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FARMTECH- It is an All in one Application for farmers to enhance their farming techniques.

A PROJECT REPORT

for

OBJECT ORIENTED ANALYSIS & DESIGN (ITE1007)

in

B.Tech – Information Technology and Engineering

by

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SLOT- G1+TG1

Under the Guidance of

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Assistant Professor (Senior)

Stakeholders:

Farmers, Agricultural experts, Agricultural Officers, Software development Team, Employee & Managers.

Actors:

Farmers, Agricultural Experts, Agricultural Officers, Admin.

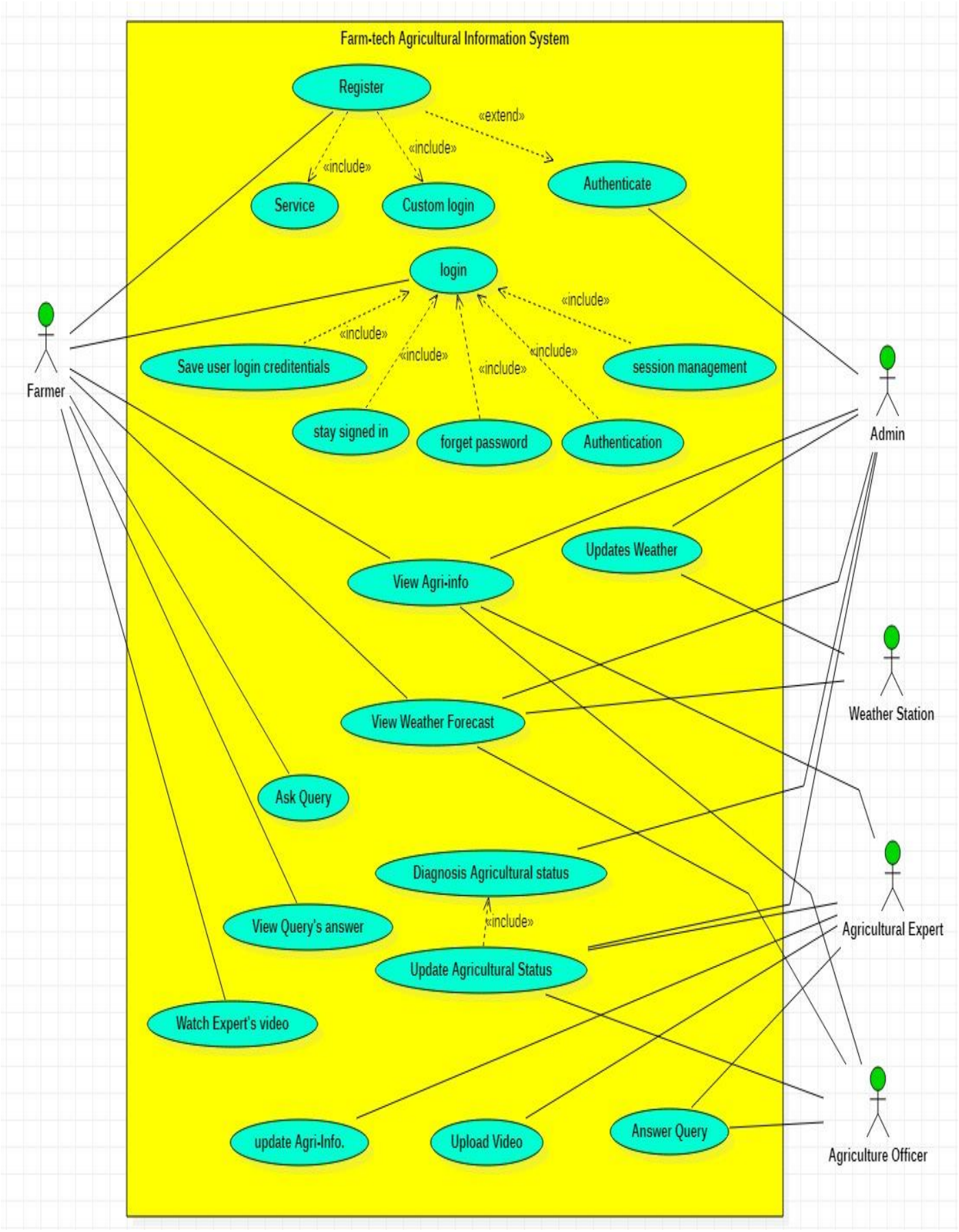
Non-Actors:

Software development team, Managers.

Use cases:

1. Registering Users.
2. Authentication.
3. Login.
4. View Agri-info.
5. Update Agri-info.
6. View Weather Forecast.
7. Update Weather Forecast.
8. Diagnosis of Agricultural status.
9. Update Agricultural status.
10. Ask Query.
11. Answer Query.
12. View Answer.
13. Watch Expert’s Video.
14. Upload Video.

USE CASE DIAGRAM



Use case Specification

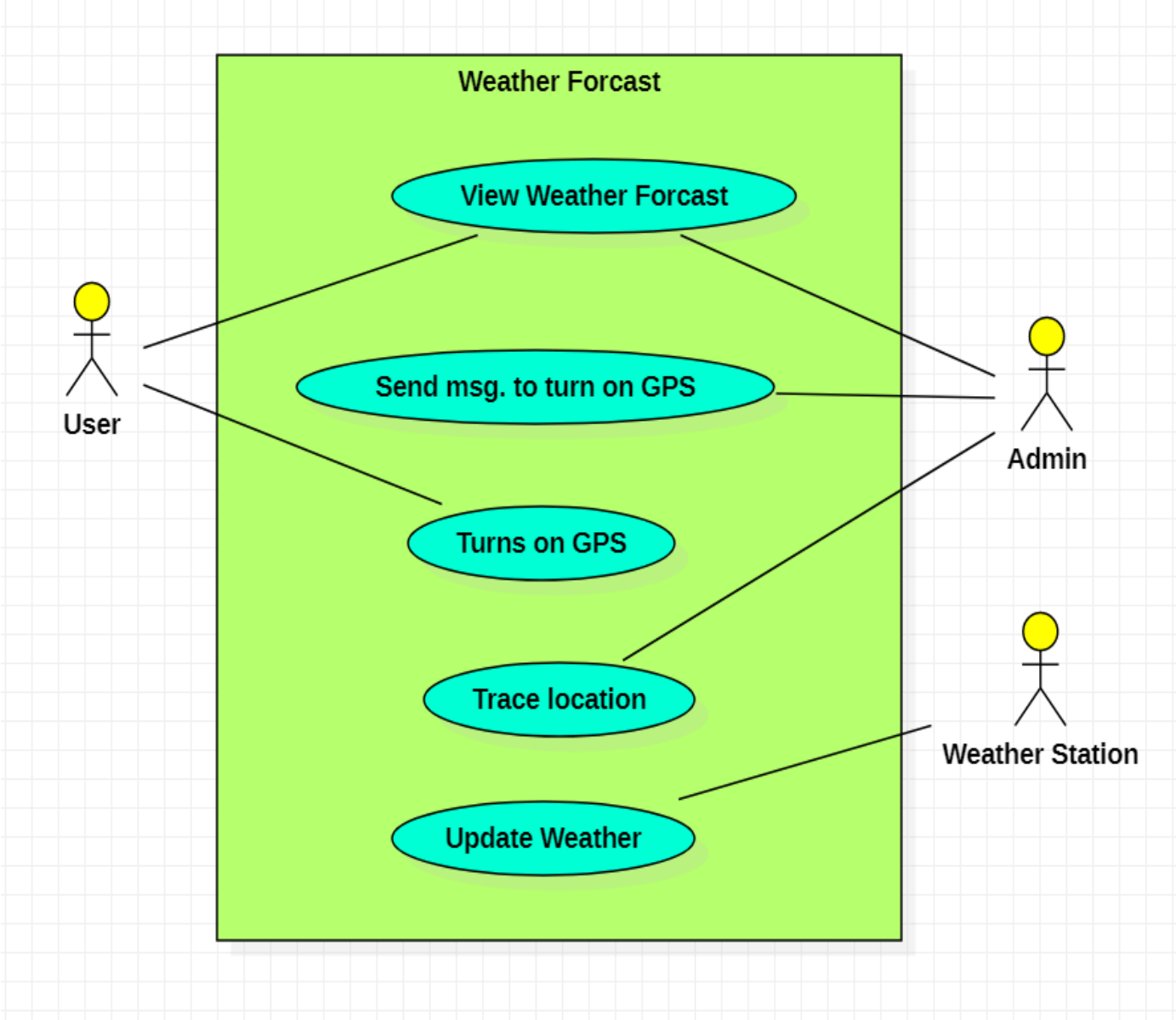
1. KEY USE CASE NAME:

View Weather Forecast.

DESCRIPTION:

This use case will give the user the information about the weather by tracking there location. This use case interacts with two actors first one is the user second is the Admin which will update the information about weather. The weather information is transferred from weather station then the admin transfer this information to the user according to his location traced by GPS.

USE CASE DIAGRAM:



Flow of Events:

BASIC FLOW:

- User will request system to show weather forecast.
- System sends message to admin about request given by user.
- System sends message to user to turn on GPS.
- User turns on the GPS.
- Admin takes weather information from regional admin which takes information from sensors.
- Then admin updates the weather information.
- Finally user is able to see the weather forecast.

ALTERNATIVE FLOW: If the admin is unable to update weather information to users system due to network issue at user's end.

- Admin will collect last known weather update.
- Admin updates the information.
- User will be able to see the weather update.

PRE-CONDITION:

The user must be logged in to the system before performing this use case.

POST-CONDITION:

User can now download weather report.

