not be limited to, information on plant care, disease management, suitable crops for specific conditions, and advice on sustainable farming practices.
- **Personalized Recommendations:** The system should provide personalized advice based on user-specific details. For instance, the type of crops they grow, their geographical location, soil conditions, and individual preferences.
- **Real-time Data Utilization:** The platform should have the capability to integrate with soil humidity sensors to provide real-time data to the users. This will enable them to make informed decisions about watering schedules and other care activities.
- **Marketplace:** The platform should facilitate the purchase and sale of agricultural products. This will act as a one-stop-shop for all farming needs, from seeds and fertilizers to equipment and machinery.
- **Accessible Interface:** The user interface should be intuitive and accessible, allowing users with minimal technical skills to navigate the platform easily.
- **User Feedback:** The platform should include a mechanism for users to provide feedback on the advice they receive and the overall user experience.
- **Scalability:** The system should be designed in a manner that allows it to handle an increase in the number of users and data volume without compromising on the performance.

B. Constraints.

- One of the biggest challenges is dealing with the huge amount of data and this will require us to use a high computational power.
- It is difficult to accurately predict the weather in all places.
- It is usually very difficult to convince investors in a new and innovative idea since it would be very risky in their eyes.
- Time consuming, since our project may need to run through multiple iterations to provide us with satisfying results.

C. Solution alternatives and the proposed solution.

Solution Alternatives:

- **Traditional Agricultural Extension Services:** This involves the use of agricultural experts visiting farms and providing advice. However, this method is costly, time-consuming, and does not scale well. Also, it doesn't provide farmers with immediate access to advice when they need it.
- **Online Forums and Communities:** This alternative involves the use of online platforms where farmers can ask questions and get advice from other farmers or enthusiasts. While this method is accessible and free, the quality of advice can be variable, and it may not be personalized or professional.
- **Agricultural Apps:** There are several mobile apps that provide some agricultural advice. However, these apps do not provide a comprehensive solution, often focusing only on specific crops or problems, and do not provide an integrated marketplace or real-time data utilization.

Proposed Solution:

The proposed solution is to develop a comprehensive, AI-driven agricultural platform – MyGardenHome: The platform will integrate professional advice, personalized recommendations, real-time data utilization, an agricultural marketplace, and user feedback mechanisms all in one place. By utilizing an AI model, the platform can provide personalized advice based on specific crop types, local conditions, and individual farmer preferences. The integration of soil humidity sensors will provide real-time data to farmers, enabling data-driven decisions. The platform will also create a marketplace for agricultural products, creating a one-stop-shop for all agricultural needs.

1.4 Local and Global Impact of the proposed solution.

A. Local impact:

- **Improved Plant Care:** People in local communities will benefit from better care for their plants. Our system can help them identify the specific needs of each plant, such as watering schedules, sunlight requirements, and pest control methods, leading to healthier and more thriving plants.
- **Reduced Plant Wastage:** By providing personalized care instructions, our project can reduce plant wastage due to improper care. Many plants die due to inadequate care, but our system can help prevent this by guiding users on the right care practices.
- **Educational Value:** The project can be used as an educational tool, helping local gardeners, horticulturists, and enthusiasts learn more about various plant species and their specific care requirements.

- **Water Conservation:** With accurate watering guidance, users may avoid overwatering their plants, which can contribute to water conservation efforts in the local community.

B. Global impact:

- **Carbon Sequestration:** Healthy and well-cared-for plants play a crucial role in carbon sequestration, potentially contributing to global efforts to mitigate climate change.
- **Knowledge Sharing:** As the project gathers data on different plant species and their care requirements, this knowledge can be shared with researchers and conservationists globally, aiding in their efforts to protect plant diversity.
- **Community Building:** The project can bring together gardening communities worldwide, fostering a sense of global connection and collaboration in plant care and conservation.

1.5 Naming Conventions and Definitions.

Machine Learning (ML): This is a subset of artificial intelligence (AI) that provides systems the ability to automatically learn and improve from experience without being explicitly programmed. Machine learning focuses on the development of computer programs that can access data and use it to learn for themselves. It's used in a variety of applications, from recommending videos on a platform like YouTube to predicting traffic patterns in autonomous vehicles.

Internet of Things (IoT): The Internet of Things refers to the network of physical devices, vehicles, home appliances, and other items embedded with electronics, software, sensors, actuators, and connectivity which enables these objects to connect, collect, and exchange data over the internet. IoT involves extending Internet connectivity beyond standard devices, such as desktops, laptops, smartphones and

tablets, to any range of traditionally dumb or non-internet-enabled physical devices and everyday objects.

Cloud Computing: This is the on-demand availability of computer system resources, especially data storage (cloud storage) and computing power, without direct active management by the user. The term is generally used to describe data centers available to many users over the internet. Cloud computing allows for safe, secure, and always-accessible storage of large amounts of data, as well as the ability to quickly scale up or down computing resources as needed.

Computer Vision: This is a field of artificial intelligence that trains computers to interpret and understand the visual world. Using digital images from cameras and videos and deep learning models, machines can accurately identify and classify objects, and then react to what they “see.” It's used in a range of technologies, from self-driving cars to facial recognition and augmented reality.

ASO: App Store Optimization.

T #N: T → Task , N → number of the task

2.0 Feasibility Study.

In this section, we will delve deep into the viability of our proposed investment company that aims to revolutionize the agricultural sector in Jordan. Our primary objective is to determine whether this project is both technically and financially feasible. By the end of this feasibility study, we aim to have a clear picture of the project's viability, ensuring that we are well-prepared to navigate any challenges and capitalize on opportunities. This will be our roadmap, guiding us as we embark on this exciting journey to reshape the agricultural landscape of Jordan.

2.1 Technical Feasibility.

- **Data Collection and Acquisition:** One of the fundamental aspects of machine learning projects is the availability of relevant and sufficient data. We need a reliable source from which we can collect plant-related data, such as soil moisture levels, temperature, humidity, light exposure, plant species, and growth patterns. We may need to rely on sensors, IoT devices, or crowdsourced data to acquire this information.
- **Data Preprocessing and Cleaning:** The data that were collected might be inconsistent, or noisy. In order to develop a reliable machine learning models, we must preprocess and clean the data to remove flaws and assure its quality.
- **Model Selection and Architecture:** Depending on the complexity of the task and the data at hand, several methods such as decision trees, random forests, support vector machines, or neural networks may be applicable. We are going to test each one of them, then we will choose the best performing one.
- **Feature Engineering:** Feature engineering involves selecting or transforming relevant features from our data that will be used as input to our machine learning model. It is essential to identify the most informative features that can help our model understand plant care requirements.
- **Model Training:** To train our machine learning model we need computational resources, including CPU/GPU and memory, so, we have to consider the complexity of our chosen model and ensure we have access to the necessary hardware or cloud-based resources for training.
- **Real-time or Batch Prediction:** We have to decide whether our project aims to provide real-time plant care advice or if it will function with batch processing. Real-time systems may have stricter requirements in terms of response time and computational resources.
- **Scalability:** Our project has to be able to scale as the number of our users increase so it can deal with the huge workload and be able to respond to all of the users without having them to deal with any problems.

- **User Interface and Experience:** The key to the project's success lies in creating a user-friendly and intuitive interface to deliver plant care advice. This is essential to ensure that users can effortlessly access and understand the provided information.
- **Security and Privacy:** We will take all necessary measures to handle user data securely and address privacy concerns diligently. Our aim is to instill confidence in our users, knowing that their personal information will be well-protected.
- **Testing and Validation:** Comprehensive testing and validation of our machine learning model will be necessary to ensure it provides accurate and reliable plant care advice.

2.2 Operational Feasibility

- **User Acceptance:** We will gather user feedback to assess the willingness of the target audience (plant owners or gardeners) to adopt and utilize our plant care system driven by machine learning.
- **Stakeholder Support:** Involves Identifying the stakeholders involved in the project, such as users, investors, or other relevant parties, then, we need to ensure that there is adequate support from these stakeholders, as their backing is essential for successful implementation.
- **Training and Support:** We will be giving the training and support requirements for users to effectively use our machine learning system in top of providing clear instructions and ongoing support, this can boost user confidence and satisfaction.
- **Maintenance and Updates:** To keep up with the evolving needs of both plants and users, we will continually evaluate and assess the effort needed to maintain and update our machine learning model and software. This proactive approach will ensure that our system remains relevant and effective over time.
- **Reliability and Robustness:** Our machine learning system has to be reliable and robust and provide consistent and accurate plant care advice under various conditions.
- **Risk Assessment:** During the operational phase of the project, it is essential for us to identify potential risks and challenges that may arise. To ensure smooth operations, we must develop contingency plans to effectively mitigate these risks and address any challenges that may arise. This proactive approach will help us maintain the project's stability and success even in the face of uncertainties.

2.3 Economic Feasibility

Table 1: Resource Cost Breakdown.

Resource Category	Resource	Cost Estimates	Notes and Details
Data Collection	Plant Image Dataset	\$100 - \$300	Purchasing or compiling a dataset of plant images
	Plant Care Information	\$200 - \$500	Collecting care instructions for various plants
	Data Cleaning	\$300 - \$1000	Preprocessing and organizing the collected data
Data Annotation	Hiring Annotators	\$300 - \$1000	Paying annotators for labeling plant images
	Annotation Tools/Software	\$100 - \$300	Tools for efficient data labeling
Subtotal: Data Collection & Annotation → \$1200 - \$3100			
Hardware	High-Performance CPU/GPU	\$1000-\$2000	Required for model training and inference.
Software/Tools	ML Frameworks	\$0-\$500	Utilizing open-source frameworks or libraries
	IDE(Integrated Development Environment)	\$0-\$300	Software for coding and development
	Data Processing Libraries	\$0-\$200	Libraries for data manipulation and analysis
Development	Coding and Testing	\$1500 - \$3000	Development and testing machine learning model
	Model Training/Optimization	\$500 - \$1500	Tuning and refining

			machine learning model
Subtotal: Development & Software → \$3000 - \$7000			
Human Resources	Data Scientist/ML Engineer	\$3000 - \$6000/month	Designing and implementing the ML model
	UI/UX Designer	\$1000 - \$3000/month	Designing the user interface
	Front-End Developer	\$1500 - \$3500/month	Developing the user interface
Subtotal: Human Resources → Monthly Costs Vary (Sum of ongoing HR expenses)			
Cloud Services	Hosting (AWS, Azure, etc.)	\$300 - \$800/year	Hosting the application and its components
	Deployment and Server Costs	\$200 - \$500/year	Costs for running and maintaining cloud servers
Marketing	Social Media Ads	\$100 - \$500	Advertising the application on social media
	Influencer Collaborations	\$200 - \$1000	Partnering with influencers for promotion
	ASO	\$100 - \$300	Enhancing app's visibility on app stores
Maintenance	Bug Fixes and Updates	\$500 - \$1000/year	Ongoing maintenance and improvements
	Server Maintenance	\$300 - \$500/year	Keeping servers updated and secure
Miscellaneous	Legal and Licensing	\$200 - \$500	Legal fees and licensing costs
	Unforeseen Expenses	\$300 - \$700	Contingency budget for unexpected costs
Initial Launch	Launch Events/PR	\$500 - \$1000	Promotional activities for initial app launch

Subtotal: Other Expenses ➔ \$2800 - \$7700
Total Initial Investment ➔ \$12300 - \$27800 (Sum of all initial costs)
Total Annual Costs ➔ Monthly + \$5,400 - \$12,200 (Sum of ongoing monthly costs)

2.4 Schedule Feasibility

Below are the anticipated tasks for the project, along with a table illustrating the projected time required for each task.

- Gather Project Requirements (5 days)
- Form Project Team (3 days)
- Develop Business Plan (10 days) - Depends on Task 1 and Task 2
- Design Software Systems and Applications (15 days) - Depends on Task 3
- Develop Content Management System (20 days) - Depends on Task 4
- Develop Expert Profiles System (18 days) - Depends on Task 4
- Develop Grants and Support System (22 days) - Depends on Task 4
- Develop User Analytics System (12 days) - Depends on Task 4
- Develop User Preferences System (8 days) - Depends on Task 4
- Develop Content and Posts System (25 days) - Depends on Task 4
- Develop User Authentication System (10 days) - Depends on Task 4
- Develop E-Commerce Module (15 days) - Depends on Task 4
- Develop Agricultural Chatbot (10 days) - Depends on Task 4
- Implement Cloud Services (5 days) - Depends on Task 4
- Content Enrichment (15 days) - Depends on Task 10
- Testing and Quality Assurance (20 days) - Depends on Task 5, Task 6, Task 7, Task 8, Task 9, Task 10, Task 11, Task 12, Task 13, Task 14
- Launch Platform (5 days) - Depends on Task 16
- Provide Customer Support (7 days) - Depends on Task 17
- Ongoing Maintenance (30 days) - Depends on Task 17
- .

Table 2 : Tasks Timeline.

Task	Effort (person-days)	Estimated Duration
T #1	5 days	5 days
T #2	3 days	3 days
T #3	15 days	10 days
T #4	20 days	15 days
T #5	27 days	20 days
T #6	23 days	18 days
T #7	25 days	22 days
T #8	18 days	12 days

T #9	10 days	8 days
T #10	25 days	25 days
T #11	15 days	10 days
T #12	9 days	15 days
T #13	8 days	10 days
T #14	7 days	5 days
T #15	20 days	15 days
T #16	22 days	20 days
T #17	5 days	5 days
T #18	8 days	7 days
T #19	45 days	30 days

2.5 Legal Feasibility

- **Data Privacy and Protection:** Since our project involves collecting and storing user data, we must ensure that we comply with data privacy laws and regulations.
- **Data Usage and Ownership:** Clarifying ownership rights and permissible use of data collected from users or other sources. Ensuring that we have the legal right to use the data for the intended purposes.

3.0 Project Management plan.

In this pivotal section, I will outline the comprehensive strategy and approach we will adopt to manage and execute our project effectively. The essence of this plan is to ensure that every facet of our project is meticulously organized, monitored, and steered towards our overarching goal: establishing a premier investment company for the agricultural sector in Jordan. In essence, this Project Management Plan will serve as our compass, guiding us through the complexities of our endeavor and ensuring we navigate them with precision and efficiency. By the end of this section, I aim to have a clear, actionable blueprint that will steer our project to success.

3.1 Project Organization

- **Management:** -

The Management role contains multiple jobs such as: HR Manager, Accountant, etc. with tasks like:

1. Establishing subscription & partnership process.
2. Developing a partnership with donors.
3. Hiring a qualified team to operate the business.
4. Office and equipment procurement.

- **Marketing:** -

The Marketing team is responsible for Marketing, advertising, and getting more subscribers, communicating with partners who provide goods and services, and making new partnerships. With tasks like:

1. Establishing subscription & partnership process (Shared with management).
2. Developing a partnership with donors (Shared with management).
3. Hiring a qualified team to operate the business (Shared with management).
4. And subscribing with server providers.

- **IT:** -

The Programmers and administrators to operate, maintain and develop new features, with tasks like: -

1. Develop software products.
2. Configure and install call center.
3. Deploy cloud services.

- **Customer care:** -

Customer support and operate the call center.

- **Content writers:** -

Write new content, collect new suitable content, and update the system.

3.2 Roles and Responsibilities

Our team is composed of experienced professionals with a track record of success in website design and development. Our team for the agriculture project consists of experts in the field of sustainable farming practices and food production. Our team includes a project manager, a farm manager, and two assistants. Our team includes a project manager, a designer, a developer, and a content creator.

Project manager and Database Developer: (Khaled Rabee)

- Management staff for Business management, HR management, and accountant.
- Skilled in project planning and coordination.
- Responsible for overall project management and communication with the client.
- Creating the overall structure and organization of a database system based on the specific requirements of the application.

Designer: (Yazeed Mshayekh)

- Experienced in visual design.
- Expertise in user interface and user experience design.
- Responsible for creating the visual design of the app.

Human Resource: (Basil Darwazeh)

- Recruiting and hiring: This involves identifying the staffing needs of the organization, attracting and selecting qualified candidates, and onboarding new employees.
- Training and development: This involves providing employees with the skills and knowledge they need to perform their jobs effectively. This may include training programs, workshops, and other learning opportunities.
- Performance management: This involves setting performance goals for employees, providing feedback and support to help them meet these goals, and conducting performance evaluations.
- Compensation and benefits: This involves managing employee pay and benefits packages, including salary, bonuses, and vacation time.
- Compliance: This involves ensuring that the organization is in compliance with all relevant labor laws and regulations.

Content creator: (Ahmad Eid)

- Experienced in content creation.
- Skilled in writing and organizing website content.
- Responsible for creating and organizing the website's content.
- App development.

Software Developer: (Ahmad Eid, Basel Darwazeh and Musa Sarsour)

- write the code to implement the application.
- build the app's functionality.
- integrate the UI/UX elements into a working application.

Customer Relations Manager: (Musa Sarsour)

- Maintain a positive relationship with clients.
- Ensure their satisfaction with products or services.
- Gather feedback to understand their needs and concerns.

Our team is committed to implementing sustainable farming practices that not only produce high-quality crops, but also protect and preserve the environment. We will work closely together to ensure a successful project and will regularly communicate with stakeholders to ensure that we are meeting the goals and objectives of the project.

3.3 Software Process Model.

There are many different software processes, but all involve:

- **Specification** – what the system should do.
- **Development** – design and implementation.
- **Validation** – checking if the system meets the needs of the customer.
- **Evolution** – changes to the project scope, requirements, or plan based on the feedback that we got from the customer to make the required changes.

The software development process for our system would be incremental, plan-driven.

3.4 Tools and Techniques.

Table 3: Tools and Techniques.

Tools And Techniques	Purpose
Programming languages: Python HTML, CSS	Backend development, Using Machine learning Algorithms to learn it into the data to make a models which we're going to use it for predictions. Using Deep Learning and AutoML to improve the performance and avoid the risk of wrong predictions. Front-end development
Frameworks (Libraries)	Scikit-learn (get the algorithms to use for making a model like Randomforest/Naïve Bayes, for validation and testing purposes), Seaborn (data visualization), Pandas (preprocessing and analysis for the data), Matplotlib (data visualization)
Canva	Design
Discord	Meetings (Online)
Streamlit	Deployment
Kaggle	Get different insights to know how to deal with this kind of data.

Machine learning	Classification: To learn the algorithms on a data and then as an example predict the plant type or the type of disease, and then give you the solutions to know how to take care about this type of plant.
Lucidchart	For Design and models

3.5 Work breakdown.

3.5.1 Project Tasks, Task Description, And the outcomes.

The overall project is broken down into 10 Tasks that are adding up to give an accurate estimate of budget, resources, and time. We assumed one person accountable for each work package and one or more people responsible of the tasks. The team will own the management of the task and be responsible for reporting to the project manager. The diagram below shows the work breakdown structure and task estimated to implement the project.

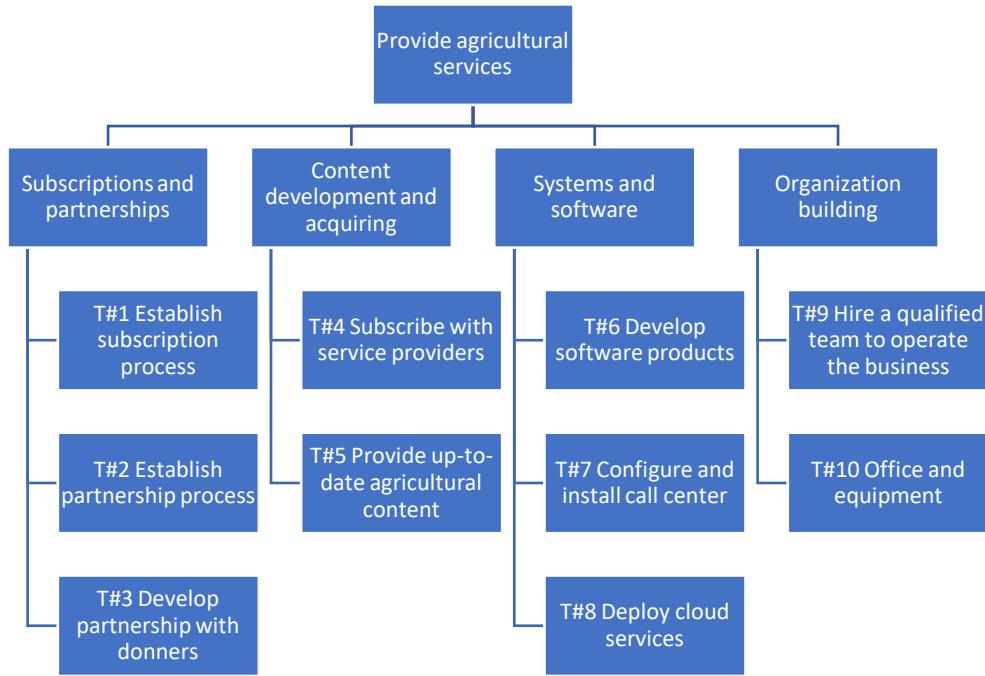


Figure 1: Tasks Roadmap.

The following table presents the details for each of the tasks, including the outcome, the implementation method, the team responsible for carrying out the task, and a summary of the application methodology.

Table 4: Strategic Implementation Roadmap.

#	Word package	Outcome	Implementation	Team member	Methodology
T #1	Establish subscription process.	List of subscribers' farmers and gardeners	Marketing campaigns. Calls over call centers. Visits to farms.	Marketing manager and marketing team	Develop subscription plan include the service and cost. Develop a list of farmers and gardeners in the country. Market the company services through media. Contact farmers and gardeners through visits and call centers.
T #2	Establish partnership process.	Partnership with suppliers	Search for dealers of agricultural materials, products, and equipment. Partner with those suppliers.	Management and marketing.	Search the ministry of trade database for relevant business, contact this business and convince them to partner with our company. Maintain the partnership with the partners based on win-win relationship with them.

T #3	Develop partnership with donners.	Partnership with donners	Find donners and get their support to the business.	Management and marketing.	Update the list of donners who support agriculture and farmers in Jordan. Develop informative presentation that presents the impact of our project. Understand the priorities of the donners to attract them to support our project.
T #4	Subscribe with service providers.	List of information content suppliers.	Search for service providers and partner with them.	Management and marketing.	Cooperate with FAO and search the internet for the agriculture and water information providers and research centers. Develop relationship with those sources and keep the list of sources updated to provide timely and relevant information to our clients.
T #5	Provide up-to-date agricultural content.	Authoring, writing, and publishing content.	Determine the topics to include in the web site. Contract experts to write about the selected topics. Review and publish the content.	Content writer	Design and develop the portal that provides information to client. Adopt content management system like Wordpress to manage and publish the content and keep the information up-to-date. Develop a list of researchers in the field of agriculture, and contract them to create content for specific topics of interest of our clients.
T #6	Develop software products.	Portal system and applications are developed and deployed	Define the requirements, design UI/UX, build and deploy the system.	IT team	Use Incremental Plan-Driven methodology for software development to develop the core services and launch them within a specific period of time at the first Iteration. And at the second Iteration we're Going to add more features and services to the system. And we have a future plans to add more features to make our system more reachable from different platforms.
T #7	Configure and install call center.	The call center is configured, and agents are trained on the system.	Procure or subscribe to CC service. Configure the CC.	Customer care and IT team.	Put forward the features and specifications of the call center. Procure or subscribe to CC services that satisfies and comply to the specifications. and train customer care team on using the call center.

T #8	Deploy cloud services.	Cloud services are leased and configured.	Sign a contract with cloud service providers. And deploy the applications on the cloud.	IT team.	Specify the required processing and storage capacity to operate the software. Study the available cloud service providers in terms of reliability, security and cost. Choose the best available sources and install our software and configure the infrastructure to run the applications smoothly.
T #9	Hire a qualified team to operate the business.	Management, IT, content writer and marketing team are hired.	Screen the candidates and hire the most suitable resources.	Management	Classifying the required jobs according to the need for each job and setting a date for filling each vacancy, Announcing vacancies through social media and various websites, receiving applications, reviewing the CVs for each job, interviewing the shortlisted candidates and selecting the most suitable applicants for jobs
T #10	Office and equipment procurement	Office is rented and furnished	Search for suitable office space, rent it and furnish it.	Management	Cooperate with an engineering office to make the appropriate design for the office, and determine the furniture required for office furniture. After that, the furniture is purchased according to the expansion of the company's business and the employees to be appointed.

3.5.2 Deliverables and Milestones.

First let's talk about the iterations for this project:

Iteration #1:

The first iteration will include the following use cases:

- User Registration.
- User Login.
- View Content (Articles, Videos, Guides).
- Search for Agricultural Topics.
- Request Expert Consultation.
- Purchase Agricultural Products.
- Manage Subscriptions.

- Contact Customer Support.
- Manage Content Calendar.
- Access Agricultural Experts' Profiles.
- Update Content Information.
- Manage User Subscriptions.
- Provide Customer Support.
- Complete Transaction and Payment.
- Manage User Accounts.
- Schedule Expert Consultation.

Iteration #2:

The second iteration will include the following use cases:

- View Supplier Information.
- Access Personalized Dashboard.
- Chat with Agricultural Chatbot.
- Collaborate with External Contributors.
- Analyze User Analytics.
- Customize Interface Preferences.
- Update Content Information.
- Interact with Agricultural Suppliers.
- Collaborate with Agricultural Experts.
- Administer User Accounts.
- Manage Team Roles and Responsibilities.

➤ Future plans:

For our future plans, we want to start making deals with factories that can help us in producing IoT devices such as sensors and cameras which will assist the user by giving them warnings if any of his plants got affected by a disease and reports of his plants conditions regularly (like if they need more water or they need some fertilizer). Also, some of these devices will help the user in managing his irrigation system.

Another thing we are aiming to is to make our project to be able to support other languages, this thing will make the global launch for the project possible. Also, we want to make the project available on all different types of platforms.

Now, let's go for the deliverables:

Deliverable #1:

- We will provide the user with a user manual for the first version of the project. (for iteration #1).
- We will give the user a usable version of the project which will include all the functionalities in the first iteration.

Deliverable #2:

- We will provide the user with a user manual for the second version of the project. (for iteration #1 and #2).
- We will give the user a usable version of the project which will include all the functionalities in the second iteration.

➤ **Milestones:**

Milestone #1:

- User Registration.
- User Login.
- View Content (Articles, Videos, Guides).
- Search for Agricultural Topics.
- Request Expert Consultation.
- Purchase Agricultural Products.
- Manage Subscriptions.
- Contact Customer Support.

Milestone #2:

- Manage Content Calendar.
- Access Agricultural Experts' Profiles.
- Update Content Information.
- Manage User Subscriptions.
- Provide Customer Support.
- Complete Transaction and Payment.
- Manage User Accounts.
- Schedule Expert Consultation.

Milestone #3:

- View Supplier Information.
- Access Personalized Dashboard.
- Chat with Agricultural Chatbot.
- Collaborate with External Contributors.
- Analyze User Analytics.
- Customize Interface Preferences.
- Update Content Information.
- Interact with Agricultural Suppliers.
- Collaborate with Agricultural Experts.
- Administer User Accounts.
- Manage Team Roles and Responsibilities.

3.5.2 Resources Needed (Skills, HW and SW).

Below is the list of resources required to run the project along with the annual cost of each.

Table 5: Table of Resources.

Resource Category	Resource	Cost Estimates	Notes and Details
Data Collection	Plant Image Dataset	\$100 - \$300	Purchasing or compiling a dataset of plant images
	Plant Care Information	\$200 - \$500	Collecting care instructions for various plants
	Data Cleaning	\$300 - \$1000	Preprocessing and organizing the collected data
Data Annotation	Hiring Annotators	\$300 - \$1000	Paying annotators for labeling plant images
	Annotation Tools/Software	\$100 - \$300	Tools for efficient data labeling
Subtotal: Data Collection & Annotation ➔ \$1200 - \$3100			
Hardware	High-Performance CPU/GPU	\$1000-\$2000	Required for model training and inference.

Software/Tools	ML Frameworks	\$0-\$500	Utilizing open-source frameworks or libraries
	IDE(Integrated Development Environment)	\$0-\$300	Software for coding and development
	Data Processing Libraries	\$0-\$200	Libraries for data manipulation and analysis
Development	Coding and Testing	\$1500 - \$3000	Development and testing machine learning model
	Model Training/Optimization	\$500 - \$1500	Tuning and refining machine learning model
Subtotal: Development & Software ➔ \$3000 - \$7000			
Human Resources	Data Scientist/ML Engineer	\$3000 - \$6000/month	Designing and implementing the ML model
	UI/UX Designer	\$1000 - \$3000/month	Designing the user interface
	Front-End Developer	\$1500 - \$3500/month	Developing the user interface
Subtotal: Human Resources ➔ Monthly Costs Vary (Sum of ongoing HR expenses)			
Cloud Services	Hosting (AWS, Azure, etc.)	\$300 - \$800/year	Hosting the application and its components
	Deployment and Server Costs	\$200 - \$500/year	Costs for running and maintaining cloud servers
Marketing	Social Media Ads	\$100 - \$500	Advertising the application on social media
	Influencer Collaborations	\$200 - \$1000	Partnering with influencers for promotion
	ASO	\$100 - \$300	Enhancing app's visibility on app stores

Maintenance	Bug Fixes and Updates	\$500 - \$1000/year	Ongoing maintenance and improvements
	Server Maintenance	\$300 - \$500/year	Keeping servers updated and secure
Miscellaneous	Legal and Licensing	\$200 - \$500	Legal fees and licensing costs
	Unforeseen Expenses	\$300 - \$700	Contingency budget for unexpected costs
Initial Launch	Launch Events/PR	\$500 - \$1000	Promotional activities for initial app launch
Subtotal: Other Expenses ➔ \$2800 - \$7700			
Total Initial Investment ➔ \$12300 - \$27800 (Sum of all initial costs)			
Total Annual Costs ➔ Monthly + \$5,400 - \$12,200 (Sum of ongoing monthly costs)			

3.5.3 Dependencies and Constraints.

Table 6 : Tasks Dependencies.

Task #	Task Name	Dependencies
T #1	Gather Project Requirements	None
T #2	Form Project Team	T #1
T #3	Develop Business Plan	T #1, T #2
T #4	Design Software Systems and Applications	T #3
T #5	Develop Content Management System	T #4
T #6	Develop Expert Profiles System	T #4
T #7	Develop Grants and Support System	T #4
T #8	Develop User Analytics System	T #4
T #9	Develop User Preferences System	T #4

Task #	Task Name	Dependencies
T #10	Develop Content and Posts System	T #4
T #11	Develop User Authentication System	T #4
T #12	Develop E-Commerce Module	T #4
T #13	Develop Agricultural Chatbot	T #4
T #14	Implement Cloud Services	T #4
T #15	Content Enrichment	T #10
T #16	Testing and Quality Assurance	T #5, T#6, T #7, T #8, T #9, T #10, T #11, T #12, T #13, T #14
T #17	Launch Platform	T #16
T #18	Provide Customer Support	T #17
T #19	Ongoing Maintenance	T #17

3.6 Assigning Team Members to Tasks.

Branch Name	Duration	Start	End	Resources
My garden my home	53 days	7/1/2023	23/8/2023	
Creating logo	2 days	7/1/2023	7/3/2023	Yazeed
Creating log in options and buttons	5 days	7/1/2023	7/6/2023	Khalid
Creating a database	25 days	7/1/2023	7/26/2023	Khalid
Create the design of the app	1 month	7/10/2023	8/15/2023	Yazeed
Create table in main menu for the current plants	5 days	7/15/2023	7/20/2023	Ahmad
Link database to table	10 days	7/22/2023	8/2/2023	Khaled
Add option to logout and use other accounts	5 days	7/25/2023	7/30/2023	Basel
Add second page for recommended products	13 days	7/25/2023	8/8/2023	Basel

Add third page for live sensor feed	15 days	7/7/2023	8/12/2023	Musa
Add options to main table to add plants	6 days	8/2/2023	8/8/2023	Ahmad
Add fourth page to include social media and thank for sponsors	10 days	8/2/2023	8/12/2023	Musa
create help button	8 days	8/5/2023	8/13/2023	Basel
Create the three options for the help button to be a call or message a support team or be a help guide	13 days	8/5/2023	8/18/2023	Basel
Testing	5 days	8/18/2023	8/23/2023	Paid tester

Figure 2:Tasks Distribution.

3.7 Project Schedule (Gantt chart and PERT diagram).

Campaign Name: My Graden Home
 Target audience: Dr. Hamad Alsawalqah
 Start Date: 7/1/2023
 Launch Date: 8/23/2023
 Last modified by: Basil Darwazeh

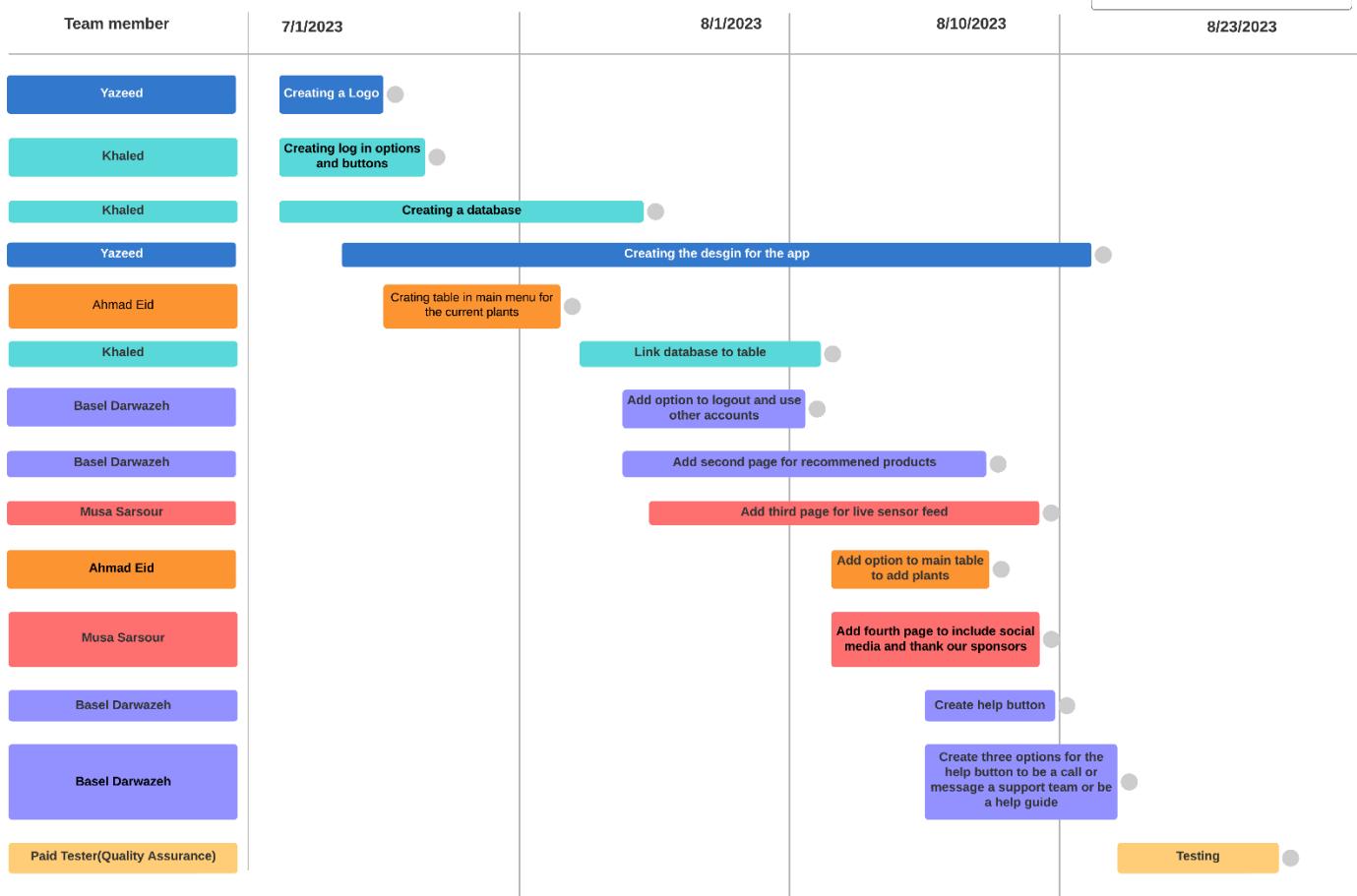
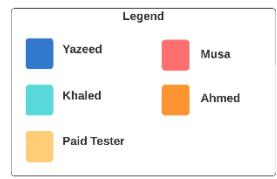


Figure 3: Project schedule.

Task Dependencies and Durations:

- 1. Gather Project Requirements (5 days)**
- 2. Form Project Team (3 days)**
- 3. Develop Business Plan (10 days) - Depends on Task 1 and Task 2**
- 4. Design Software Systems and Applications (15 days) - Depends on Task 3**
- 5. Develop Content Management System (20 days) - Depends on Task 4**
- 6. Develop Expert Profiles System (18 days) - Depends on Task 4**
- 7. Develop Grants and Support System (22 days) - Depends on Task 4**
- 8. Develop User Analytics System (12 days) - Depends on Task 4**
- 9. Develop User Preferences System (8 days) - Depends on Task 4**
- 10. Develop Content and Posts System (25 days) - Depends on Task 4**
- 11. Develop User Authentication System (10 days) - Depends on Task 4**
- 12. Develop E-Commerce Module (15 days) - Depends on Task 4**
- 13. Develop Agricultural Chatbot (10 days) - Depends on Task 4**
- 14. Implement Cloud Services (5 days) - Depends on Task 4**
- 15. Content Enrichment (15 days) - Depends on Task 10**
- 16. Testing and Quality Assurance (20 days) - Depends on Task 5, Task 6, Task 7, Task 8, Task 9, Task 10, Task 11, Task 12, Task 13, Task 14**
- 17. Launch Platform (5 days) - Depends on Task 16**
- 18. Provide Customer Support (7 days) - Depends on Task 17**
- 19. Ongoing Maintenance (30 days) - Depends on Task 17**

Critical Path:

Based on the example durations and dependencies provided, the critical path can be determined using techniques like the **Critical Path Method (CPM)**. In this example, the critical path would be:

Gather Project Requirements (5 days) -> Form Project Team (3 days) -> Develop Business Plan (10 days) -> Design Software Systems and Applications (15 days) -> Develop Content and Posts System (25 days) -> Testing and Quality Assurance (20 days) -> Launch Platform (5 days) -> Provide Customer Support (7 days) -> Ongoing Maintenance (30 days)

The total time along this critical path would be **120 days**.

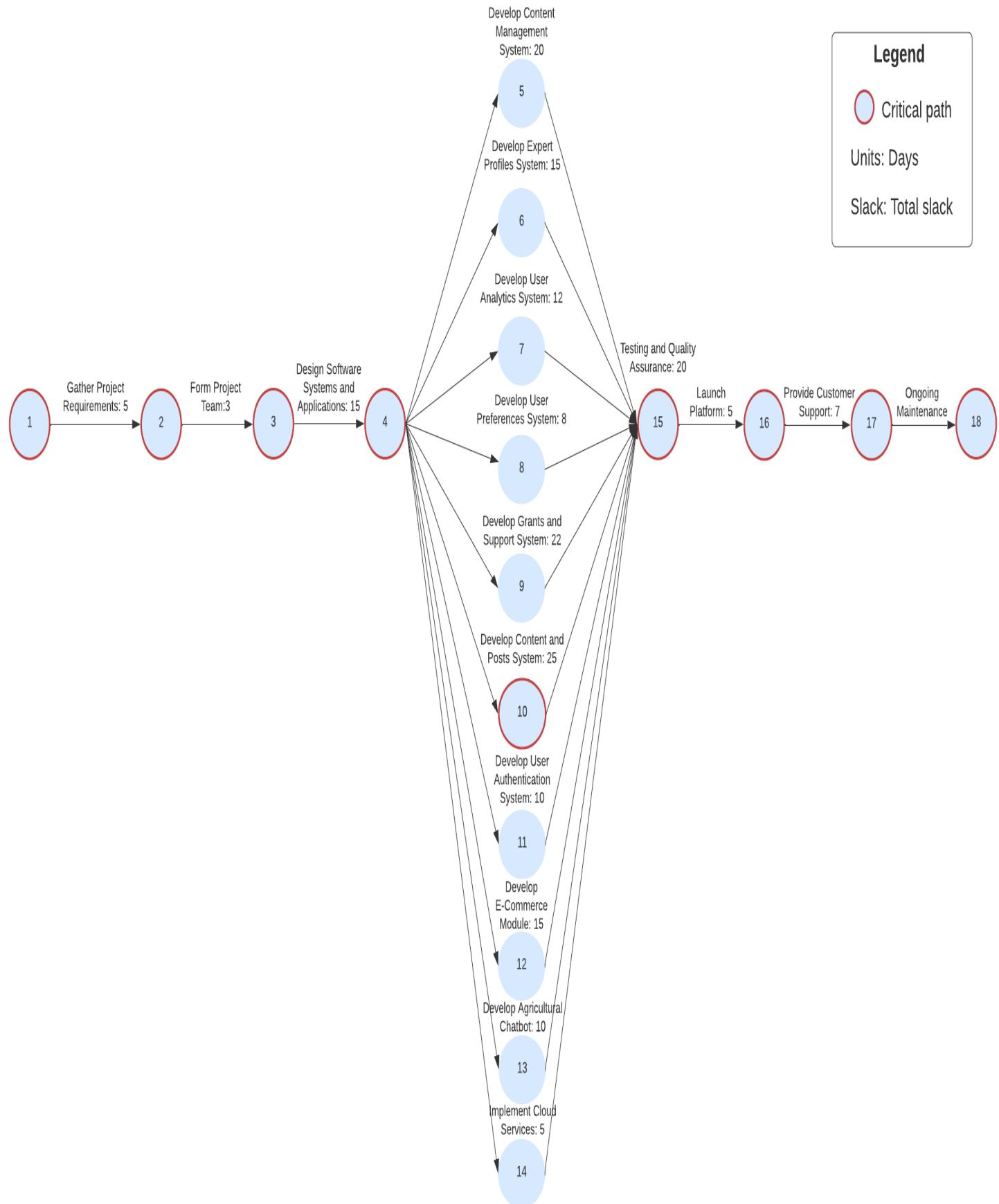


Figure 4: Activity Network.

3.8 Risk Analysis and Plans.

Table 7: Risk Analysis.

Risk type	Affect	Description	Probability	Effects
Market Risk	Business	Changes in the agriculture market, such as fluctuations in commodity prices or demand for specific crops	High	Tolerable
Technology Risk	Project and product	there might be risks related to data breaches, cyber-attacks, system failures, or software bugs.	Moderate	Serious
Supplier and Partner Risk	Project	The reliability and credibility of agricultural suppliers and partners can significantly impact the quality of products and services offered to the community.	Moderate	Serious
Regulatory and Compliance Risk	Project and business	The agriculture sector is subject to various regulations and compliance requirements, such as environmental standards, product safety regulations, and import/export rules.	High	Serious
Adoption and Engagement Risk	Project and product	Convincing the target community to adopt and actively engage with the platform or services can be challenging.	Moderate	Serious
Competitive Risk	Business	The agriculture sector may already have	High	Serious

		established players offering similar services.		
Natural and Climate Risks		The agriculture sector is highly susceptible to natural disasters, weather events, and climate change impacts.	High	catastrophic

Table 8: Risk Plans.

Risk type	Strategy
Market Risk	Diversification of Crop Offerings:
	<ul style="list-style-type: none"> • Encourage agricultural producers to diversify their crop selection, reducing reliance on a single crop and mitigating the risk associated with fluctuations in the demand and prices of specific crops. • Provide guidance and support to farmers to explore alternative crops suitable for their region and market demand.
Technology Risk	Technology Upgrades: Regularly update the platform to incorporate the latest technologies and improvements based on user feedback and emerging industry standards.
Supplier and Partner Risk	Diversification of Suppliers:
	<ul style="list-style-type: none"> • Avoid over-reliance on a single supplier or partner by diversifying the sources of agricultural materials and services. • Engage multiple suppliers to ensure a steady supply chain.
Regulatory and Compliance Risk	Keep track of any changes in government policies related to agriculture and adapt the service accordingly.
Adoption and Engagement Risk	If initial adoption is slow, allocate additional resources to targeted marketing campaigns to raise awareness and attract new users.
Competitive Risk	Market Research and Analysis:
	<ul style="list-style-type: none"> • Conduct thorough market research to understand the competitive landscape, including key players, their offerings, pricing, and market share. • Identify gaps in the market or areas of unmet customer needs to create a unique value proposition.
Natural and Climate Risks	Resilience Fund: Set up a contingency fund to absorb potential financial losses during periods of market downturns or unexpected events.

3.9 Monitoring, Reporting, and Controlling Mechanisms .

Performance Monitoring and Validation:

- Regularly monitoring the performance of our machine learning model and keep tracking of how accurately it identifies the plants and provides the right treatment recommendations.
- We will create a validation set of plant images and names with known correct treatments so we can use this set to validate the accuracy and effectiveness of our model regularly.
- Implementing performance metrics such as precision, recall, F1-score, and accuracy to assess the model's performance and identify potential issues.

User Feedback and Error Reporting:

- We will implement a user feedback system where users can rate the accuracy and helpfulness of the advice they receive also to take a look if they have any other services that they would like to see in our project.
- Setting up an error reporting mechanism that enables users to report any misidentification or incorrect treatment recommendations.
- We will conduct frequent evaluations and analyses of user feedback and error reports to recognize patterns and pinpoint opportunities for enhancement.

Model Versioning and Updates:

- We will maintain a record of various iterations of our machine learning model by implementing a versioning system, allowing us to manage changes and enhancements as we progress.

- Establishing a process for updating the model with new plant data and treatments.

Continuously train the model on new and diverse data to enhance its accuracy and coverage of plant species and treatments.
- Notifying users about model updates and improvements, informing them of the changes and how it might affect their plant care recommendations.

4.0 Software Requirements Specifications.

In this crucial section, I will delve into the intricate details of the software components required for our project. The SRS will serve as a foundational document, capturing the essence of what our software needs to achieve and how it will cater to our users, especially in the agricultural sector of Jordan. This Software Requirements Specifications section will serve as our blueprint, guiding our development team and ensuring that our software aligns perfectly with our project's goals.

4.1 System Stakeholders and Requirements Sources.

A. The Stakeholders for our system:

- **The Stakeholders for our system**
- **Farmers, Garden Owners, and Investors:**

Primary users of the platform seeking agricultural information, guidance, and services.

Requirements: User-friendly interface, relevant and up-to-date content, personalized recommendations, subscription options.

- **Agricultural Experts:**

Provide content, consultations, and expertise to users.

Requirements: Easy content creation/upload process, direct communication channels with users, access to user data for personalized advice.

- **Agricultural Suppliers and Sellers:**

Offer products and services to platform users.

Requirements: Supplier profiles, product listings, transaction features, visibility to target audience.

- **Support Team:**

Assist users with technical issues, subscription inquiries, and general assistance.

Requirements: User support channels (chat, email, phone), knowledge base, ticketing system.

- **Management and Administrators:**

Oversee platform operations, manage content, monitor financials, and ensure compliance.

Requirements: Admin dashboard, content management tools, analytics, user management, revenue tracking.

- **Marketing Team:**

Promote the platform, attract users, and manage marketing campaigns.

Requirements: Marketing tools (social media integration, email campaigns), user analytics for targeting, user feedback collection.

- **Cloud Service Provider:**

Host and maintain the platform's software systems and applications.

Requirements: Reliable and scalable cloud infrastructure, data security, uptime guarantees.

- **Financial Partners and Investors:**

Provide funding and financial support for the project.

Requirements: Financial tracking and reporting, investment information sharing.

- **Government and Agricultural Development Agencies:**

Provide support, grants, and assistance for agricultural projects.

Requirements: Compliance with agricultural regulations, documentation for grant applications.

- **External Content Contributors:**

Experts and organizations contributing articles, videos, and resources to the platform.

Requirements: Content submission and approval process, contributor profiles.

- **Users' Networks and Communities:**

Users who share the platform's content and services within their own networks.

Requirements: Social sharing features, referral programs, user-generated content options.

B. The Requirement sources for our system.

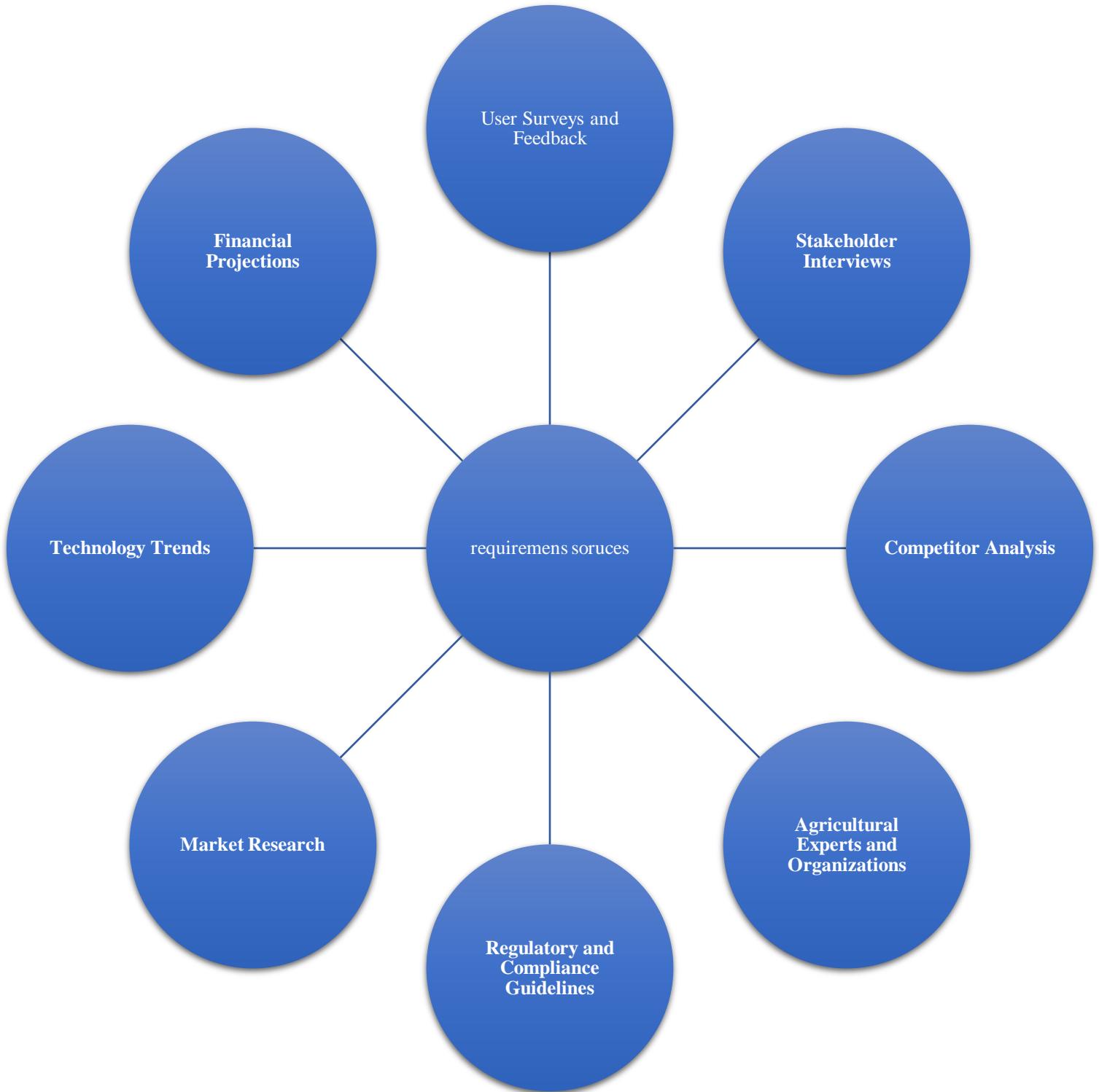


Figure 5: Requirement sources

1. User Surveys and Feedback.



**MY GARDEN HOME
COMPANY**

Customer Satisfaction Survey

Full Name _____ Age _____ Contact Phone _____
Address _____ Gender Male Female
Email _____

1. How did you hear about My Garden Home?

Social Media Search Engine Advertisement
 Word of Mouth Other (Please specify) _____

2. Which of the following best describes your role or interest?

Farmer Garden owner Agricultural investor Agricultural expert Other (Please specify) _____

3. How often do you use My Garden Home?

Daily Weekly Monthly Rarely

4. What features do you find most valuable on My Garden Home? (Check all that apply)

Access to agricultural articles and guides Expert consultation services Product purchasing and supplier information Webinars and discussions Personalized recommendations

5. How satisfied are you with the content available on My Garden Home?

Very satisfied Satisfied Neutral Unsatisfied Very unsatisfied

6. How would you rate your experience with our customer support team?

Excellent Good Average Poor Very Poor

Do you have any suggestions for how we can improve our product/service or customer experience or the user interface or navigation of My Garden Home? (Open-ended response)

Thank you for taking the time to complete our customer satisfaction survey.
Your feedback will help us improve our product/service.

Figure 6: User surveys and Feedback

2. Stakeholder Interviews

Interview stakeholders to gain insights into their expectations, concerns, and suggestions for the platform.

3. Competitor Analysis

Study similar platforms and services to identify features that are well-received by users.

❖ [Competitor 1](#)



Figure 7:AgriConsult Logo

➤ Strengths:

- Established brand presence in the agriculture sector.
- Robust library of comprehensive agricultural guides and resources.
- Active community forums for farmers to share insights and experiences.
- Offers live webinars featuring renowned agricultural experts.
- Integration with local agricultural suppliers for seamless product purchasing.

➤ Weaknesses:

- Limited personalized consultation services.
- User interface lacks modern design and may be less intuitive.
- Minimal mobile app support for on-the-go access.

➤ Key Features:

- Extensive library of articles and guides.
- Community forums for discussions.
- Webinars with expert speakers.
- Direct integration with suppliers.
-

❖ [Competitor 2](#)



Figure 8: AgriSmart Logo

➤ Strengths:

- User-friendly and modern interface with intuitive navigation.

- Advanced data analytics tools for personalized recommendations.
- Real-time chat support for instant expert advice.
- Collaborative features for farmers to share success stories.
- Exclusive partnerships with top agricultural research institutions.

➤ Weaknesses:

- Limited supplier integration for product purchasing.
- Smaller library of content compared to other platforms.
- Webinars and expert interactions are less frequent.

➤ Key Features:

- Data-driven personalized recommendations.
- Real-time chat support.
- Collaborative success stories.
- Partnerships with research institutions.

❖ My Garden Home.



➤ Strengths:

- Comprehensive combination of personalized consultations and rich content resources.
- Extensive network of agricultural suppliers for easy product purchasing.
- Regularly updated content including articles, videos, and guides.
- Strong emphasis on connecting farmers, investors, and experts.
- Multi-language support catering to the local market.

➤ Weaknesses:

- Limited data analytics tools compared to Competitor 2.
- Less established brand presence compared to Competitor 1.
- Webinars and community forums may need further expansion.

➤ Key Features:

- Personalized consultations with agricultural experts.
- Extensive supplier network for product purchasing.
- Diverse and regularly updated content.
- Multi-language support.
- Emphasis on networking and collaboration.

4. Agricultural Experts and Organizations

Collaborate with agricultural experts and organizations to understand the type of content and features that would be valuable to users.

5. Regulatory and Compliance Guidelines

Research relevant regulations and guidelines in the agricultural sector to ensure compliance and integration of necessary features. General regulatory and compliance considerations that might be relevant to our agricultural investment and consulting project in Jordan.

A. Business Licensing and Registration:

In Jordan, any business entity must be registered with the Ministry of Industry, Trade and Supply. You would need to follow the necessary procedures to obtain the appropriate licenses and permits

for your investment and consulting company. This includes registering your company name, obtaining a tax number, and complying with other regulatory requirements.

B. Data Protection and Privacy:

If your platform collects and stores user data, you would need to ensure compliance with data protection laws in Jordan. As of my last update, Jordan has implemented data protection regulations, and you would need to handle user data responsibly, obtain necessary consent, and protect user privacy.

C. E-Commerce Regulations:

If your platform involves e-commerce activities, you need to adhere to the Electronic Transactions Law, which governs electronic transactions, digital signatures, and online contracts. It's important to ensure that your online transactions, payment processing, and terms of use comply with these regulations.

D. Intellectual Property Rights:

Respecting intellectual property rights is crucial. Ensure that the content on your platform is original or properly licensed. Registering trademarks, copyrights, or patents, if applicable, can help protect your platform's unique features and branding.

E. Consumer Protection Laws:

Jordan has consumer protection laws that you need to be aware of, especially when offering services and products to consumers. These laws aim to ensure fair practices, transparent pricing, and accurate information for consumers.

F. Agricultural Regulations:

Given the agricultural focus of your platform, you might need to consider relevant agricultural regulations. This could include guidelines for promoting sustainable farming practices, proper use of agricultural materials, and adherence to quality standards for agricultural products.

G. Taxation and Financial Regulations:

Complying with tax laws and financial regulations is essential. You would need to register for and remit taxes appropriately based on your business activities and revenue. Consulting with financial experts or tax advisors can help you navigate these aspects.

H. Content and Advertising Regulations:

If you provide information, advice, or advertise agricultural products, be aware of advertising standards and guidelines. Your content should be accurate, transparent, and not misleading.

6. Market Research

Analyze the current trends, challenges, and opportunities in the agricultural industry in Jordan to tailor your platform accordingly.

7. Technology Trends

Stay updated on technological advancements in cloud services, data security, and user experience to ensure your platform is up-to-date.

8. Financial Projections

Use financial projections and budget estimates to determine resource allocation for different aspects of the platform.

4.2 User Requirement Definition.

- User-Friendly Interface:

The platform should have an intuitive and easy-to-navigate interface that allows users to access information and services effortlessly.

- Rich and Relevant Content:

Users should have access to a wide range of high-quality and up-to-date agricultural information, articles, videos, and guides.

- **Personalized Recommendations:**

The platform should provide personalized recommendations based on users' interests, location, and preferences.

- **Subscription Options:**

Users should be able to choose from different subscription tiers that offer varying levels of access to content and services.

- **Direct Expert Consultations:**

Users should have the ability to directly communicate with agricultural experts for personalized advice and guidance.

- **Search and Filtering Capabilities:**

Users should be able to search for specific topics, products, or services and apply filters to refine their search results.

- **Supplier and Product Information:**

Users should be able to view detailed information about agricultural suppliers, their products, and services.

- **Transaction and Payment Support:**

Users should be able to complete transactions securely, including purchasing agricultural materials, tools, and services.

- **Interactive Tools:**

The platform should provide interactive tools such as calculators, forums, and chat support to enhance user engagement.

- **Support and Assistance:**

Users should have access to a customer support team that can assist with technical issues, subscription inquiries, and general questions.

- **User Profiles and Dashboards:**

Users should be able to create and manage their profiles, track their subscriptions, and view their transaction history.

- **Social Sharing Features:**

Users should be able to easily share platform content and information on social media and other communication channels.

- **Mobile Accessibility:**

The platform should be accessible and functional on various devices, including smartphones and tablets.

- **Regular Content Updates:**

Users should expect a continuous stream of new and relevant content, including articles, videos, and webinars.

- **User-Generated Content:**

Users should have the ability to contribute their own content, such as reviews, comments, and articles.

- **Data Privacy and Security:**

Users' personal and payment information should be securely stored and protected according to relevant data privacy regulations.

- **Feedback Mechanism:**

Users should be able to provide feedback on content, services, and user experience to help improve the platform.

- **Easy Subscription Management:**

Users should be able to easily subscribe, upgrade, or cancel their subscriptions without hassle.

- **Community Engagement:**

Users should be able to participate in discussions, forums, and webinars to connect with other members of the agricultural community.

- **Language and Localization:**

The platform should support multiple languages and provide content relevant to the local agricultural context.

4.3 Use case Diagrams.

The **Use Cases** for our project:

- 1. User Registration.**
- 2. User Login.**
- 3. View Content (Articles, Videos, Guides).**
- 4. Search for Agricultural Topics.**
- 5. Request Expert Consultation.**

- 6. Purchase Agricultural Products.**
- 7. Manage Subscriptions.**
- 8. Contact Customer Support.**
- 9. View Supplier Information.**
- 10. Access Personalized Dashboard.**
- 11. Chat with Agricultural Chatbot.**
- 12. Manage Content Calendar.**
- 13. Collaborate with External Contributors.**
- 14. Analyze User Analytics.**
- 15. Customize Interface Preferences.**
- 16. Access Agricultural Experts' Profiles.**
- 17. Update Content Information.**
- 18. Manage User Subscriptions.**
- 19. Provide Customer Support.**
- 20. Complete Transaction and Payment.**
- 21. Manage User Accounts.**
- 22. Interact with Agricultural Suppliers.**
- 23. Collaborate with Agricultural Experts.**
- 24. Administer User Accounts.**
- 25. Schedule Expert Consultation.**
- 26. Manage Team Roles and Responsibilities.**

Now, let's compare these use cases to identify potential duplications and overlaps:

- "User Registration" and "User Login" could be combined as part of a broader "User Authentication" use case.
- "View Content" and "Search for Agricultural Topics" might be related and can be grouped under an "Access and Search Content" use case.
- "Request Expert Consultation" and "Schedule Expert Consultation" could be combined.
- "Participate in Webinars and Discussions" might be combined with "Access Personalized Dashboard" as part of a "User Engagement" use case.
- "Manage Subscriptions" and "Manage User Subscriptions" could potentially be unified under a "Subscription Management" use case.

Use Case Diagram: User Authentication.

User Authentication Diagram

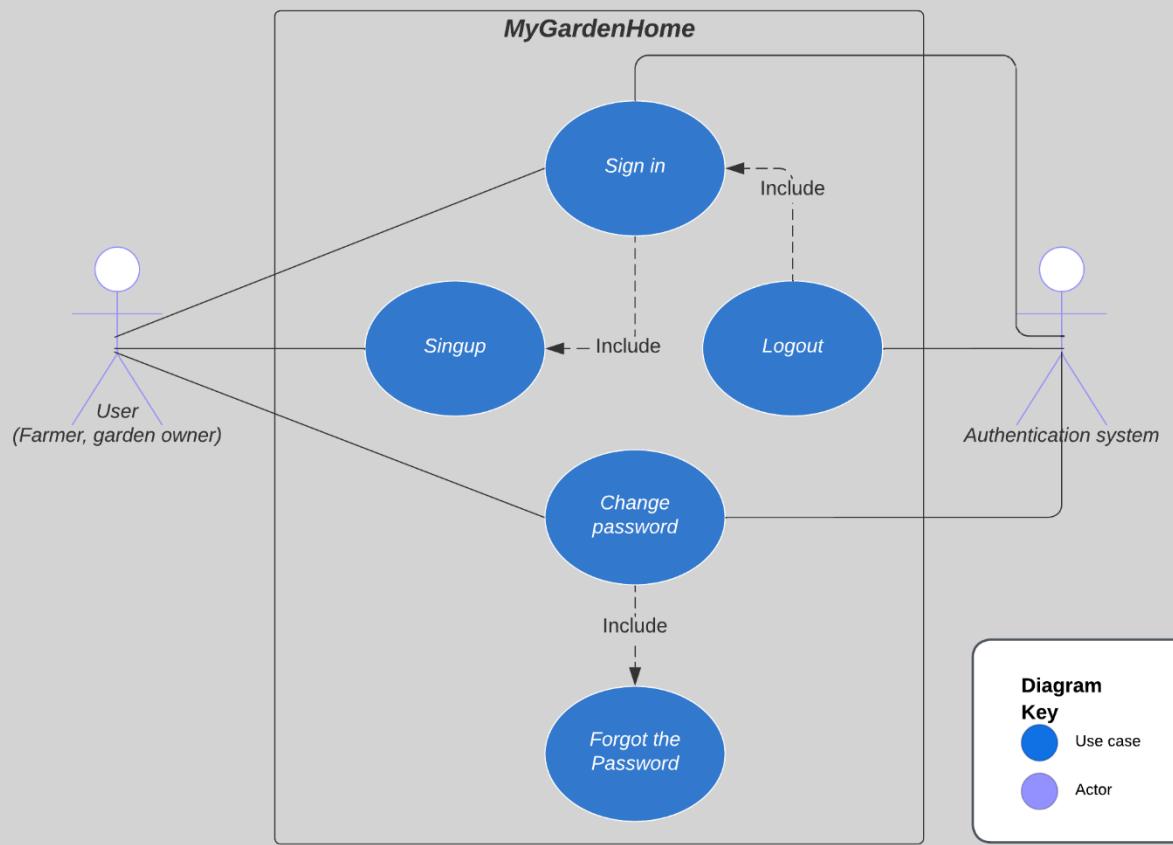


Figure 9: User Authentication.

Use Case Diagram: Access and Search Content with Manage Content.

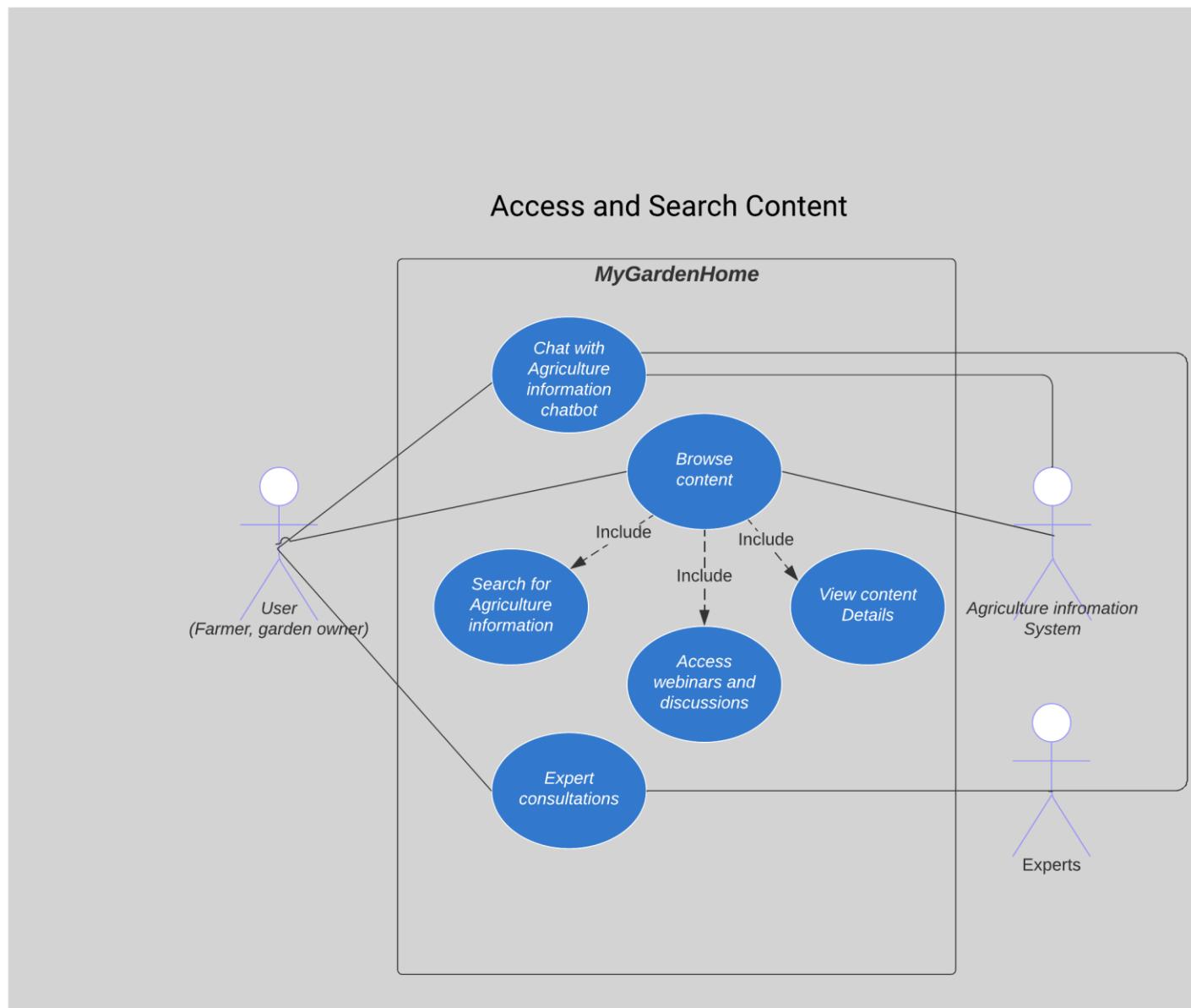
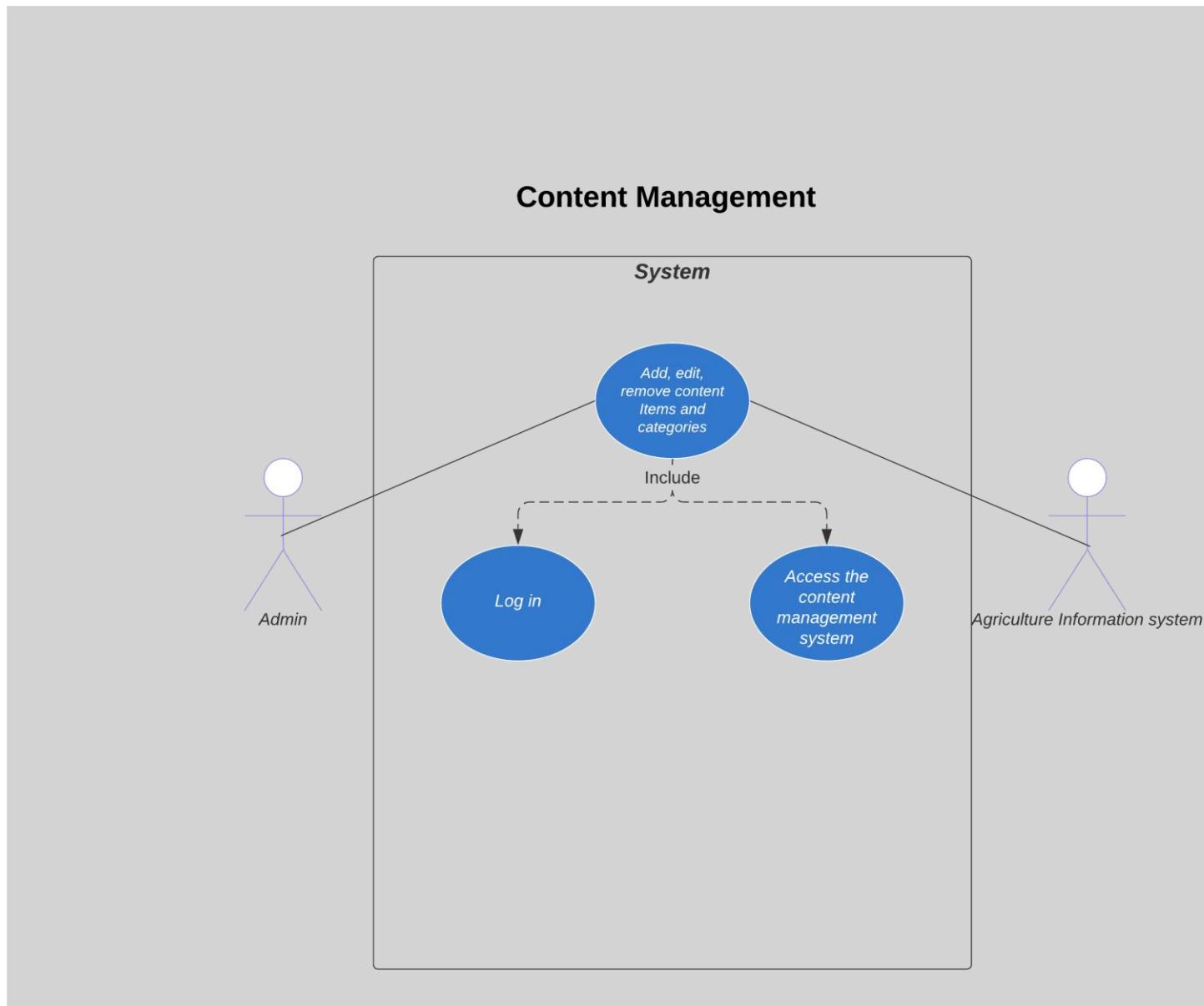


Figure 10:Access and Search Content



Use Case Diagram: Agricultural Information Chatbot.

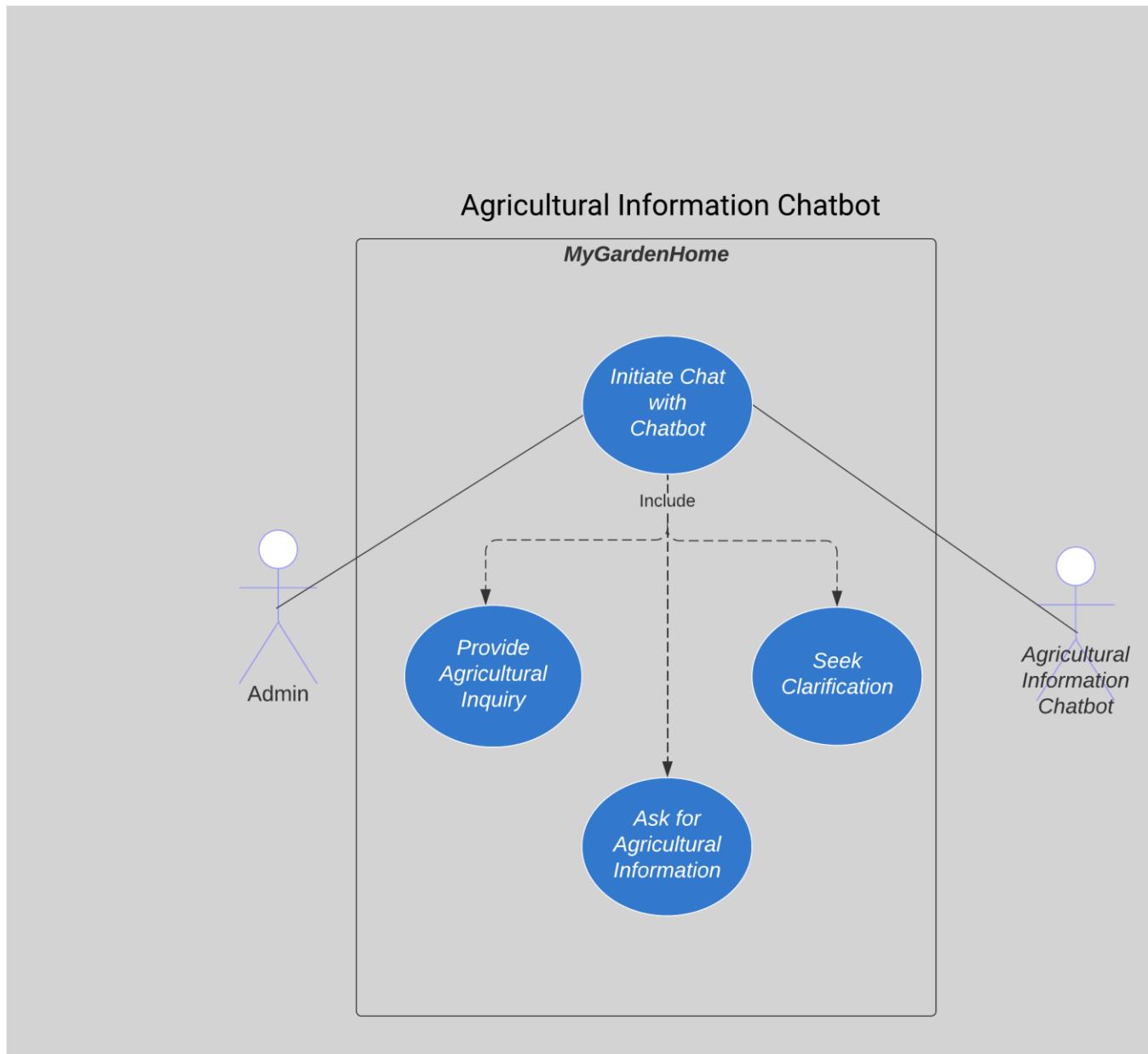


Figure 12: Agricultural Information Chatbot.

Use Case Diagram: Expert Consultation with Manage Expert Consultation.

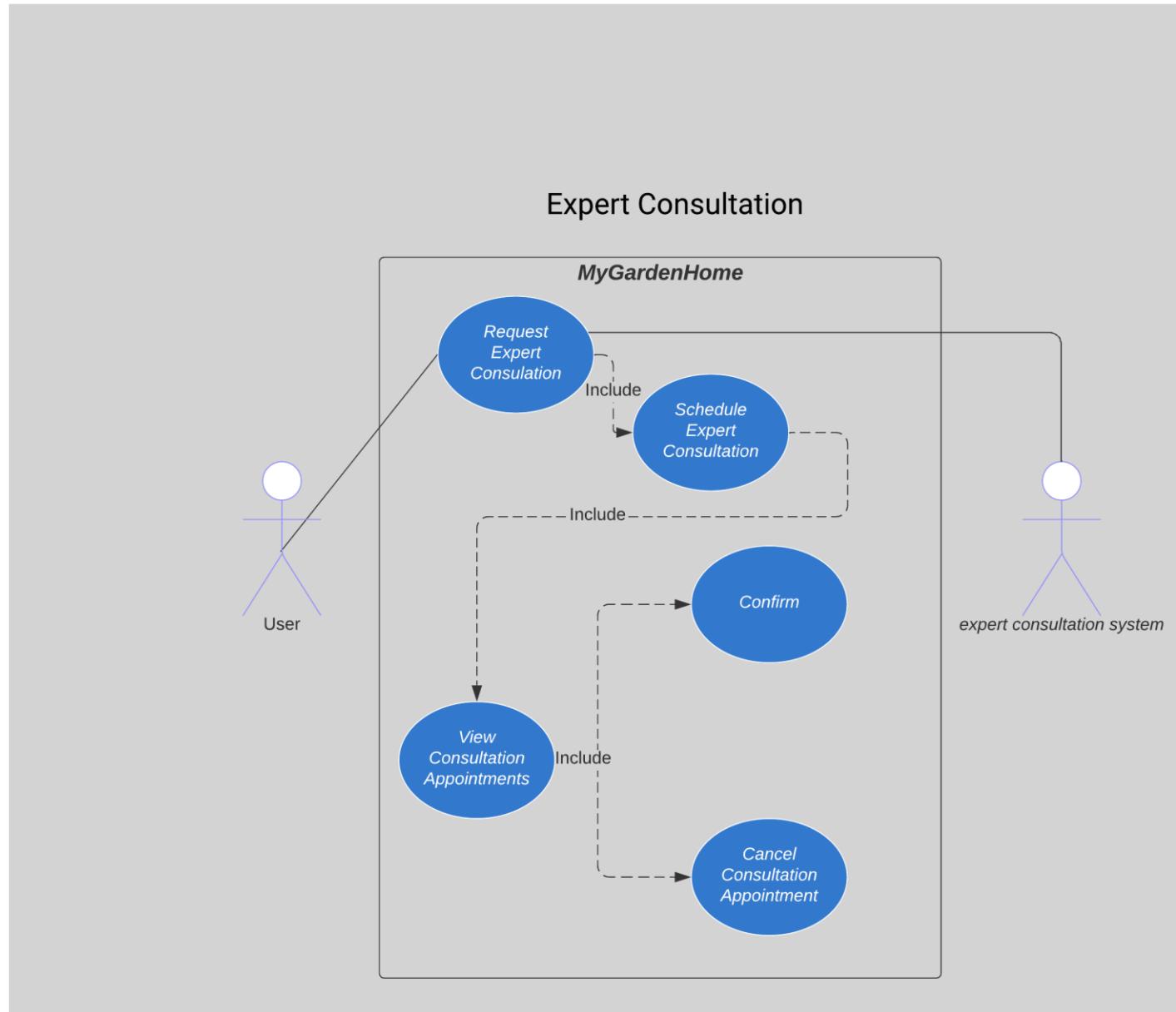
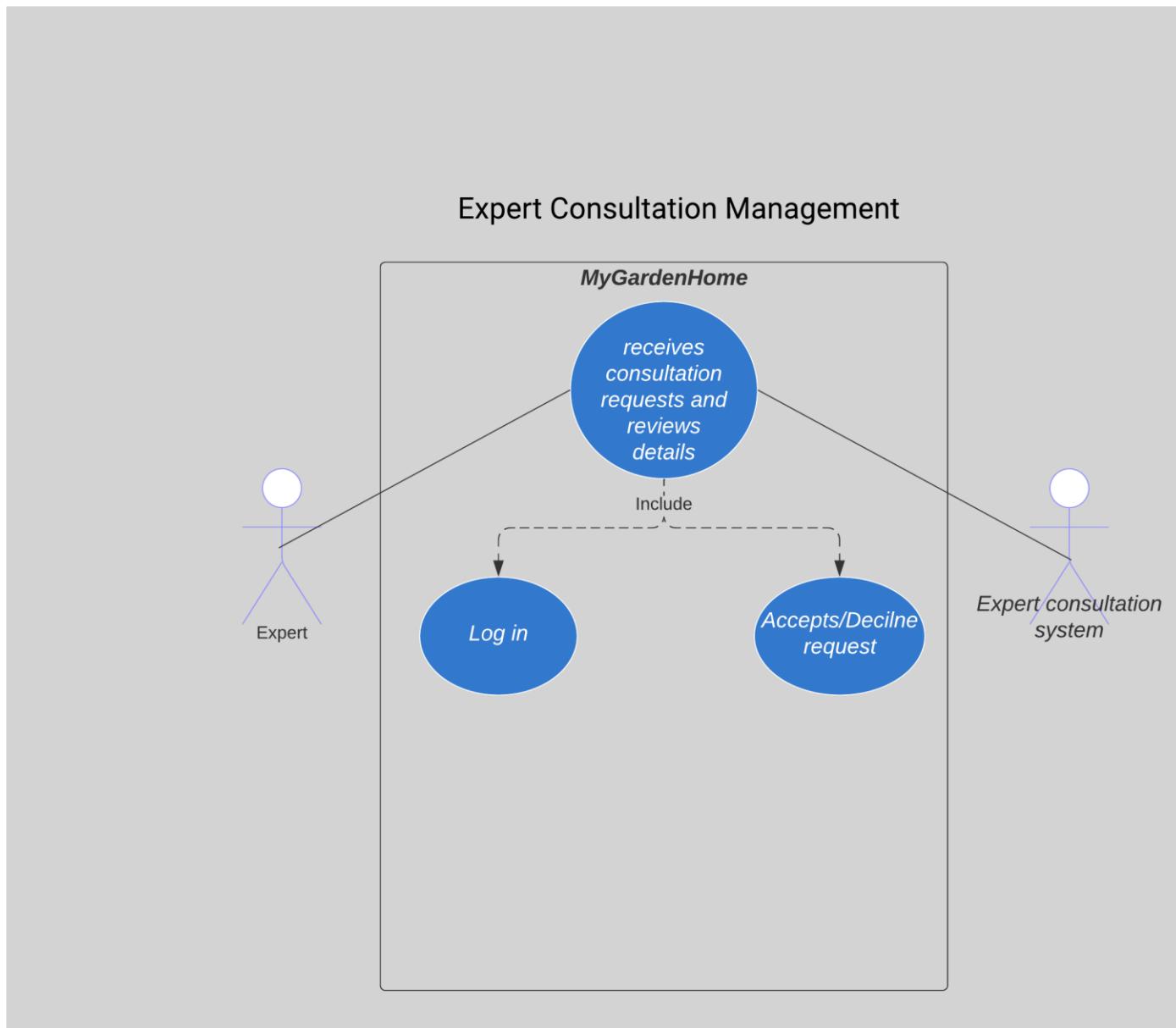


Figure 13:Expert Consultation.



Use Case Diagram: Purchase Agricultural Products.