SPECIAL REQUIREMENTS:

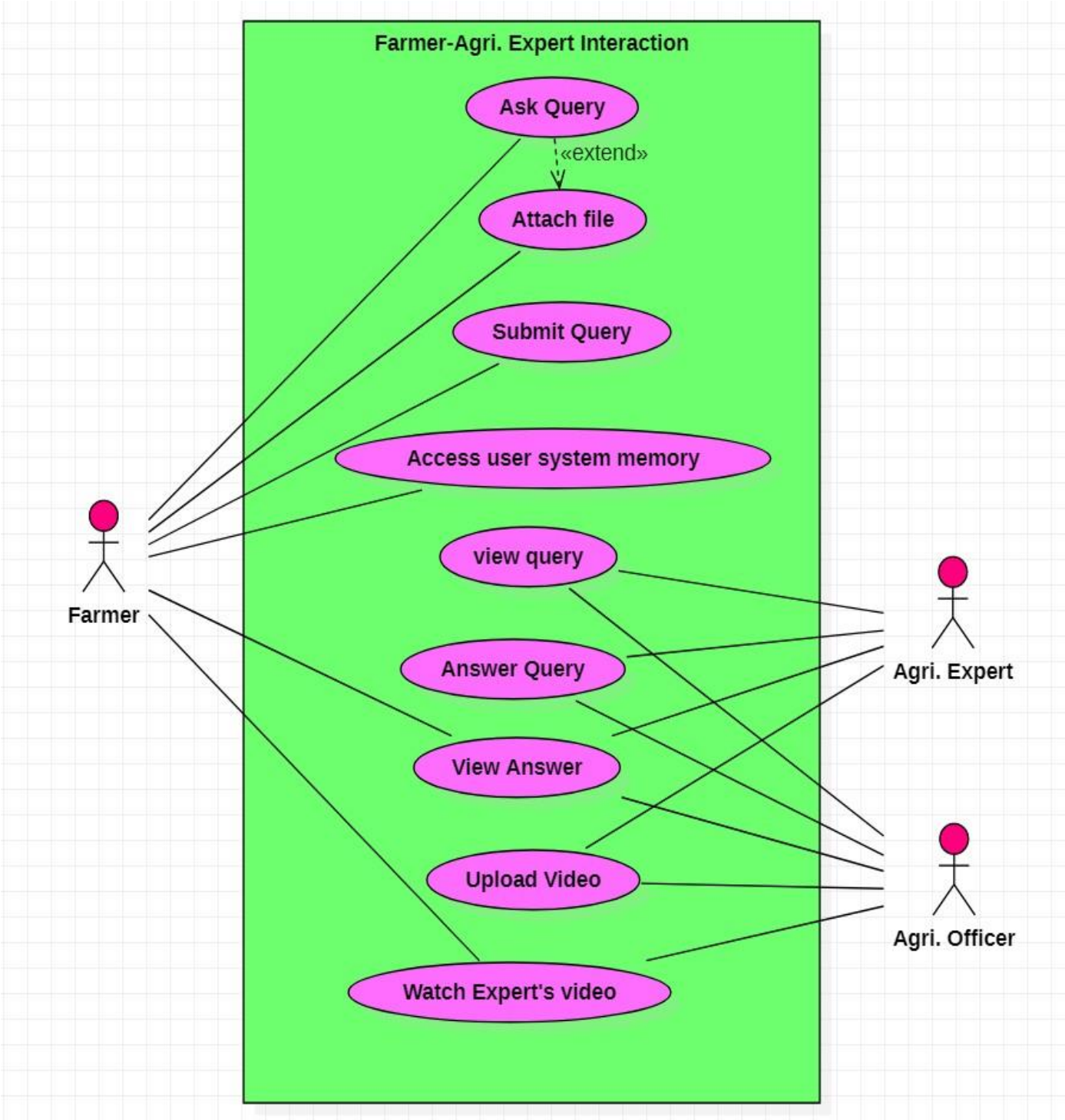
The server should automatically back up the database every 24 hours.

2. Key Use-Case Name: Ask Query

Description:

Ask Query Use Case is used by farmer in this system. If they have any queries about farming methods then they will ask to agriculture experts, it will help the farmer to get the solution for their queries and also get more knowledge about farming.

USE CASE DIAGRAM:



Flow of events:

Basic flow:

1. User types their queries on query box.
2. If they want to attach any photo or File click the appropriate option then attach it.
3. System will send message “System want to access your phone memory”.
4. Then they will submit their queries.
5. After their submission system will show your query was saved.
6. Now Agricultural Experts and Agricultural Officer will be able to view user’s Query.
7. When the agriculture expert’s team will answer their query user will get a message “your query was answered” by a system.
8. Click on “View answer” to see the answer given by experts.
9. Expert can also answer the query in form of a video.
10. The user can click on “Watch Expert’s Video” to watch the video.

Alternative flow:

1. If the user is not a member of this system cannot ask query, so first that user become a member of this system under some conditions and rules.

Pre-condition:

User should signup this system and also User should be a member of this system before perform ask query use-case.

Post-condition:

User can now give Feedback to Experts.

SPECIAL REQUIREMENTS:

Each request should be processed within 10 seconds.

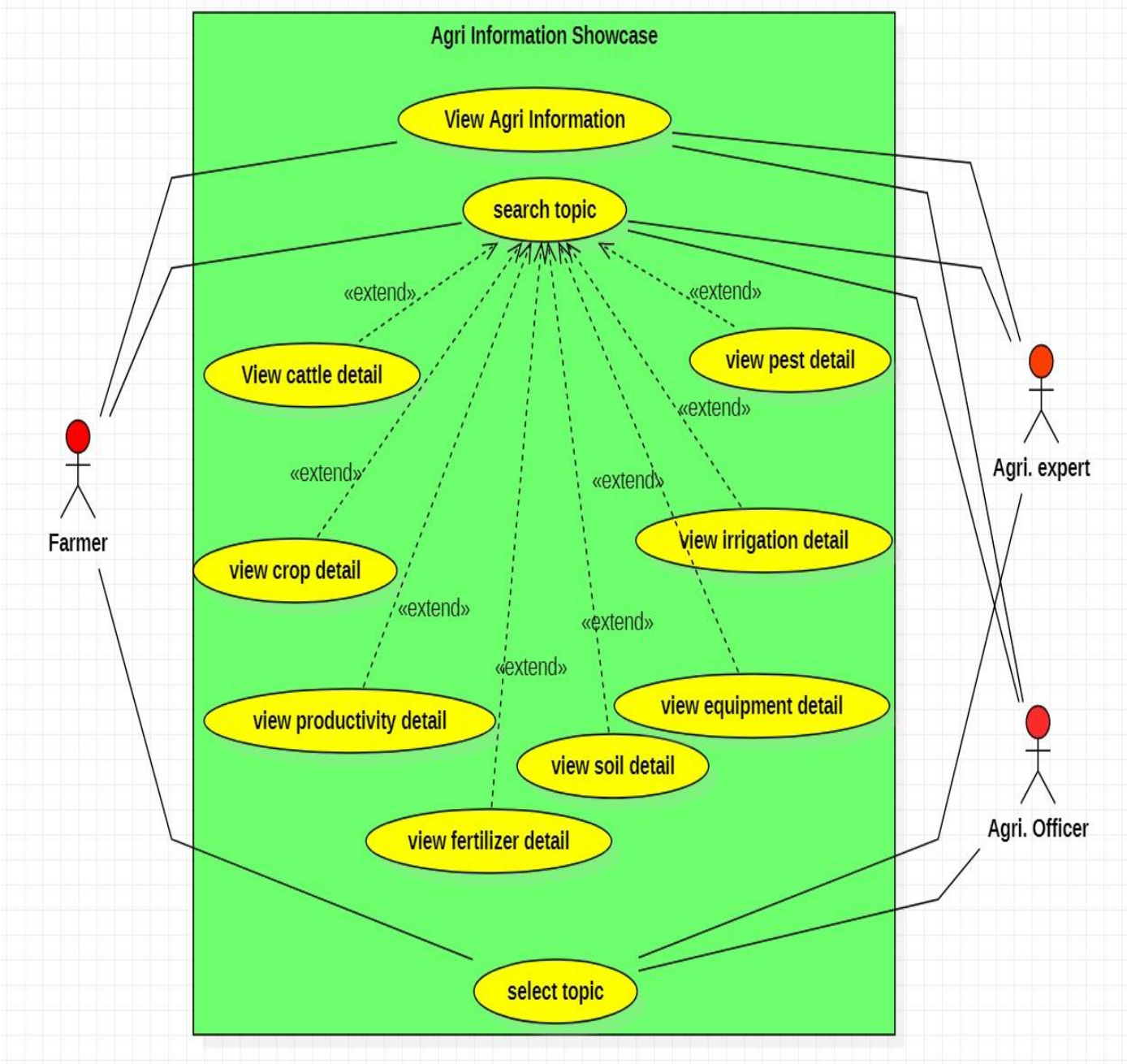
The system should allow only managers to access a user’s personal data.

3. KEY USE-CASE NAME: View Agri-info.

Description:

View Agri-info use-case is used to know all the information about farming such as crop information, irrigation information, equipment information, soil information, fertilize information which details user want to know go to appropriate extending use-case.

USE CASE DIAGRAM:



FLOW OF EVENTS:

Basic Flow:

1. User clicks on View Agri-info.
2. Go to search button.
3. Select the article or information you want to read.
4. Read the information.

Alternative flow:

1. User should signup this system and also User should be a member of this system before perform View Agri-info usecase.

PRE-CONDITIONS:

User should signup and also member of a system for View Agri-info.