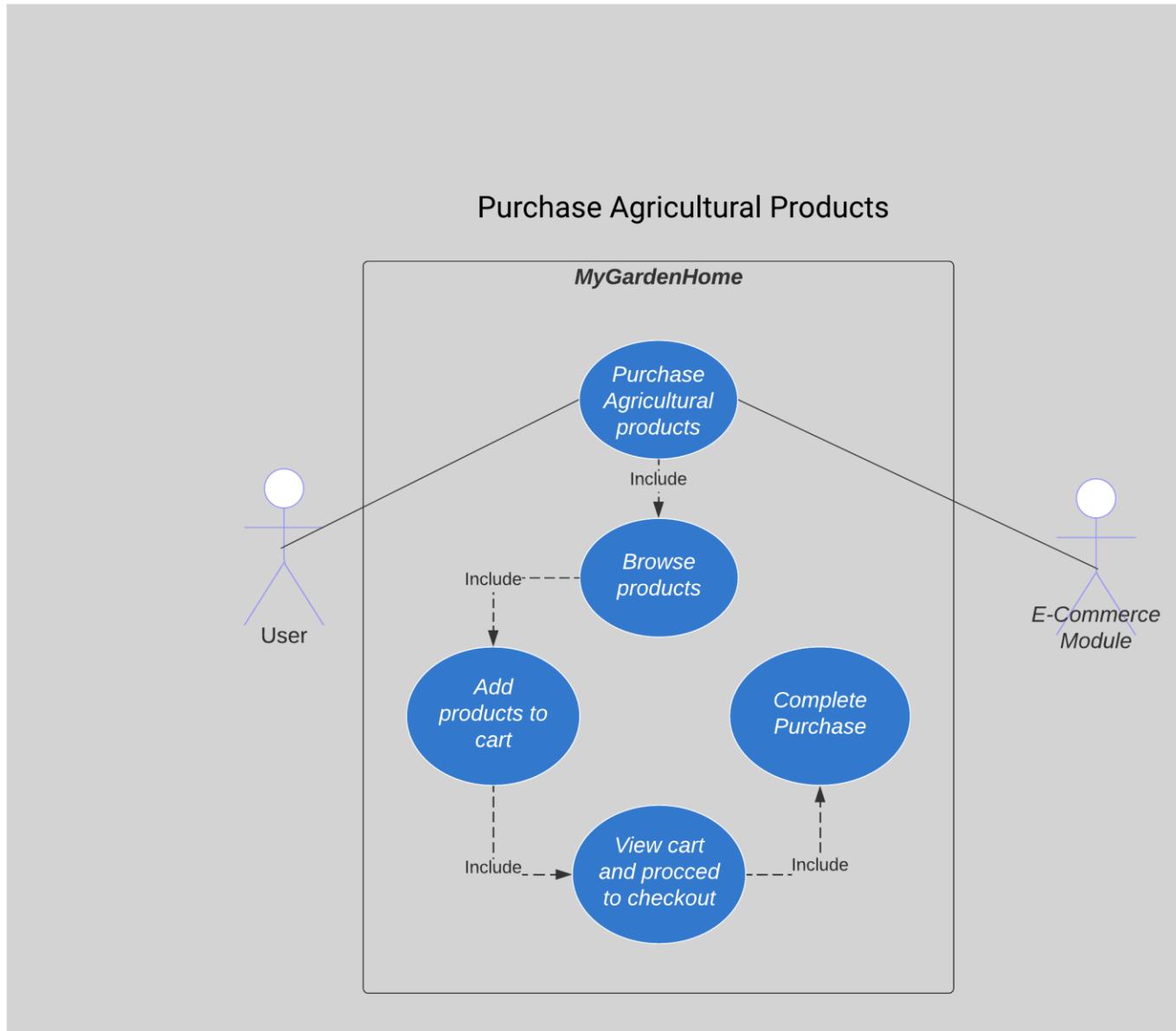


Figure 15:Purchase Agricultural Products.

Use Case Diagram: Manage Subscriptions.

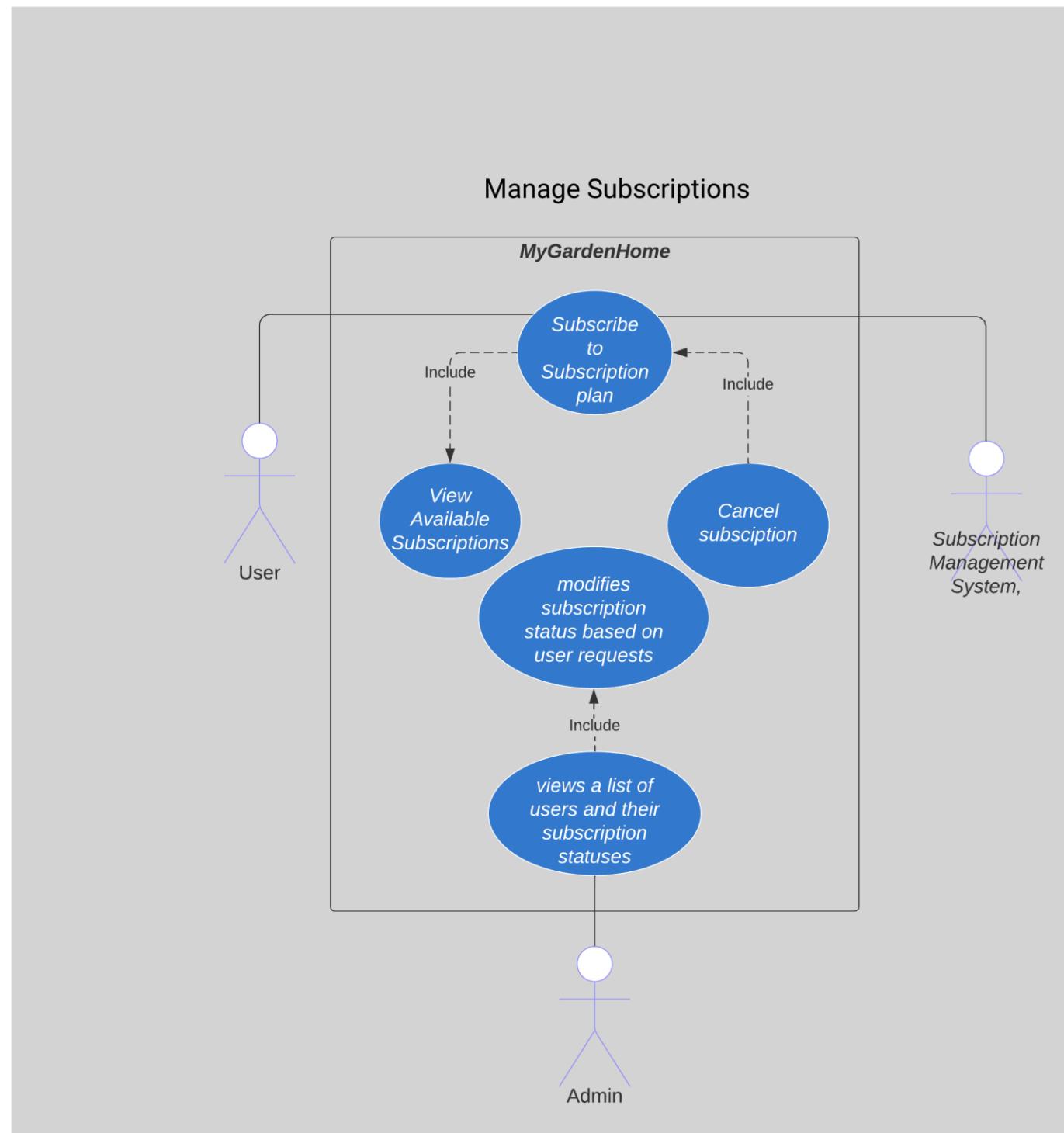


Figure 16:Manage Subscriptions.

Use Case Diagram: Contact and Provide Customer Support.

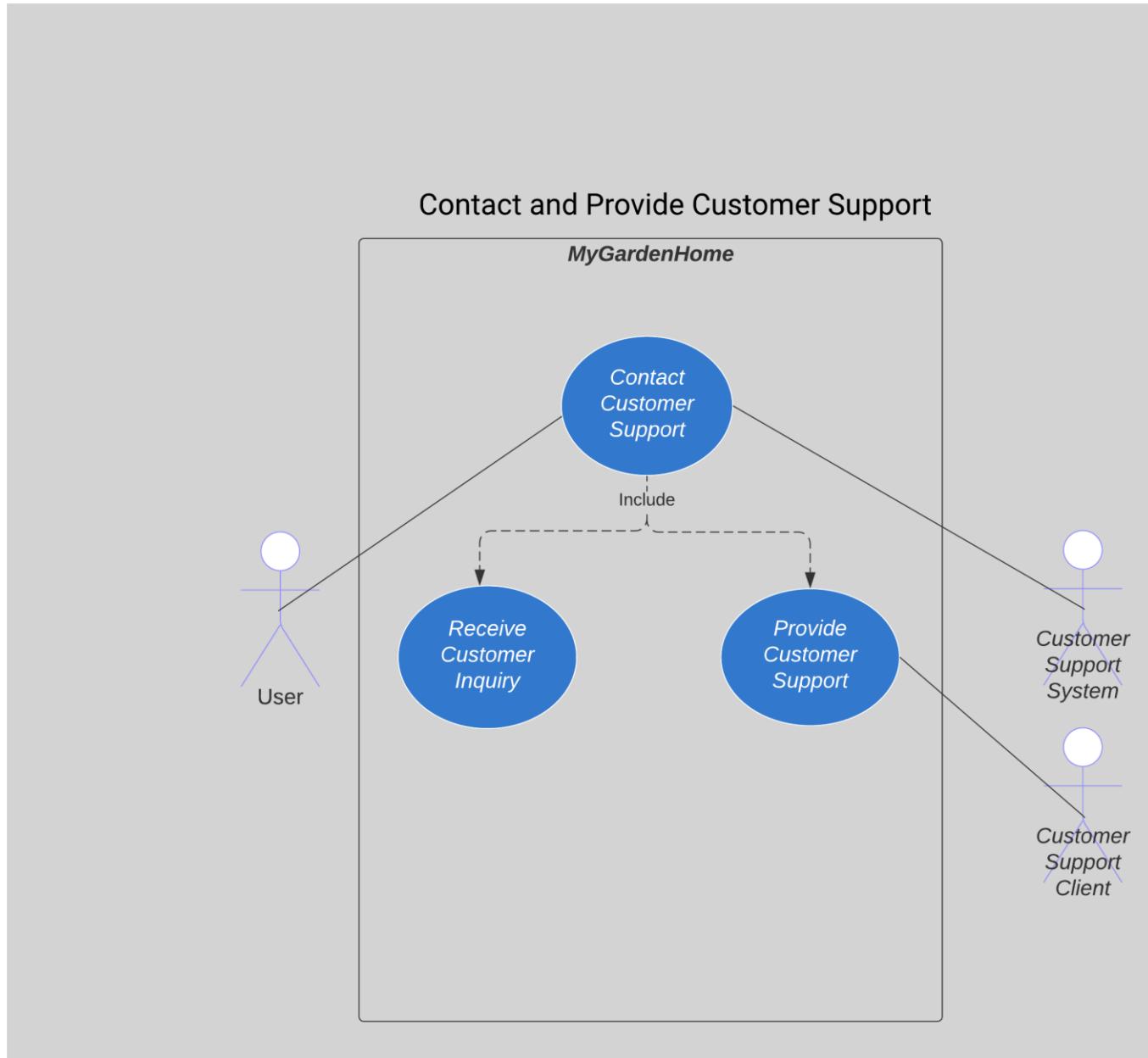


Figure 17: Contact and Provide Customer Support.

Use Case Diagram: Manage Customer Support.

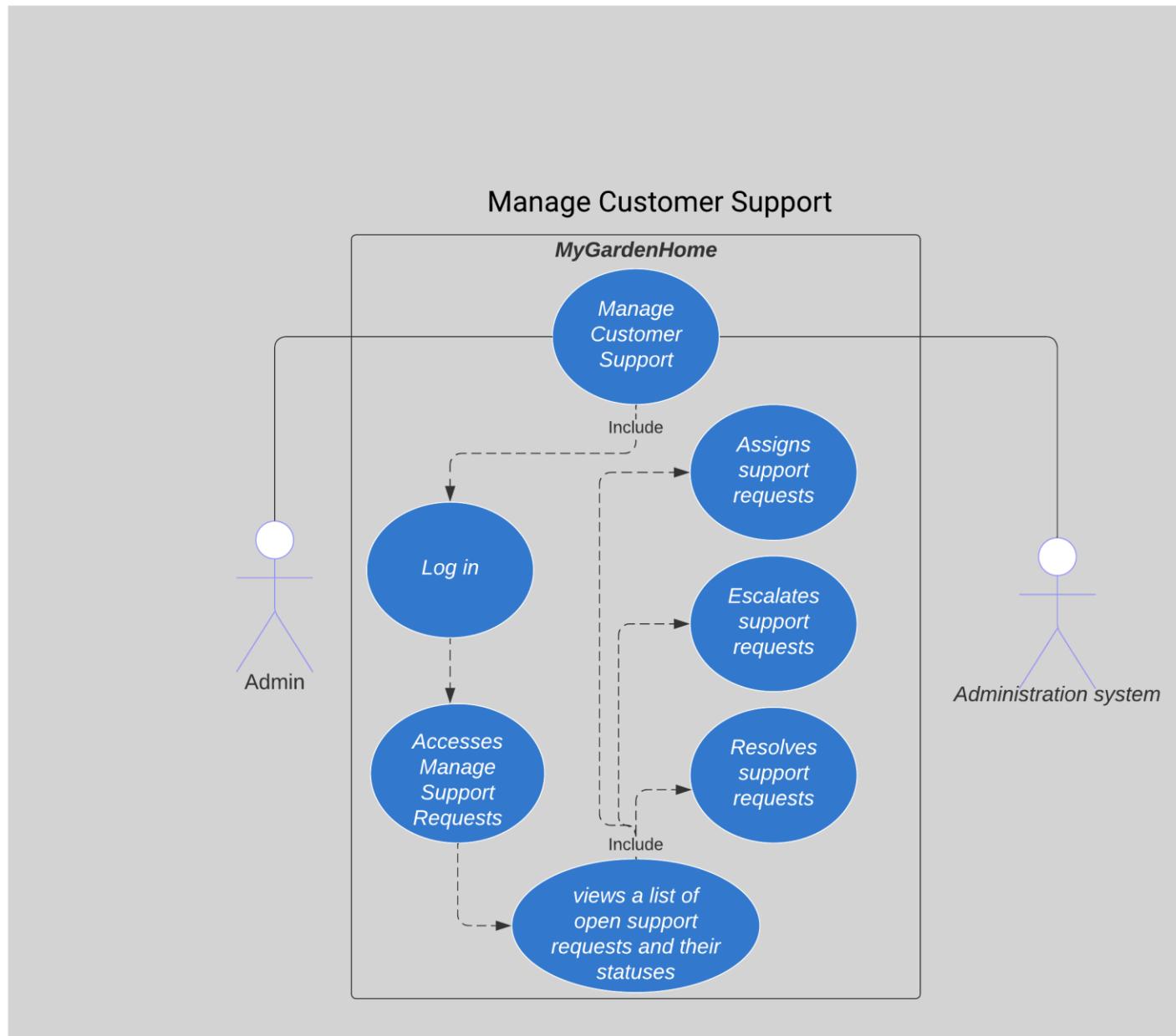


Figure 18: Manage Customer Support.

Use Case Diagram: User Engagement.

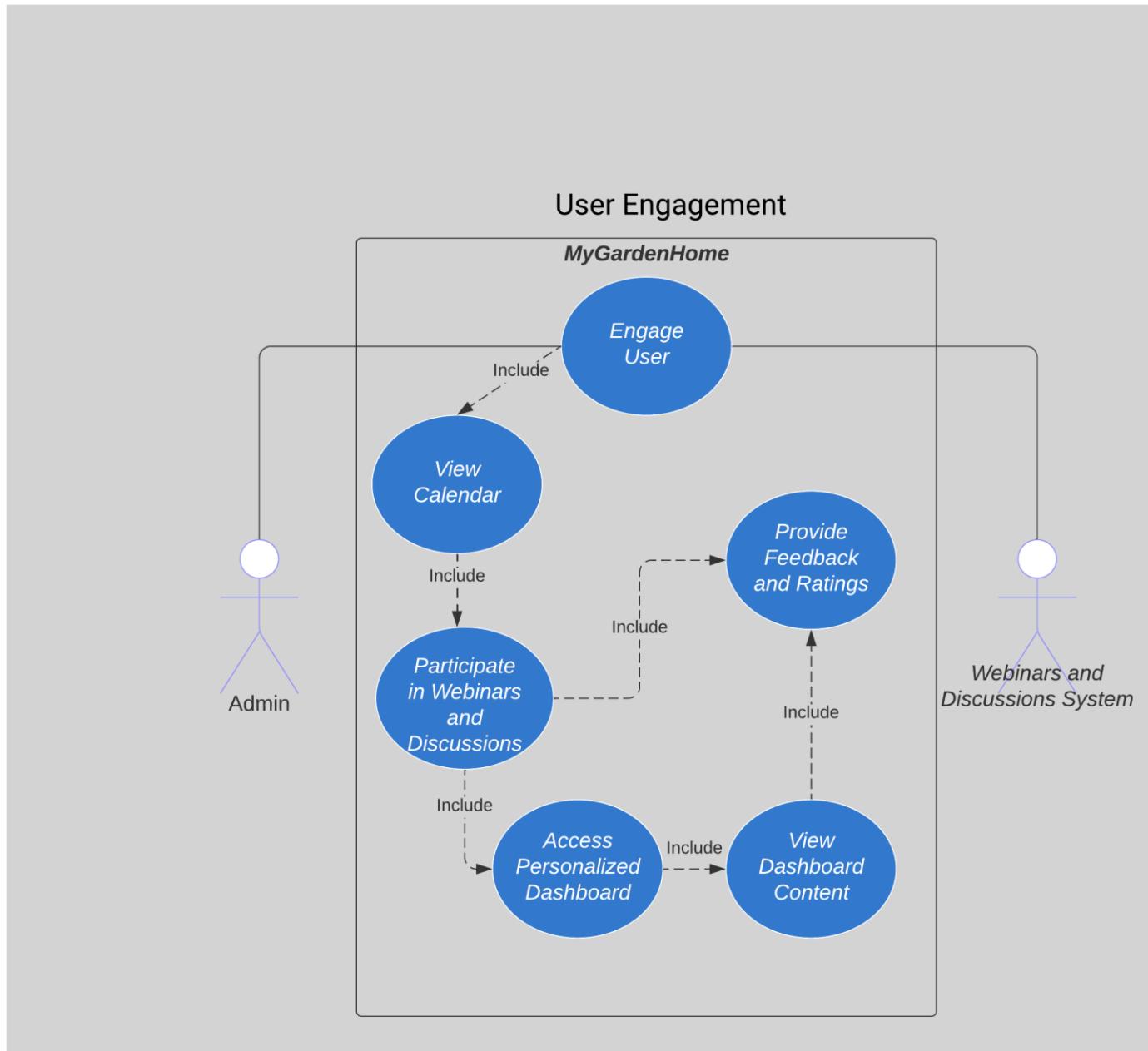


Figure 19: User Engagement.

Use Case Diagram: Manage Content Calendar.

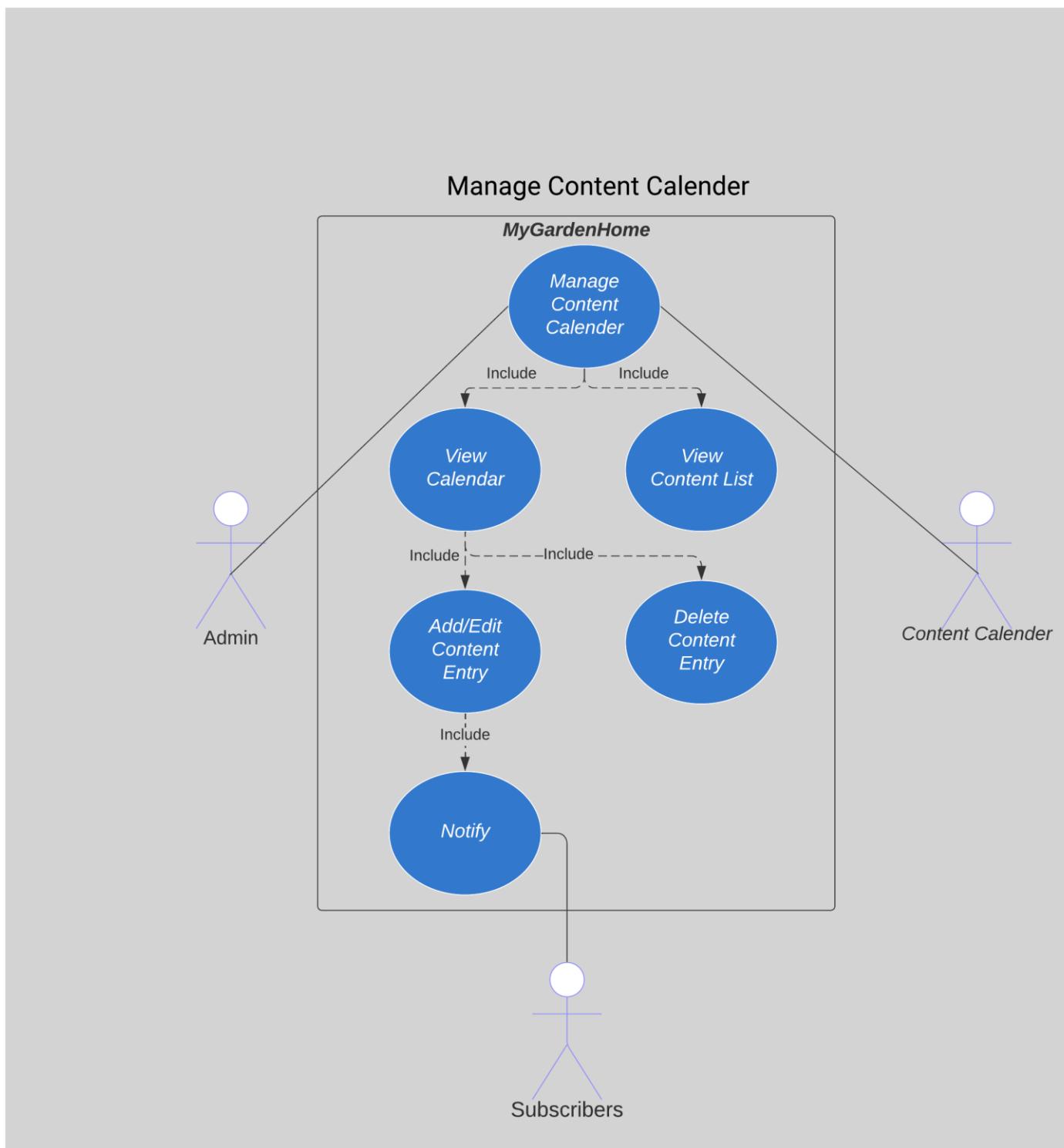


Figure 20: Manage Content Calendar.

Use Case Diagram: Enter Content by User.

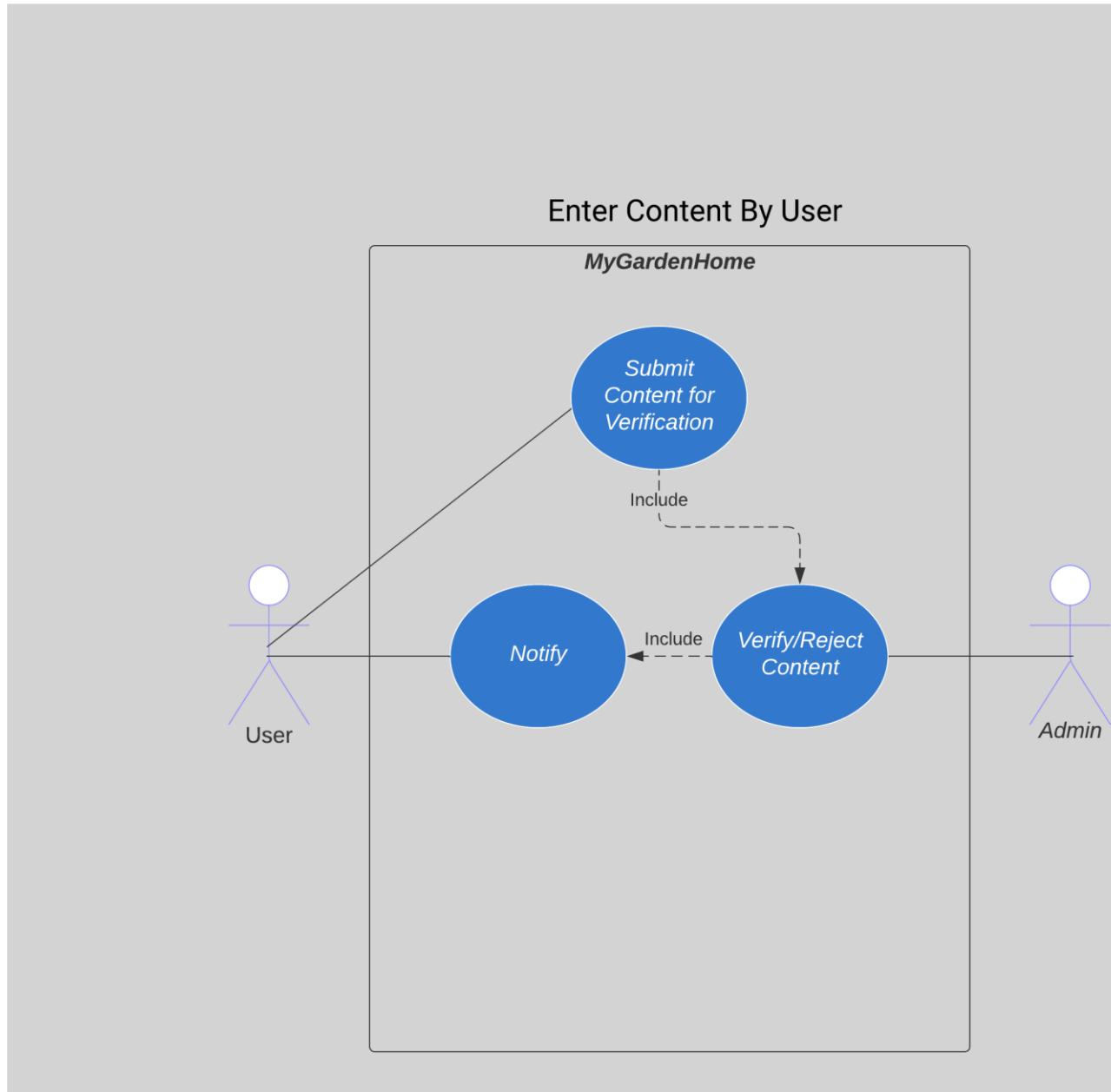


Figure 21: Enter Content by User.

Use Case Diagram: Collaborate with External Contributors.

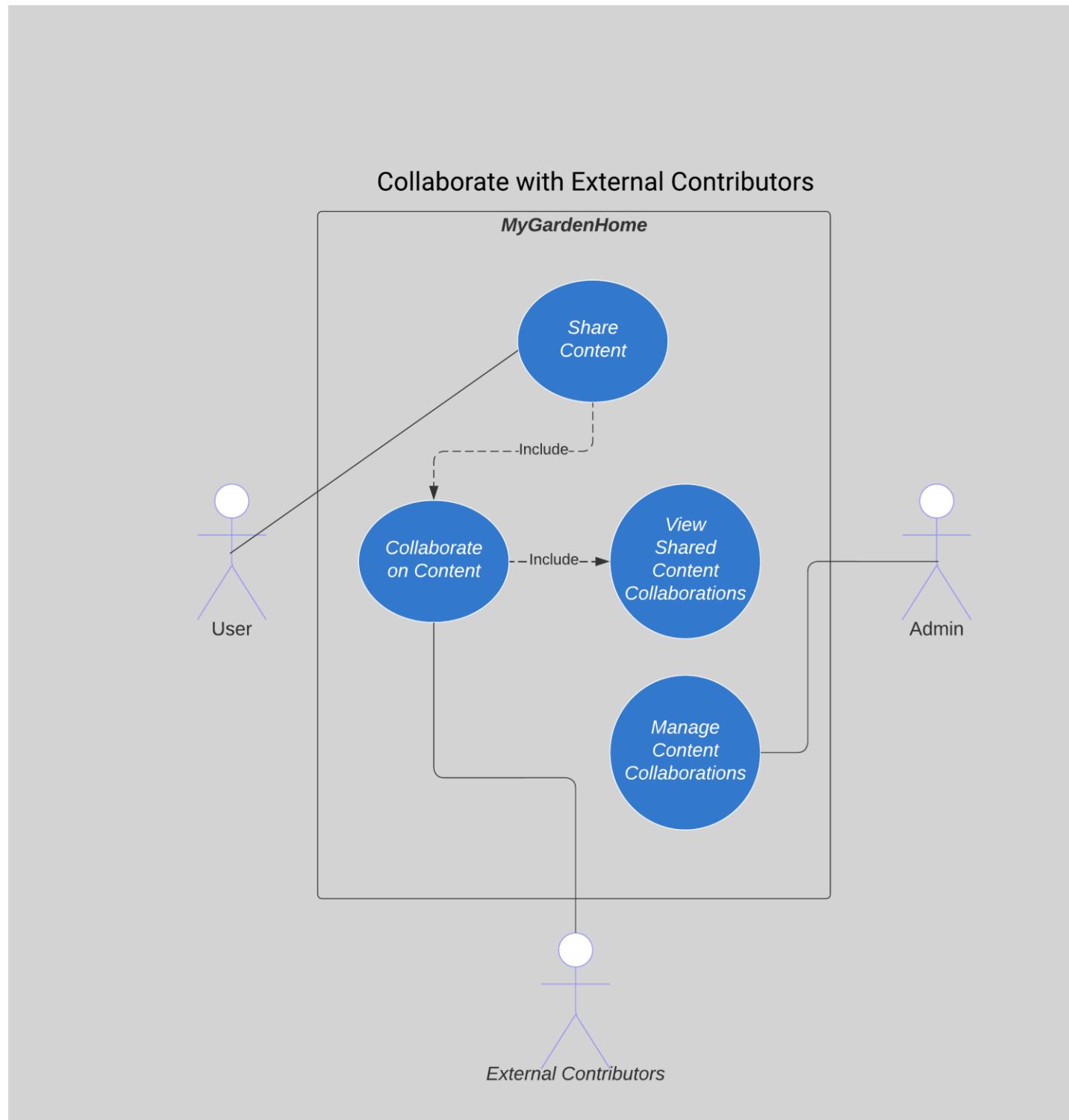


Figure 22: Collaborate with External Contributors.

Use Case Diagram: Analyze User Analytics.

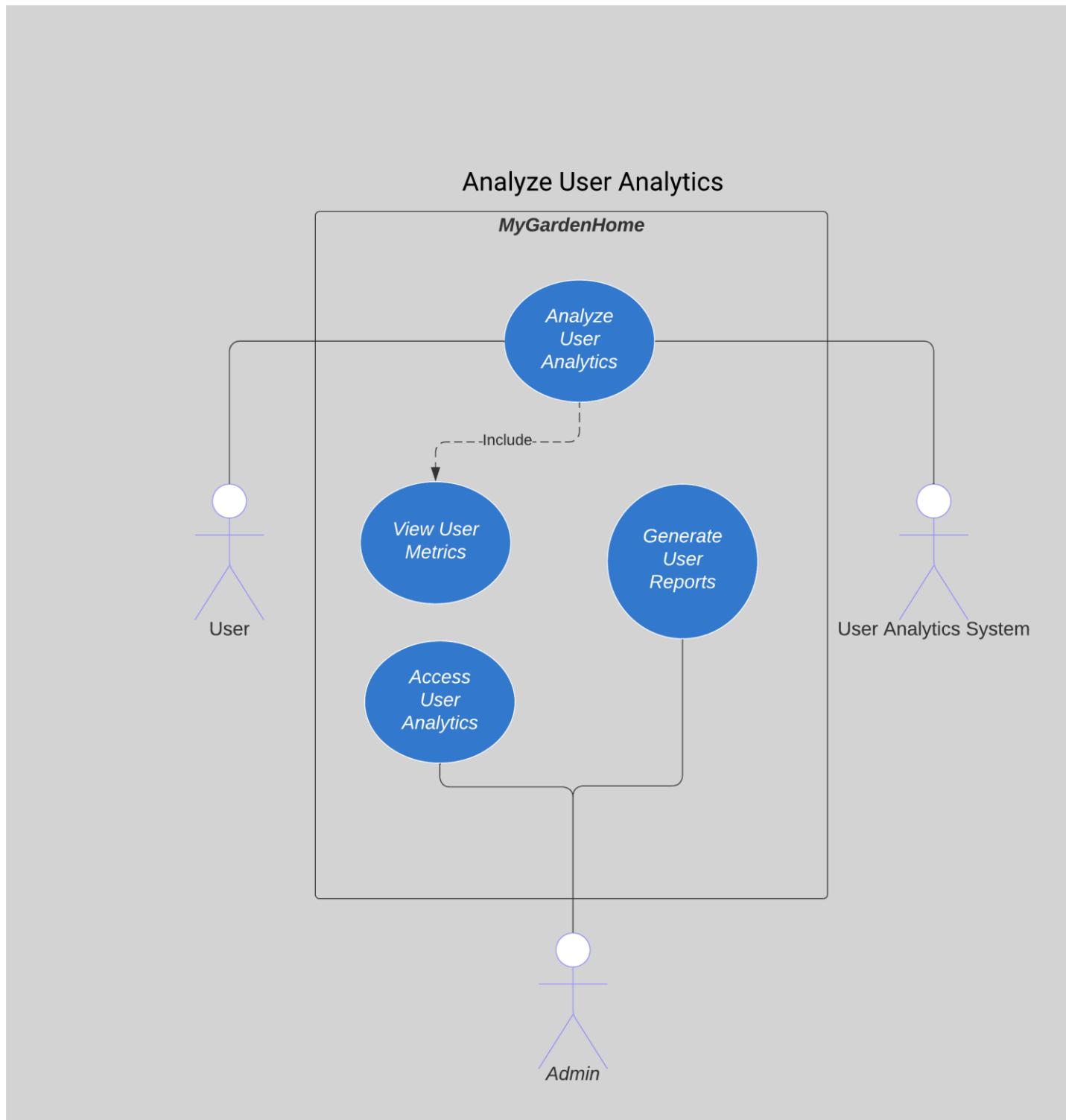


Figure 23: Analyze User Analytics.

Use Case Diagram: Customize Interface Preferences.

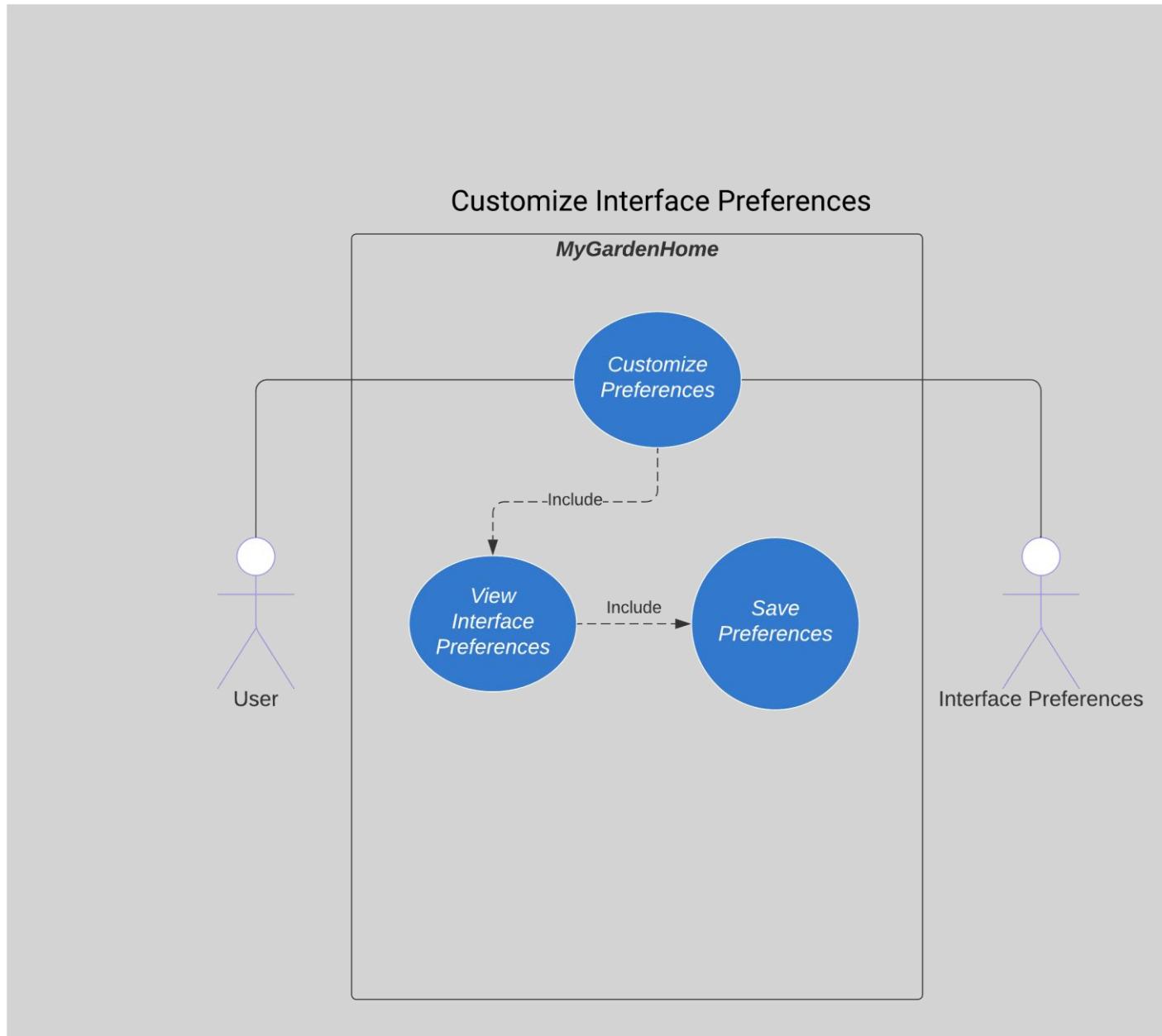


Figure 24: Customize Interface Preferences.

Use Case Diagram: Access Agricultural Expert's Profiles.



Figure 25: Access Agricultural Expert's Profiles.

Use Case Diagram: Update Content Information.

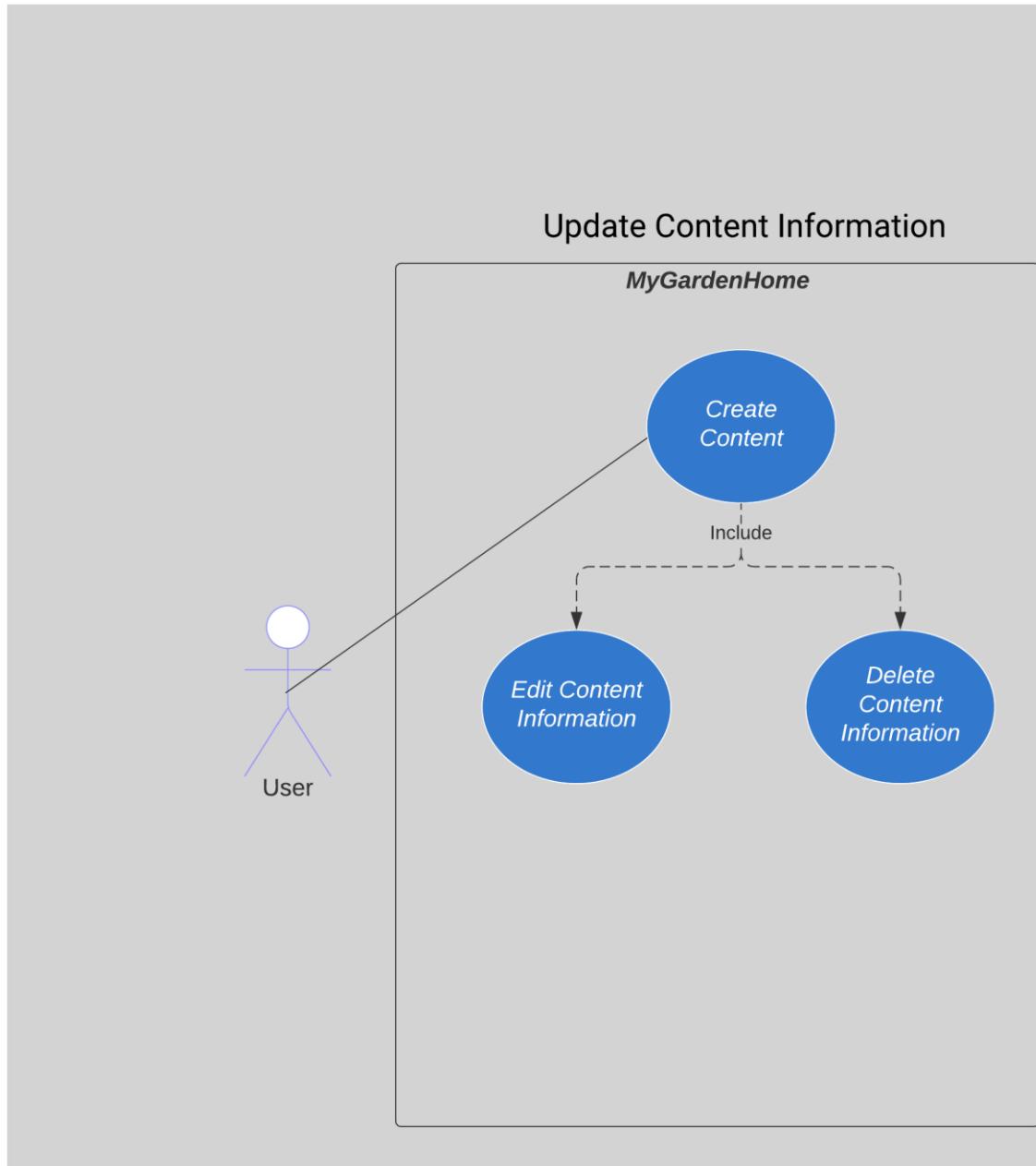


Figure 26: Update Content Information.

Use Case Diagram: Complete Transaction and Payment.