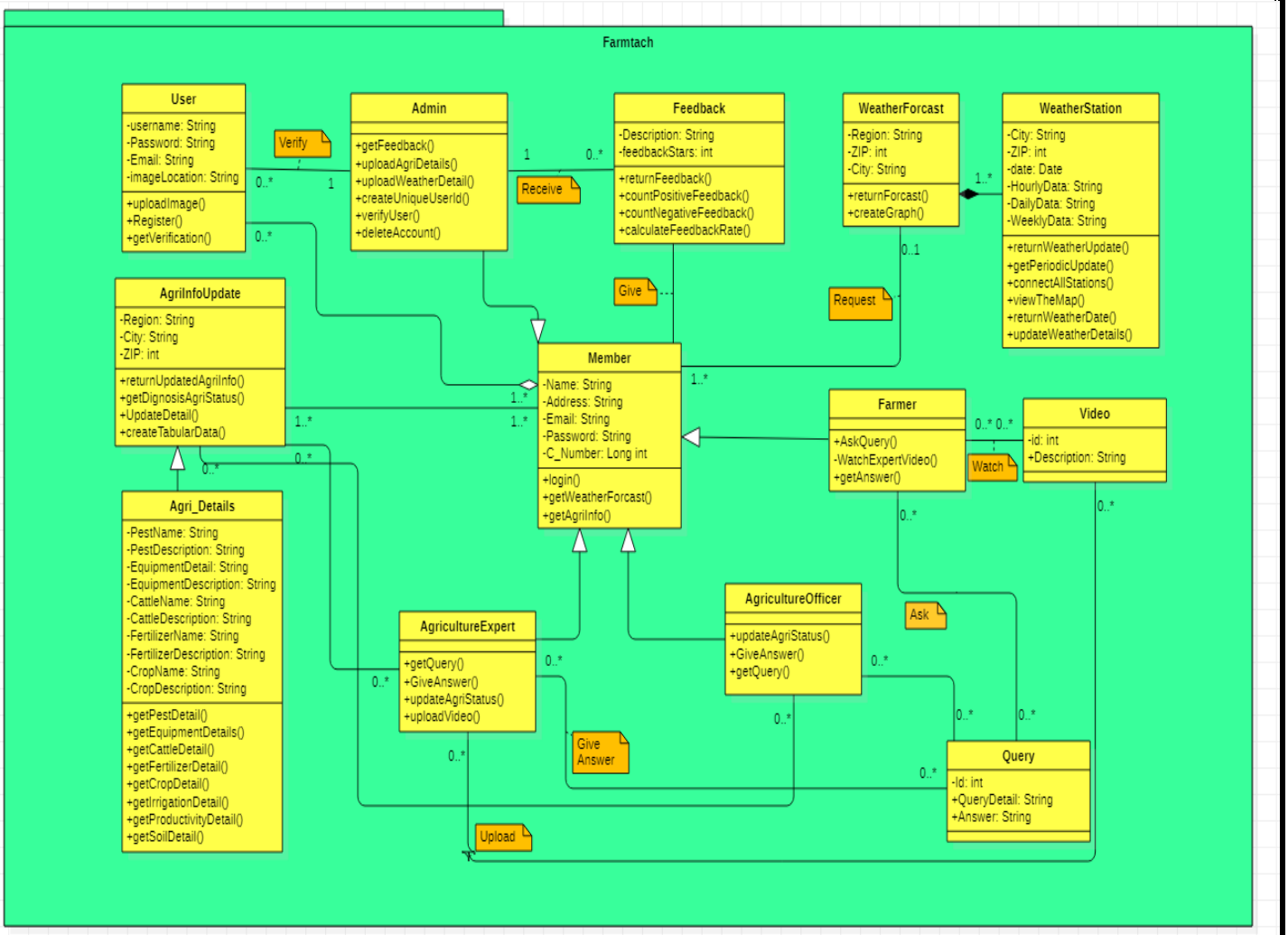
POST-CONDITION:

None.

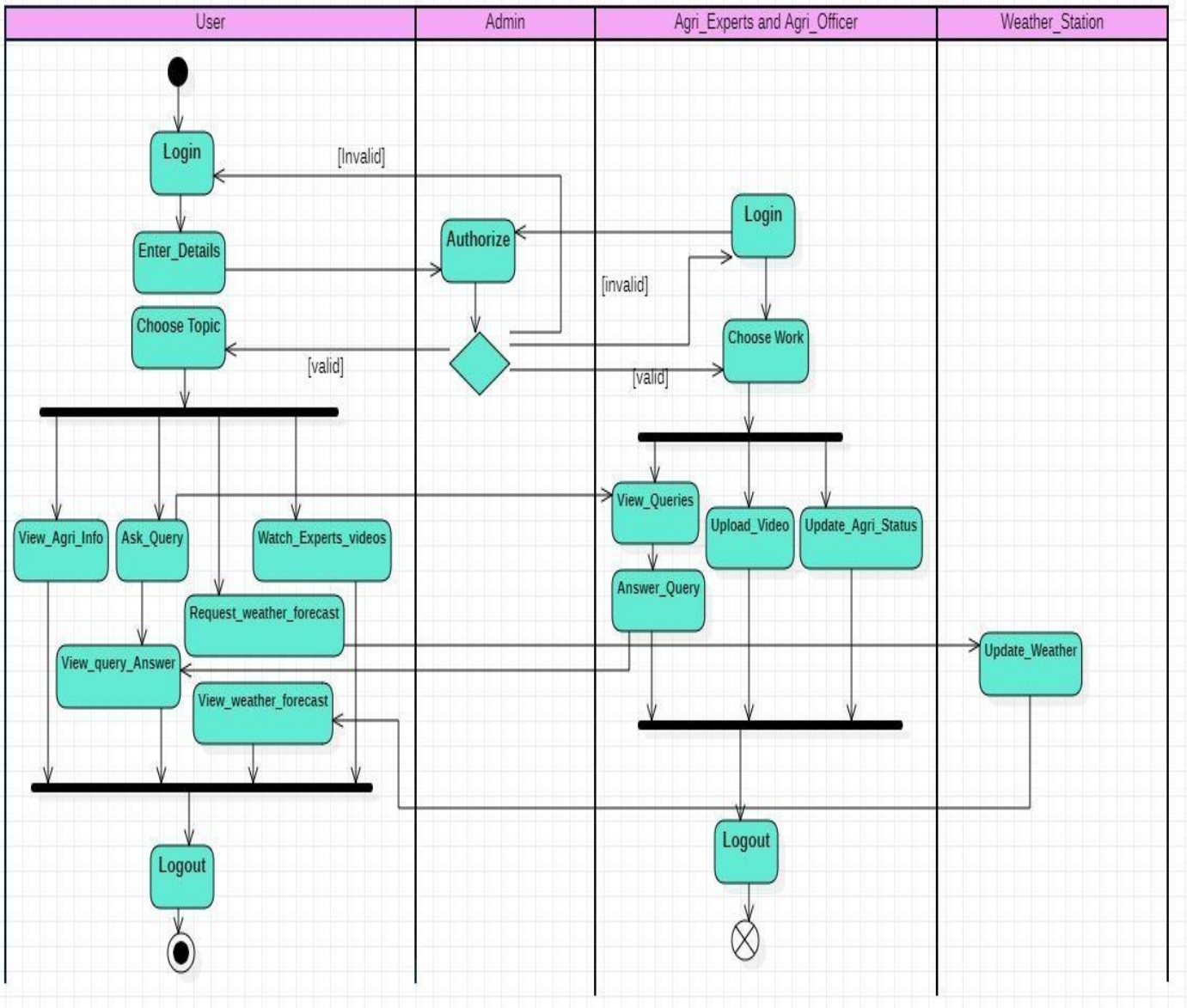
SPECIAL REQUIREMENTS:

User can access the information 98% of the time without failure.