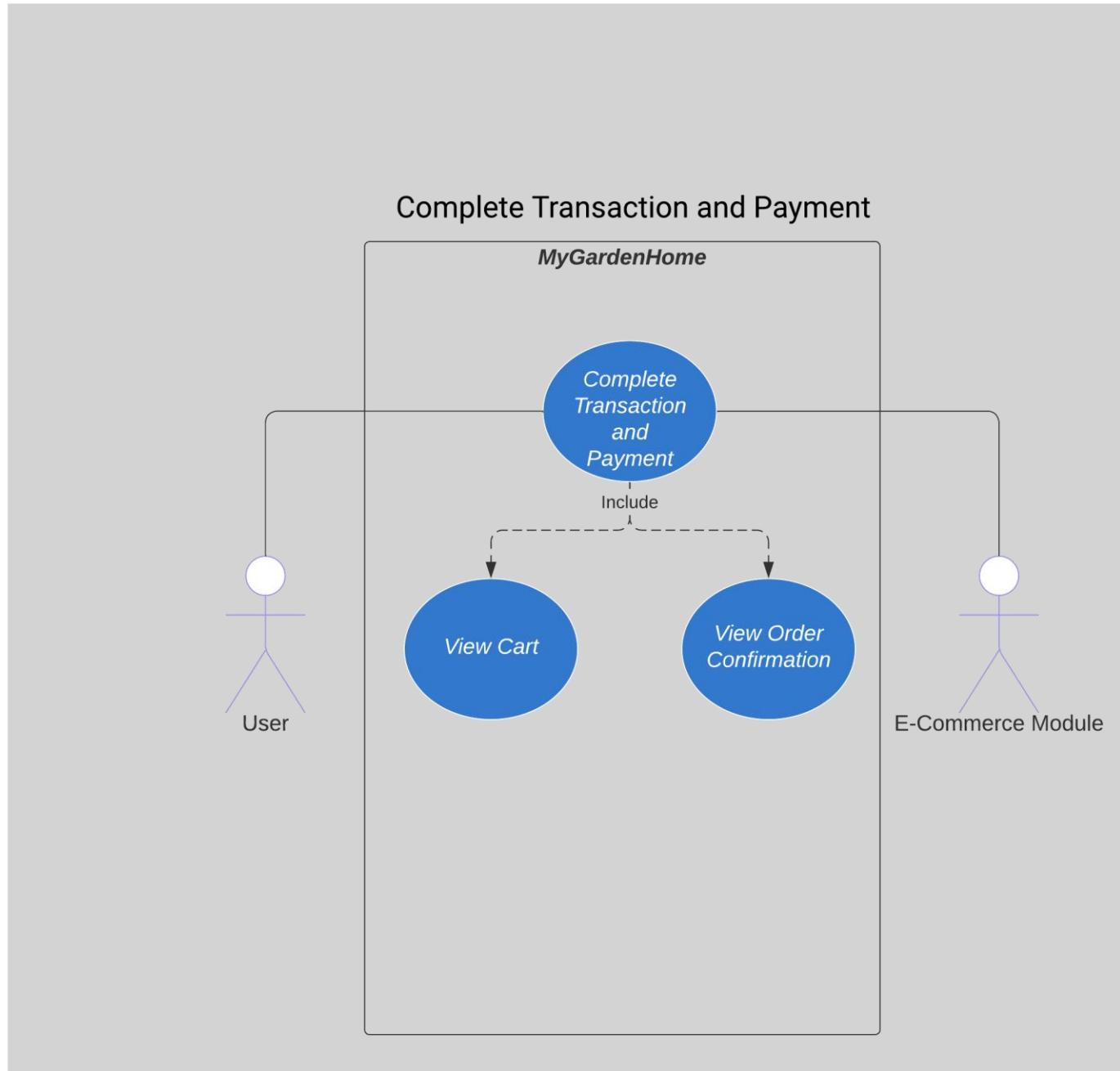


Figure 27: Complete Transaction and Payment.

Use Case Diagram: Manage User Accounts.

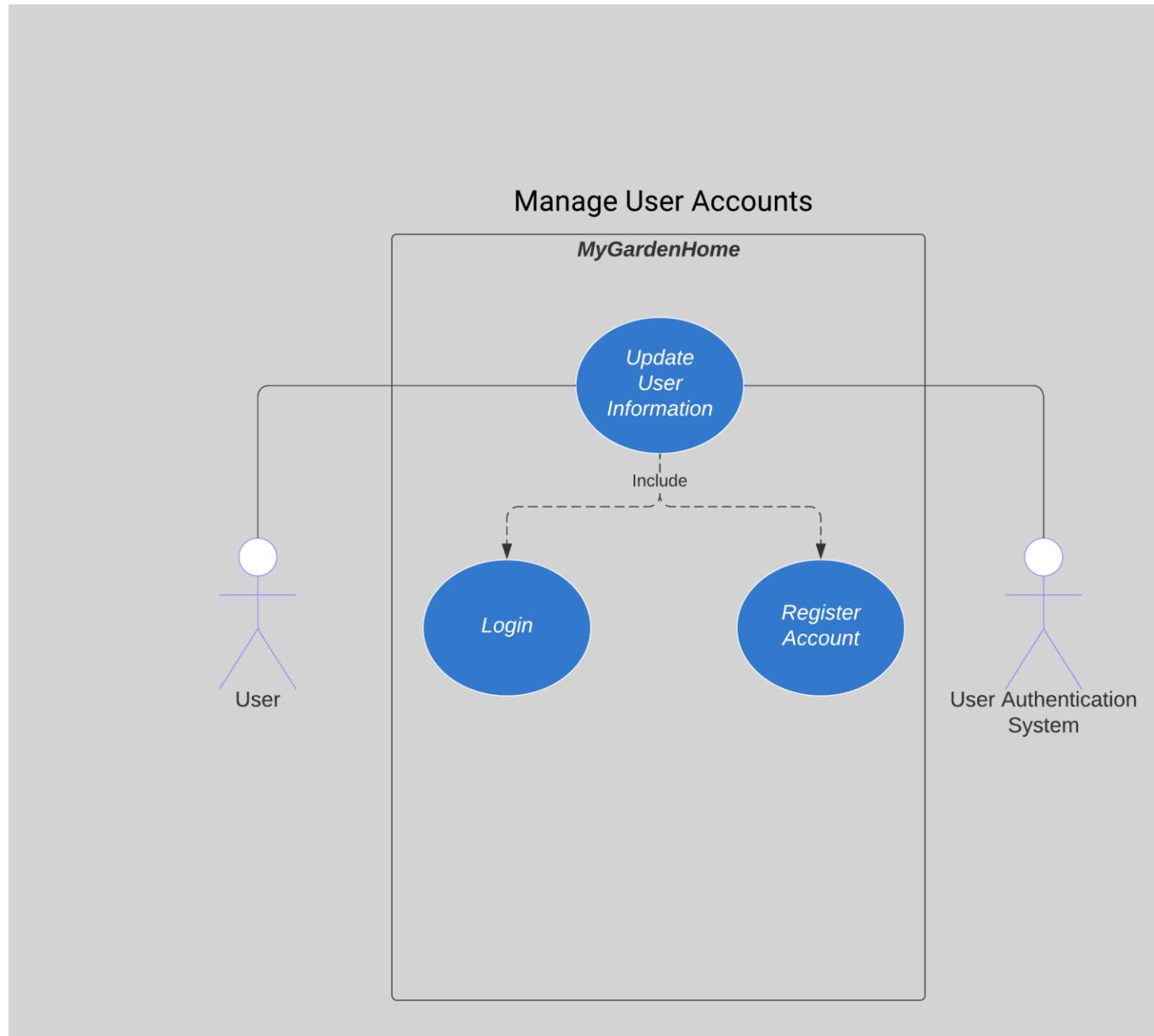


Figure 28: Manage User Accounts.

Use Case Diagram: Interact with Agriculture Suppliers.

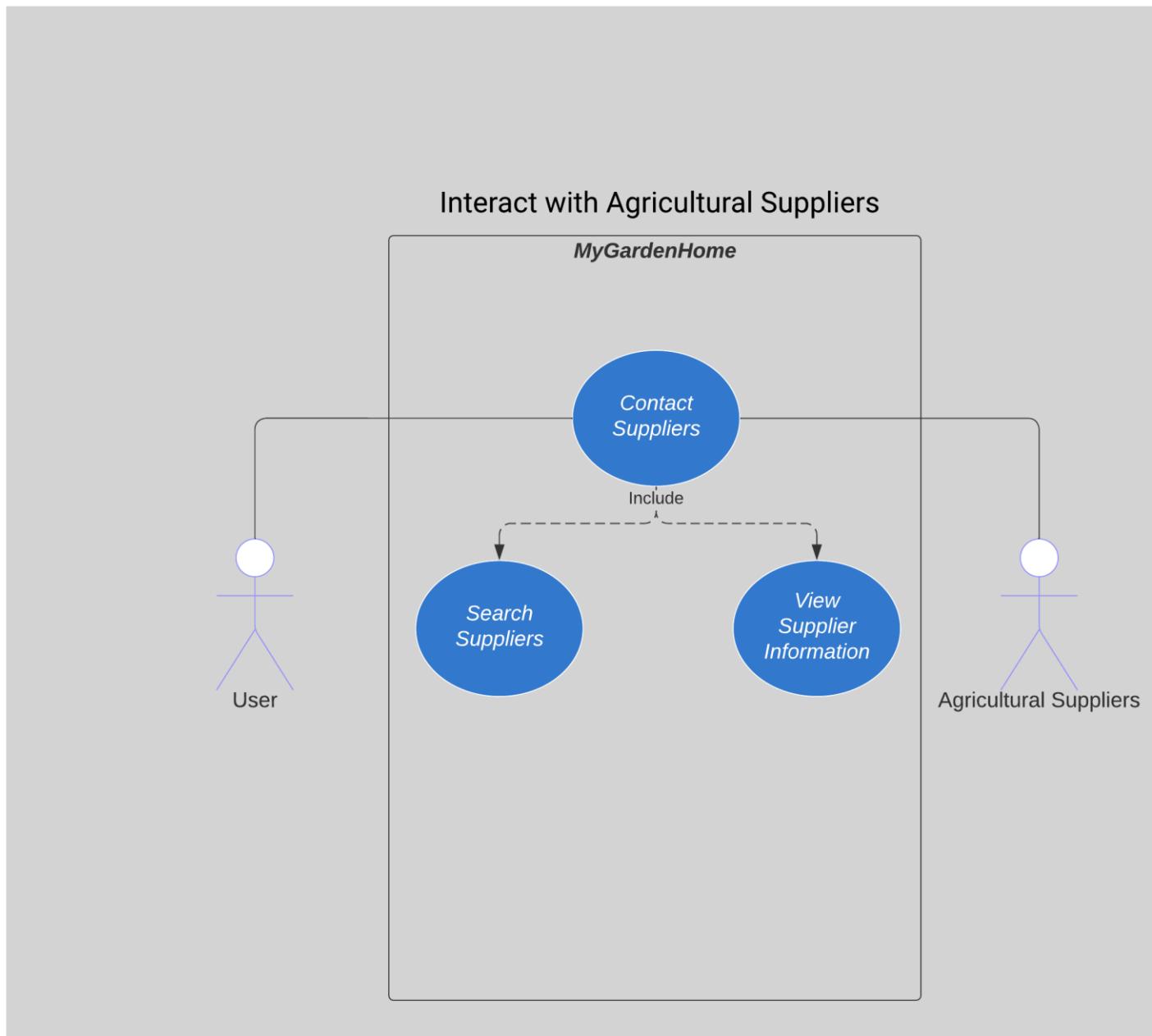


Figure 29: Interact with Agriculture Suppliers.

Use Case Diagram: Collaborate with Agricultural Experts.

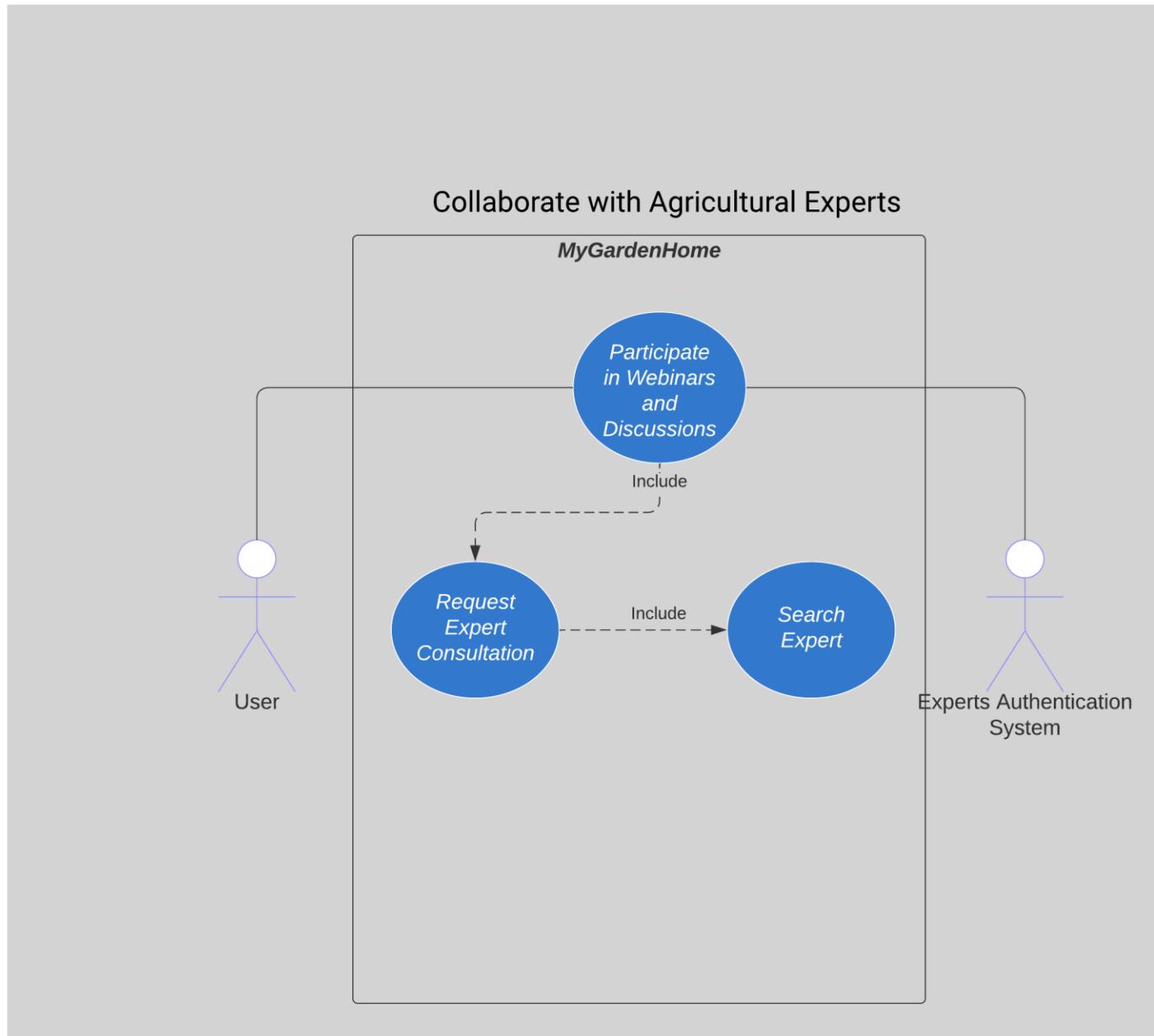


Figure 30: Collaborate with Agricultural Experts.

Use Case Diagram: Administer User Accounts.

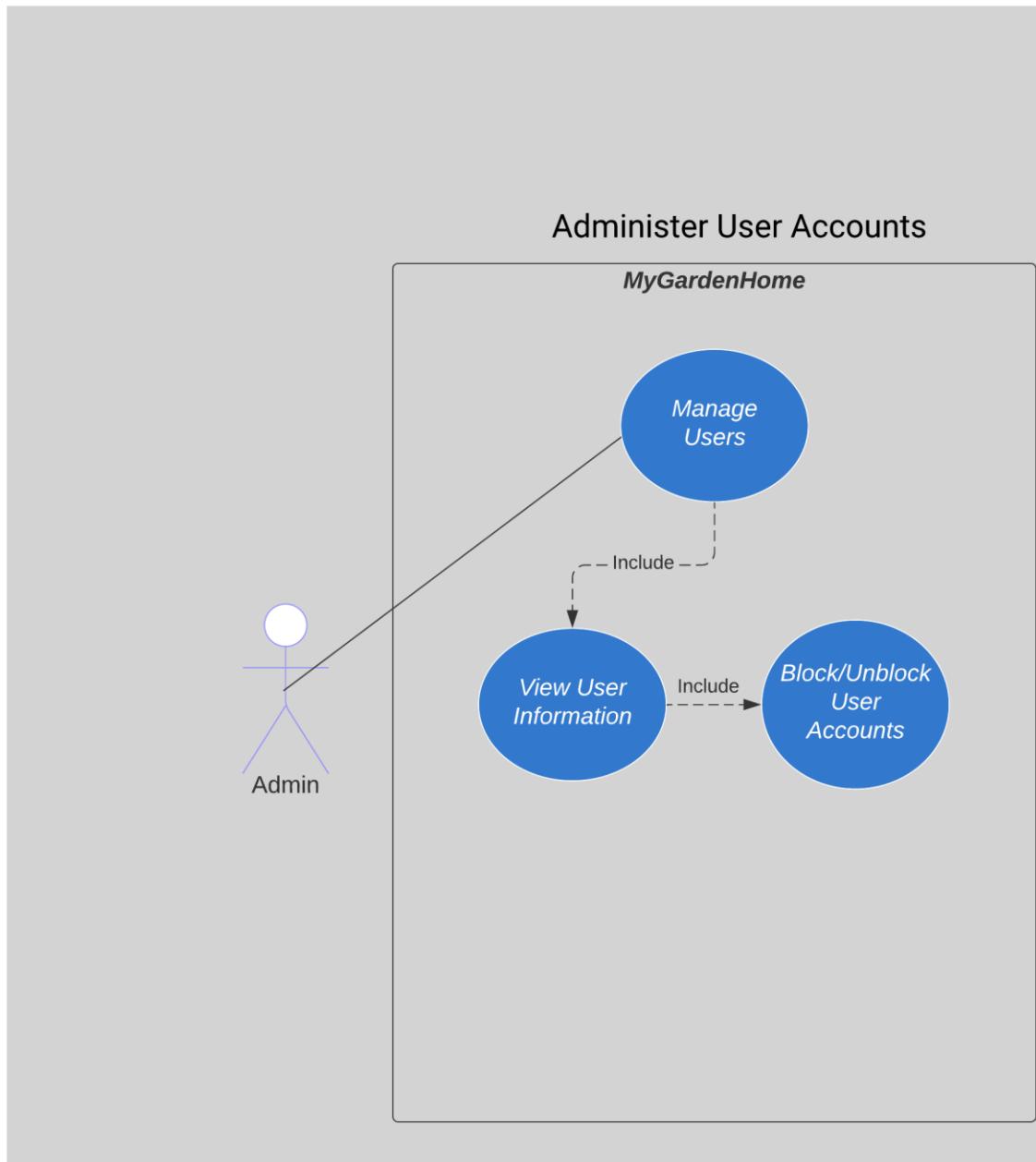


Figure 31: : Administer User Accounts.

Use Case Diagram: Manage Team Roles and Responsibilities.

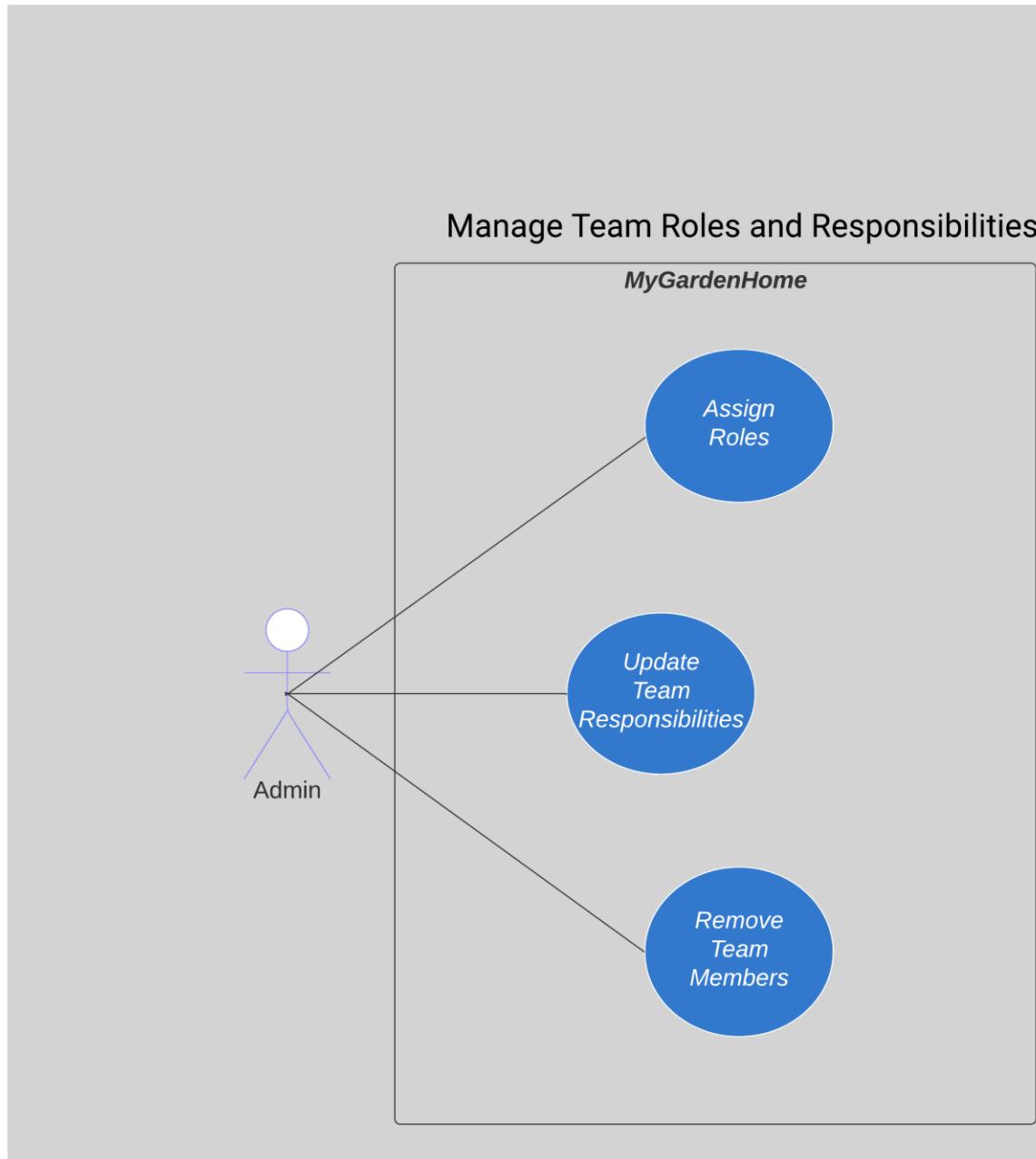


Figure 32: Manage Team Roles and Responsibilities.

4.4 System Functional Requirement Specification with A Textual Description for Each Use Case.

Table 9: User Registration.

Use Case Name: User Registration.	Unique ID: UC-REG-001.
Area: User Management and Security.	
Actor(s): User.	
Description: This use case describes the process by which a user creates a new account in the system.	
Triggering Event: User initiates the registration process.	
Trigger Type: External.	
<p>Steps Performed (Main Path):</p> <ol style="list-style-type: none"> 1. User navigates to the registration page. 2. User enters a username and unique email for identification, e.g., "user@example.com". 3. User enters a secure password (Must Contain At least: One Capital Letter, One small Letter, One Special Character, One Number, More Than 8 Characters), e.g., "Mygardenhome2000". 4. User provides additional registration details (name, contact information, address, Additional Email, etc.). 5. User agrees to the terms and conditions. 6. User clicks the "Register" button. 7. System validates the entered information. 8. If valid, the system creates a new user account. 9. User receives a registration confirmation message. 	<p>Information for Each Step:</p> <ol style="list-style-type: none"> 1. Navigates to the URL: Registration Page. 2. Enters a username and unique email. 3. Enters a secure password. 4. Provides full name, contact details, and other required information. 5. Checks the "Agree to Terms and Conditions" checkbox. 6. Clicks the "Register" button. 7. System validates entered information for accuracy and format. 8. If valid, the system generates a unique user ID and stores the user's registration data. 9. User receives a confirmation email with a link to verify the account.

Preconditions: User must not be already registered with the provided email.
Postconditions: User account is created and awaits email confirmation.
Assumptions: Users provide accurate and valid registration information.
Requirements Met:
<p>User-Friendly Interface: The registration process should have a clear and simple design, guiding users smoothly through the steps.</p> <p>Data Privacy and Security: User registration data, including personal information and credentials, should be securely stored, and protected from unauthorized access.</p> <p>Language and Localization: The registration process should be available in multiple languages to accommodate users from various regions.</p>
Issues: Possible issues include incomplete or incorrect information during registration.
Priority: High.
Risk: Low to Medium. Risks include incomplete or incorrect information during registration, potential security vulnerabilities, or abuse of the registration process. Proper validation and security measures are needed to mitigate risks.

Table 10: User Login.

Use Case Name: User Login.	Unique ID: UC-LOGIN-001.
Area: User Management and Security.	
Actor(s): User.	
Description: This use case involves the process by which a registered user logs into the agricultural investment and consulting platform.	
Triggering Event: User attempts to log in.	
Trigger Type: External.	

<p>Steps Performed (Main Path):</p> <ol style="list-style-type: none"> 1. User navigates to the platform's login page. 2. User enters a username and email. 3. User enters their secure password. 4. User Clicks the "Login" button. 5. System validates the entered credentials. 6. If the credentials are valid, the system grants access to the user's account and redirects to the user's dashboard. 7. If the credentials are invalid, the system displays an error message. 	<p>Information for Each Step:</p> <ol style="list-style-type: none"> 1. Navigates to the platform's login page. 2. Enters a username and unique email. 3. Enters their secure password. 4. Clicks the "Login" button. 5. System compares entered credentials with stored credentials in the database. 6. If valid, user is granted access to their account's dashboard; if invalid, an error message is displayed.
<p>Preconditions: User must be registered and have a valid account.</p>	
<p>Postconditions: User is either logged in and granted access to their account or presented with an error message.</p>	
<p>Assumptions: Users have registered, and their account information is stored in the system's database.</p>	
<p>Requirements Met:</p> <p>Data Privacy and Security: User credentials and sensitive data must be securely authenticated to prevent unauthorized access.</p> <p>User-Friendly Interface: The login process should be straightforward and easy to understand, with clear instructions for users.</p> <p>Mobile Accessibility: Users should be able to access and use the login feature on mobile devices seamlessly.</p>	
<p>Issues: Possible issues include incorrect implementation of authentication logic or security vulnerabilities.</p>	
<p>Priority: High.</p>	
<p>Risk Probability: Low to Medium. Possible risks include incorrect implementation of authentication logic or security vulnerabilities leading to unauthorized access. Proper security measures are crucial to mitigate risks.</p>	

Table 11: View Content.

Use Case Name: View Content (Articles, Videos, Guides).	Unique ID: UC-VIEW-CONTENT-001.
Area: Content Management.	
Actor(s): User.	
Description: This use case involves the process by which a user views various types of content, such as articles, videos, and guides, on the agricultural investment and consulting platform.	
Triggering Event: User navigates to view content.	
Trigger Type: External.	
Steps Performed (Main Path): <ol style="list-style-type: none">1. User accesses the platform's home page or content section.2. User browses or searches for desired content based on categories, keywords, or topics.3. User clicks on the content item they want to view.4. System retrieves the selected content and displays it to the user.	Information for Each Step: <ol style="list-style-type: none">1. Navigates to the platform's home page or content section.2. Utilizes browsing features, category filters, or enters keywords to find desired content.3. Clicks on a content item's title or thumbnail to access the detailed view.4. System retrieves and presents the selected content, which can include articles, videos, guides, and related multimedia.
Preconditions: User must be logged into their account.	
Postconditions: User views the selected content and has the option to engage with it further.	
Assumptions: Content is logically organized and easily accessible for users based on their preferences.	
Requirements Met: <p>Rich and Relevant Content: The platform should provide a diverse range of high-quality content, including articles, videos, and guides, covering various agricultural topics.</p> <p>Personalized Recommendations: Content recommendations should be tailored to users' interests, encouraging engagement with relevant content.</p>	

Language and Localization: Content should be available in multiple languages and adapted to local agricultural contexts.
Issues: Potential challenges related to content discovery, content diversity, or multimedia compatibility.
Priority: High.
Risk Probability: Moderate. Risks include content diversity and quality, potential issues with multimedia rendering, or content inconsistency. Regular content curation and maintenance can mitigate these risks.

Table 12: Request Expert Consultation.

Use Case Name: Request Expert Consultation.	Unique ID: UC-REQUEST-CONSULT-001.
Area: Consultation Services.	
Actor(s): User.	
Description: This use case outlines how a user initiates the process of requesting a consultation session with an agricultural expert on the platform.	
Triggering Event: User's intention to seek expert advice.	
Trigger Type: External.	
Steps Performed (Main Path): <ol style="list-style-type: none"> 1. User logs into their account. 2. User navigates to the "Expert Consultation" section. 3. User views the list of available experts and their profiles. 4. User selects a specific expert they want to consult with. 5. User clicks the "Request Consultation" button on the expert's profile. 6. User provides additional details about their consultation needs. 	Information for Each Step: <ol style="list-style-type: none"> 1. User provides valid login credentials. 2. Navigates to the "Expert Consultation" section in the platform's navigation. 3. Views the list of experts and their profiles, including expertise and availability. 4. Selects a specific expert for consultation. 5. Clicks the "Request Consultation" button on the expert's profile. 6. Provides additional details about the consultation needs (topic, preferred date/time, etc.).

<p>7. User submits the consultation request.</p> <p>8. System validates the request and notifies the selected expert.</p> <p>9. Expert reviews the request and confirms availability.</p> <p>10. User receives a notification confirming the consultation appointment.</p>	<p>7. Submits the consultation request.</p> <p>8. System validates the entered information and triggers a notification to the selected expert.</p> <p>9. Expert receives and reviews the consultation request, confirms availability, and accepts/declines the request.</p> <p>10. User receives a notification about the expert's response and the scheduled consultation appointment.</p>
<p>Preconditions: User must be registered and logged into their account.</p>	
<p>Postconditions: Consultation request is submitted, and expert's response is received.</p>	
<p>Assumptions: Experts' profiles are available and accessible to users, and experts are available for consultations.</p>	
<p>Requirements Met:</p> <p>Direct Expert Consultations: Users should be able to request one-on-one consultations with agricultural experts for personalized guidance.</p> <p>User-Friendly Interface: The consultation request process should be straightforward, allowing users to provide their questions or concerns easily.</p> <p>Support and Assistance: If users face issues during the consultation request process, they should have access to customer support for assistance.</p>	
<p>Issues: Possible issues include experts being unavailable, miscommunication, or delays in response.</p>	
<p>Priority: High.</p>	
<p>Risk Probability: Low to Medium. Risks include experts' unavailability, miscommunication, or potential misunderstanding of consultation needs. Proper communication channels and clear expectations can mitigate risks.</p>	

Table 13: Purchase Agricultural Products.

<p>Use Case Name: Purchase Agricultural Products.</p>	<p>Unique ID: UC-PURCHASE-PRODUCTS-001.</p>
<p>Area: E-Commerce and Product Purchase.</p>	

Actor(s): User.	
Description: This use case depicts how a user selects and purchases agricultural products available for sale on the platform.	
Triggering Event: User's intention to purchase products.	
Trigger Type: External.	
<p>Steps Performed (Main Path):</p> <ol style="list-style-type: none"> 1. User logs into their account. 2. User navigates to the platform's "Shop" or "Products" section. 3. User browses products, filtering and exploring based on categories and preferences. 4. User selects a specific product they wish to purchase. 5. User reviews the product details, including price, specifications, and reviews. 6. User adds the product to their shopping cart. 7. User proceeds to the checkout process. 8. User provides shipping information and selects a payment method. 9. User confirms the order and makes the payment. 10. System processes the payment and generates an order confirmation. 11. User receives an email confirmation with order details. 	<p>Information for Each Step:</p> <ol style="list-style-type: none"> 1. User provides valid login credentials. 2. Navigates to the platform's "Shop" or "Products" section. 3. Utilizes search and filters to explore products based on preferences. 4. Selects a specific product from the list.. 5. Reviews product details, price, specifications, and customer reviews. 6. Adds the chosen product to the shopping cart. 7. Proceeds to checkout. 8. Provides shipping details and selects a payment method. 9. Confirms the order and initiates the payment. 10. System processes the payment, confirms the transaction, and generates an order receipt. 11. User receives an email with order confirmation and details.
Preconditions: User must be registered and logged into their account.	
Postconditions: User successfully places an order for the selected product.	
Assumptions: Products are accurately listed with relevant details, and the payment gateway is operational.	

Requirements Met:

Transaction and Payment Support: Users should be able to securely purchase agricultural materials, tools, and services. Users should have the option to choose from various payment methods, such as credit cards, online payment platforms, or mobile wallets. The payment process should be seamless and secure, ensuring the confidentiality of users' payment information.

User-Friendly Interface: The purchasing process should guide users through selecting products, adding them to the cart, and proceeding to payment. Clear instructions should be provided at each step, reducing any confusion or uncertainty.

Supplier and Product Information: Users should be able to view detailed information about agricultural suppliers, their products, and services before making a purchase decision. Product descriptions, specifications, prices, and availability should be presented clearly to help users make informed choices.

Support and Assistance: Users encountering issues during the purchasing process should have access to customer support for assistance. In case of any difficulties, users should be able to reach out to customer support for guidance and problem resolution.

Issues: Possible issues include payment processing failures or inaccuracies in product information.

Priority: High.

Risk Probability: Low to Medium. Risks include payment processing issues, potential discrepancies in product details, or delayed order confirmation. Proper payment integration and accurate product listings are important to mitigate risks.

Table 14: Manage Subscriptions.

Use Case Name: Manage Subscriptions.	Unique ID: UC-MANAGE-SUBSCRIPTIONS-001.
Area: Subscription Management.	
Actor(s): User (Subscriber).	
Description: This use case outlines how a user manages their subscription plans and preferences on the agricultural investment and consulting platform.	
Triggering Event: User's intention to modify subscription settings.	
Trigger Type: External.	

<p>Steps Performed (Main Path):</p> <ol style="list-style-type: none"> 1. User logs into their account. 2. User navigates to the "Subscription Management" section. 3. User views their current subscription plan details. 4. User selects the option to modify their subscription. 5. User chooses a different subscription plan or adjusts their current plan (e.g., upgrade or downgrade). 6. User reviews the changes and their impact on billing. 7. User confirms the subscription changes. 8. System processes the subscription changes and updates the user's account. 9. User receives a confirmation message of the successful changes. 	<p>Information for Each Step:</p> <ol style="list-style-type: none"> 1. User provides valid login credentials. 2. Navigates to the "Subscription Management" section in the platform's navigation. 3. Views details of the current subscription plan, including billing cycle and features. 4. Selects the option to modify the subscription. 5. Chooses a new plan or adjusts their current plan, such as changing tiers or billing frequency. 6. Reviews changes to ensure they align with user preferences. 7. Confirms the subscription changes. 8. System processes the changes, updates the user's account, and adjusts billing as necessary. 9. User receives a message confirming the successful subscription changes.
<p>Preconditions: User must have an active subscription.</p>	
<p>Postconditions: Subscription plan changes are successfully applied to the user's account.</p>	
<p>Assumptions: Subscription plans are clearly defined, and the system supports plan modifications.</p>	
<p>Requirements Met:</p> <p>Subscription Options: Users should have the ability to view different subscription tiers with varying levels of access to content and services. Users should be able to choose a subscription tier that aligns with their preferences and needs.</p> <p>Easy Subscription Management: Users should be able to easily upgrade, downgrade, or cancel their subscriptions within their account settings. Changes to subscriptions should take effect seamlessly and without unnecessary complications.</p> <p>Support and Assistance: Users encountering difficulties in managing their subscriptions should be able to seek help from the customer support team. Customer support should assist users with subscription-related inquiries, changes, or issues.</p>	
<p>Issues: Possible issues include failed updates or discrepancies in billing calculations.</p>	

Priority: Medium.	
Risk Probability: Low to Medium. Risks include potential technical issues during plan updates or inaccurate billing calculations. Proper validation and testing are essential to mitigate risks.	
<i>Table 15: Contact Customer Support.</i>	
Use Case Name: Contact Customer Support.	
Unique ID: UC-CONTACT-SUPPORT-001.	
Area: Customer Support.	
Actor(s): User.	
Description: This use case outlines how a user interacts with customer support for assistance on the agricultural investment and consulting platform.	
Triggering Event: User's need for assistance or support.	
Trigger Type: External.	
<p>Steps Performed (Main Path):</p> <ol style="list-style-type: none"> 1. User logs into their account. 2. User navigates to the "Customer Support" or "Contact Us" section. 3. User selects the appropriate type of support request (e.g., technical issue, billing inquiry, general inquiry). 4. User provides a detailed description of the issue or inquiry. 5. User attaches any relevant documents or screenshots. 6. User submits the support request. 7. System sends an acknowledgment message to the user. 8. Support team reviews the request and responds within a specified timeframe. 9. User receives a response from the support team. 	<p>Information for Each Step:</p> <ol style="list-style-type: none"> 1. User provides valid login credentials. 2. Navigates to the "Customer Support" or "Contact Us" section. 3. Selects the appropriate type of support request from available options. 4. Provides a detailed description of the issue or inquiry. 5. Attaches relevant files, such as screenshots or documents. 6. Submits the support request. 7. System acknowledges the receipt of the support request. 8. Support team reviews the request and responds within the stipulated time. 9. User receives an email or notification containing the support team's response.

10. User interacts further if needed, clarifying details, or following up on the issue.	10. User interacts further to clarify or provide additional information.
Preconditions: User must be registered and logged into their account.	
Postconditions: User's support request is submitted and received by the support team.	
Assumptions: Support channels are clearly accessible, and users provide accurate and relevant information.	
<p>Requirements Met:</p> <p>Support and Assistance: Users should have access to a customer support team that can assist with technical issues, subscription inquiries, and general questions. Users should be able to reach out to customer support for prompt help and problem resolution.</p> <p>User-Friendly Interface: The interface for contacting customer support should be intuitive and easy to navigate. Users should be able to find the contact option without difficulty.</p>	
Issues: Possible issues include delays in response or inadequate problem description.	
Priority: Medium.	
Risk Probability: Low to Medium. Risks include delayed responses, misunderstandings of the issue, or inadequate solutions. Proper communication channels and clear problem descriptions can mitigate risks.	

Table 16: Provide Customer Support.

Use Case Name: Provide Customer Support.	Unique ID: UC-PROVIDE-SUPPORT-001.
Area: Customer Support.	
Actor(s): Support Team.	
Description: This use case outlines how the support team interacts with users to provide assistance and resolve issues on the agricultural investment and consulting platform.	
Triggering Event: Receipt of a user's support request.	
Trigger Type: System-initiated event (response to user's request).	

<p>Steps Performed (Main Path):</p> <ol style="list-style-type: none"> 1. Support team receives a user's support request. 2. Support team member reviews the provided details and attachments. 3. Support team member initiates further investigation or analysis if needed. 4. Support team member drafts a response addressing the user's issue. 5. Response includes possible solutions, explanations, or guidance. 6. Support team member attaches relevant documents or instructions. 7. Support team member sends the response to the user. 8. User receives the support team's response. 9. User reviews the response and follows the provided instructions. 10. If needed, user interacts further for clarification or additional assistance. 	<p>Information for Each Step:</p> <ol style="list-style-type: none"> 1. Support team receives a user's support request via the support platform. 2. Review details and attachments provided by the user. 3. Initiate further analysis or investigation to understand the issue. 4. Draft a response addressing the user's issue. 5. Provide possible solutions, explanations, or guidance. 6. Attach relevant documents or instructions as needed. 7. Send the response to the user via the support platform. 8. User receives the response via email or platform notification. 9. Review the response and follow provided instructions. 10. Interact further if clarification or additional assistance is needed.
<p>Preconditions: A user's support request has been received.</p>	<p>Postconditions: User's issue is addressed, and response is sent.</p>
<p>Assumptions: Support team has access to relevant information and tools for issue resolution.</p>	<p>Requirements Met:</p> <p>Support and Assistance: Users should have access to effective and responsive customer support to address their inquiries and issues. The customer support team should be equipped to provide accurate information, solutions, and guidance.</p> <p>User-Friendly Interface: The interface for providing customer support should be intuitive and easy for the support team to use. Customer support agents should be able to efficiently navigate and use the tools provided.</p> <p>Communication Channels: Multiple communication channels should be available for users to reach out to customer support, such as live chat, email, or phone. Users should have options for choosing the communication method that best suits their preferences.</p>

Problem Resolution: Customer support agents should have access to the necessary tools and information to resolve users' issues in a timely manner. Efficient problem-solving should be a priority to enhance user satisfaction.

Issues: Possible issues include delays in response, inaccuracies in the response, or misunderstanding of the issue.

Priority: High.

Risk Probability: Low to Medium. Risks include inadequate or incorrect responses, leading to user dissatisfaction. Proper training and documentation for the support team are essential to mitigate risks.

Table 17: Manage Customer Support.

Use Case Name: Manage Customer Support.	Unique ID: UC-MANAGE-SUPPORT-001.
Area: Customer Support.	
Actor(s): Support Team (Admin).	
Description: This use case outlines how the support team administers and manages customer support requests and interactions on the agricultural investment and consulting platform.	
Triggering Event: Receipt of user support requests and need for support administration.	
Trigger Type: System-initiated event (response to user's requests) and admin-initiated event (administration needs).	
Steps Performed (Main Path): <ol style="list-style-type: none">1. Support team member logs into the support administration dashboard.2. Support team member views the list of pending support requests.3. Support team member prioritizes and categorizes support requests.4. Support team member assigns support tickets to specific team members for response.5. Support team member monitors the progress of assigned support tickets.	Information for Each Step: <ol style="list-style-type: none">1. Support team member logs in using valid credentials.2. Views the list of pending support requests, organized by date or priority.3. Prioritizes and categorizes requests based on their nature and urgency.4. Assigns support tickets to specific team members based on expertise.5. Monitors ticket progress and ensures timely response.

<p>6. Support team member reviews responses drafted by team members before sending.</p> <p>7. Support team member sends the response to the user.</p> <p>8. Support team member oversees and analyzes response times and user satisfaction.</p> <p>9. Support team member generates reports on support request metrics.</p> <p>10. Support team member escalates complex issues to higher management if needed.</p>	<p>6. Has the option to escalate priority for critical issues.</p> <p>7. Reviews and approves responses before sending to users.</p> <p>8. Analyzes response times and user satisfaction based on feedback.</p> <p>9. Generates reports on support request metrics, including response times and resolution rates.</p> <p>10. Escalates complex issues to higher management if necessary.</p>
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Preconditions: Support team member has access to the support administration dashboard.

Postconditions: Support requests are managed, categorized, assigned, and responded to as needed.

Assumptions: Support team has appropriate tools and resources for efficient support management.

Requirements Met:

Support and Assistance: The customer support team should have the tools and resources to effectively manage user inquiries and issues. Support agents should be able to access user information and previous interactions to provide personalized assistance.

User-Friendly Interface: The interface for managing customer support should be intuitive and efficient for support agents to navigate. Support agents should be able to access user profiles, communication history, and support history easily.

Communication Channels: The system should provide support agents with the capability to manage and respond to inquiries through various channels, such as live chat, email, and phone.

Problem Resolution: The system should enable support agents to document and track the status of user issues to ensure timely resolution. Support agents should be able to escalate complex issues to higher-level support if needed.

Issues: Possible issues include delayed responses, inaccurate categorization, or miscommunication within the support team.