CLASS DIAGRAM

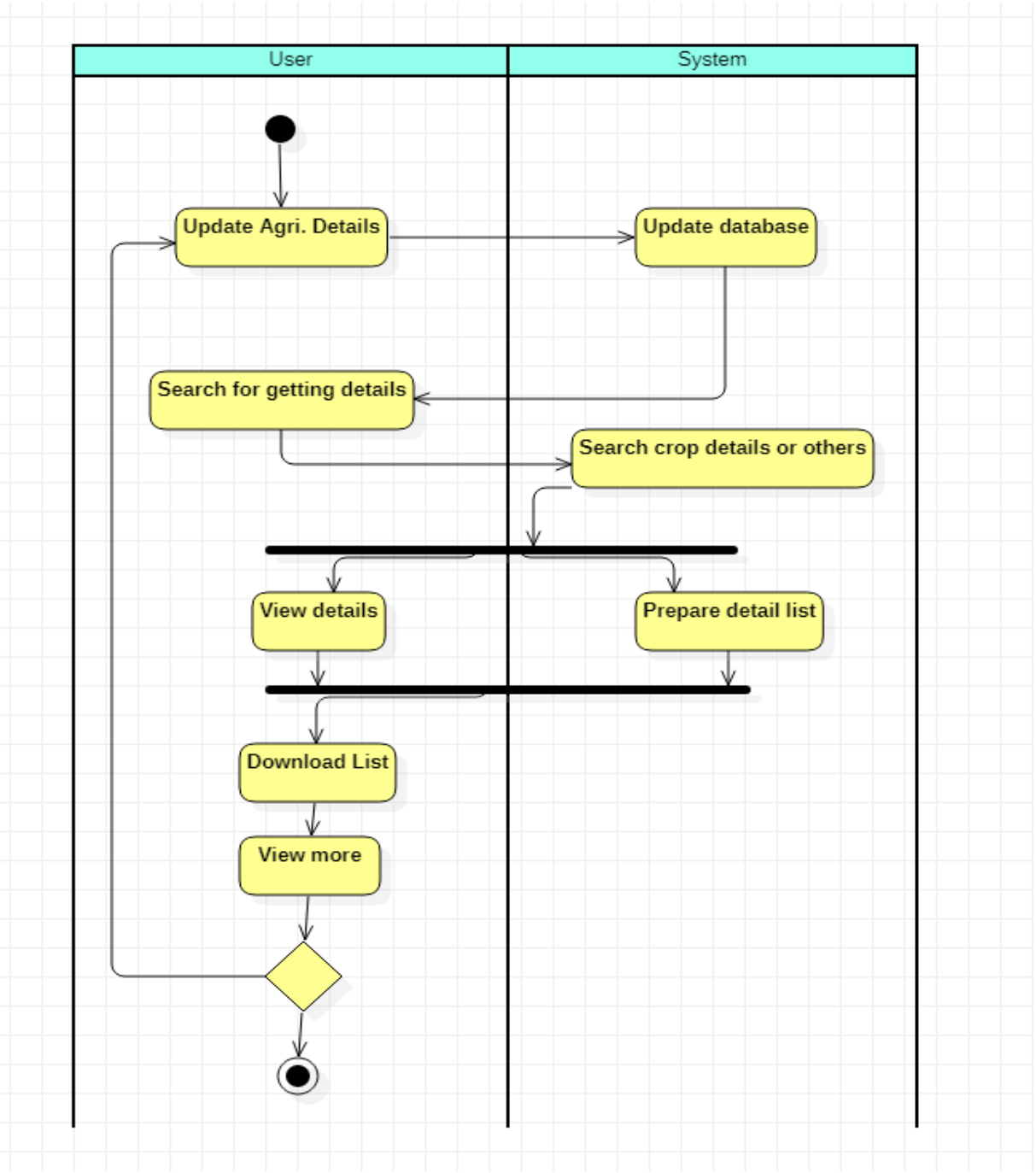


Activity Diagram

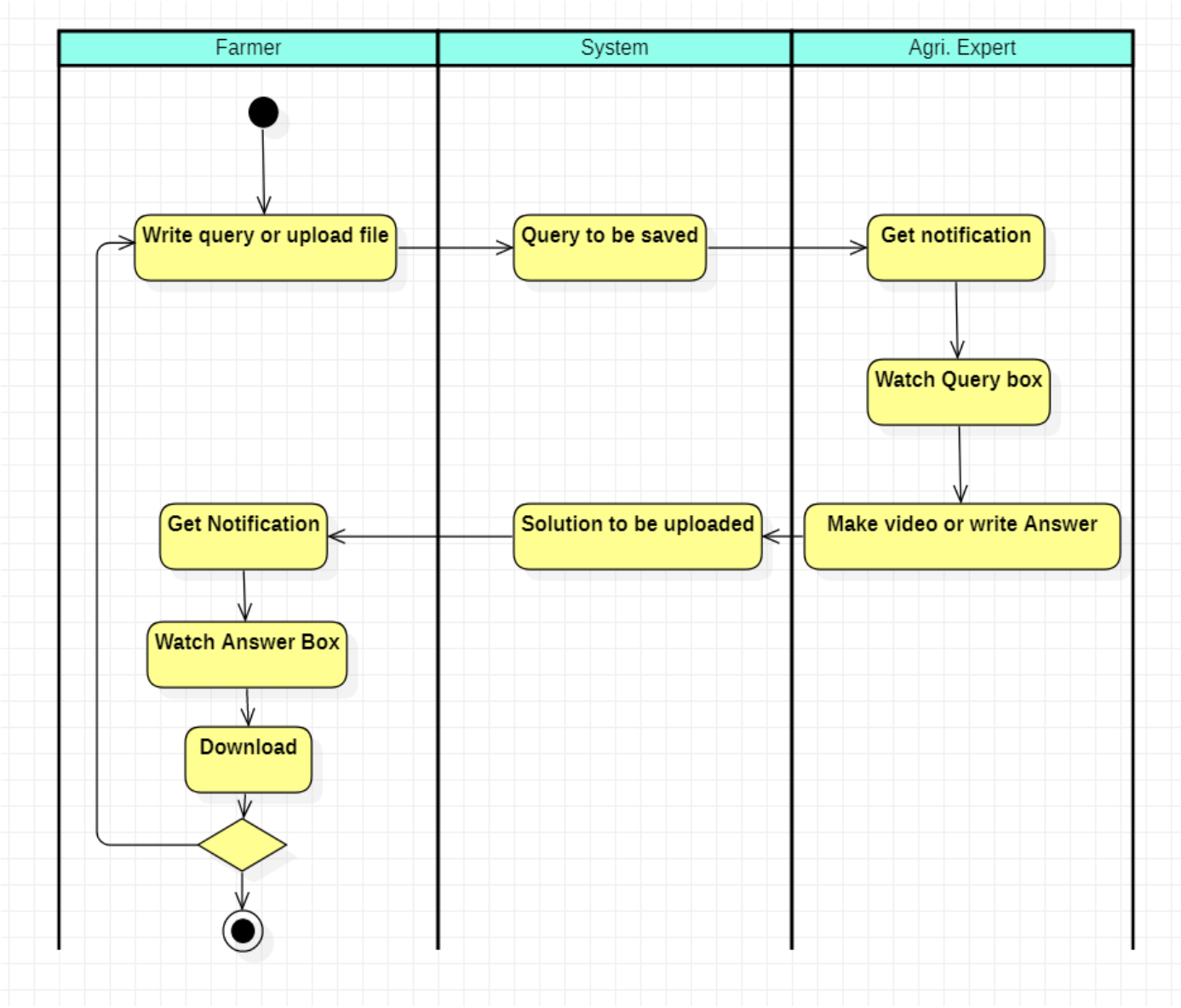


Activity Diagram for Key UseCases:

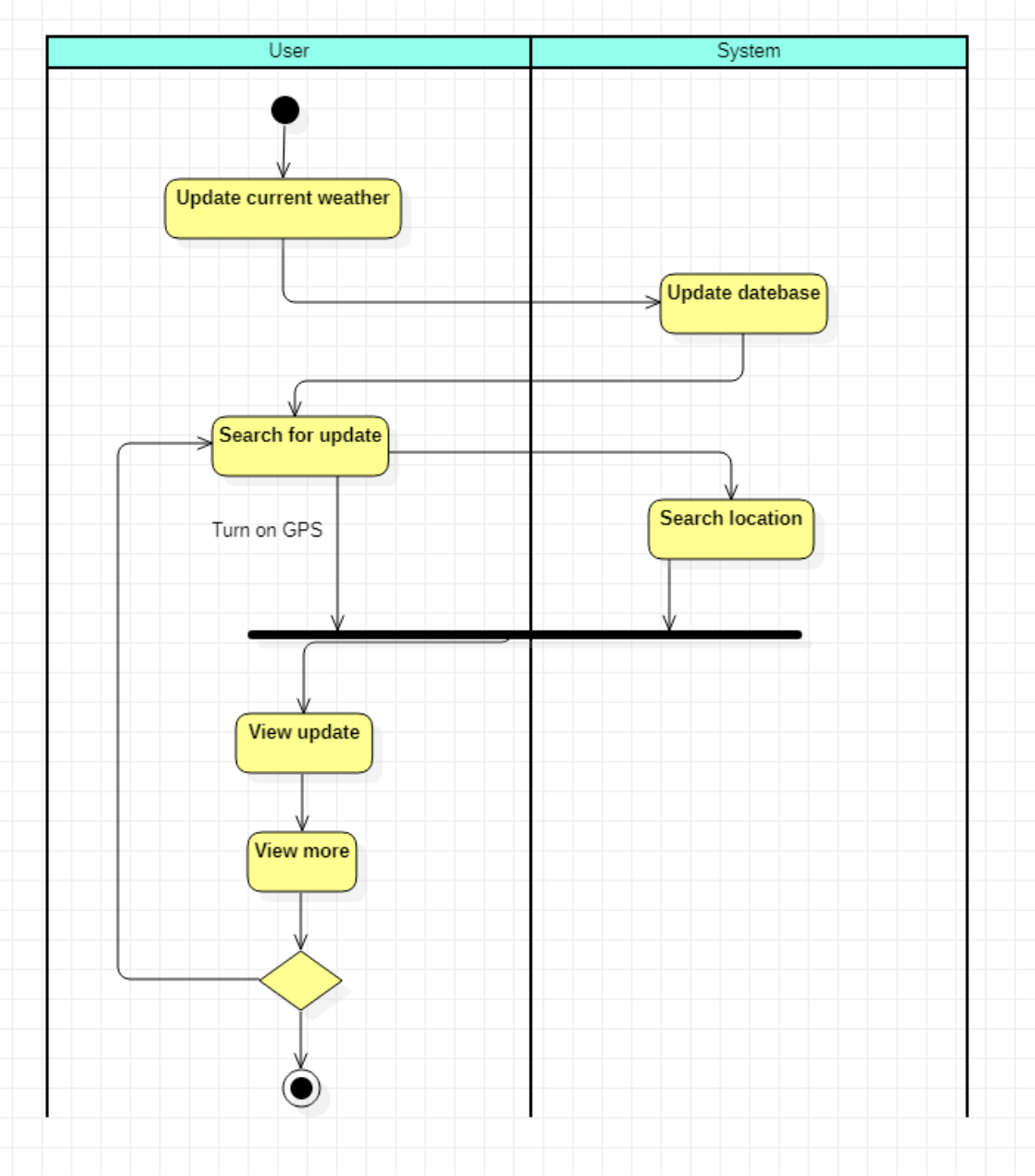
1. View Agri_Info:



2. Ask Query:

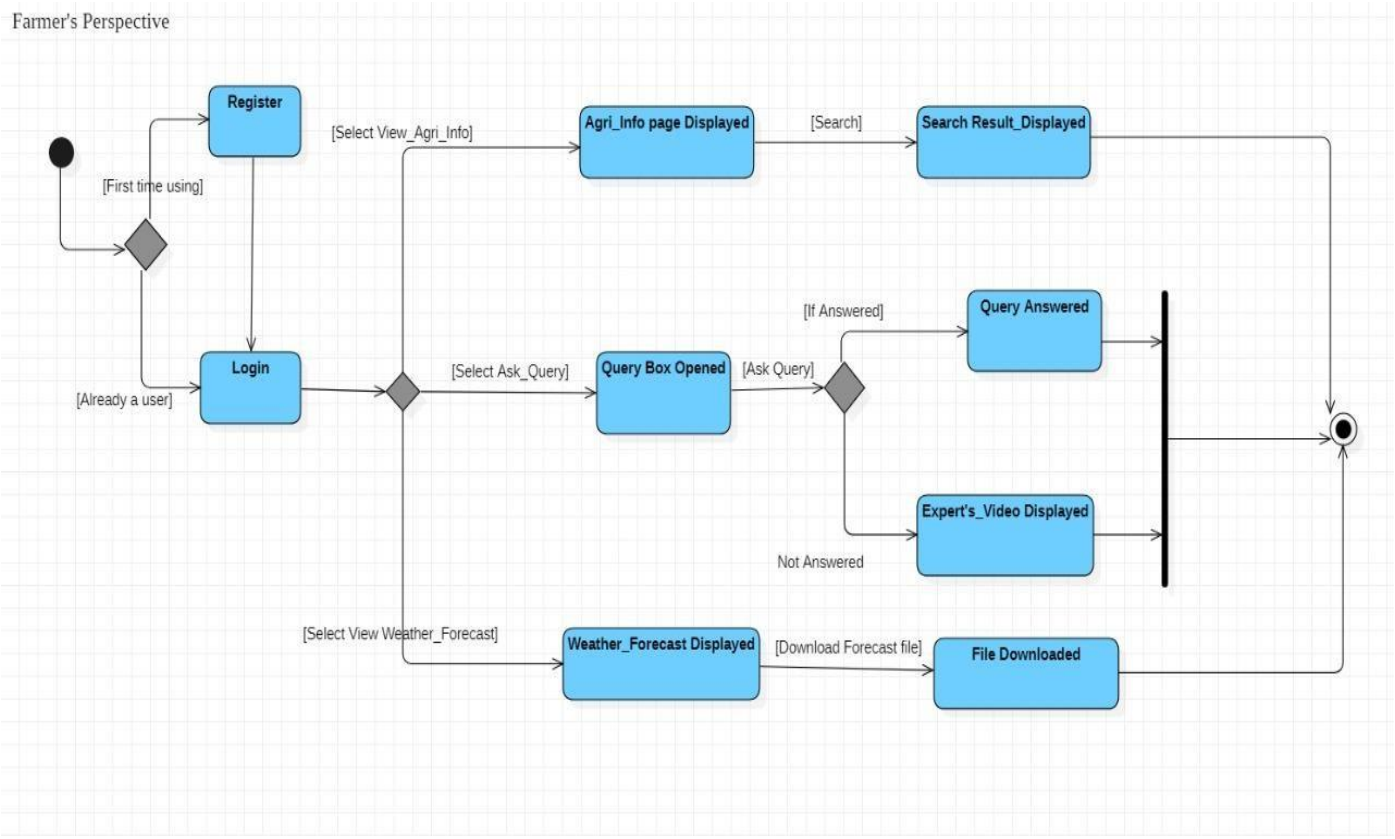

Farmer
System
Agri. Expert
Write query or upload file
Query to be saved
Get notification
Watch Query box
Make video or write Answer
Solution to be uploaded
Get Notification
Watch Answer Box
Download

3. View Weather Forecast:

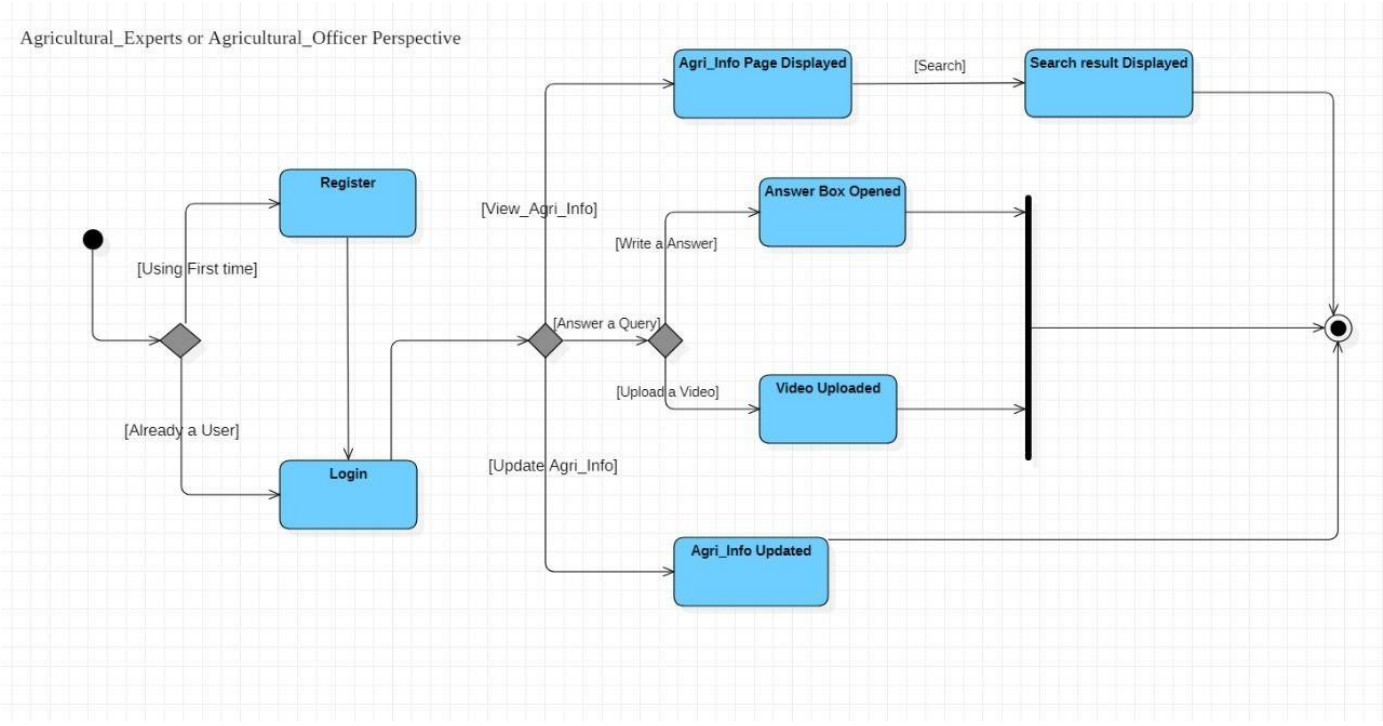


State Chart Diagram

Farmer's Perspective:

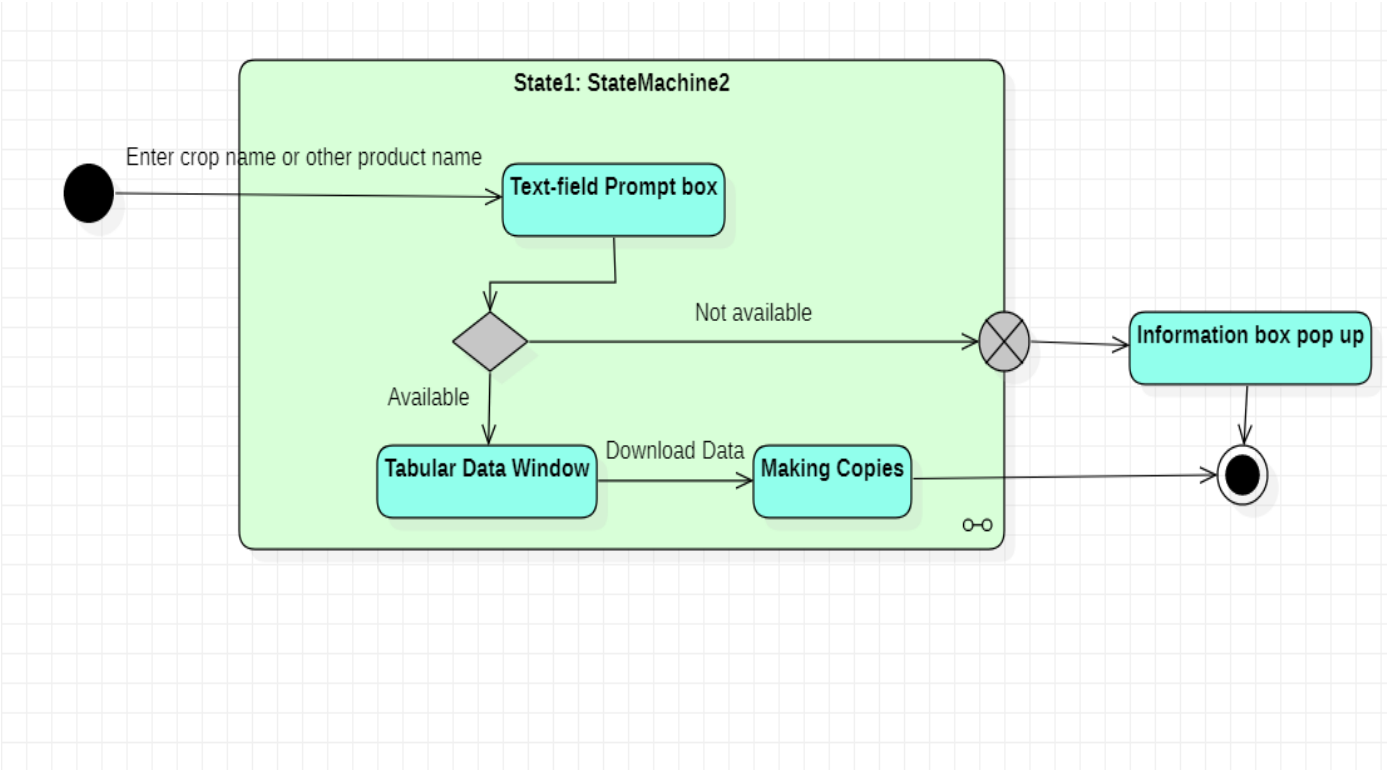


Agri_Officer and Agri_Expert's Perspective:

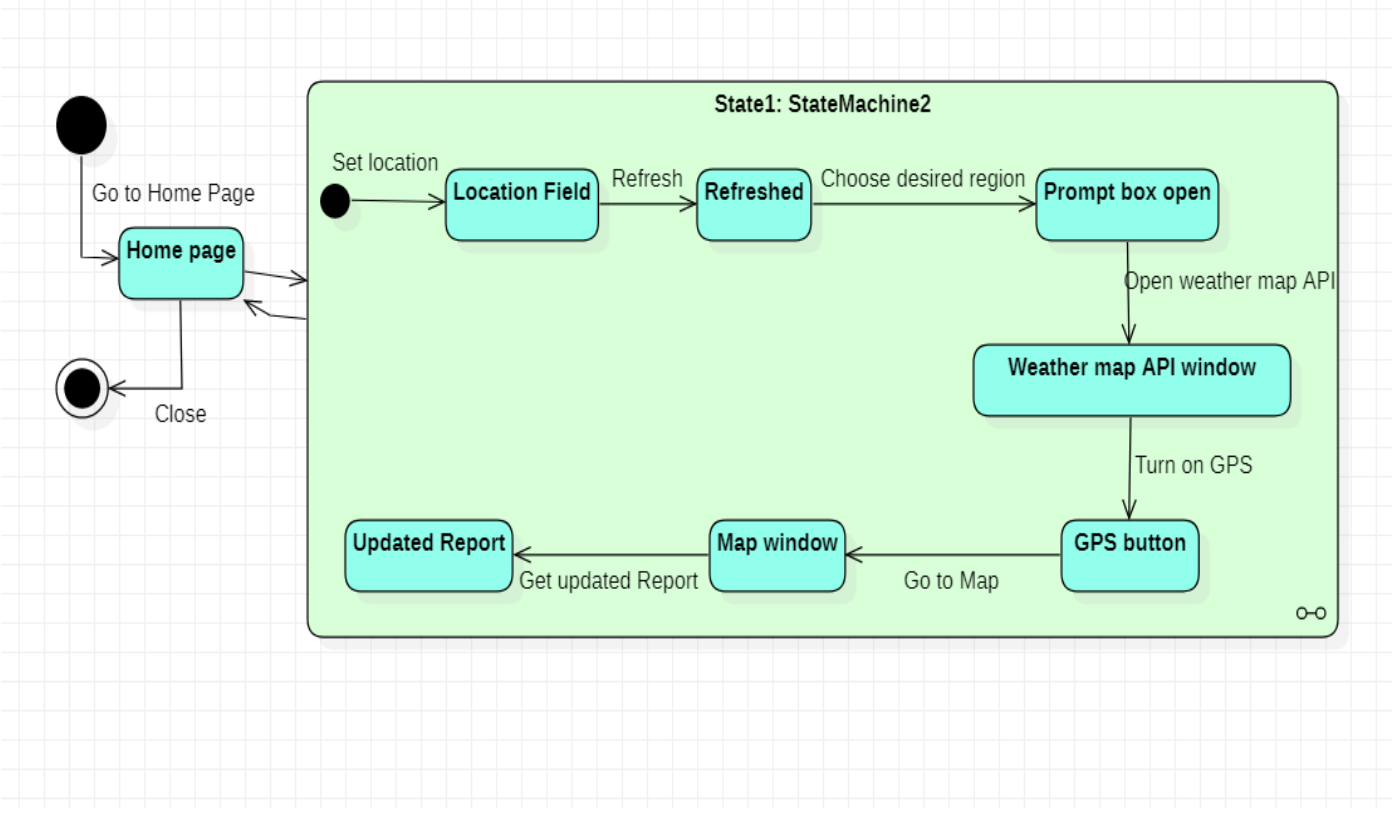


State Chart Diagram for Key UseCases:

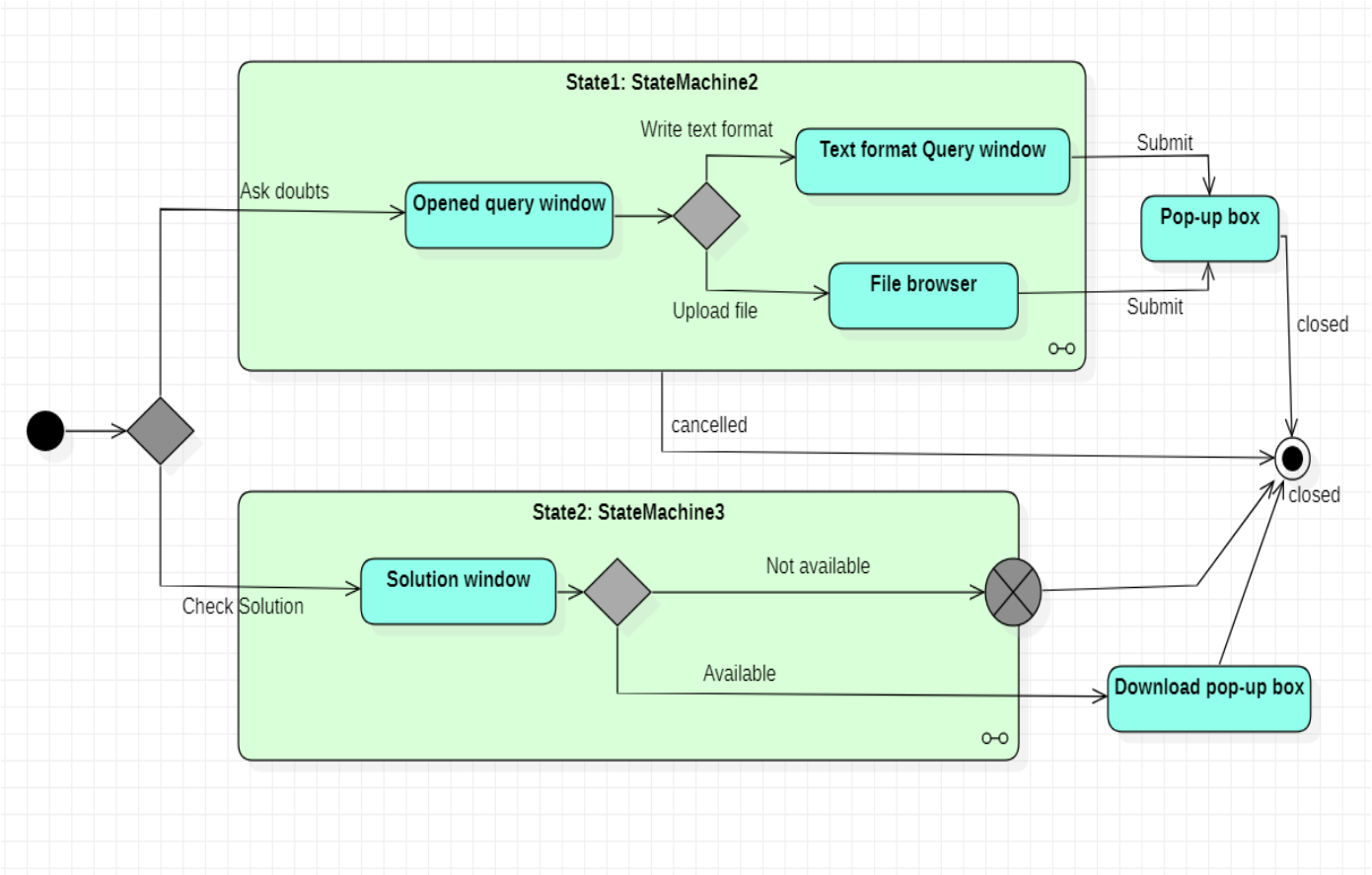
1. View Agri_Info:



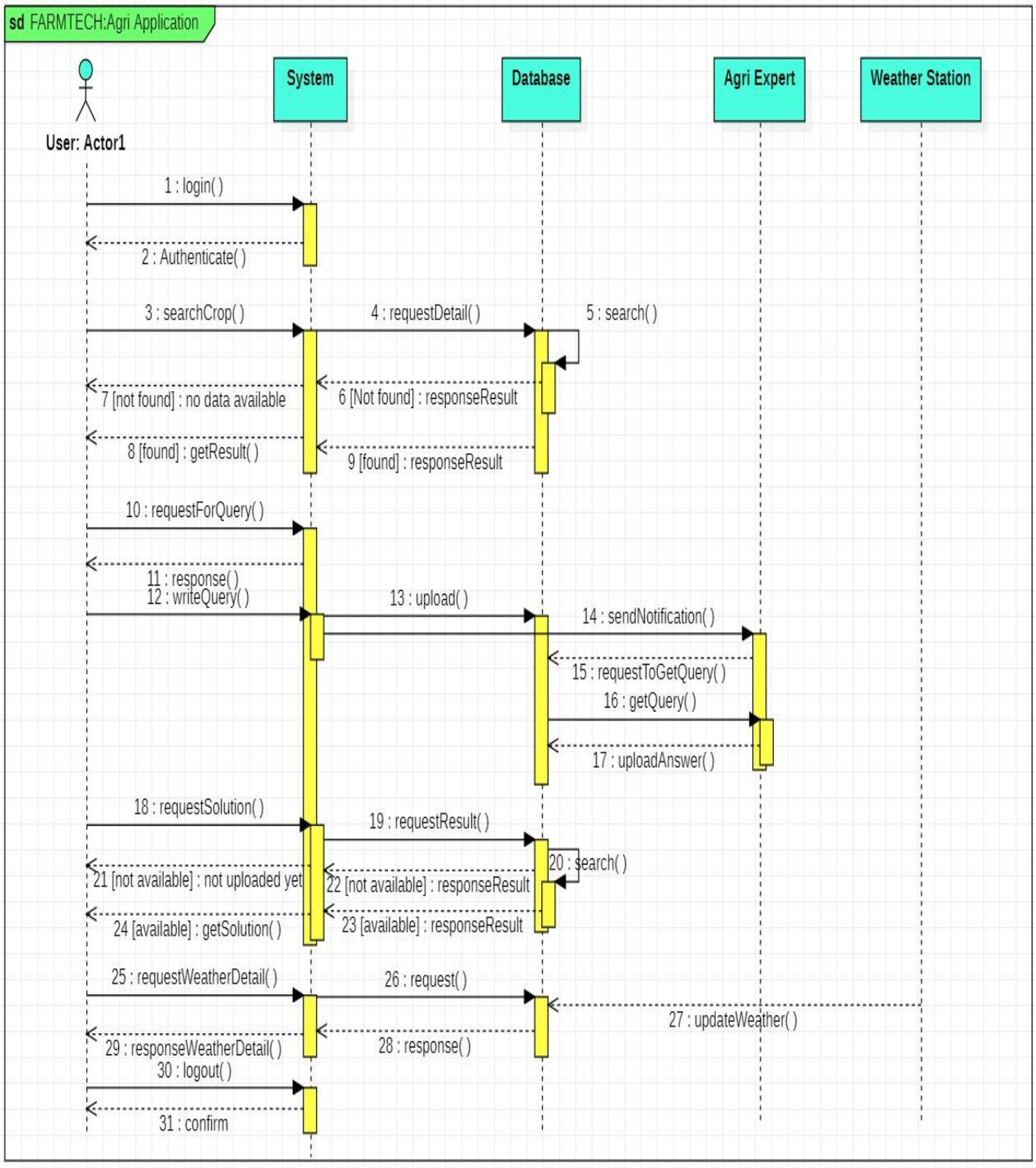
2. View Weather Forecast:



3. Ask Query:

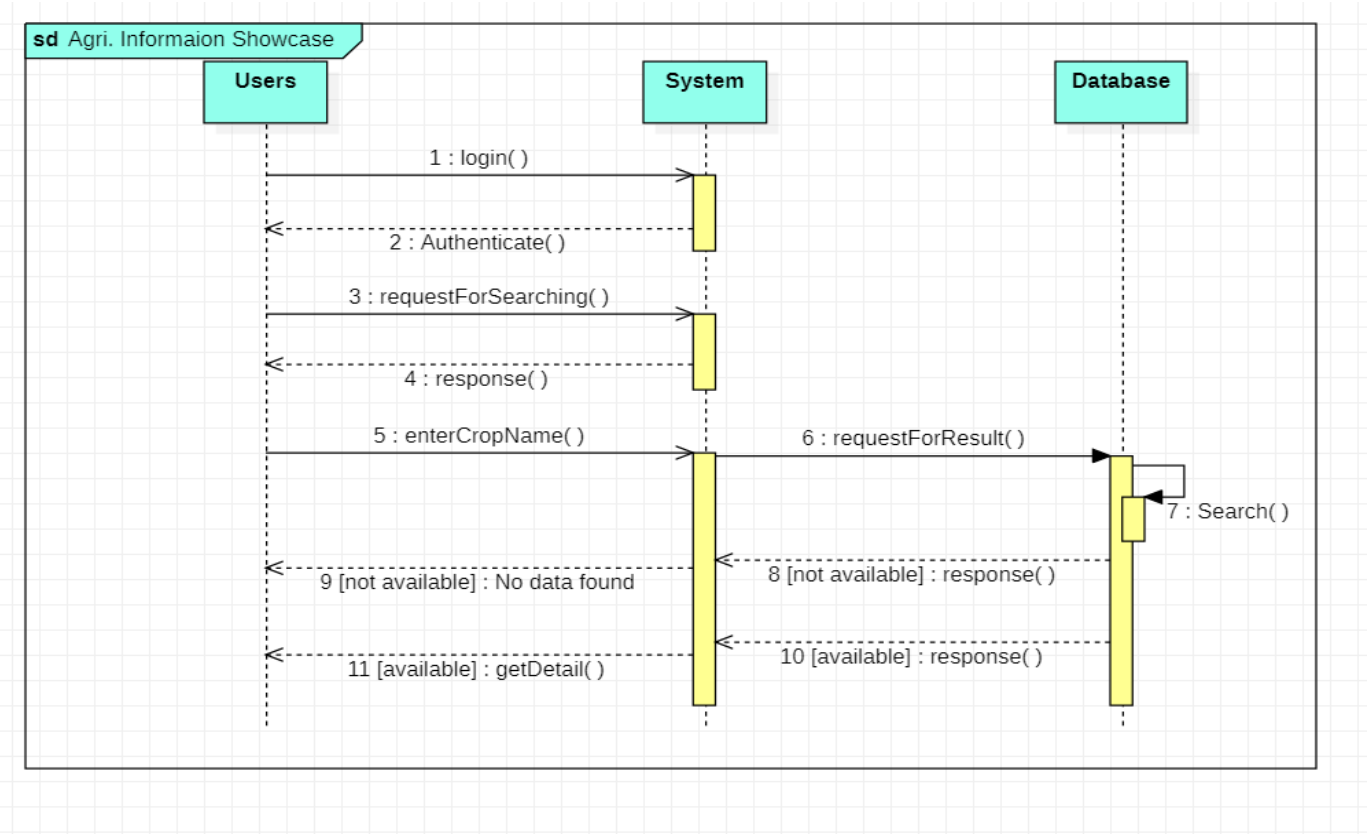

State1: StateMachine2
Write text format
Text format Query window
Submit
Ask doubts
Opened query window
Pop-up box
File browser
Upload file
Submit
closed
cancelled
closed
State2: StateMachine3
Solution window
Not available
Check Solution
Available
Download pop-up box

Sequence Diagram:

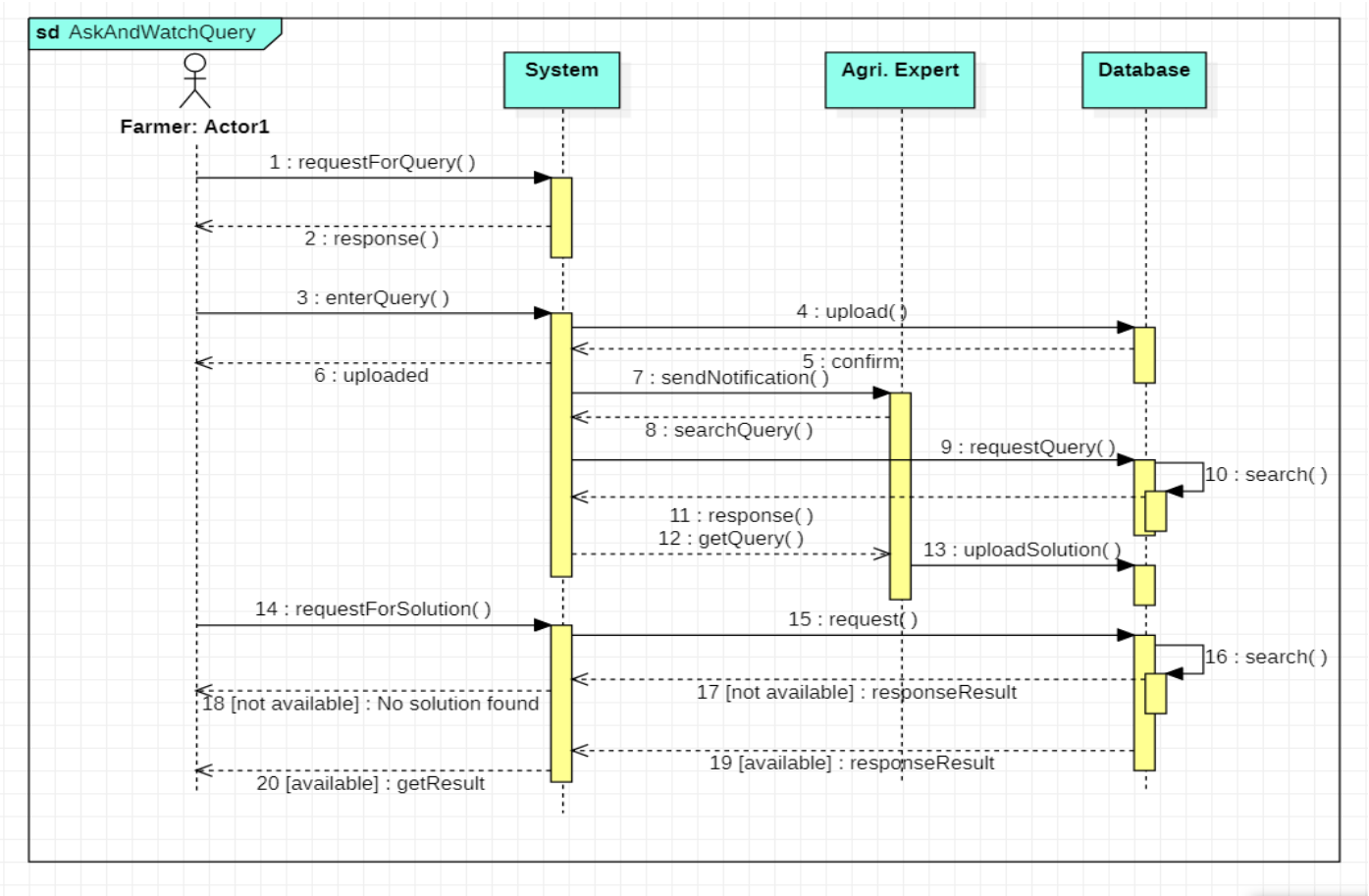


Sequence Diagram for Key UseCases:

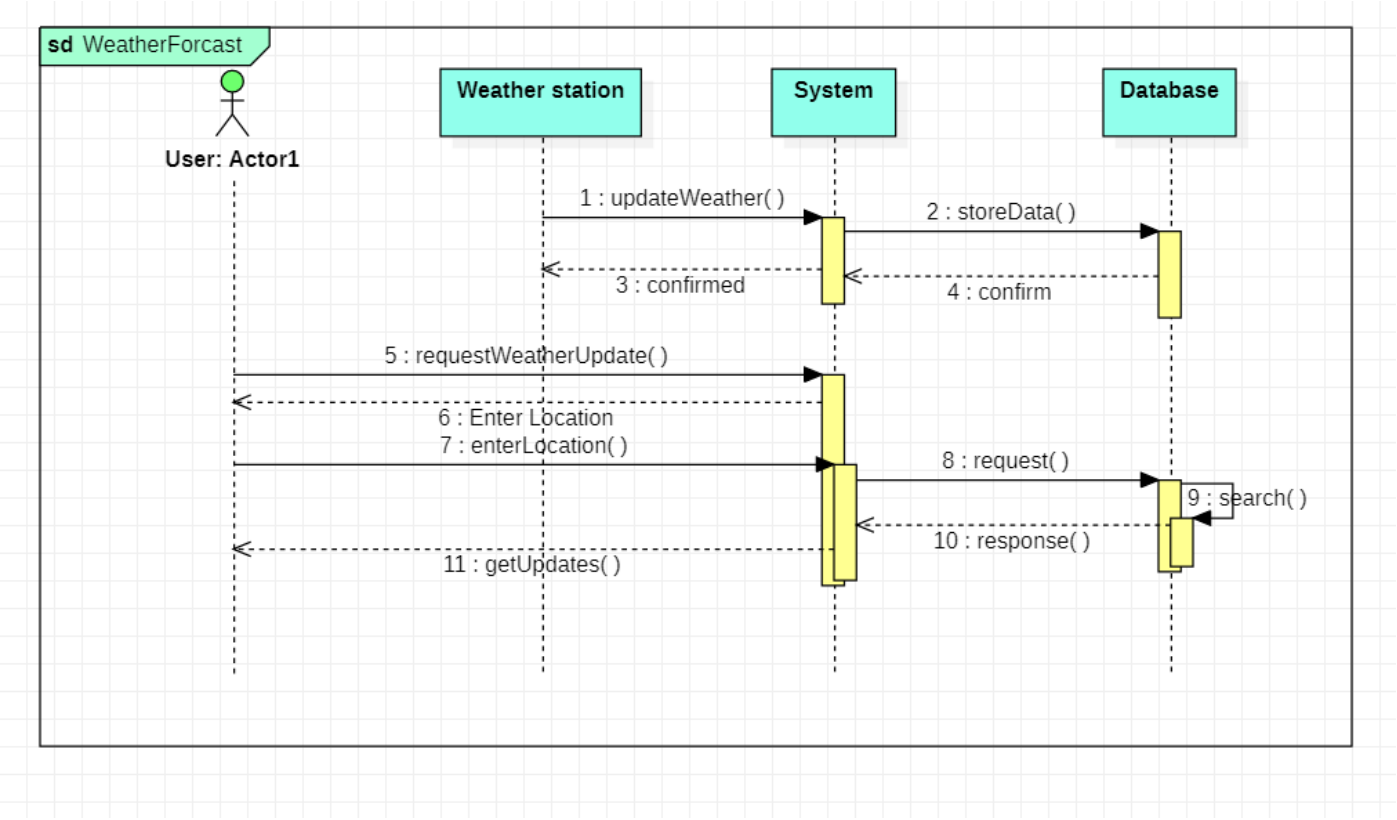
1. View Agri_Info:



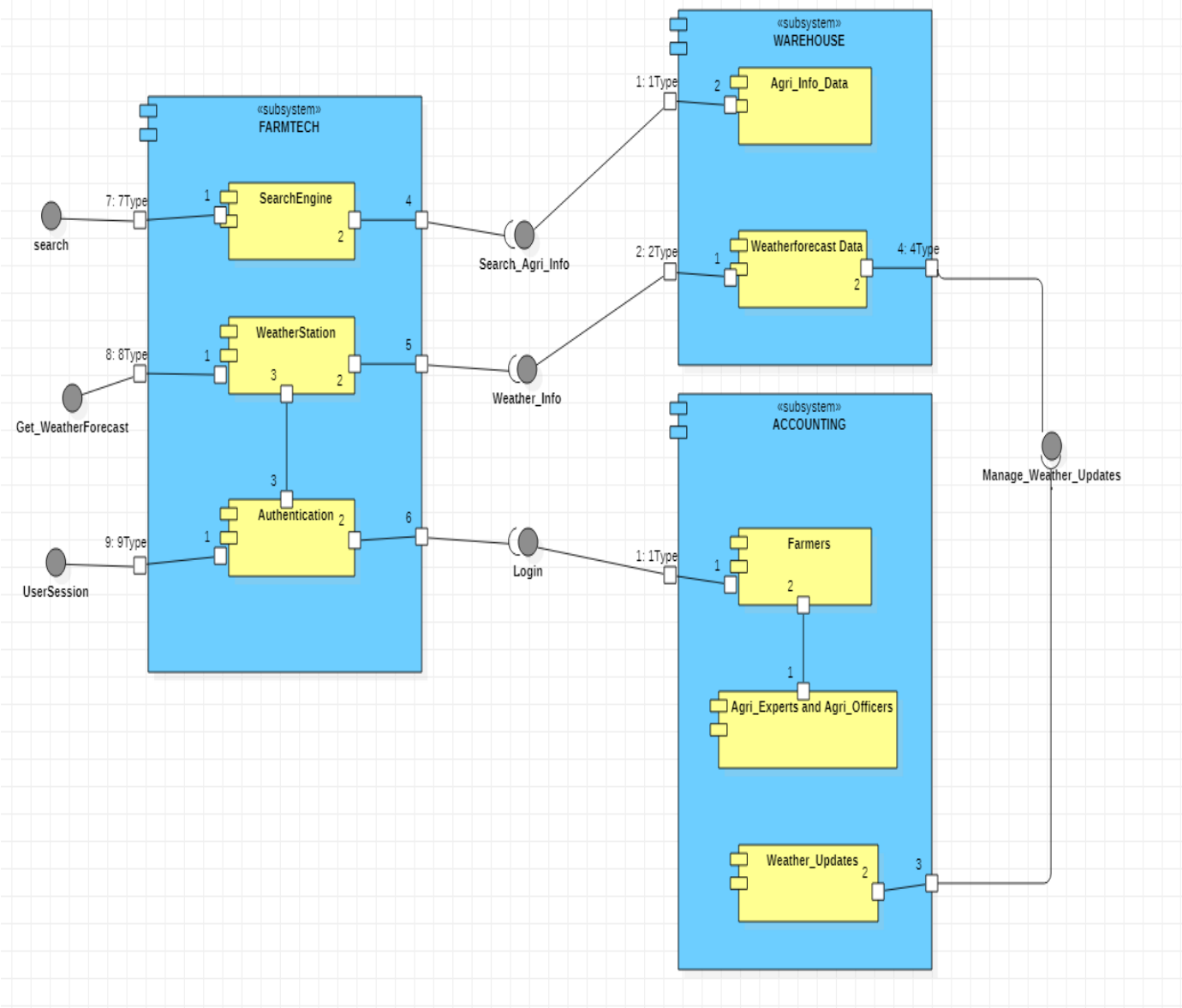
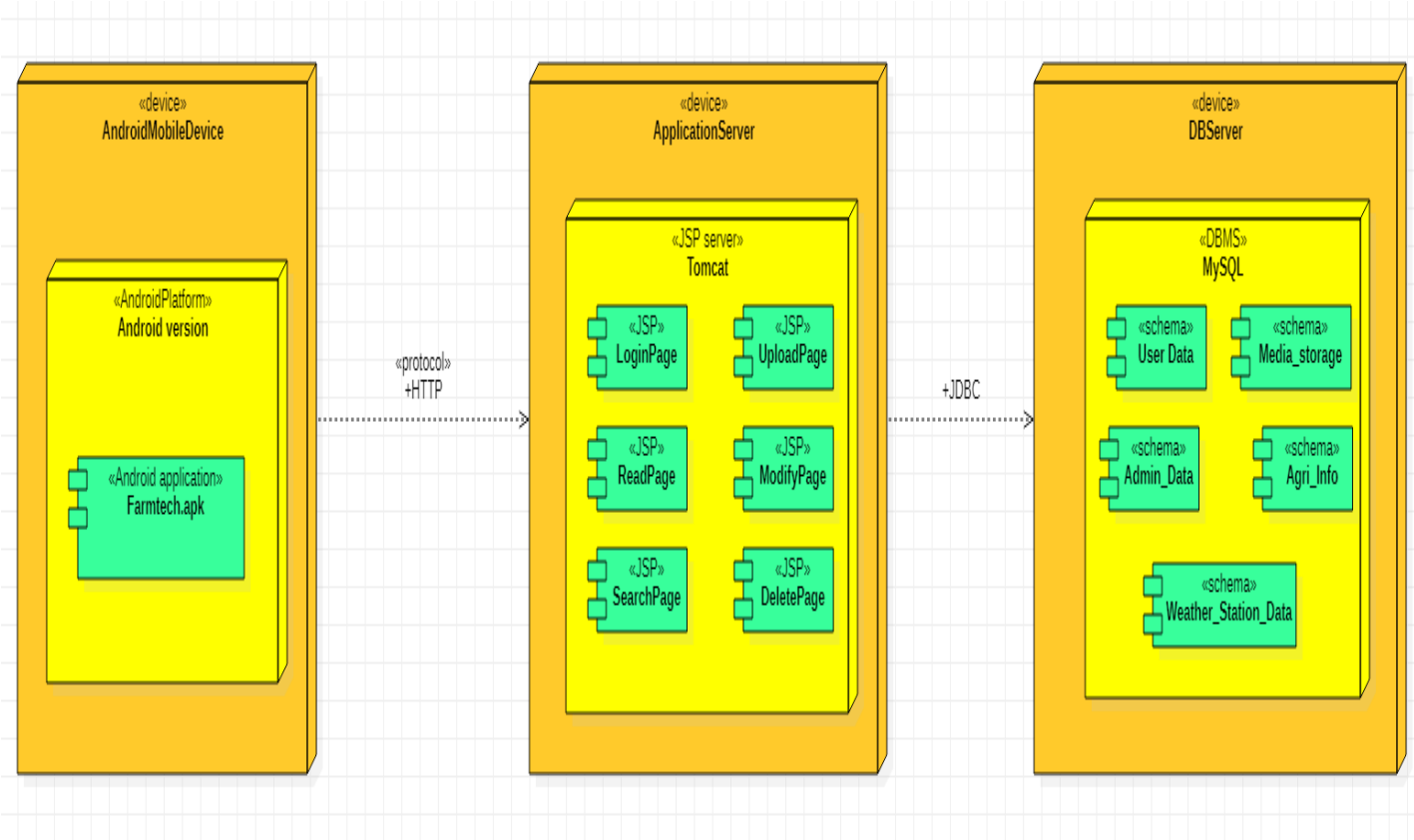
2. Ask Query:



3. View Weather Forecast:



Component Diagram:



Deployment Diagram