Priority: High.

Risk Probability: Medium to High. Risks include support requests being mishandled, leading to user dissatisfaction or misunderstanding. Proper training and communication within the support team are important to mitigate risks.

Table 18: Access Personalized Dashboard.

Use Case Name: Access Personalized Dashboard.	Unique ID: UC-ACCESS-DASHBOARD-001.
Area: User Engagement.	
Actor(s): User.	
Description: This use case outlines how a user accesses their personalized dashboard on the agricultural investment and consulting platform.	
Triggering Event: User's intention to view their personalized dashboard.	
Trigger Type: External	
Steps Performed (Main Path): <ol style="list-style-type: none"> 1. User logs into their account. 2. User lands on the platform's homepage. 3. User clicks on the "Dashboard" or "Profile" link. 4. System validates user's credentials and access rights. 5. System loads the user's personalized dashboard. 6. User views a summary of their account, activities, and progress. 7. User accesses tailored recommendations, insights, or updates. 8. User interacts with widgets or sections for specific features (e.g., notifications, achievements). 9. User navigates to other platform sections as needed. 	Information for Each Step: <ol style="list-style-type: none"> 1. User logs in using valid credentials. 2. Lands on the homepage after successful login. 3. Clicks on the "Dashboard" or "Profile" link. 4. System verifies user's credentials and access permissions. 5. Loads the user's personalized dashboard interface. 6. Views a summary of account-related activities, progress, and recent actions. 7. Accesses recommendations, insights, or updates tailored to their profile. 8. Interacts with widgets or sections for specific features (e.g., notifications, achievements). 9. Navigates to other sections within the platform if desired.
Preconditions: User must be registered and logged into their account.	
Postconditions: User successfully accesses and interacts with their personalized dashboard.	

Assumptions: User's device supports the platform's interface.

Requirements Met:

User Profiles and Dashboards: Users should have the ability to create and manage their profiles, including personal information and preferences. Users should be able to access their personalized dashboard that displays relevant information and tools.

Personalized Recommendations: The personalized dashboard should present users with recommendations based on their interests, preferences, and activities. Users should see content, services, and products that align with their agricultural needs.

Transaction History: Users should be able to view their transaction history, including purchases, subscriptions, and interactions. The dashboard should display details about completed transactions.

User Engagement: The personalized dashboard should facilitate user engagement by offering interactive tools, forums, webinars, and discussion options. Users should be able to participate in discussions, access webinars, and use calculators or other interactive features.

Content Access: Users should be able to access their saved content, such as bookmarked articles, videos, and guides. The dashboard should provide easy access to previously viewed or favorited content.

Communication Channels: Users should have a way to contact customer support directly from their dashboard for assistance. The dashboard may include a support chat option or a link to reach out for help.

Issues: Possible issues include slow loading times or inaccurate personalized recommendations.

Priority: Medium.

Risk Probability: Low to Medium. Risks include slow loading times affecting user experience or inaccurate recommendations leading to user dissatisfaction. Proper server optimization and accurate recommendation algorithms can mitigate risks.

Table 19: Participate in Webinars and Discussions.

Use Case Name: Participate in Webinars and Discussions.	Unique ID: UC-PARTICIPATE-WEBINARS-001.
Area: User Engagement.	
Actor(s): User.	
Description: This use case outlines how a user engages with webinars and discussions on the agricultural investment and consulting platform.	

Triggering Event: User's intention to join a webinar or discussion.	
Trigger Type: External	
<p>Steps Performed (Main Path):</p> <ol style="list-style-type: none"> 1. User logs into their account. 2. User navigates to the "Webinars" or "Discussions" section. 3. User views the list of available webinars or discussions. 4. User selects the desired webinar or discussion to join. 5. System verifies user's eligibility and registration status for the event. 6. User clicks on the "Join" button for the selected event. 7. System grants access to the webinar or discussion interface. 8. User participates in the live or recorded session, interacts with presenters or peers. 9. User can ask questions, provide comments, or contribute to discussions. 10. User leaves the session when done. 11. User receives a follow-up email or notification with session details. 	<p>Information for Each Step:</p> <ol style="list-style-type: none"> 1. User logs in using valid credentials. 2. Navigates to the "Webinars" or "Discussions" section in the platform. 3. Views a list of upcoming or ongoing webinars or discussions. 4. Selects a webinar or discussion to join. 5. System checks user's eligibility and registration status for the event. 6. Clicks on the "Join" button associated with the selected event. 7. System provides access to the webinar or discussion interface. 8. Participates in the live or recorded session, interacts with presenters or peers. 9. Engages in discussions, asks questions, provides input, etc. 10. Leaves the session when finished. 11. Receives a follow-up email or platform notification containing session details.
<p>Preconditions: User must be registered and logged into their account. Webinars or discussions must be available and scheduled.</p>	
<p>Postconditions: User successfully participates in the selected webinar or discussion.</p>	
<p>Assumptions: User's device supports webinar software and internet connectivity.</p>	
<p>Requirements Met:</p> <p>User Engagement: Users should have the ability to join and actively participate in live webinars and discussions. Users should be able to post questions, comments, and interact with other participants.</p>	

Interactive Tools: The platform should provide interactive tools within webinars and discussions, such as chat rooms, Q&A sessions, and polls. Users should have options to engage in real-time interactions during events.

Community Engagement: Users should be able to connect with other members of the agricultural community during webinars and discussions. The platform should foster a sense of community and collaboration among users.

Content Access: Users should have access to recorded webinars and discussions that they might have missed. The platform should offer an archive of past events for users to revisit.

Issues: Possible issues include technical glitches during the session or limited interaction due to large participation.

Priority: Medium.

Risk Probability: Low to Medium. Risks include technical difficulties impacting user experience or limited engagement opportunities. Clear instructions and technical support can mitigate risks.

Table 20: Manage Content Calendar.

Use Case Name: Manage Content Calendar.	Unique ID: UC-MANAGE-CONTENT-CALENDAR-001.
Area: Content Management.	
Actor(s): Content Manager (Admin).	
Description: This use case outlines how a content manager administers and maintains the content calendar on the agricultural investment and consulting platform.	
Triggering Event: Content updates, additions, or scheduling changes.	
Trigger Type: Admin-initiated event.	
Steps Performed (Main Path): <ol style="list-style-type: none">1. Content manager logs into their admin account.2. Content manager accesses the "Content Calendar" section.3. Content manager views the existing content schedule and upcoming releases.	Information for Each Step: <ol style="list-style-type: none">1. Content manager logs in using valid admin credentials.2. Navigates to the "Content Calendar" section within the admin dashboard.

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| <p>4. Content manager selects a specific date to add or edit content.</p> <p>5. Content manager inputs content details (title, type, description, etc.).</p> <p>6. Content manager sets the content's publication date and time.</p> <p>7. Content manager uploads or links relevant files (articles, videos, etc.).</p> <p>8. Content manager reviews and confirms the changes.</p> <p>9. System updates the content calendar with the new/edited content.</p> <p>10. Content manager receives a confirmation message.</p> | <p>3. Views the existing content schedule, including scheduled releases.</p> <p>4. Selects a specific date to manage content.</p> <p>5. Inputs content details such as title, type, description, etc.</p> <p>6. Sets the publication date and time for the content.</p> <p>7. Uploads or links relevant files associated with the content.</p> <p>8. Reviews changes and confirms the schedule.</p> <p>9. System updates the content calendar with the new/edited content.</p> <p>10. Receives a confirmation message indicating the successful update.</p> |
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Preconditions: Content manager must have admin-level access to the platform.

Postconditions: Content calendar is updated with new or edited content entries.

Assumptions: Content manager has access to relevant content and publication details.

Requirements Met:

Regular Content Updates: The platform should have a content calendar that enables administrators to schedule and manage the release of new content. Administrators should be able to plan and schedule articles, videos, webinars, and other types of content.

Content Management: Administrators should be able to add, edit, and delete content items from the content calendar. The platform should provide tools to manage content metadata, descriptions, and publishing dates.

Content Curation: Administrators should be able to curate the content by prioritizing and organizing content releases based on relevance and user interests.

Editorial Workflow: The content calendar should support an editorial workflow that involves content creation, review, approval, and scheduling.

Issues: Possible issues include incorrect scheduling or incomplete content details.

Priority: Medium.

Risk Probability: Low to Medium. Risks include scheduling errors affecting user experience or incomplete content details leading to misinformation. Careful review and confirmation can mitigate risks.

Table 21: Enter Content.

Use Case Name: Enter Content.	Unique ID: UC-ENTER-CONTENT-BY-USER-001.
Area: User-Generated Content.	
Actor(s): User (Content Contributor).	
Description: This use case outlines how a user contributes and submits content, such as articles or guides, to the agricultural investment and consulting platform.	
Triggering Event: User's intention to submit content for publication.	
Trigger Type: User-initiated event.	
Steps Performed (Main Path): <ol style="list-style-type: none"> 1. User logs into their account. 2. User navigates to the "Contribute Content" or "Submit Article" section. 3. User selects the content type they want to submit (e.g., article, guide). 4. User provides content details (title, description, category, etc.). 5. User uploads the content file (document, video, image, etc.). 6. User reviews and confirms the submission. 7. System validates the content and checks for any violations. 8. System adds the content to the moderation queue for review. 9. User receives a confirmation message regarding successful submission. 	Information for Each Step: <ol style="list-style-type: none"> 1. User logs in using valid credentials. 2. Navigates to the "Contribute Content" or "Submit Article" section. 3. Selects the desired content type to contribute (article, guide, etc.). 4. Provides content details including title, description, and category. 5. Uploads the content file (document, video, image, etc.). 6. Reviews and confirms the content submission. 7. System validates the content for completeness and compliance. 8. Adds the submitted content to the moderation queue for review. 9. Receives a confirmation message indicating successful submission.

Preconditions: User must be registered and logged into their account.
Postconditions: User successfully submits content for review.
Assumptions: Users have access to valid content files and understand content submission guidelines.
Requirements Met:
<p>Rich and Relevant Content: Users should be able to contribute articles, videos, and other content types that enhance the range of available agricultural information. Content should be reviewed for quality to maintain a high standard of relevant information.</p> <p>User-Generated Content: Users should have the ability to share their expertise, experiences, and knowledge by submitting articles, videos, and other content. Content contributed by users enhances the variety of perspectives available.</p> <p>Community Engagement: User-generated content encourages engagement and discussions among community members. Users can participate in discussions, forums, and webinars related to their contributed content.</p>
Issues: Possible issues include inappropriate or violating content being submitted.
Priority: Medium.
Risk Probability: Low to Medium. Risks include the submission of inappropriate or low-quality content. Proper content guidelines and moderation can mitigate risks.

Table 22: Analyze User Analytics.

Use Case Name: Analyze User Analytics.	Unique ID: UC-ANALYZE-USER-ANALYTICS-001.
Area: Analytics and Reporting.	
Actor(s): Data Analyst, Marketing Manager.	
Description: This use case outlines how data analysts and marketing managers analyze user analytics data to derive insights and make informed decisions for the agricultural investment and consulting platform.	
Triggering Event: Regular analysis of user engagement and behavior data.	

Trigger Type: Periodic event.

Steps Performed (Main Path):

1. Data analyst logs into their analytics account or platform.
2. Data analyst navigates to the "User Analytics" or "Data Insights" section.
3. Data analyst selects the desired timeframe and metrics to analyze.
4. System retrieves and displays relevant user engagement data (e.g., page views, interactions).
5. Data analyst applies data visualization techniques (charts, graphs, etc.).
6. Data analyst interprets trends and patterns from the data.
7. Data analyst generates reports or presentations with key insights.
8. Marketing manager reviews the insights provided by the data analyst.

Information for Each Step:

1. Data analyst logs in using valid credentials.
2. Navigates to the "User Analytics" or "Data Insights" section within the analytics platform.
3. Selects a specific timeframe and relevant metrics for analysis.
4. System retrieves and displays user engagement data based on the selected metrics.
5. Applies data visualization techniques to represent the data effectively.
6. Interprets trends and patterns observed in the data.
7. Generates reports or presentations summarizing the key insights.
8. Marketing manager reviews the insights to inform decision-making.

Preconditions: Data analyst must have access to the analytics platform and relevant user engagement data.

Postconditions: Derived insights provide valuable information for informed decision-making.

Assumptions: User engagement data is accurate and reflects user behavior effectively.

Requirements Met:

Personalized Recommendations: Analyzing user behavior and preferences helps in generating accurate personalized content recommendations.

User Engagement Enhancement: Analytics provide insights into which content or features are most engaging to users, enabling improvements in engagement strategies.

Regular Content Updates: Analytics data can highlight which content types or topics are most popular, guiding the decision to create more of such content.

Feedback Mechanism: User behavior analytics can help identify areas where users may face issues, informing improvements and adjustments.

<p>Content Relevance Enhancement: Analytics data can help in understanding which content is most relevant to users' needs, improving content curation.</p> <p>Subscription Optimization: Analyzing user subscription patterns and preferences aids in optimizing subscription offerings and benefits.</p>
Issues: Possible issues include misinterpretation of data or missing key insights.
Priority: Medium.
Risk Probability: Low to Medium. Risks include misinterpretation of data leading to misguided decisions. Clear communication between data analysts and decision-makers can mitigate risks.

Table 23: Collaborate with External Contributors.

Use Case Name: Collaborate with External Contributors.	Unique ID: UC-COLLABORATE-EXTERNAL-CONTRIB-001.
Area: Content Management.	
Actor(s): Content Manager (Admin), External Contributor.	
Description: This use case outlines how the content manager collaborates with external contributors to gather and publish relevant agricultural content on the platform.	
Triggering Event: Content manager's decision to engage external contributors.	
Trigger Type: Admin-initiated event.	
<p>Steps Performed (Main Path):</p> <ol style="list-style-type: none"> 1. Content manager logs into their admin account. 2. Content manager accesses the "Collaboration" or "External Contributors" section. 3. Content manager identifies potential external contributors or invites contributors. 4. External contributor receives an invitation and registers on the platform. 	<p>Information for Each Step:</p> <ol style="list-style-type: none"> 1. Content manager logs in using valid admin credentials. 2. Navigates to the "Collaboration" or "External Contributors" section within the admin dashboard. 3. Identifies and invites potential external contributors.

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| <p>5. Content manager and external contributor discuss content ideas and guidelines.</p> <p>6. External contributor creates and submits the content using the platform's interface.</p> <p>7. Content manager reviews the submitted content.</p> <p>8. Content manager provides feedback or requests revisions if needed.</p> <p>9. Once content is approved, content manager schedules publication.</p> <p>10. External contributor receives a notification about the published content.</p> | <p>4. External contributor receives an invitation and registers on the platform.</p> <p>5. Engages in discussions with content manager about content topics and guidelines.</p> <p>6. Creates and submits content using the platform's interface.</p> <p>7. Content manager reviews the submitted content for quality and relevance.</p> <p>8. Content manager provides feedback or requests revisions if necessary.</p> <p>9. Once content meets requirements, the content manager schedules its publication.</p> <p>10. External contributor receives a notification upon the content's publication.</p> |
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Preconditions: Content manager must have admin-level access to the platform. External contributors must accept the invitation and register.

Postconditions: Published content contributed by external collaborators is available on the platform.

Assumptions: External contributors have expertise in agriculture and adhere to content guidelines.

Requirements Met:

Rich and Relevant Content: External contributors can provide additional high-quality and up-to-date agricultural content, enriching the platform's offerings.

Interactive Tools: Collaboration with external experts can lead to the development of interactive tools and calculators for users.

Community Engagement: External contributors can participate in discussions, forums, and webinars, enhancing engagement within the community.

Personalized Recommendations: Contributions from external experts can help tailor personalized recommendations for users.

Issues: Possible issues include content misalignment with platform's goals or quality expectations.

Priority: Medium.

Risk Probability: Low to Medium. Risks include misaligned or low-quality content. Clear communication and content guidelines can mitigate risks.

Table 24: Customize Interface Preferences.

Use Case Name: Customize Interface Preferences.	Unique ID: UC-CUSTOMIZE-INTERFACE-PREFS-001.
Area: User Interface Customization.	
Actor(s): User.	
Description: This use case outlines how users customize their interface preferences on the agricultural investment and consulting platform to enhance their user experience.	
Triggering Event: User's decision to personalize interface settings.	
Trigger Type: User-initiated event.	
Steps Performed (Main Path): <ol style="list-style-type: none"> 1. User logs into their account. 2. User navigates to the "Settings" or "Preferences" section. 3. User selects the "Interface Customization" or "Personalization" option. 4. User chooses from available customization options (e.g., color scheme, font size). 5. User selects and saves their preferred settings. 6. System updates the interface based on the selected preferences. 7. User reviews and confirms the changes. 	Information for Each Step: <ol style="list-style-type: none"> 1. User logs in using valid credentials. 2. Navigates to the "Settings" or "Preferences" section within their account. 3. Selects the "Interface Customization" or "Personalization" option. 4. Chooses customization options like color scheme, font size, etc. 5. Selects and saves the preferred customization settings. 6. System updates the interface appearance according to the selected settings. 7. Reviews and confirms the applied changes.
Preconditions: User must be registered and logged into their account.	
Postconditions: User's interface preferences are customized as per their selections.	
Assumptions: User preferences are supported by the platform's customization options.	
Requirements Met:	

<p>User-Friendly Interface: Allowing users to customize interface preferences ensures that the platform caters to their specific preferences.</p> <p>Personalized Recommendations: The customization of interface preferences can extend to personalized content recommendations.</p> <p>Language and Localization: Customizing interface preferences can include selecting preferred language and localized content.</p>
Issues: Possible issues include conflicting customization settings or design inconsistencies.
Priority: Medium.
Risk Probability: Low. Risks include design inconsistencies or user dissatisfaction with selected customization settings. Clear customization options can mitigate risks.

Table 25: Access Agricultural Expert's Profiles.

Use Case Name: Access Agricultural Experts' Profiles.	Unique ID: UC-AAEP-001.
Area: User Interaction.	
Actor(s): Registered User, Agricultural Expert.	
Description: This use case outlines the steps for a registered user to access the profiles of agricultural experts on the platform.	
Triggering Event: User wants to view the profiles of agricultural experts for personalized advice and guidance.	
Trigger Type: User-initiated event.	
Steps Performed (Main Path): <ol style="list-style-type: none"> 1. User navigates to the platform and logs in with their credentials. 2. User accesses the main dashboard or landing page of the platform. 3. User locates the section or feature that provides access to agricultural experts' profiles. 4. User selects a specific expert's profile to view. 	Information for Each Step: <ol style="list-style-type: none"> 1. User provides their login credentials (username and password). 2. User is presented with the main dashboard or landing page after successful login. 3. The platform displays options to access experts' profiles, which can be a dedicated tab, a search bar, or a list of experts.

	4. User selects an expert's profile from the displayed options.
Preconditions:	User must be a registered and logged-in user. Agricultural experts' profiles must be available on the platform.
Postconditions:	User successfully views the selected agricultural expert's profile.
Assumptions:	The platform provides detailed profiles of agricultural experts, including their background, expertise, achievements, and contact information.
Requirements Met:	<p>Direct Expert Consultations: Users can access experts' profiles to initiate direct communication.</p> <p>Rich and Relevant Content: Expert profiles provide detailed and relevant information.</p> <p>User Profiles and Dashboards: User logs in to access expert profiles.</p> <p>Language and Localization: Profiles are displayed in the user's preferred language.</p> <p>User-Friendly Interface: Accessing expert profiles is intuitive and easy.</p> <p>Data Privacy and Security: User data and expert information are securely stored.</p>
Issues:	The availability and accuracy of expert profiles must be regularly maintained.
Priority:	High.
Risk Probability:	Medium. Users might rely heavily on the information in expert profiles, so ensuring accuracy and up-to-date information is crucial. Privacy concerns may arise if experts' contact information is not handled securely.

Table 26: Update Content Information.

Use Case Name: Update Content Information.	Unique ID: UCCI001.
Area: Content Management.	
Actor(s): Content Administrators, Editors.	
Description: This use case involves the process of updating existing content information, such as articles, videos, guides, and other resources, on the platform.	

Triggering Event: The need to update content due to new information, corrections, improvements, or relevance.

Trigger Type: Admin-initiated Task.

Steps Performed (Main Path):

1. Content administrator/editor logs into the content management system.
2. Administrator/editor navigates to the content list or specific content item.
3. Administrator/editor selects the content to be updated.
4. Administrator/editor makes necessary changes to the content.
5. Administrator/editor reviews the changes and ensures accuracy.
6. If required, the updated content undergoes a review or approval process.
7. Approved content changes are saved and published.

Information for Each Step:

Step 1: Administrator/editor's credentials (username and password).

Step 3: Identification of the specific content item for updating.

Step 4: Details of the changes made to the content.

Preconditions: Administrator/editor has the appropriate permissions to access and modify content. The content management system is operational.

Postconditions: The updated content is saved in the system and reflected on the platform.

Assumptions: Content administrators and editors are knowledgeable about the content they are updating. The platform's infrastructure supports real-time content updates.

Requirements Met:

User-Friendly Interface: The content management system provides an intuitive interface for content editing.

Rich and Relevant Content: This use case ensures that content remains accurate and up-to-date.

Support and Assistance: Support is available in case issues arise during content updating.

Issues: Ensuring that the updated content aligns with the platform's content quality standards.

Priority: Medium.

Risk Probability: Low. There is a potential risk that inaccurate or poorly reviewed content updates could negatively impact the quality of information presented to users. This risk can be mitigated by implementing a thorough review process and providing clear guidelines for content updates.

Table 27: Complete Transaction and Payment.

Use Case Name: Complete Transaction and Payment.	Unique ID: UCTP001.
Area: E-commerce and Transactions.	
Actor(s): Registered Users, Customers.	
Description: This use case involves the process of completing a transaction and making a payment for agricultural products, services, or subscriptions on the platform.	
Triggering Event: User selects a product, service, or subscription for purchase.	
Trigger Type: User-initiated event.	
Steps Performed (Main Path): <ol style="list-style-type: none"> 1. User logs into their account or creates a new account if not already registered. 2. User browses the platform to find the desired agricultural product, service, or subscription. 3. User adds the selected item to their shopping cart. 4. User reviews items in their shopping cart. 5. User proceeds to checkout. 6. User provides shipping and billing information. 7. User selects a payment method (credit card, PayPal, etc.). 8. User confirms the order and payment details. 9. User completes the payment. 10. The platform processes the payment and generates an order confirmation. 	Information for Each Step: <p>Step 1: User's login credentials (username and password) or account creation details.</p> <p>Step 2: User's product/service/subscription preferences.</p> <p>Step 6: Shipping and billing information, including address and contact details.</p> <p>Step 7: Payment method details, such as credit card number or PayPal account.</p>

11. User receives an order confirmation with transaction details.	
Preconditions: User has selected items for purchase and added them to the shopping cart. User is logged in or has created an account on the platform.	
Postconditions: The transaction is completed, and the user's payment is processed. The user receives an order confirmation email.	
Assumptions: The platform's payment gateway is functional and secure. Users are familiar with the payment methods available on the platform.	
<p>Requirements Met:</p> <p>User-Friendly Interface: The checkout process is intuitive and easy to navigate.</p> <p>Transaction and Payment Support: Users can complete transactions securely using various payment methods.</p> <p>Support and Assistance: Customer support is available to assist with any payment issues.</p>	
Issues: Ensuring the security of users' payment information during the transaction process.	
Priority: High.	
Risk Probability: Moderate. There is a moderate risk that users may encounter technical issues during the payment process, leading to incomplete transactions. This risk can be mitigated by thorough testing of the payment system and providing clear instructions to users.	

Table 28: Manage User Accounts.

Use Case Name: Manage User Accounts.	Unique ID: UCMUA004.
Area: User Management.	
Actor(s): Administrators, Registered Users.	
Description: This use case involves the management of user accounts on the platform, including user registration, login, profile updates, and account security settings.	

Triggering Event: User accesses the platform or attempts to perform account-related actions.	
Trigger Type: User-initiated event.	
<p>Steps Performed (Main Path):</p> <ol style="list-style-type: none"> 1. User accesses the platform through the login page or homepage. 2. User enters their login credentials (username and password). 3. The platform verifies the user's credentials and grants access. 4. User navigates to the account settings or profile page. 5. User updates their profile information (name, contact details, preferences, etc.). 6. User updates their security settings (password changes, two-factor authentication, etc.). 7. User logs out of the platform. 	<p>Information for Each Step:</p> <p>Step 1: User's action to access the platform.</p> <p>Step 2: User's login credentials (username and password).</p> <p>Step 5: User's updated profile information.</p> <p>Step 6: User's updated security settings.</p>
Preconditions: User is registered on the platform. User knows their login credentials.	
Postconditions: User's profile information and security settings are updated as per their changes. User is logged out of the platform.	
Assumptions: Users have valid login credentials. The platform has mechanisms to secure user data and manage user authentication.	
<p>Requirements Met:</p> <p>User-Friendly Interface: Users can easily navigate to their account settings and update their information.</p> <p>User Profiles and Dashboards: Users can manage their profiles and view their account-related information.</p> <p>Data Privacy and Security: Users can update their security settings to enhance the protection of their accounts.</p>	
Issues: Ensuring the security of user account information during profile updates.	

Priority: Medium.
Risk Probability: Low. There is a low risk of account information being compromised during profile updates. This risk is mitigated by implementing secure authentication mechanisms and providing clear instructions to users.

Table 29: Interact with Agricultural Suppliers.

Use Case Name: Interact with Agricultural Suppliers.	Unique ID: UCIAS005.
Area: Supplier Interaction.	
Actor(s): Registered Users, Agricultural Suppliers.	
Description: This use case involves the interaction between registered users and agricultural suppliers on the platform, allowing users to communicate, inquire about products/services, and make transactions.	
Triggering Event: User initiates contact or interacts with an agricultural supplier's profile.	
Trigger Type: User-initiated event.	
Steps Performed (Main Path): <ol style="list-style-type: none"> 1. User accesses the platform through the login page or homepage. 2. User navigates to the agricultural supplier's profile or product listings. 3. User reviews information about the supplier's products, services, and contact details. 4. User sends inquiries or messages to the supplier through provided communication channels. 5. Supplier receives the user's inquiries and responds with relevant information. 6. User and supplier continue to communicate and exchange information. 7. If the user decides to proceed, they initiate a transaction to purchase products/services. 	Information for Each Step: <p>Step 1: User's action to access the platform.</p> <p>Step 2: Supplier's profile or product listings that the user interacts with.</p> <p>Step 3: Information about the supplier's offerings.</p> <p>Step 4: User's inquiries or messages to the supplier.</p> <p>Step 5: Supplier's responses and provided information.</p> <p>Step 7: User's decision to proceed with a transaction.</p> <p>Step 8: User's chosen payment method and transaction details.</p>

<p>8. User completes the transaction using the provided payment methods.</p>	
Preconditions: User is registered on the platform. Agricultural supplier's profile or product listings are available.	
Postconditions: User and supplier have established communication. Transaction details are recorded in the platform's records.	
Assumptions: Suppliers' contact information is accurately displayed. The platform provides secure communication channels.	
<p>Requirements Met:</p> <p>User-Friendly Interface: Users can easily navigate to supplier profiles and communicate.</p> <p>Supplier and Product Information: Users can access detailed information about agricultural suppliers' offerings.</p> <p>Transaction and Payment Support: Users can complete secure transactions for products/services.</p>	
Issues: Ensuring timely communication between users and suppliers.	
Priority: Moderate.	
Risk Probability: Low to Moderate. The risk of communication breakdown or incomplete transactions is low to moderate. This risk can be mitigated by providing clear communication channels and transaction processes.	

Table 30: Collaborate with Agricultural Experts.

<p>Use Case Name: Collaborate with Agricultural Experts.</p>	<p>Unique ID: UCCAE006.</p>
Area: Expert Collaboration.	
Actor(s): Registered Users, Agricultural Experts.	
Description: This use case involves collaboration between registered users and agricultural experts on the platform, enabling users to seek advice, guidance, and knowledge from experts in the agricultural field.	

Triggering Event: User initiates a request for collaboration with an agricultural expert.	
Trigger Type: User-initiated event.	
<p>Steps Performed (Main Path):</p> <ol style="list-style-type: none"> 1. User logs in to the platform. 2. User navigates to the list of available agricultural experts or their profiles. 3. User reviews information about the expert's qualifications, expertise, and areas of knowledge. 4. User sends a collaboration request or inquiry to the expert through provided channels. 5. Expert receives the collaboration request and reviews the user's inquiry. 6. Expert responds to the user's request with advice, guidance, or relevant information. 7. User and expert continue to exchange information and collaborate as needed. 	<p>Information for Each Step:</p> <p>Step 1: User's login credentials.</p> <p>Step 2: List of agricultural experts or expert profiles.</p> <p>Step 3: Expert's qualifications and expertise.</p> <p>Step 4: User's collaboration request or inquiry.</p> <p>Step 5: Expert's review of the request.</p> <p>Step 6: Expert's response to the user's request.</p> <p>Step 7: Ongoing collaboration and exchange of information.</p>
Preconditions: User is registered on the platform. Agricultural expert profiles are available.	
Postconditions: User and expert have established collaboration.	
Assumptions: Experts' expertise and qualifications are accurately displayed. The platform provides secure and efficient communication channels.	
<p>Requirements Met:</p> <p>User-Friendly Interface: Users can easily navigate to expert profiles and initiate collaboration.</p> <p>Direct Expert Consultations: Users can communicate directly with agricultural experts.</p> <p>Support and Assistance: Users can seek guidance and advice from agricultural experts.</p>	
Issues: Ensuring timely and valuable expert responses.	
Priority: Moderate.	

Risk Probability: Low to Moderate. The risk of delayed or inadequate expert responses is low to moderate. This risk can be mitigated by setting clear expectations for response times and providing guidelines for experts' engagement.

Table 31: Administer User Accounts.

Use Case Name: Administer User Accounts.	Unique ID: UCAUA007.
Area: User Account Management.	
Actor(s): Admin or Moderators.	
Description: This use case involves the administration and management of user accounts by authorized administrators or moderators. It encompasses tasks related to user account creation, modification, suspension, and deletion.	
Triggering Event: An authorized administrator or moderator initiates a user account management task.	
Trigger Type: Admin-initiated event.	
Steps Performed (Main Path): <ol style="list-style-type: none"> 1. Administrator logs in to the admin panel. 2. Administrator selects the "User Accounts" section. 3. Administrator searches for the specific user account. 4. Administrator views user account details and activity history. 5. Administrator performs the intended action: <ul style="list-style-type: none"> • Create a new user account. • Modify user account information. • Suspend or reactivate a user account. • Delete a user account. 6. System updates user account status based on the action taken. 	Information for Each Step: <p>Step 1: Administrator's login credentials.</p> <p>Step 2: Admin panel interface.</p> <p>Step 3: User account search parameters.</p> <p>Step 4: User account details and activity log.</p> <p>Step 5: Action performed on the user account.</p> <p>Step 6: Updated user account status.</p>
Preconditions: Administrator is logged in to the admin panel. User accounts exist in the system.	

Postconditions: User account information is updated according to the administrator's actions.
Assumptions: Administrator has appropriate permissions to perform user account management.
Requirements Met: User-Friendly Interface: The admin panel provides an intuitive interface for managing user accounts. User Profiles and Dashboards: Administrators can view and modify user account information. Support and Assistance: Admins can suspend or reactivate user accounts as needed.
Issues: Ensuring proper authorization for administrators to prevent unauthorized access.
Priority: High.
Risk Probability: Low to Moderate. The risk of unauthorized access by administrators is low to moderate. This risk can be mitigated by implementing strict access controls and authentication mechanisms for the admin panel.

Table 32: Manage Team Roles and Responsibilities.

Use Case Name: Manage Team Roles and Responsibilities.	Unique ID: UCMTRR008.
Area: Team Management.	
Actor(s): Project Managers, Administrators.	
Description: This use case involves assigning, modifying, and managing roles and responsibilities of team members within the agricultural platform. It ensures that each team member has the appropriate access and responsibilities based on their role.	
Triggering Event: A new team member joins or an existing team member's role needs to be updated.	
Trigger Type: Admin-initiated event.	
Steps Performed (Main Path): 1. Project manager or administrator logs in to the admin panel.	Information for Each Step: Step 1: Administrator's or project manager's login credentials.

- 2.** Project manager or administrator selects the "Team Management" section.
- 3.** Project manager or administrator searches for the specific team member's profile.
- 4.** Project manager or administrator views the team member's current roles and responsibilities.
- 5.** Project manager or administrator updates the roles and responsibilities:
 - Assigns a new role.
 - Modifies existing role's responsibilities.
 - Removes a role.
- 6.** System updates the team member's roles and responsibilities.

Step 2: Admin panel interface.

Step 3: Team member search parameters.

Step 4: Team member's current roles and responsibilities.

Step 5: Roles and responsibilities updates.

Step 6: Updated team member's roles and responsibilities.

Preconditions: Project manager or administrator is logged in to the admin panel. Team members and their roles are defined in the system.

Postconditions: Team member's roles and responsibilities are updated according to the administrator's actions.

Assumptions: The admin panel provides a clear interface to manage team roles and responsibilities.

Only authorized individuals can access and modify team roles.

Requirements Met:

User-Friendly Interface: The admin panel allows easy management of team roles.

Support and Assistance: Admins can ensure that team members have appropriate access levels.

Issues: Ensuring proper authorization for administrators to prevent unauthorized role changes.

Priority: Medium.

Risk Probability: Low to Moderate. The risk of unauthorized role changes is low to moderate. This risk can be mitigated by implementing strict access controls for the admin panel and having a clear role assignment process.

4.5 Non-Functional Requirements.

4.5.1 Performance Requirements.

- **Response Time:** Our system should provide plant care recommendations within a reasonable time frame (not to exceeding a threshold of X seconds) to ensure a smooth user experience.
- **Scalability:** The system should be able to handle an increasing number of users and plants without significant degradation in performance.
- **Resource Utilization:** The system must effectively manage computational resources, including memory and processing capacity, to avoid any potential resource constraints.

4.5.2 Dependability Requirements.

- **Availability:** The system should be available to users for plant care recommendations most of the time, aiming for a high uptime percentage.
- **Fault Tolerance:** The system should be designed to handle unexpected errors or failures gracefully and recover without data loss
- **Backup and Recovery:** Regular backups of user data and system state should be performed, allowing for recovery in case of data loss or system failure.

4.5.3 Security Requirements.

- **Data Privacy:** User information and plant care history should be stored securely and only accessible to authorized personnel.
- **Authentication and Authorization:** Users should authenticate before accessing the system, and proper authorization mechanisms should be in place to control user access to different functionalities.
- **Data Encryption:** Data transmitted between the user and the system should be encrypted to prevent interception and unauthorized access.

4.5.4 Usability Requirements.

- **User Interface:** The user interface should be intuitive and visually appealing, guiding users through the process of inputting plant names and receiving care recommendations.
- **User Feedback:** The system should provide clear and informative feedback to users, helping them understand the care instructions and any potential issues.

4.5.5 Operational and Environmental Requirements.

- **Operating Environment:** The system should work well across different devices, browsers, and operating systems commonly used by users.

- **Network Connectivity:** The system should function properly with varying levels of network connectivity, including slow or intermittent connections.

4.5.6 Maintainability Requirements.

- **Modularity:** The system's components should be modular and well-organized, making it easier to update and maintain individual parts without affecting the entire system.
- **Documentation:** Comprehensive documentation should be provided for developers and administrators, explaining the system's architecture, APIs, and how to troubleshoot common issues.

4.6 Data Requirements.

The Data Requirements for the Plant Care Machine Learning Project are pivotal to achieving accurate plant care recommendations and cultivating a robust user experience. Comprehensive and well-curated data forms the foundation upon which the machine learning model thrives. The ensuing section elaborates on the specific data aspects essential to the project's success.

Plant Data

Accurate and detailed information about various plant species is fundamental to generate effective care recommendations. The Plant Data encompasses:

- **Plant Taxonomy:** Precise taxonomic information, including family, genus, and species, is required to categorize plants accurately.
- **Attributes:** Relevant attributes such as growth habits, light requirements, watering preferences, and soil types shall be compiled to facilitate tailored care guidance.
- **Images:** A diverse collection of plant images shall be amassed to support image recognition and classification tasks, enhancing the model's ability to identify plant species from user-provided images.

User Data

User data plays a vital role in personalizing recommendations and enhancing user engagement. The User Data includes:

- **User Profiles:** Basic user profiles containing usernames, email addresses, and authentication credentials are necessary for system access.
- **Plant Collection:** Maintaining a record of plants owned by each user enables the system to offer contextually relevant care advice and track plant health over time.
- **User Feedback:** Mechanisms for users to provide feedback on care recommendations and report plant-related issues shall be incorporated to enhance system performance.

Pest and Disease Information

Integrating information about common pests, diseases, and potential problems that affect various plant species enhances the system's diagnostic capabilities. This includes:

- **Pest Identification:** Data on pests, their appearances, and symptoms they cause on plants to aid in accurate pest identification.
- **Treatment Methods:** Recommendations for treating and preventing specific pests and diseases, which can be suggested based on plant species and observed symptoms.

Nutritional Requirements

Including information about the nutritional needs of different plants helps users optimize their plant care routines. This includes:

- **Nutrient Types:** Information about essential nutrients required by plants, such as nitrogen, phosphorus, and potassium, to ensure balanced care.
- **Fertilization Guidelines:** Recommendations for appropriate fertilizers and application frequencies for different plant types.

Environmental Data

Environmental conditions significantly influence plant health and care requirements. The Environmental Data encompasses:

- **Location Information:** Gathering geographic location data or user-provided climate zone information helps tailor care suggestions to the local climate.
- **Weather Data:** Accessing real-time or historical weather data aids in recommending appropriate care based on weather conditions, including temperature, humidity, and precipitation.

Interaction Data

Understanding user interactions with the system facilitates system improvement and personalization. The Interaction Data includes:

- **Search Queries:** Capturing user search queries and interactions with the recommendation system provides insights into user preferences and interests.
- **Recommendation Feedback:** User responses to recommended care actions, including success stories and perceived challenges, offer valuable feedback for refining the recommendation algorithm.

Data Quality and Maintenance

Ensuring data accuracy, consistency, and freshness is paramount to the project's success. Regular data quality checks and maintenance procedures shall be established, including:

- **Data Cleansing:** Regularly removing or correcting inaccuracies, inconsistencies, and outliers from the data to maintain model integrity.
- **Data Updates:** Routinely updating plant-related data, user profiles, and environmental information to reflect changing conditions and ensure recommendations remain relevant.

Nutritional Requirements

Including information about the nutritional needs of different plants helps users optimize their plant care routines. This includes:

- **Nutrient Types:** Information about essential nutrients required by plants, such as nitrogen, phosphorus, and potassium, to ensure balanced care.
- **Fertilization Guidelines:** Recommendations for appropriate fertilizers and application frequencies for different plant types.

5.0 Analysis and Design.

5.1 Activity Diagram.

Activity Diagram: User Registration.

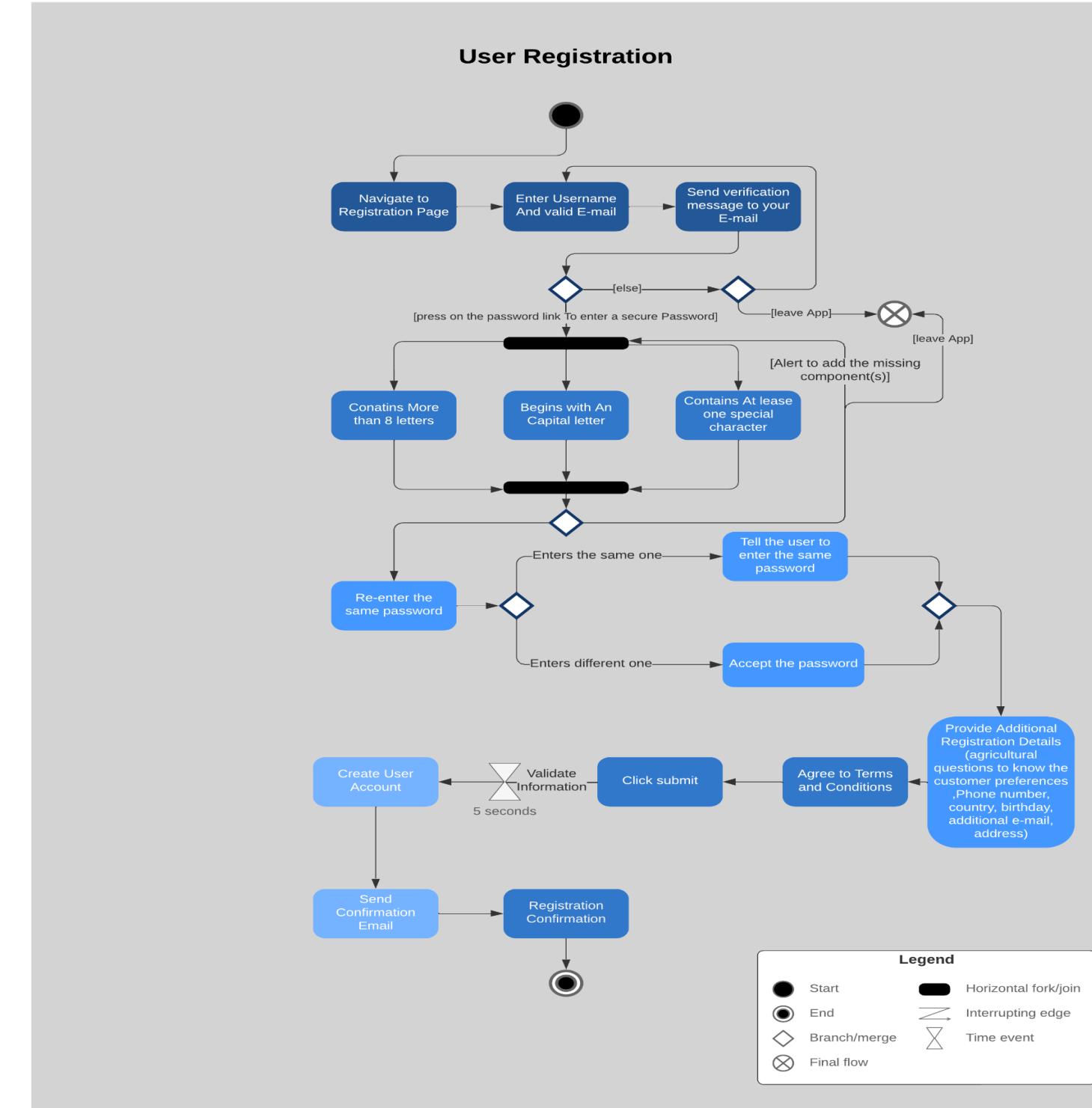


Figure 33: User Registration.

Activity Diagram: User Login.

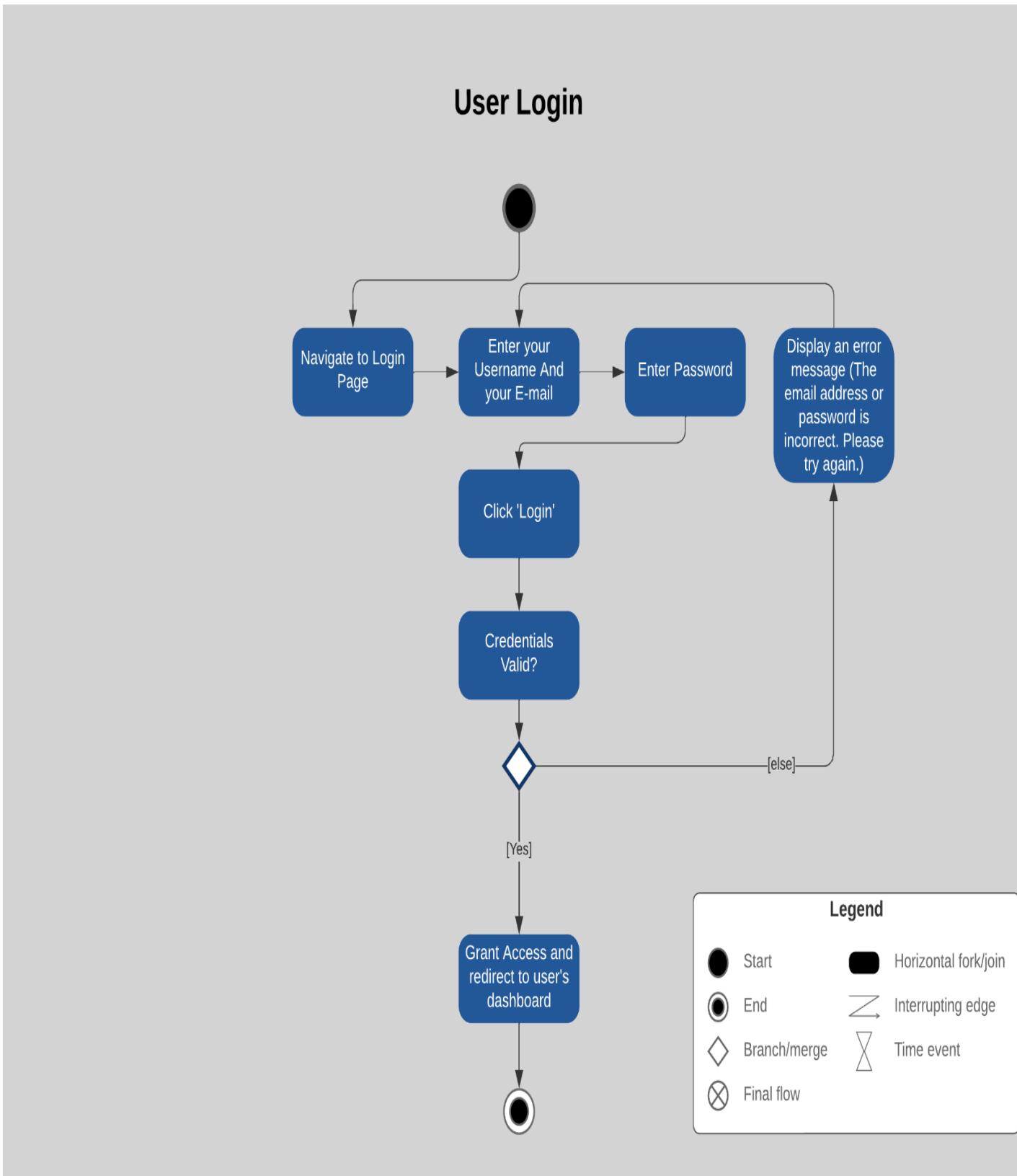


Figure 34: User Login.

Activity Diagram: View Content.

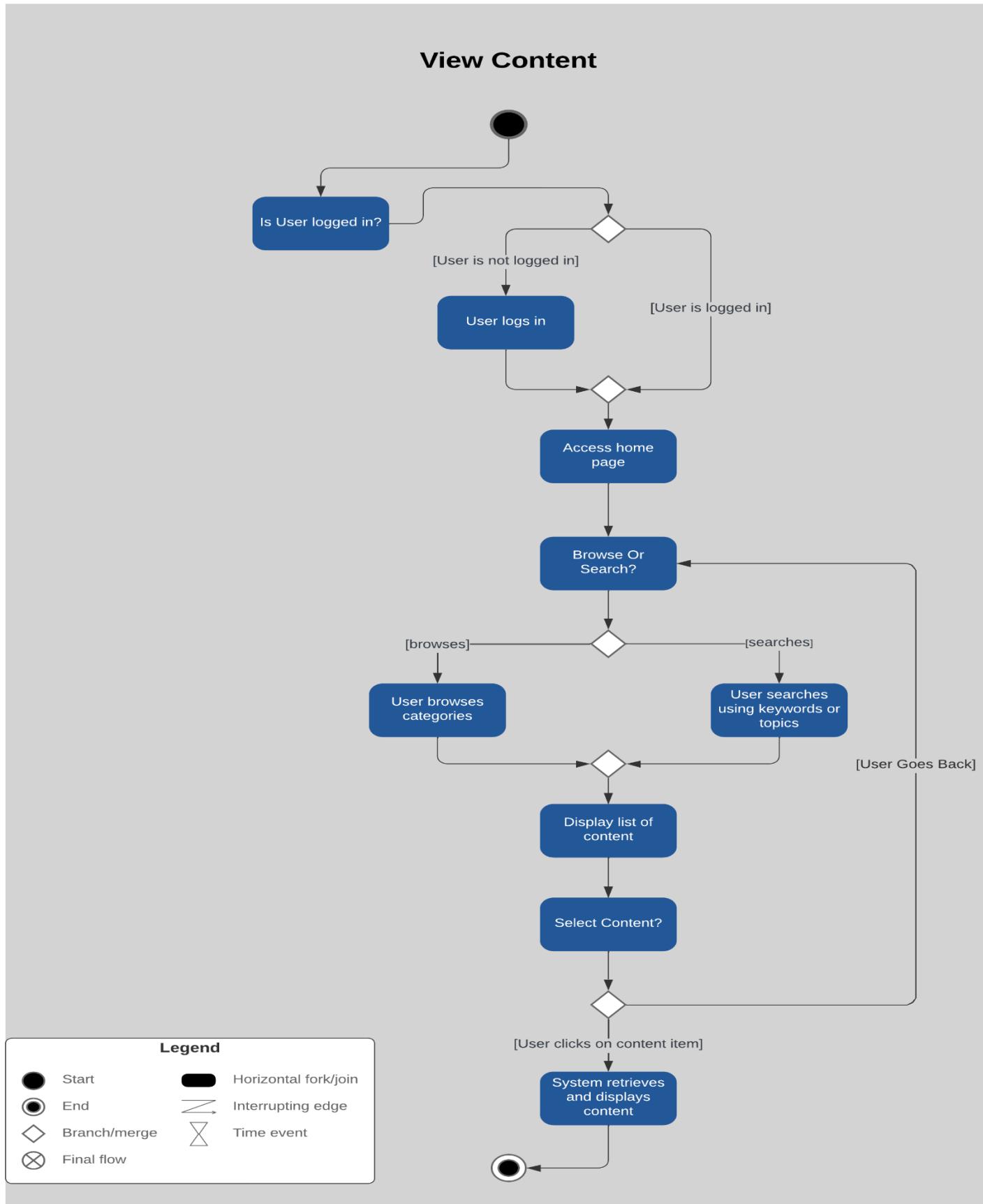


Figure 35: View Content.

Activity Diagram: Request Expert Consultation.

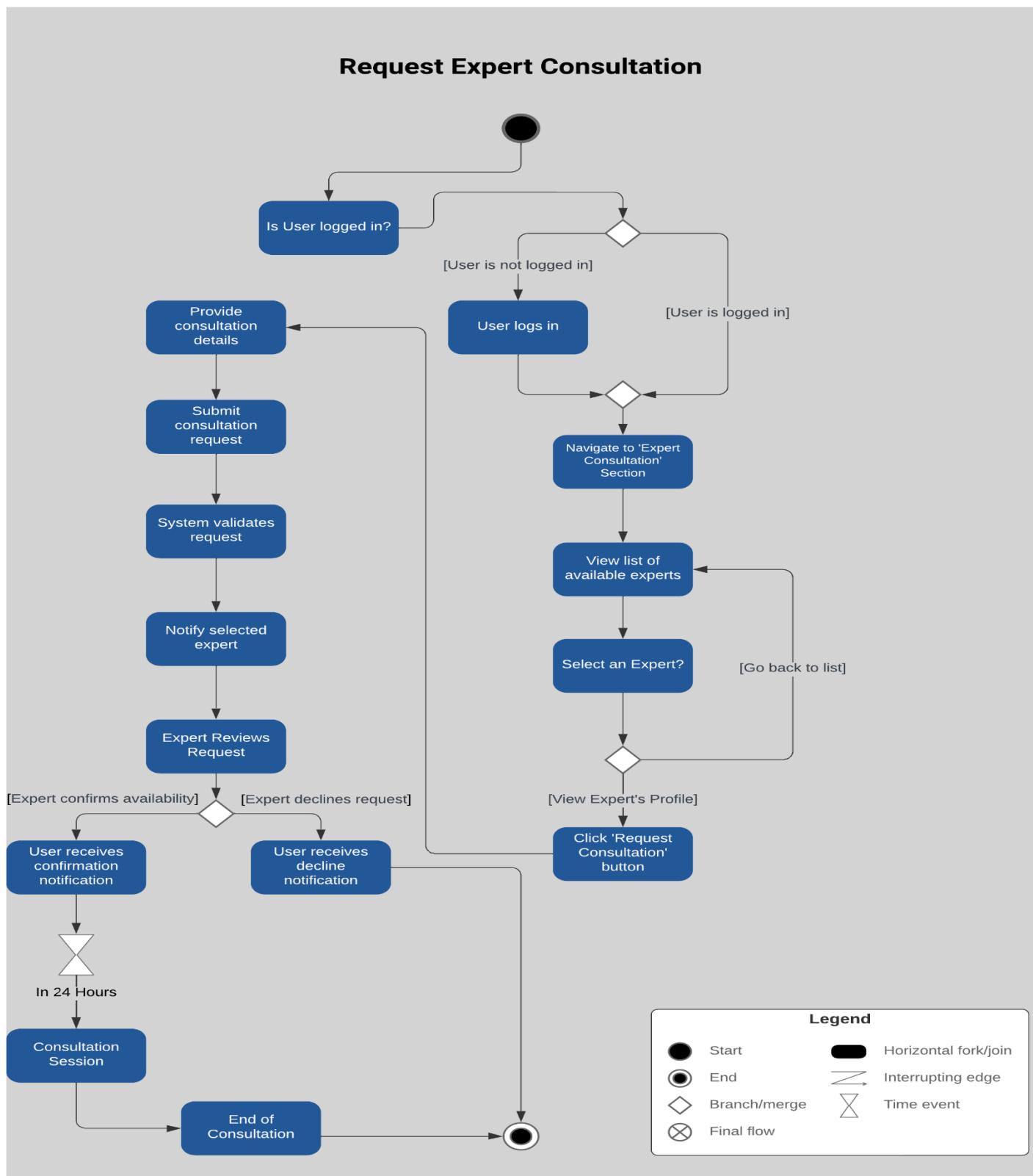


Figure 36: Request Expert Consultation.

Activity Diagram: Purchase Agricultural Products.

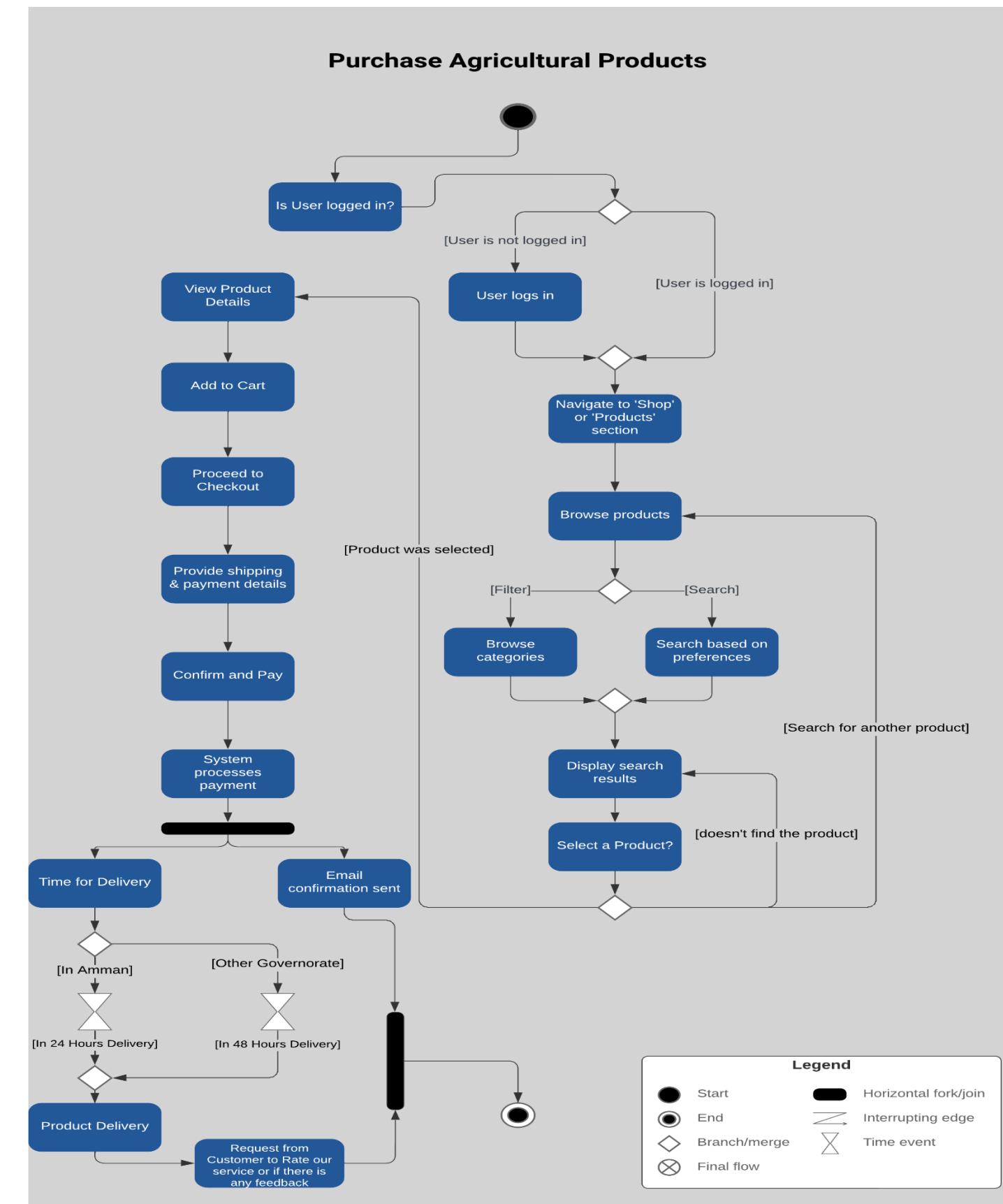


Figure 37: Purchase Agricultural Products.

Activity Diagram: Manage Subscriptions.

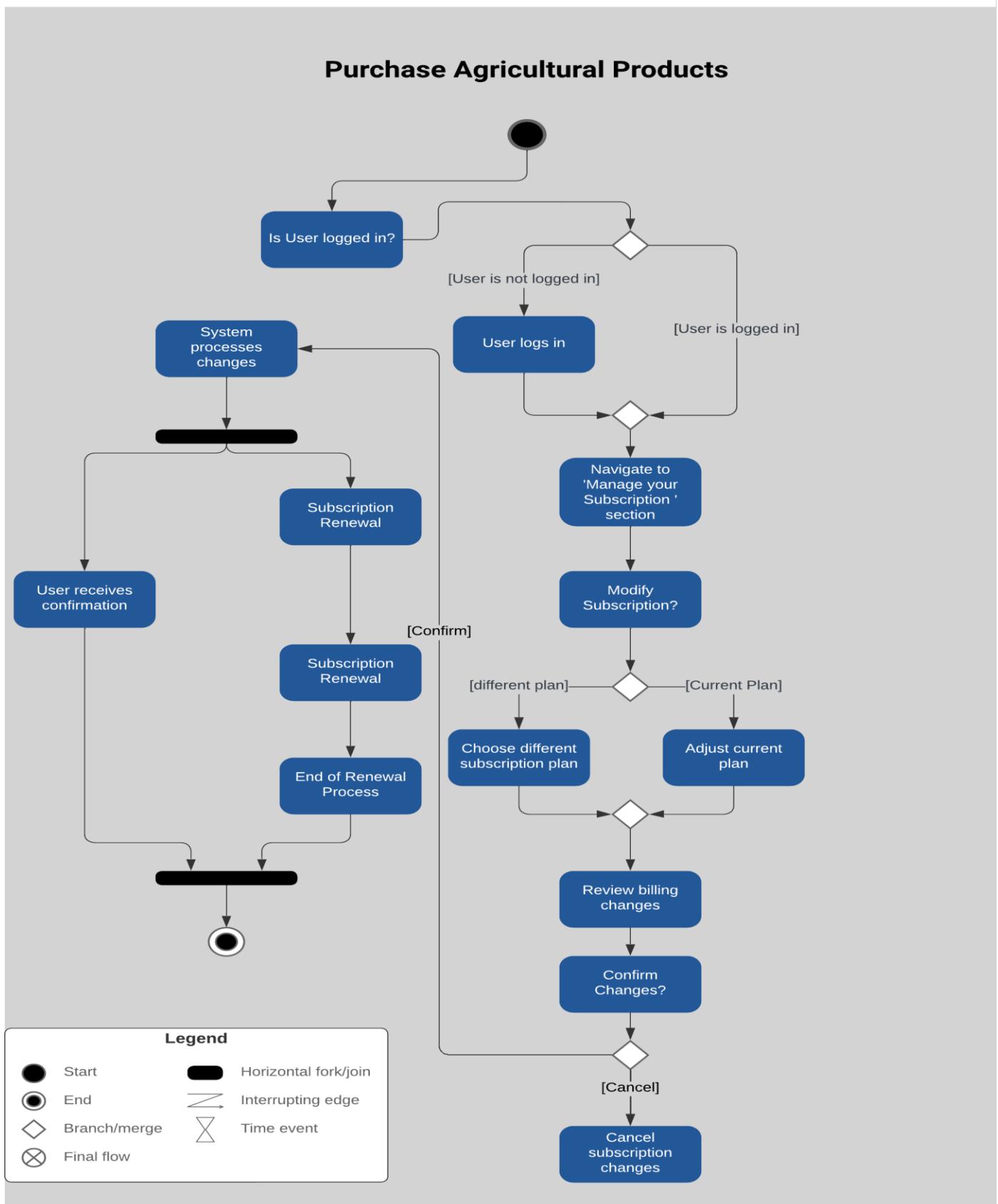


Figure 38: Manage Subscriptions.

Activity Diagram: Contact Customer Support.

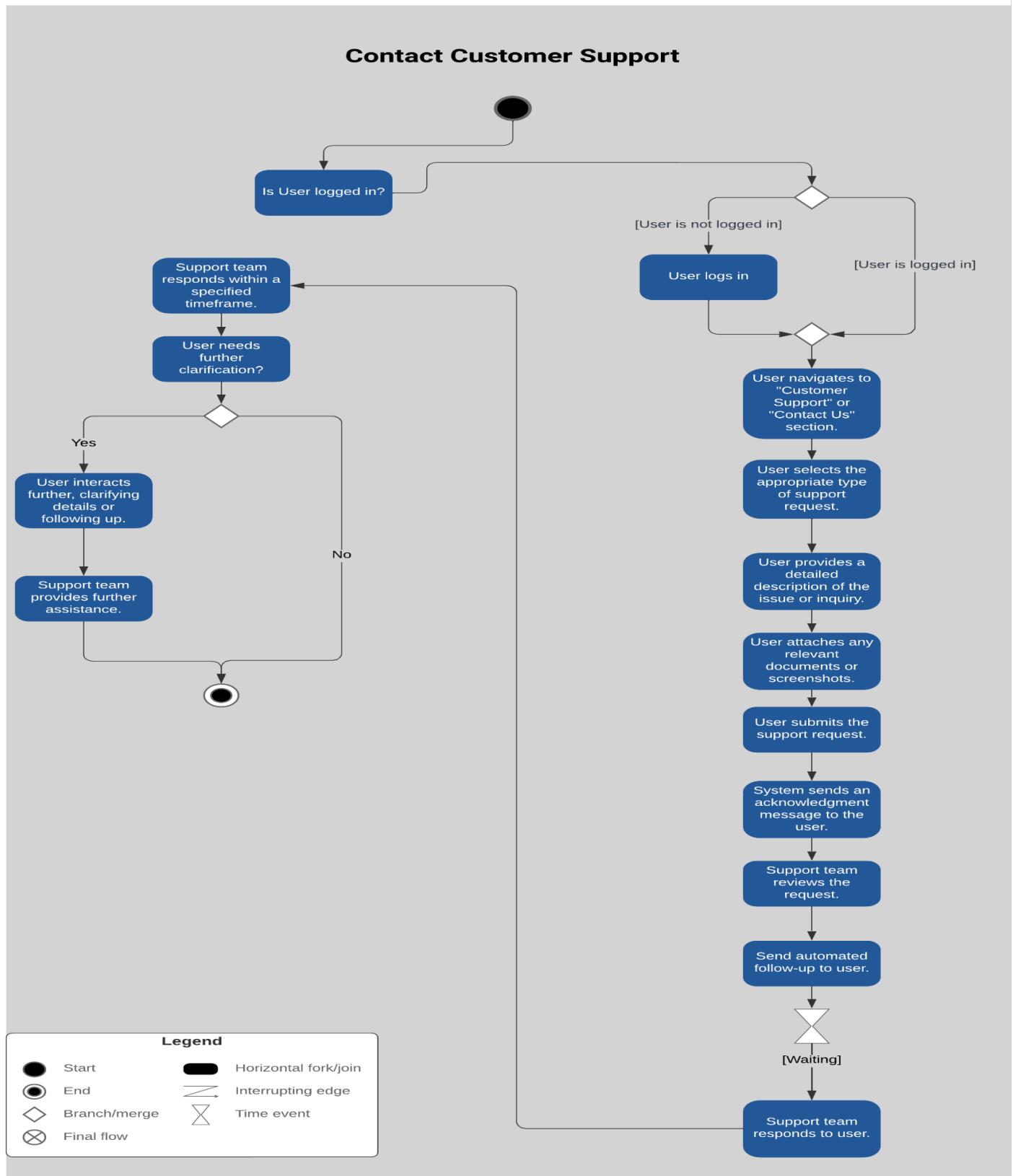


Figure 39: Contact Customer Support.

Activity Diagram: Participate in webinars and discussions.

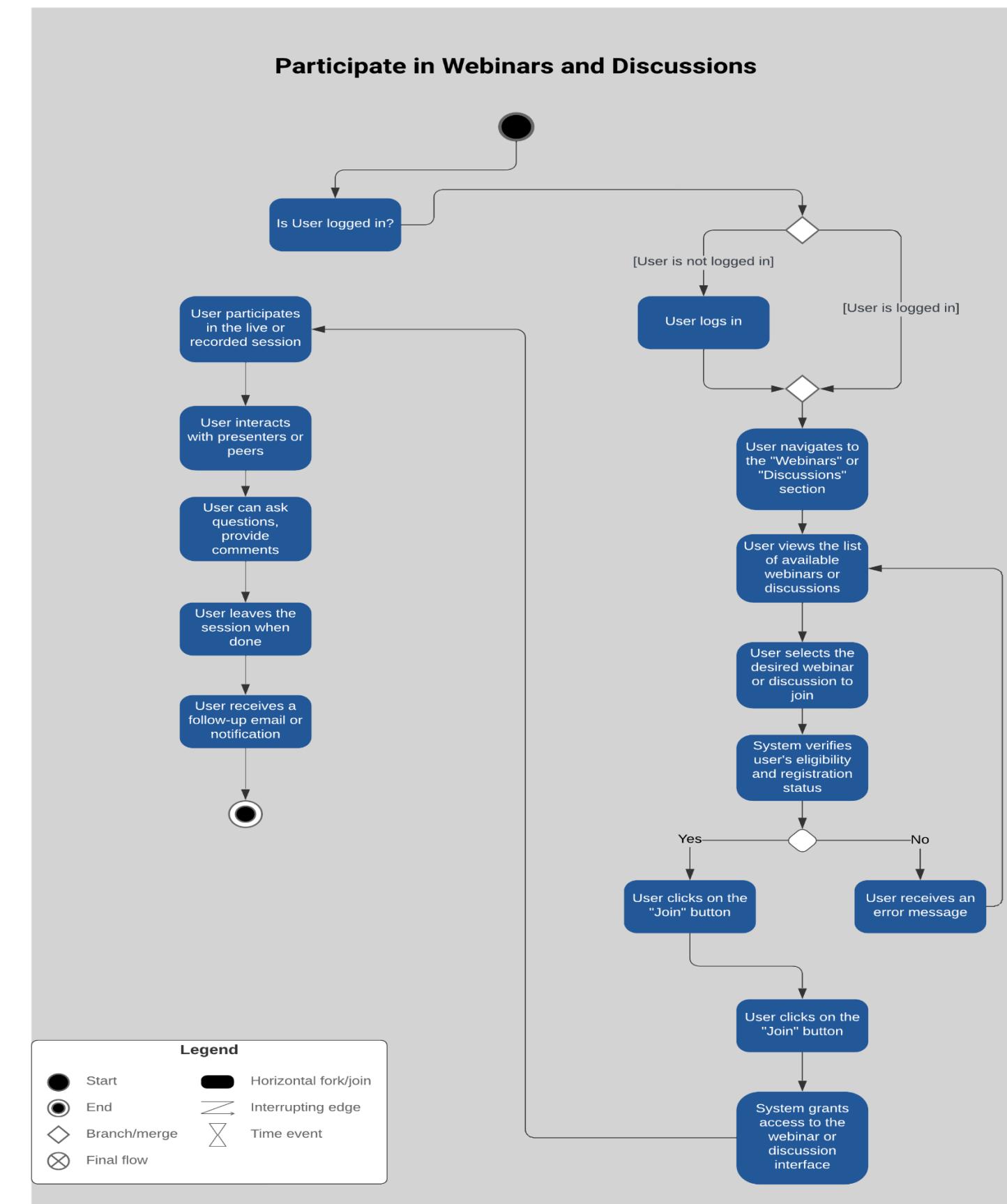


Figure 40:Participate in webinars and discussions.

Activity Diagram: Access Personalized Dashboard.

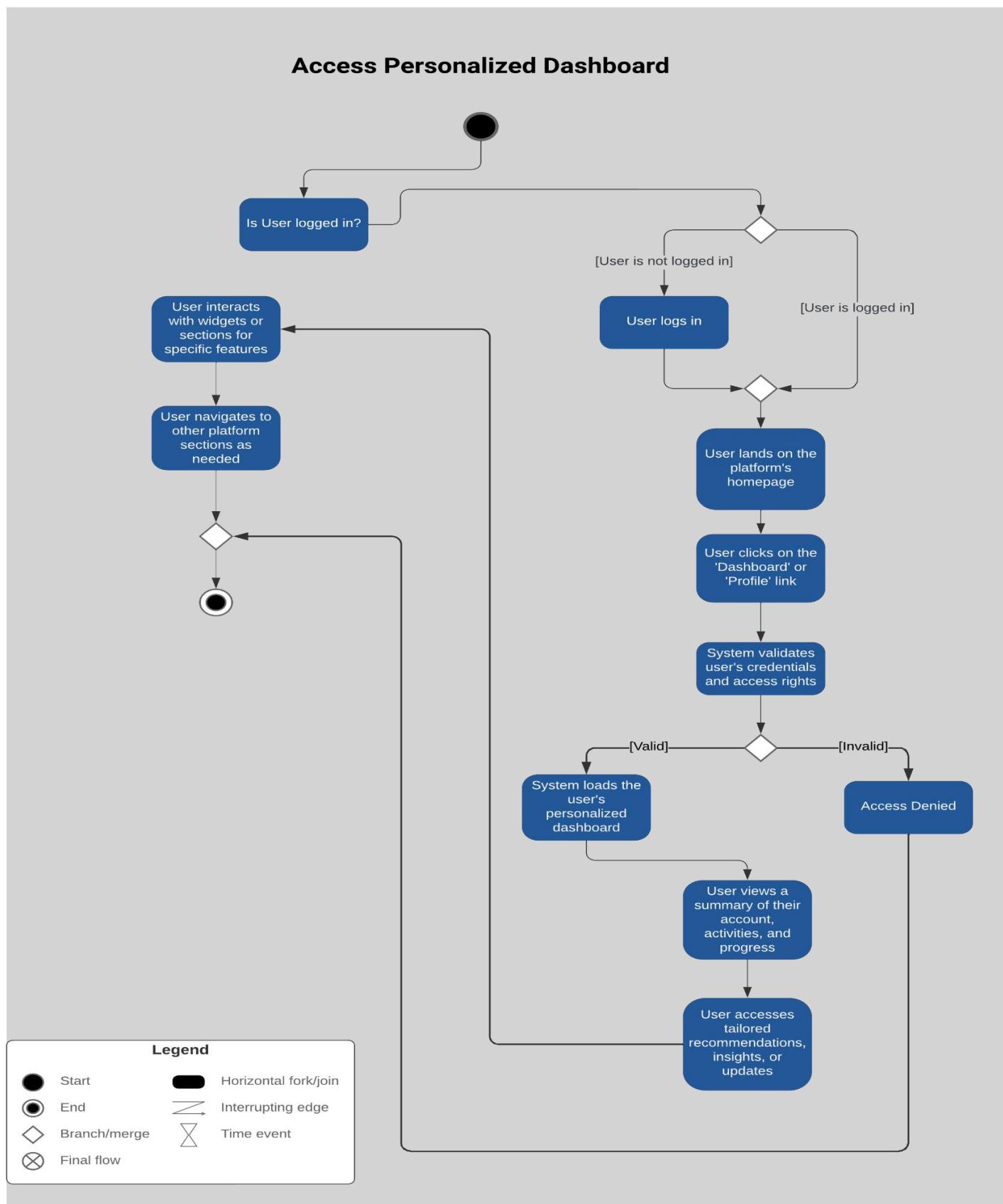


Figure 41: Access Personalized Dashboard.

Activity Diagram: Enter Content by User.

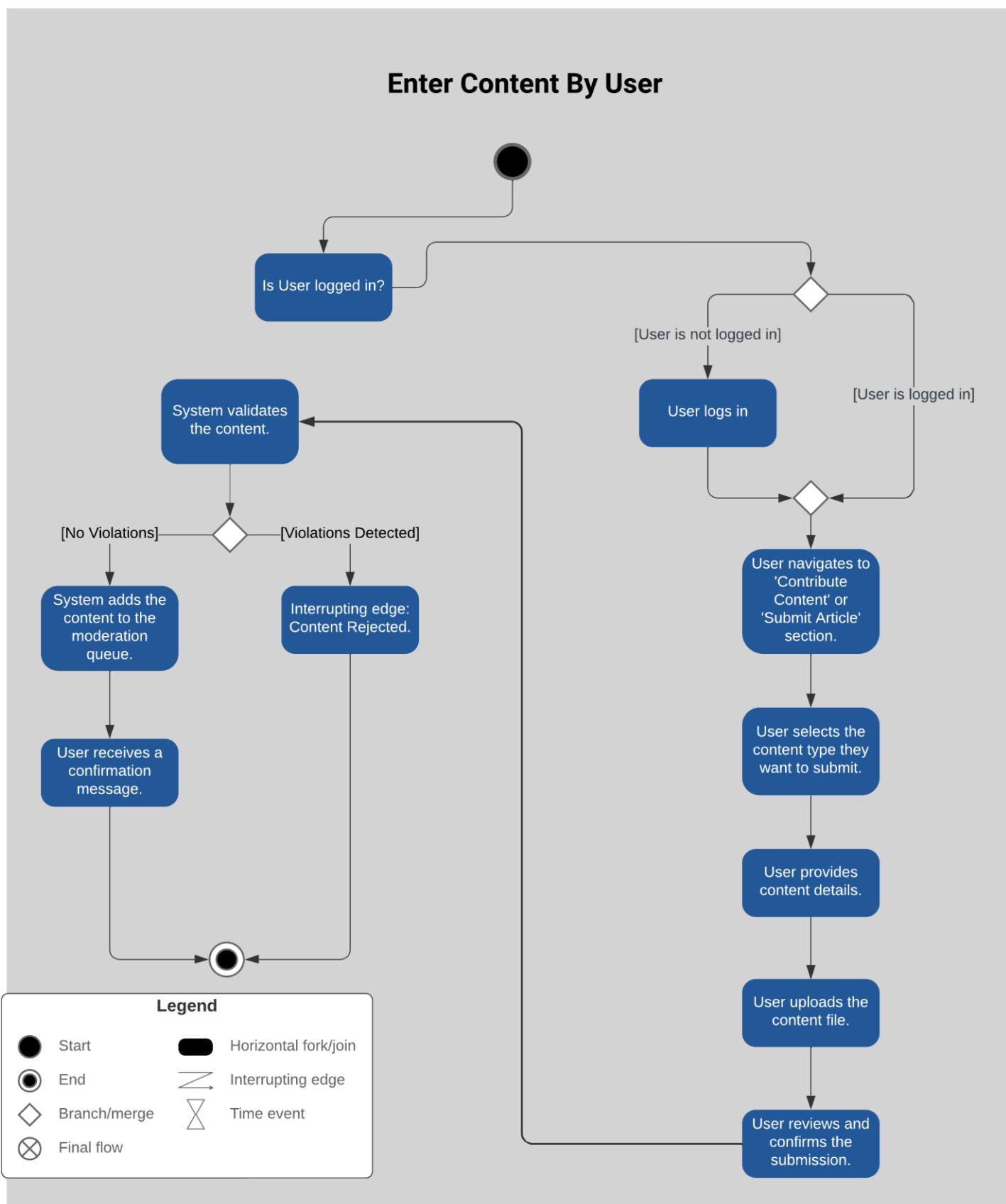


Figure 42: Enter Content by User.

Activity Diagram: Customize Interface Preferences.

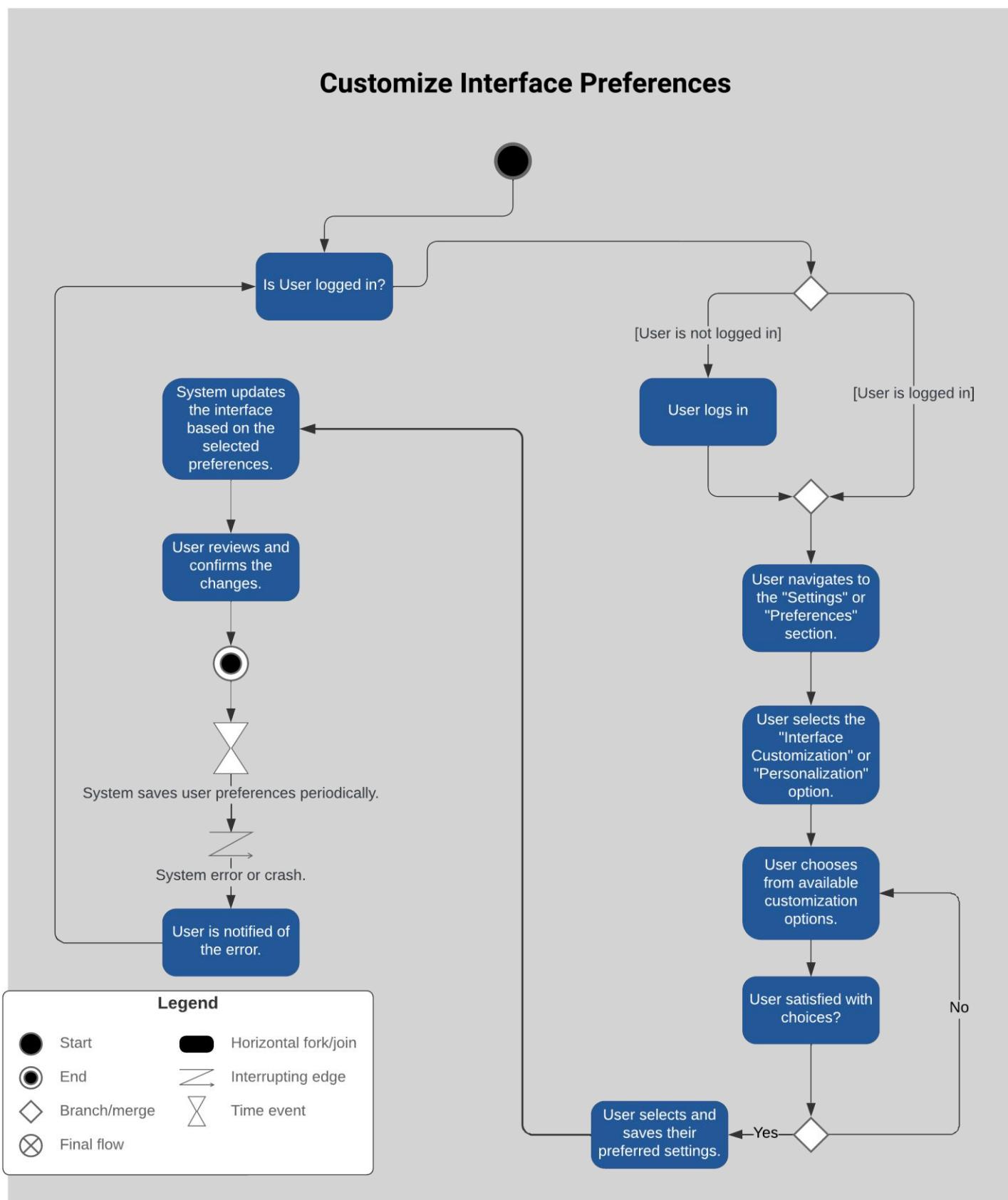


Figure 43: Customize Interface Preferences.

Activity Diagram: Manage User Accounts.

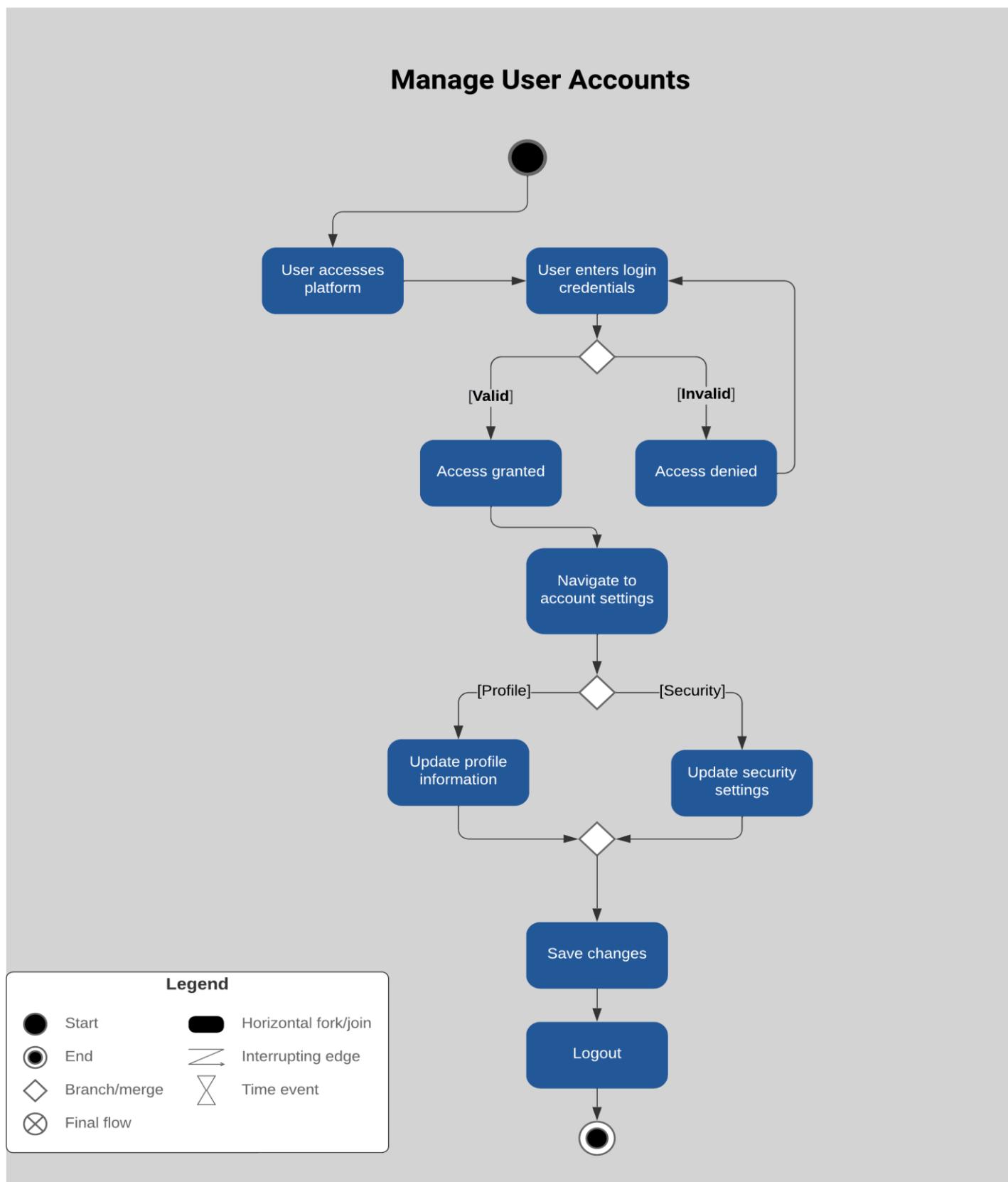


Figure 44: Manage User Accounts.

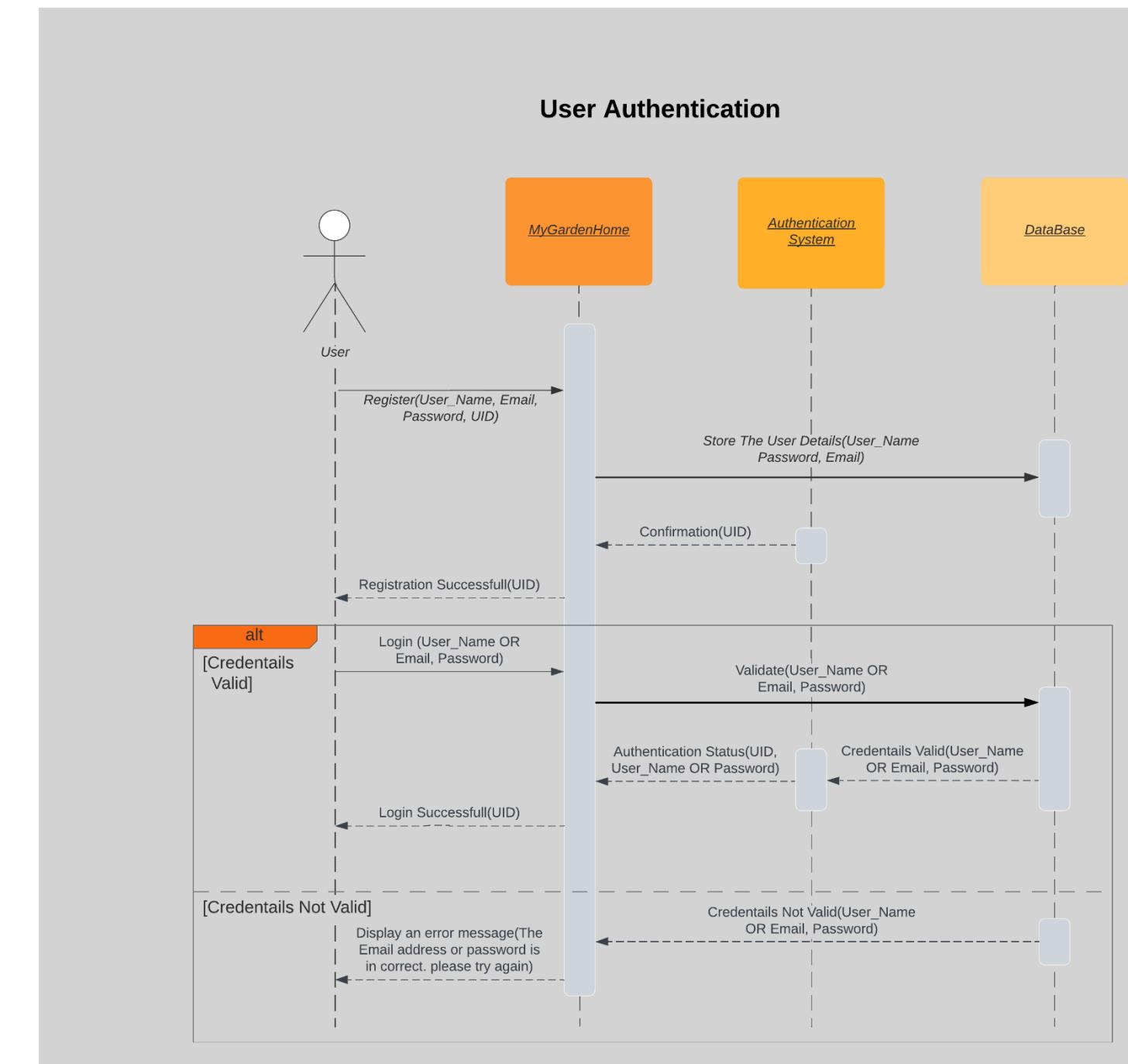
Activity Diagram: Manage Team Roles and Responsibilities.



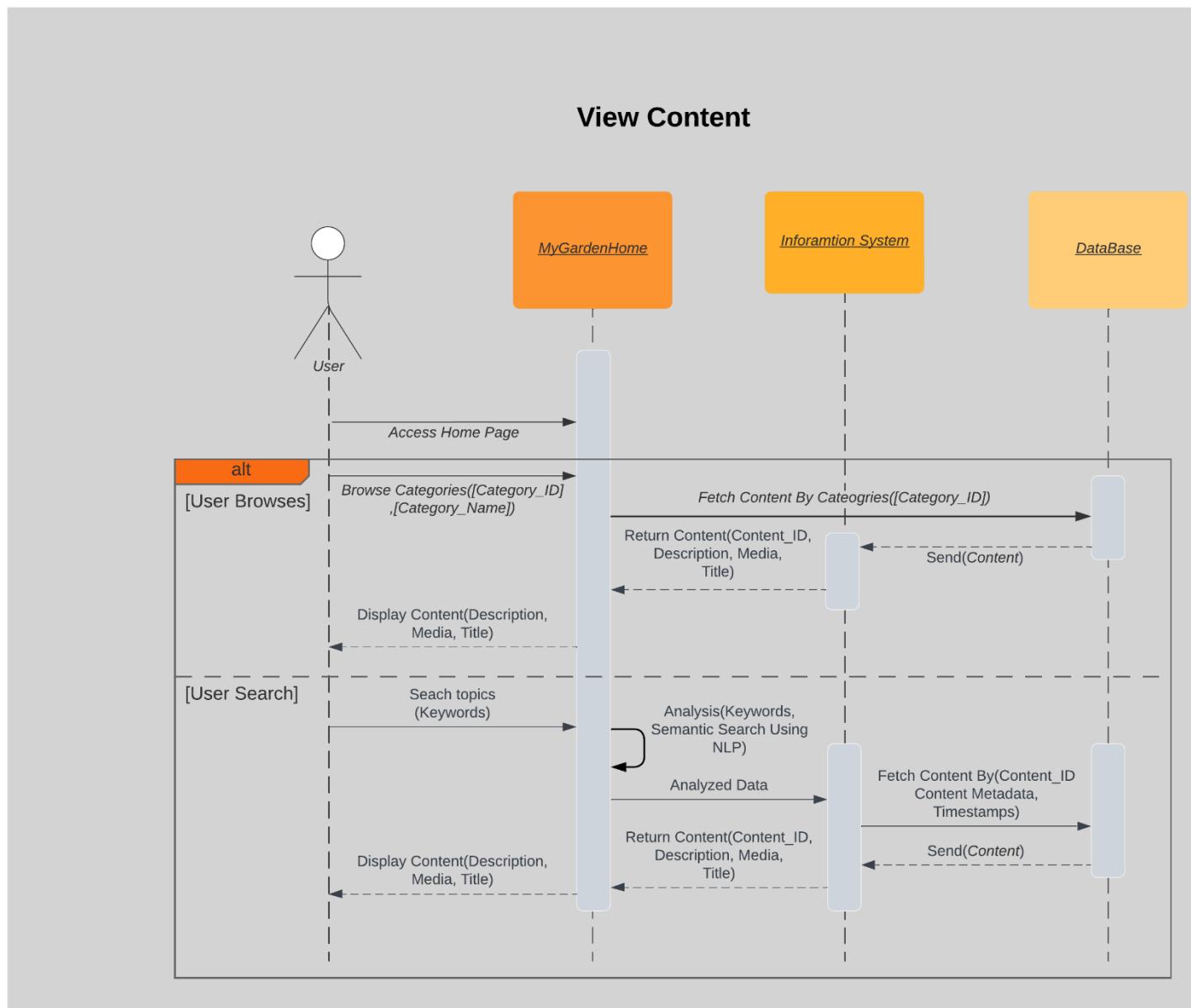
Figure 45: Manage Team Roles and Responsibilities.

5.2 Sequence Diagram.

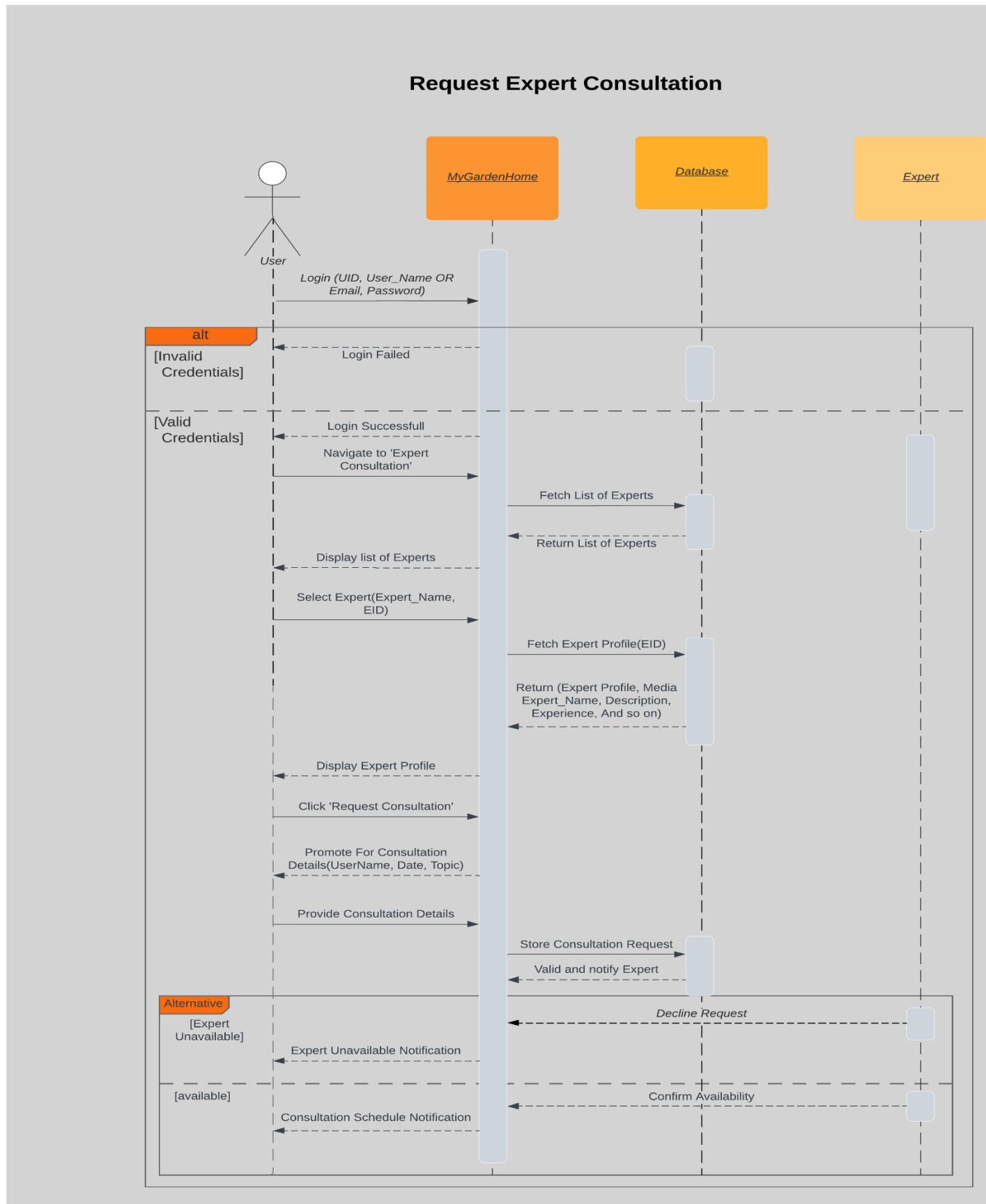
Sequence Diagram: User Authentication.



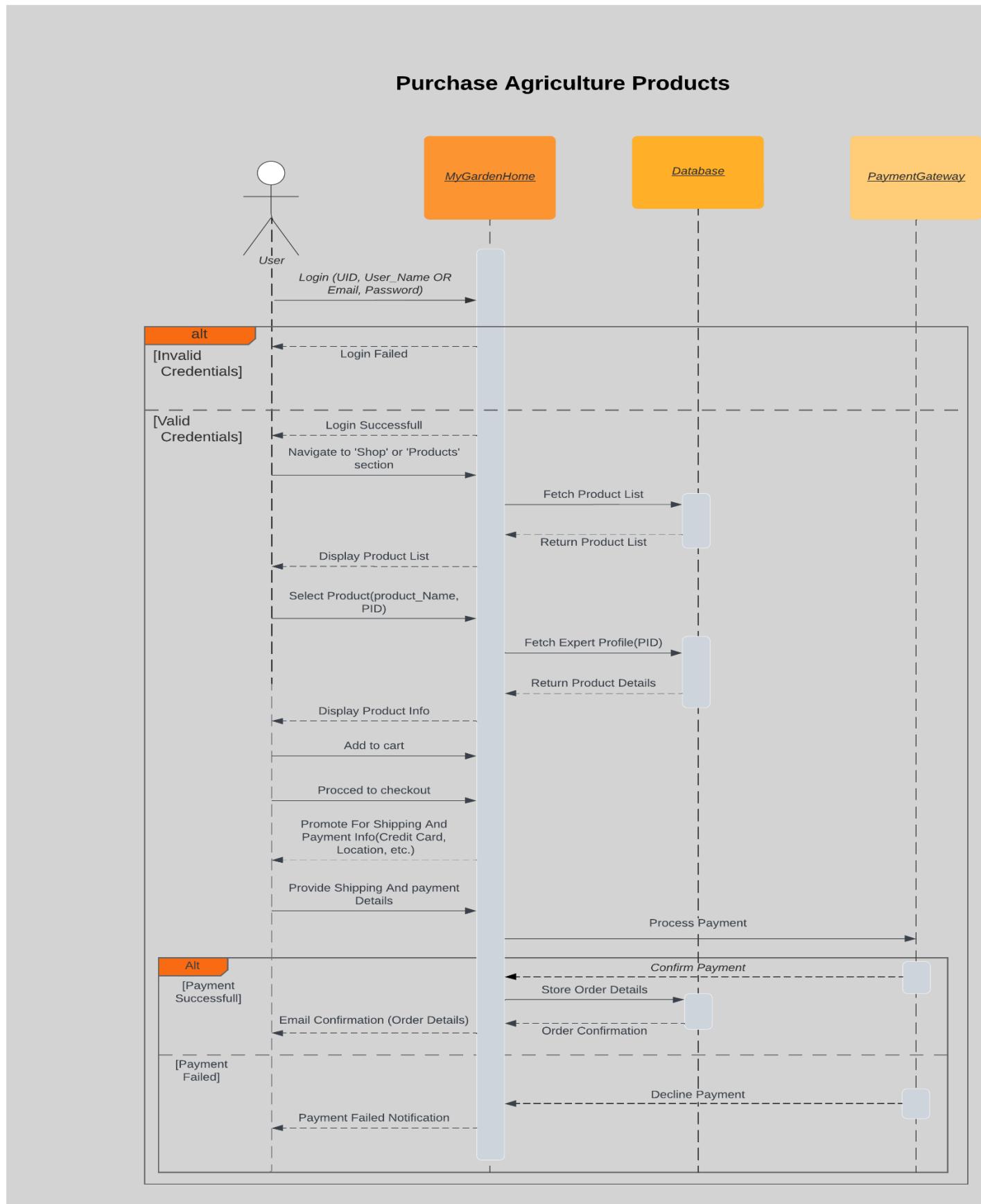
Sequence Diagram: View Content.



Sequence Diagram: Request Expert Consultation.

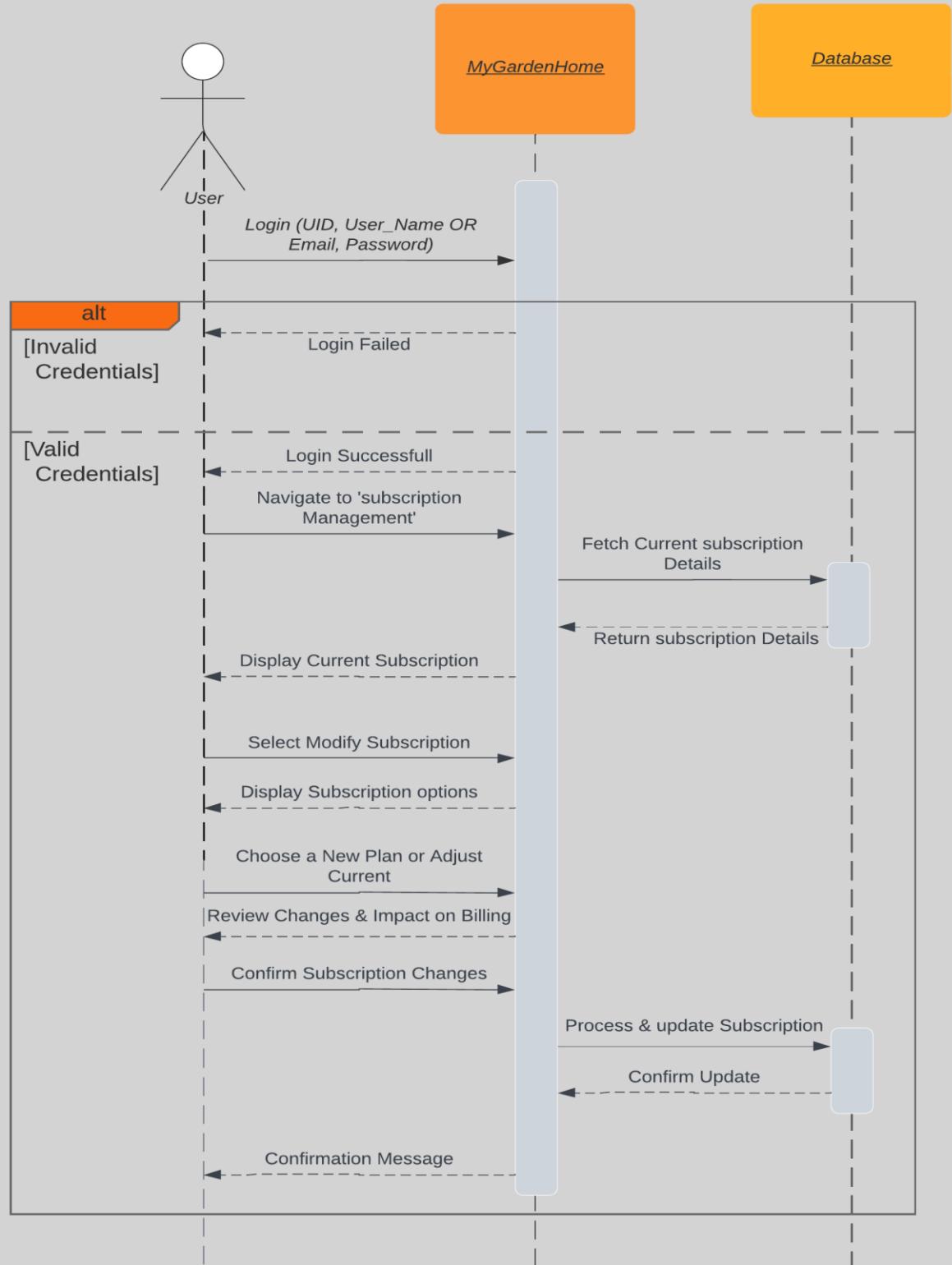


Sequence Diagram: Purchase Agriculture Products.



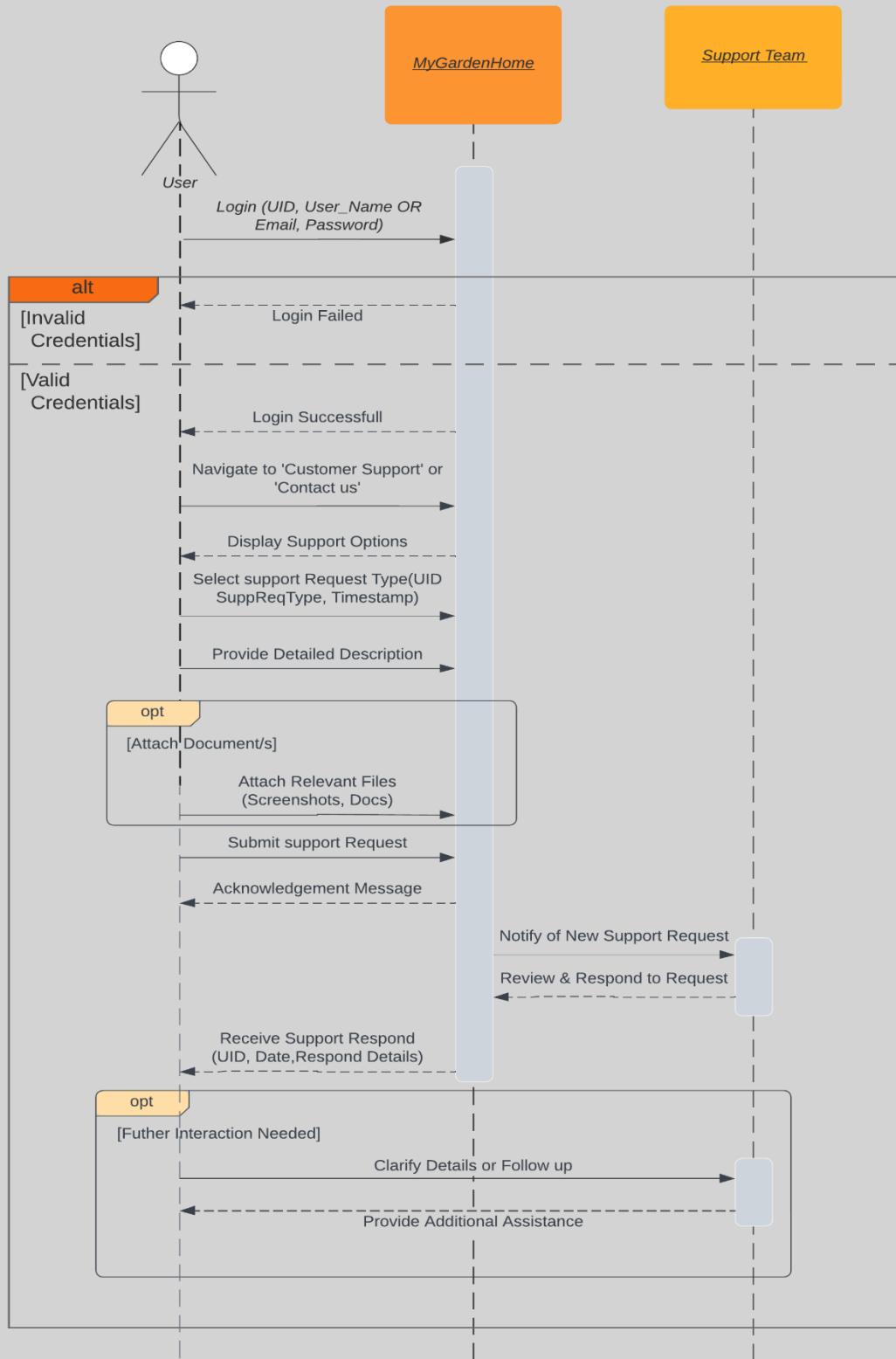
Sequence Diagram: Manage Subscriptions.

Manage Subscription



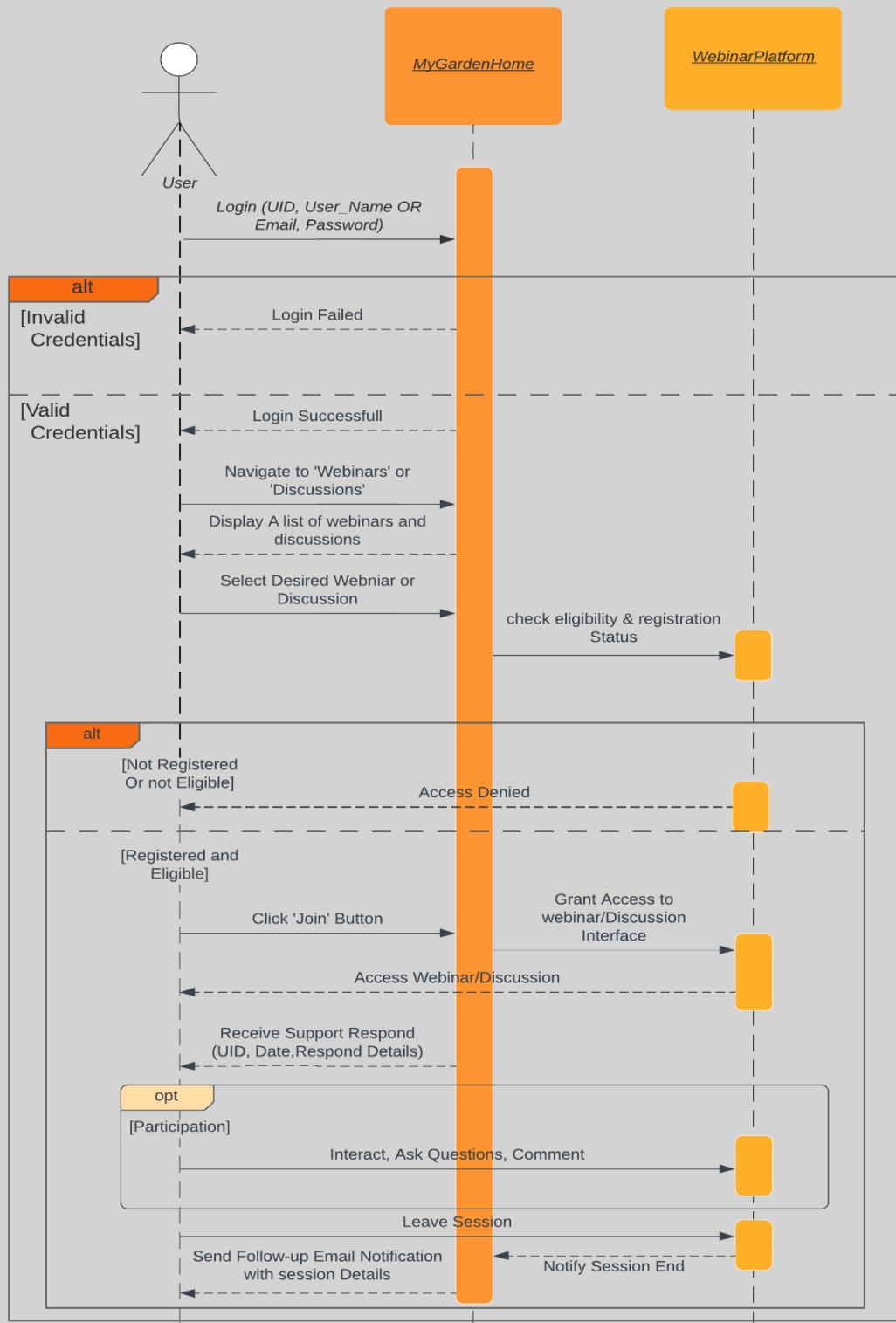
Sequence Diagram: Contact Customer Support.

Contact Customer Support



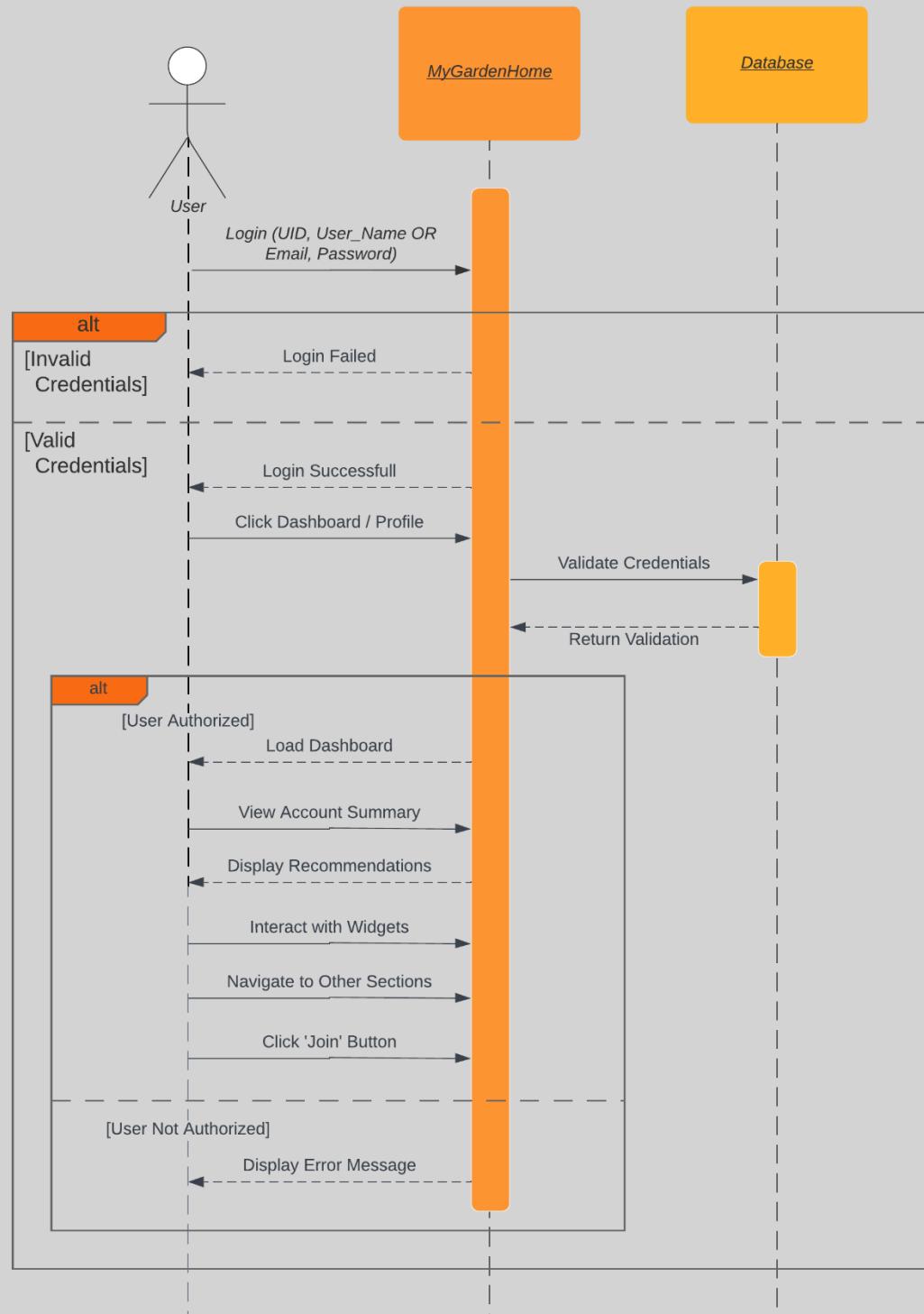
Sequence Diagram: Participate in webinars and discussions.

Participate in webinars and Discussions



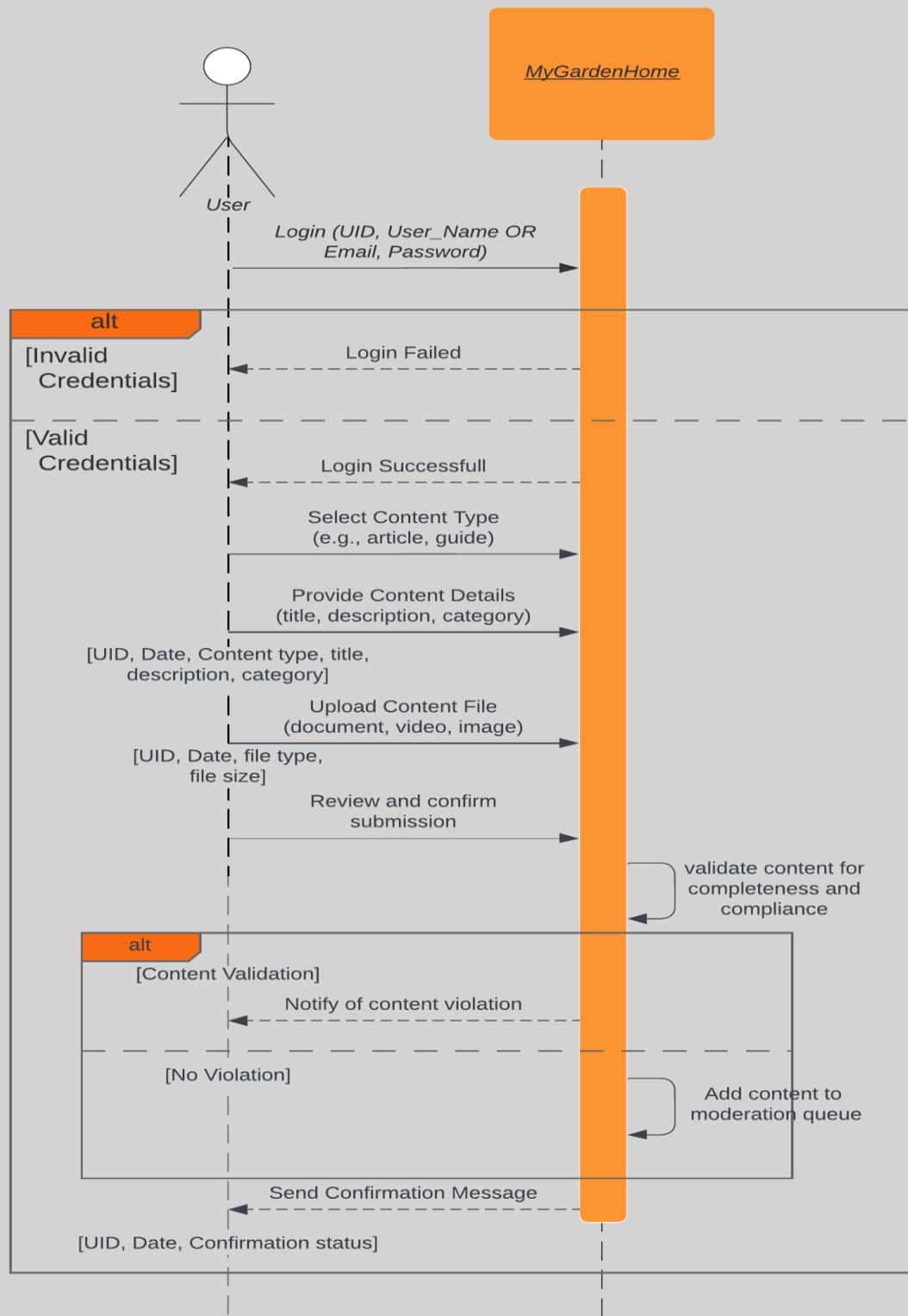
Sequence Diagram: Access Personalized Dashboard.

Access Personalized Dashboard



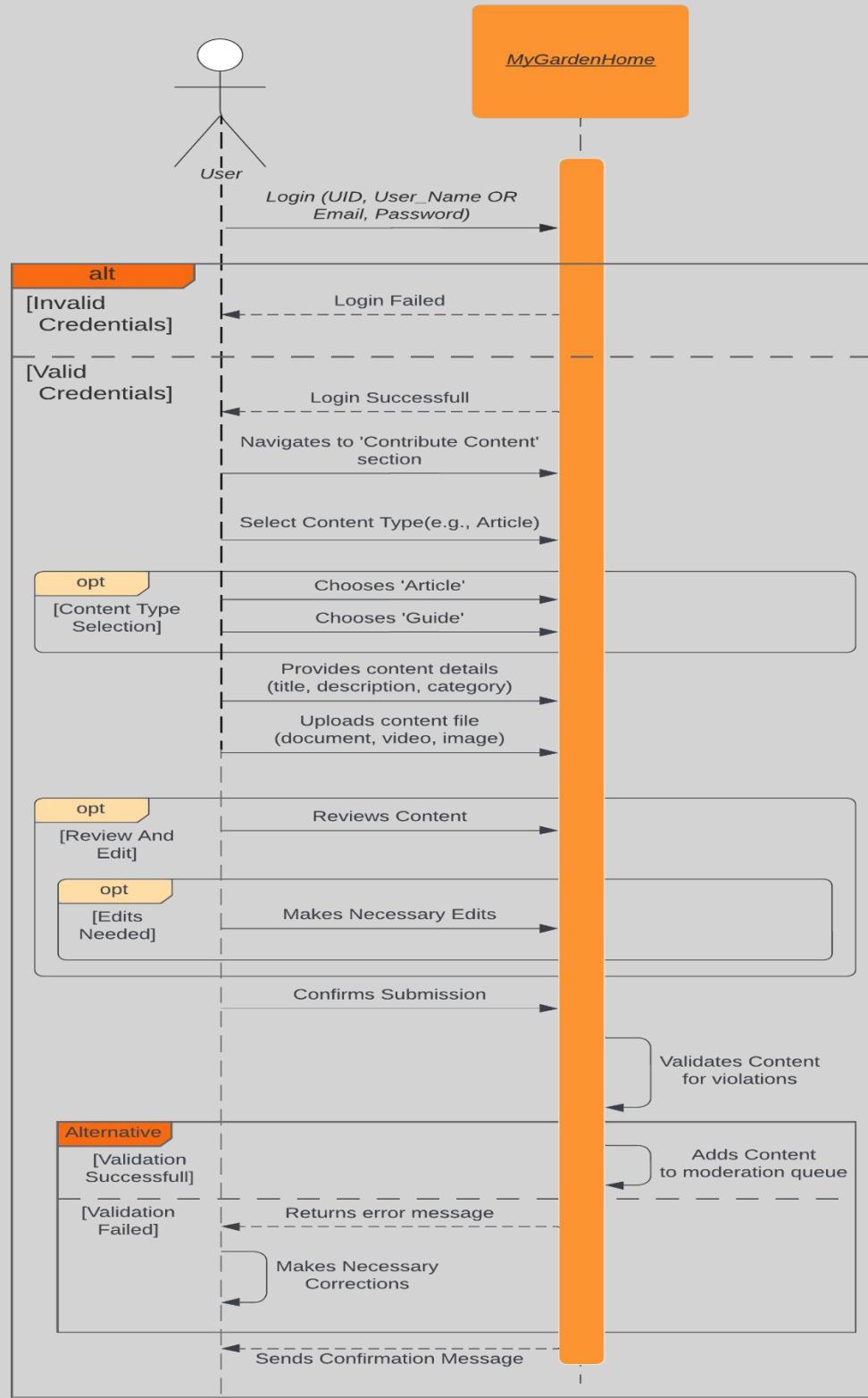
Sequence Diagram: Enter Content by User.

Enter Content By User



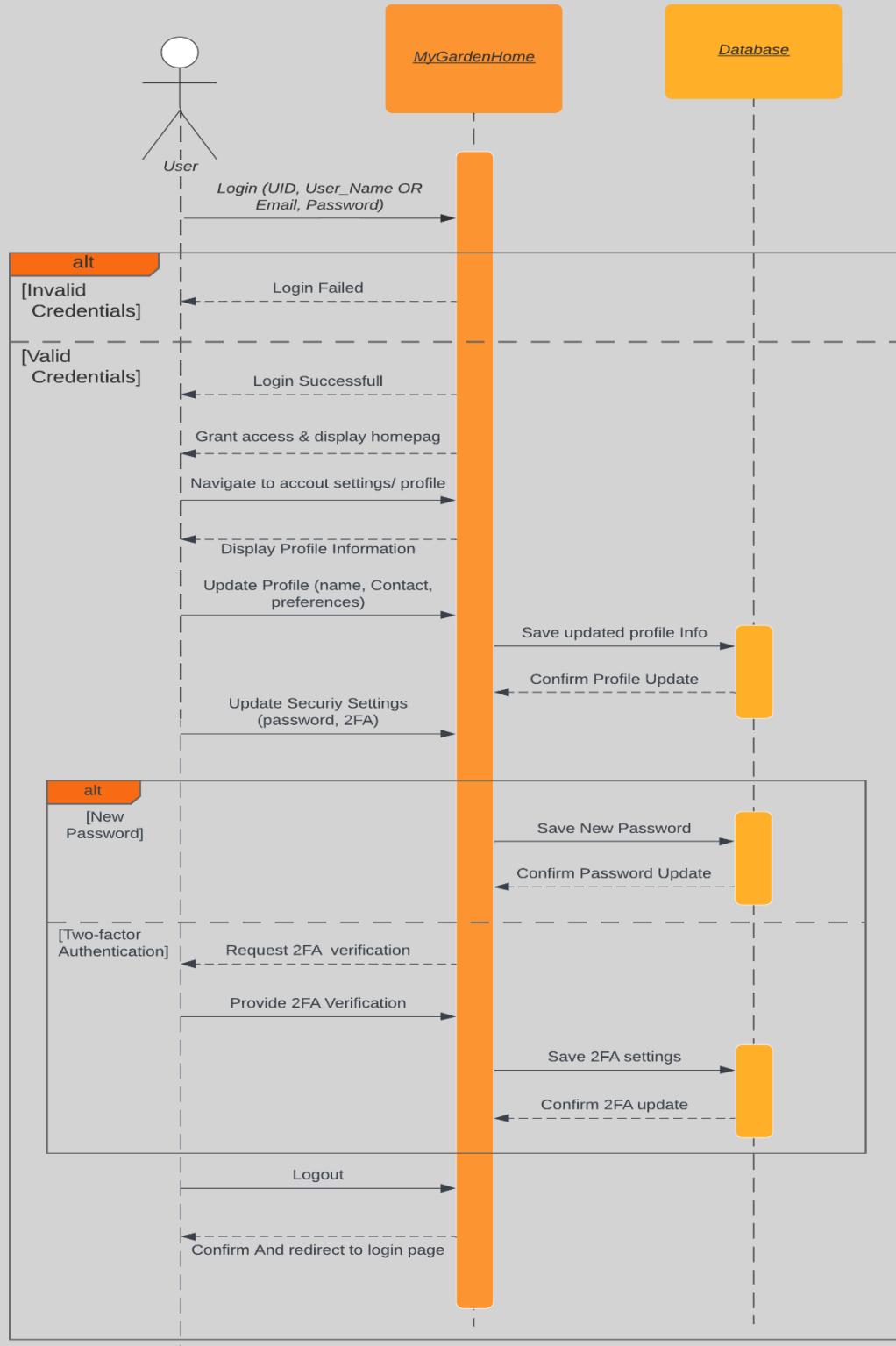
Sequence Diagram: Customize Interface Preferences.

Customize Interface Preferences



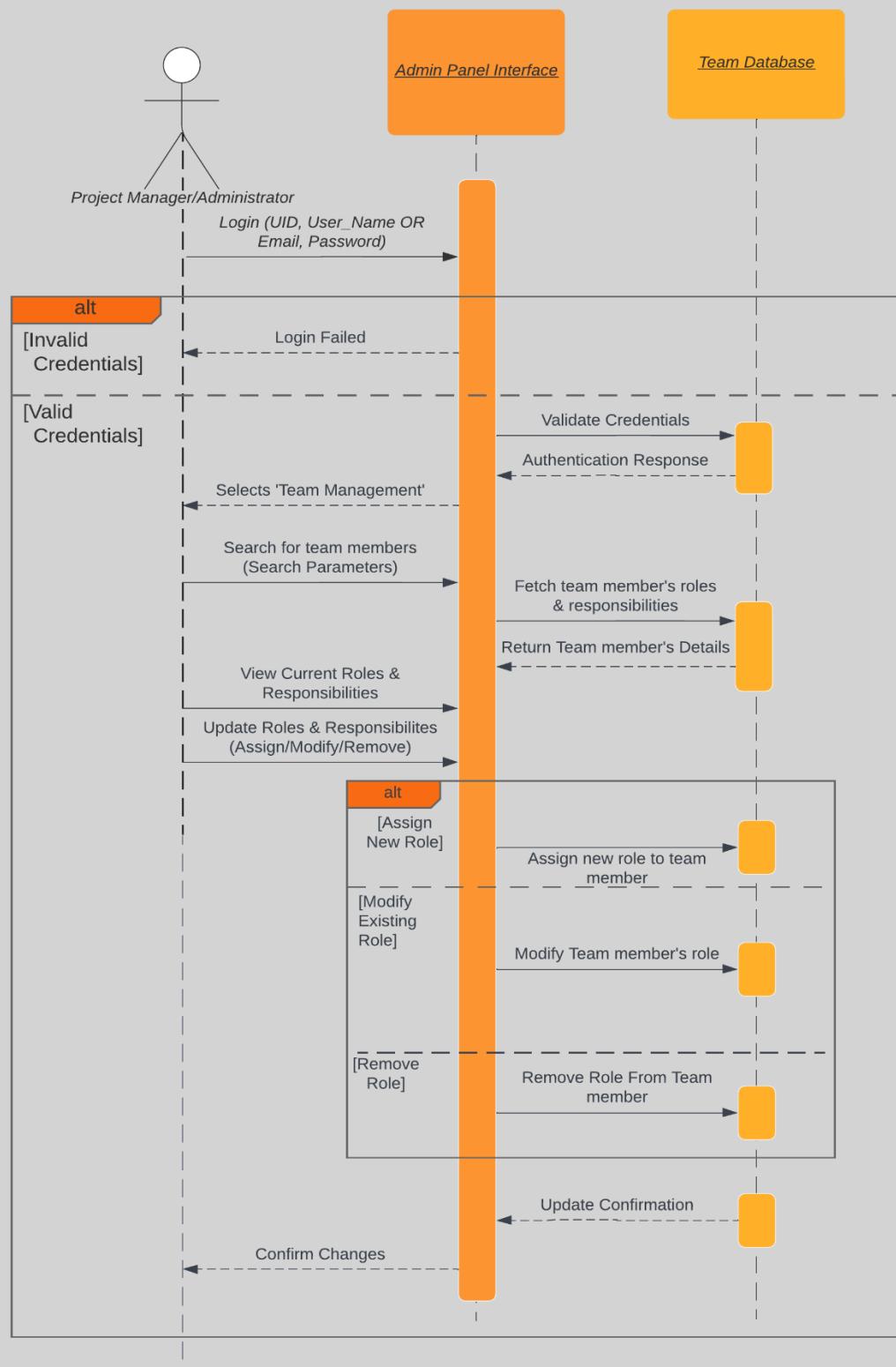
Sequence Diagram: Manage User Accounts.

Manage User Accounts



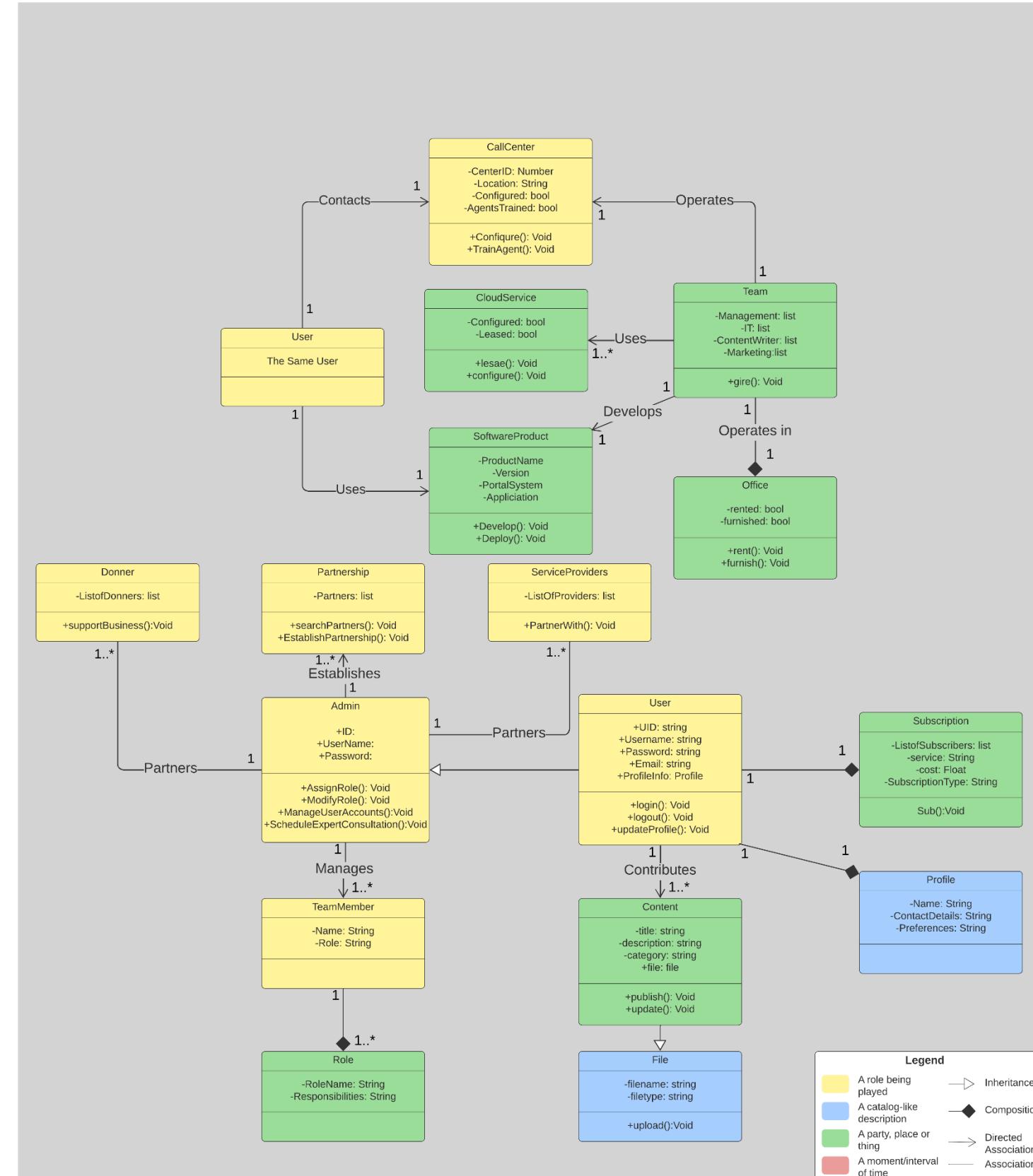
Sequence Diagram: Manage Team Roles and Responsibilities.

Manage Team Roles and Responsibilities



5.3 Class Diagram.

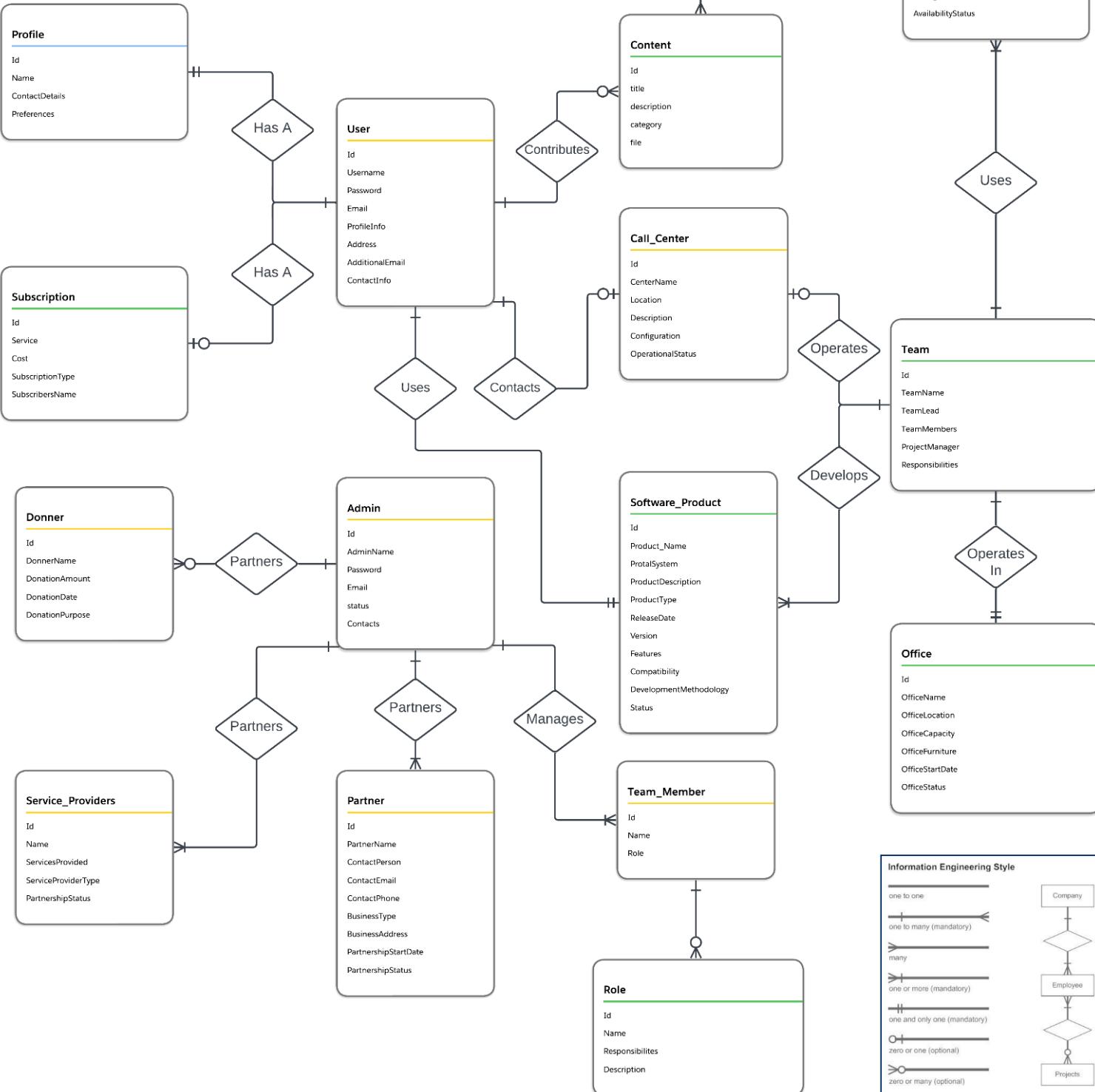
This is a high-level representation that provides an overview of the main classes and their relationships.



5.4 Object to ER mapping.

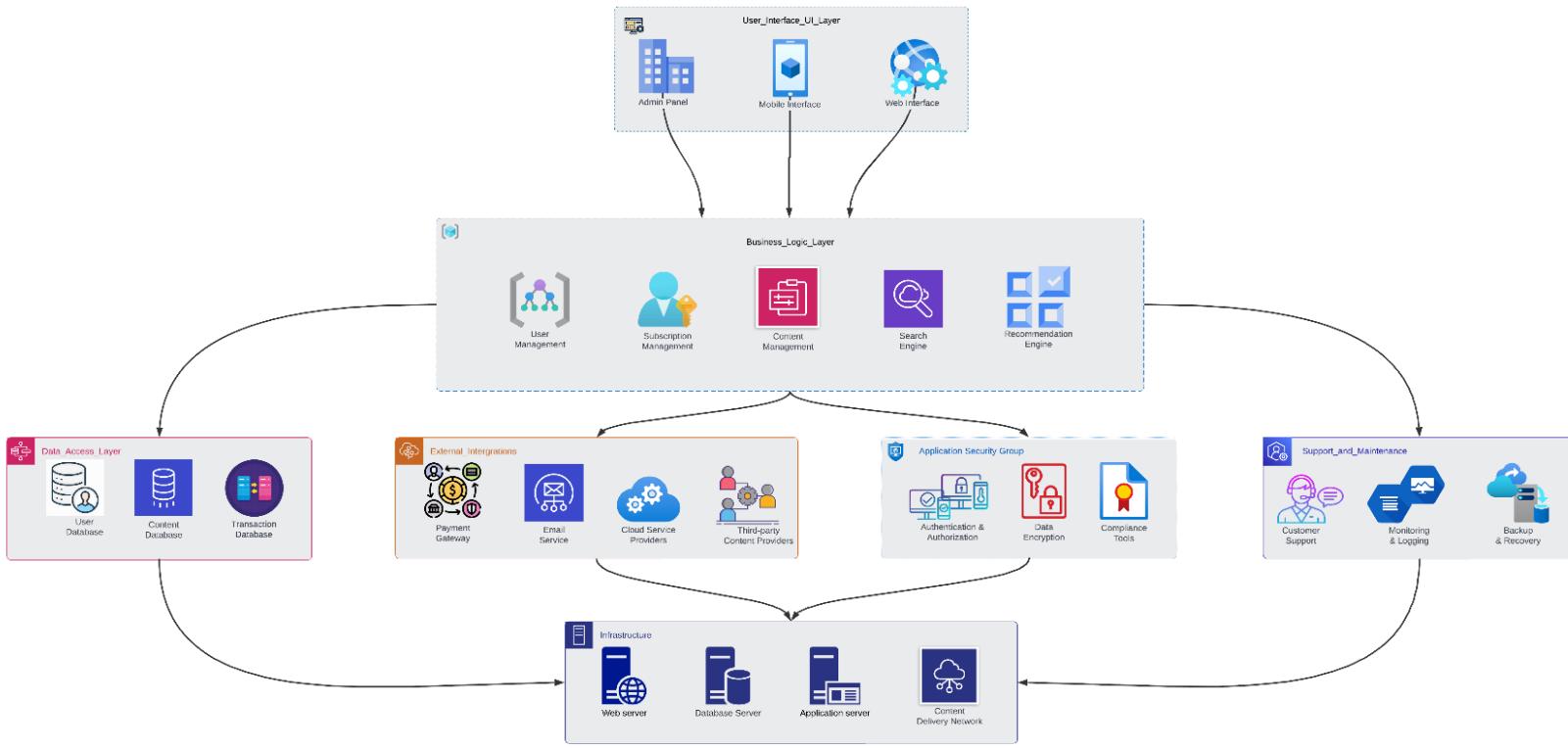
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Object to ER Mapping



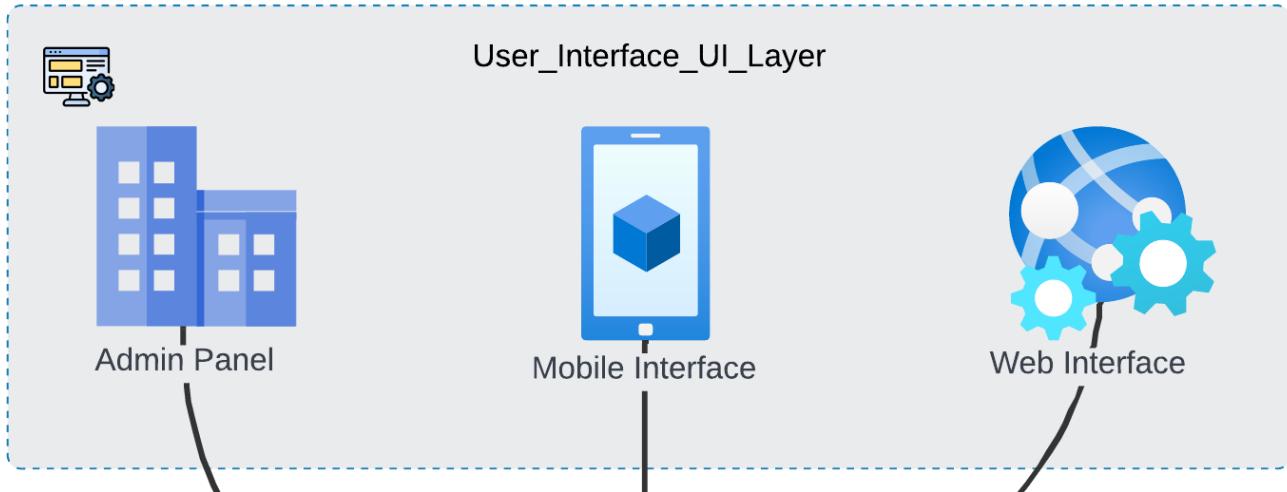
5.6 Architecture Design.

This design provides a high-level overview of how the system components interact and function together.

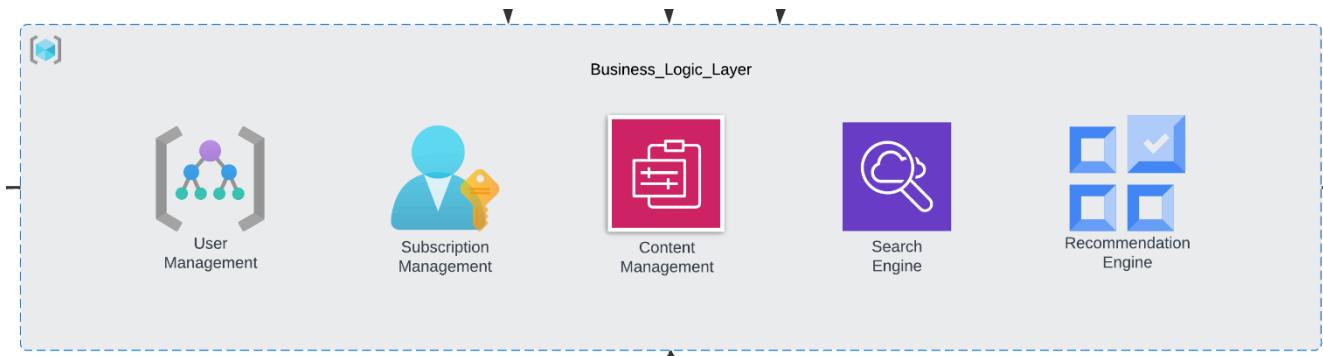


Each component interacts with one or more other components, as depicted by the arrows. The architecture is divided into several layers and components:

User Interface (UI) Layer: This layer includes the Web Interface, Mobile Interface, and Admin Panel. It's the primary point of interaction for users and administrators.



Business Logic Layer: This is where the core functionalities of the system reside, including User Management, Subscription Management, Content Management, Search Engine, and Recommendation Engine.



Data Access Layer: This layer interacts with various databases like User Database, Content Database, and Transaction Database.



Data_Access_Layer



User Database



Content Database



Transaction Database

External Integrations: This includes integrations with external systems like Payment Gateway, Email Service, Cloud Service Providers, and Third-party Content Providers.



External_Intergrations



Payment Gateway



Email Service

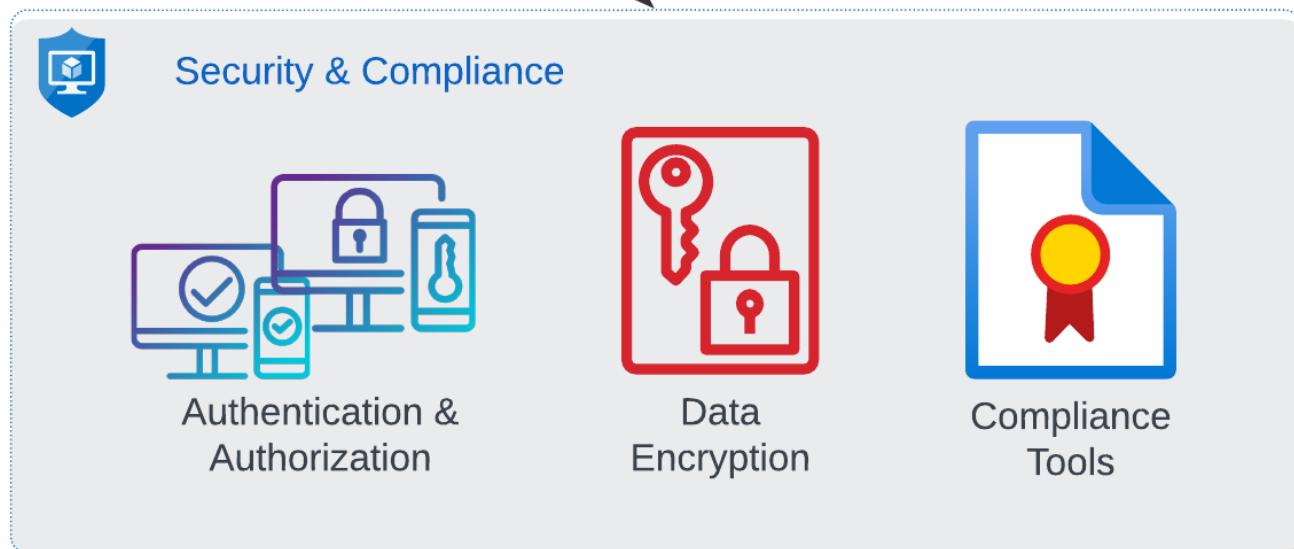


Cloud Service Providers

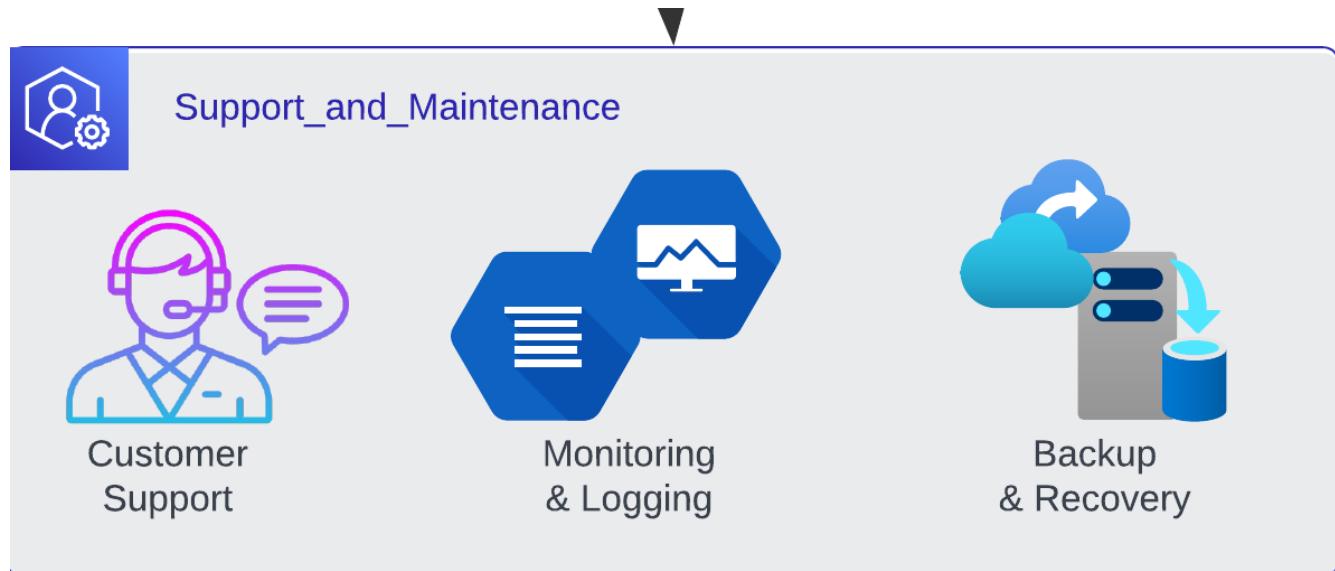


Third-party Content Providers

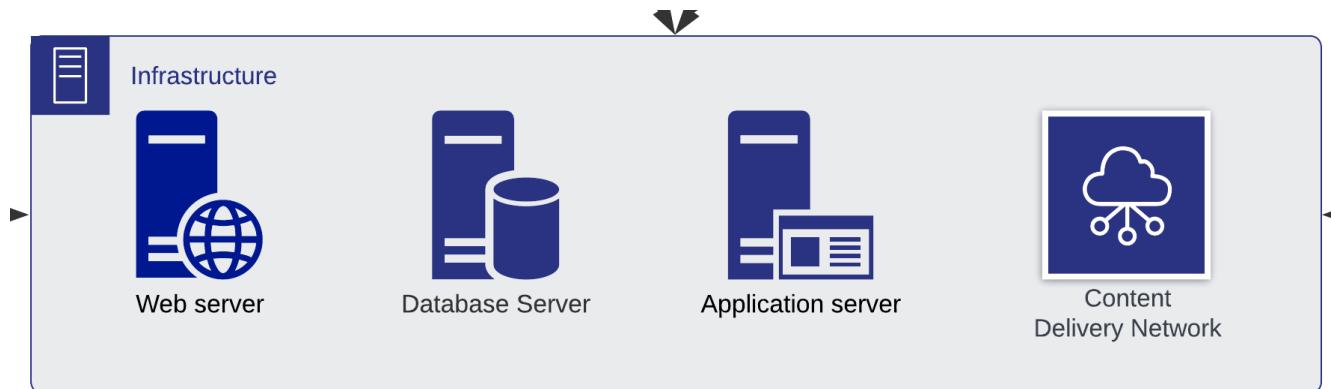
Security and Compliance: This component ensures that the system is secure and compliant. It includes Authentication & Authorization, Data Encryption, and Compliance Tools.



Support and Maintenance: This component ensures the smooth operation of the system. It includes Customer Support, Monitoring & Logging, and Backup & Recovery functionalities.



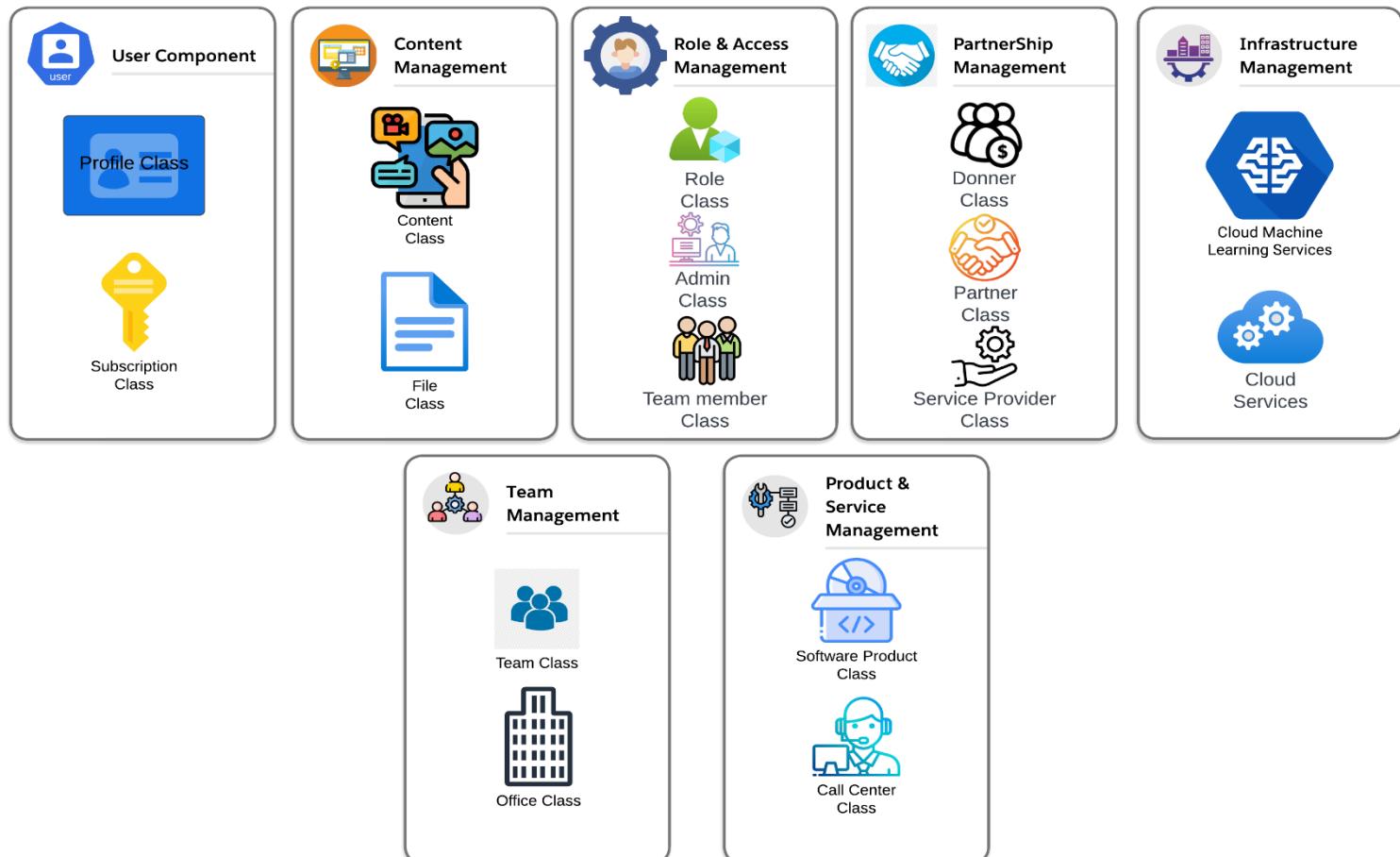
Infrastructure: This is the foundational layer that supports the entire system. It includes Web Servers, Application Servers, Database Servers, and a Content Delivery Network (CDN).



5.7 Classes and Components Design.

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Classes And Components Design



- **User Component:** Represents the main user interactions with the system, linked to Profile and Subscription.
- **Content Management:** Manages all content-related functionalities, including Content and File.
- **Role & Access Management:** Manages user roles and access levels, including Role, Admin, and Team Member.
- **Partnership Management:** Manages partnerships, donors, and service providers, including Donner, Partners, and Service Provider.
- **Infrastructure Management:** Manages the infrastructure, specifically the Cloud Service.
- **Team Management:** Manages team-related functionalities, including Team and Office.
- **Product & Service Management:** Manages products and services, including Software Product and Call Center.

The arrows indicate the interactions and dependencies between the components. For instance, the **User Component** interacts with both “**Profile**” and “**Subscription**”.

5.8 Graphical User Interface Design.

✓ Registration Page.



Registration Page

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Farm Business Information

Choose one:

- Renewal
- New

Ownership Type *

- Sole Proprietorship
- Partnership
- Corporation

Farm Business Name *

Legal/Owner Name

First Name

Last Name

ID No: *

Farm Location *

Street Address

Street Address Line 2

City

State / Province

Postal / Zip Code

Phone Number *

(000) 000-0000

Email *

example@example.com

Name(s) of Farm Partners

Contact Person

Name and Surname

First Name

Last Name

Relationship to farm business

Email

example@example.com

Phone Number

(000) 000-0000

Address

Street Address

Street Address Line 2

City

State / Province

Registration Eligibility

Select one or more than one activities which is related with your farm business: *

- Dairy farming
- Fruit growing
- Tree farming
- Tillage of soil
- Keeping of bees
- Other

Payment Options

Please select the annual gross farm income of your farm business: *

- \$1- \$50.000 / Registration Fee: \$170
- \$51.000 - \$150.000 / Registration Fee: \$255
- \$151.000 - \$250.000 / Registration Fee: \$365
- \$251.000 - \$500.000 / Registration Fee: \$445
- \$501.000 - \$750.000 / Registration Fee: \$555
- \$751.000 or more / Registration Fee: \$680

0	USD
---	-----

Description

Payment Method



Declaration

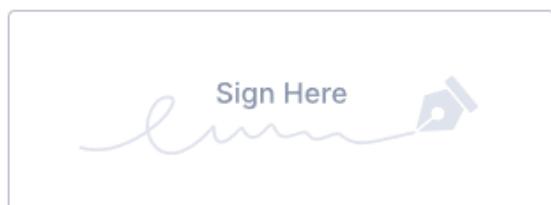
I agree that the information that I provide in this registration form is precise and complete. I understand that it is an offence to make false statement on this form according to the laws.

Your Birthda *

Date

Signature



Sign Here

Powered by [Jotform Sign](#)

Payment Method



Credit Card

<input type="text"/>	<input type="text"/>
----------------------	----------------------

First Name

Last Name

<input type="text"/>	<input type="text"/>
----------------------	----------------------

Credit Card Number

Security Code

<input type="text"/>	<input type="text"/>
----------------------	----------------------

Expiration Month

Expiration Year

Billing Address

<input type="text"/>

Street Address

<input type="text"/>

Street Address Line 2

<input type="text"/>	<input type="text"/>
----------------------	----------------------

City

State / Province

<input type="text"/>	<input type="text"/>
----------------------	----------------------

Postal / Zip Code

Please Select



Country

Declaration

✓ Login Page:

MyGardenHome

Home

What We Do

Testimonials

Pricing

Contact

Log in

Log into your account to access to your garden information

Your Email

password

Log in

Chat Online

mail@company.com

Our Location

255-662-5566

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✓ Home Page

MyGardenHome

Home What We Do Testimonials Pricing Contact

MyGardenHome

A new innovative idea
Your perfect garden is one step closer

↓

✓ What We Do

What We Do

target the community interested in agriculture and build a network of agricultural producers and suppliers of agricultural materials and devices to develop the agriculture sector by providing agricultural guidance and choosing the appropriate agricultural tools and materials.



Helping people in taking care of their garden.



Raising people's awareness and knowledge about gardening and plant-care.



Extending the plants' life by giving them the right treatment and taking good care of it.



Making garden-care available and affordable for a huge number of people.

[Learn More](#)

[Details](#)

✓ Testimonials

Testimonials

What Our Users Say About Us



As a supplier, I've found this platform to be an excellent way to connect with farmers and showcase our products. The exposure we've gained here has boosted our sales, and the team behind the scenes is incredibly helpful.

Emily R. - Agricultural Supplier



I've been using these agriculture services for over a year now, and I can't imagine my farming operations without them. The guidance and resources provided have significantly improved my yields, and the customer support is top-notch.

John M. - Farmer in Ohio



Starting my own farm was daunting, but with the support and resources provided by this service, I felt much more confident. The step-by-step guidance and the ability to connect with experienced farmers have been a lifesaver.

Mary T. - New Farmer

• • •

✓ Pricing

MyGardenHome

Home

What We Do

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Contact

Pricing

Different packages to support your needs

Basic

Free

- Access to basic agricultural articles and guides.
- Limited access to videos and multimedia content.
- Limited consultation requests.
- Limited customer support.

Advanced

10\$/Month

- Full access to all content.
- 30 consultation requests.
- Priority customer support.
- Access to personalized dashboard and recommendations.
- Chat with Agricultural Chatbot with 50 messages per day.
- The opportunity when you bought from our markets to obtain discount codes on some goods.

Professional

30\$/Month

- All features of the Advanced Plan.
- Unlimited consultation requests with agricultural experts.
- Exclusive access to premium content and advanced analytics.
- Customizable content preferences.
- Unlimited number of messages with agricultural chatbot.
- Discount on goods and possibly the full purchase voucher.

✓ Contact

MyGardenHome

Home

What We Do

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Contact Us

Thank you for your interest in our agriculture services. We value your feedback, inquiries, and collaboration opportunities. Please feel free to reach out to us using the contact information below:

Your Name

Your Email

Message

Submit



Chat Online



mail@company.com



Our Location



255-662-5566

Copyright © 2023 MyGardenHome.

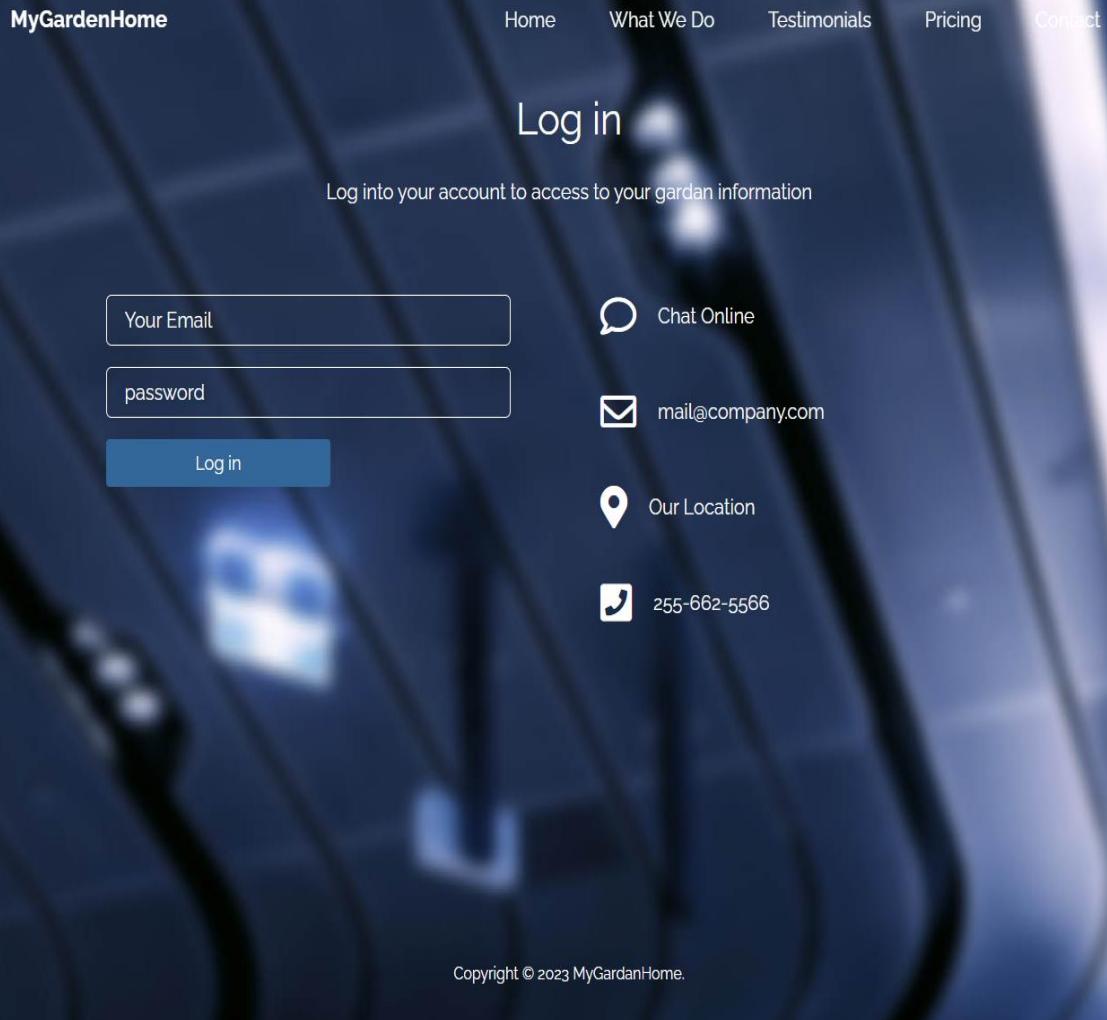
6.0 Implementation

[The GUI Implementation](#)

[Google Drive](#)

7.0 User Manual

Here is the login page, we're you put your email and password you registered with.



The image shows a screenshot of a login page for a website called "MyGardenHome". The background features a dark blue gradient with a faint, stylized illustration of a person's head and shoulders. At the top left, the logo "MyGardenHome" is displayed. Along the top edge, there are navigation links: "Home", "What We Do", "Testimonials", "Pricing", and "Contact". The main title "Log in" is centered above a subtitle "Log into your account to access to your gardan information". Below this, there are two input fields: one for "Your Email" and one for "password", both with placeholder text. A blue "Log in" button is positioned below the password field. To the right of the login form, there are four contact links: "Chat Online" (represented by a speech bubble icon), "mail@company.com" (represented by an envelope icon), "Our Location" (represented by a location pin icon), and a phone number "255-662-5566" (represented by a telephone receiver icon). At the bottom center of the page, the copyright notice "Copyright © 2023 MyGardenHome." is visible.

MyGardenHome

Home What We Do Testimonials Pricing Contact

Log in

Log into your account to access to your gardan information

Your Email

password

Log in

Chat Online

mail@company.com

Our Location

255-662-5566

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Registration Page

MYGARDENHOME

Farm Business Information

Choose one:

- Renewal
- New

Ownership Type *

- Sole Proprietorship
- Partnership
- Corporation

Farm Business Name *

Legal/Owner Name

First Name

Last Name

ID No: *

- Be careful, you must fill this registration page with your real information.
 - First If you are a new user select new, otherwise select renewal.
 - Then put your ownership type.
 - You farm business name and your legal name.
 - Your ID number.
 - Fill your location in the farm location section.
 - Valid phone and email.
 - If there are any partnership(s), put the name(s) of the partners.
 - Your Contact Information.
 - In the Registration Eligibility section please fill the fields with accurate information.
 - Your Payment Information.
 - Your birthday and your signature.
-

MyGardenHome

Home

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Pricing

Diffrnt packges to support your needs

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Free

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- Customizable content preferences.
- Unlimited number of messages with agricultural chatbot.
- discount on goods and possibly the full purchase voucher.

Type of Subscription	Free	Advanced	Professional
Price Yearly	Free	99.99\$	299.99\$
Price Monthly	Free	9.99\$	29.99\$
Service 1	Access to basic agricultural articles and guides.	Full access to all content types: articles, videos, guides, and multimedia.	All features of the Advanced Plan.
Service 2	Limited access to videos and multimedia content.	30 consultation requests.	Unlimited consultation requests with agricultural experts.
Service 3	Limited consultation requests.	Priority customer support.	Exclusive access to premium content and advanced analytics.
Service 4	Limited customer support.	Access to personalized dashboard and recommendations.	Customizable content preferences.
Service 5	---	Chat with Agricultural Chatbot with 50 messages per day.	Unlimited number of messages with agricultural chatbot.
Service 6	---	The opportunity when you bought from our markets to obtain discount codes on some goods.	The opportunity when you bought from our markets to obtain discount codes on goods and possibly the full purchase voucher.

Contact Us

Thank you for your interest in our agriculture services. We value your feedback, inquiries, and collaboration opportunities. Please feel free to reach out to us using the contact information below:

 Chat Online

 mail@company.com

 Our Location

 255-662-5566

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Here put your name and an email to help the team to contact you using the email and in the message field you can put your problem or your suggestions to improve our system, or you can chat online with chatbot, or you can contact us using havenmygarden@gmail.com our email, or you can contact using the phone number +962 799888552.

8.0 References.

Tools used in development and design:

- Vscode: Front-end and back-end developing.
- B12.io.
- TechTarget Network.
- Smartdraw.
- figma and canva: design and templates.
- Microsoft word: Create designs and edit photos.
- Discord: Online meeting.
- Lucidchart: lucidchart website online tool.
- Pexels.

Other references:

- E-Learning Software Engineering Power Point Slides, PDFs, and videos.
- Experiences of other students.