

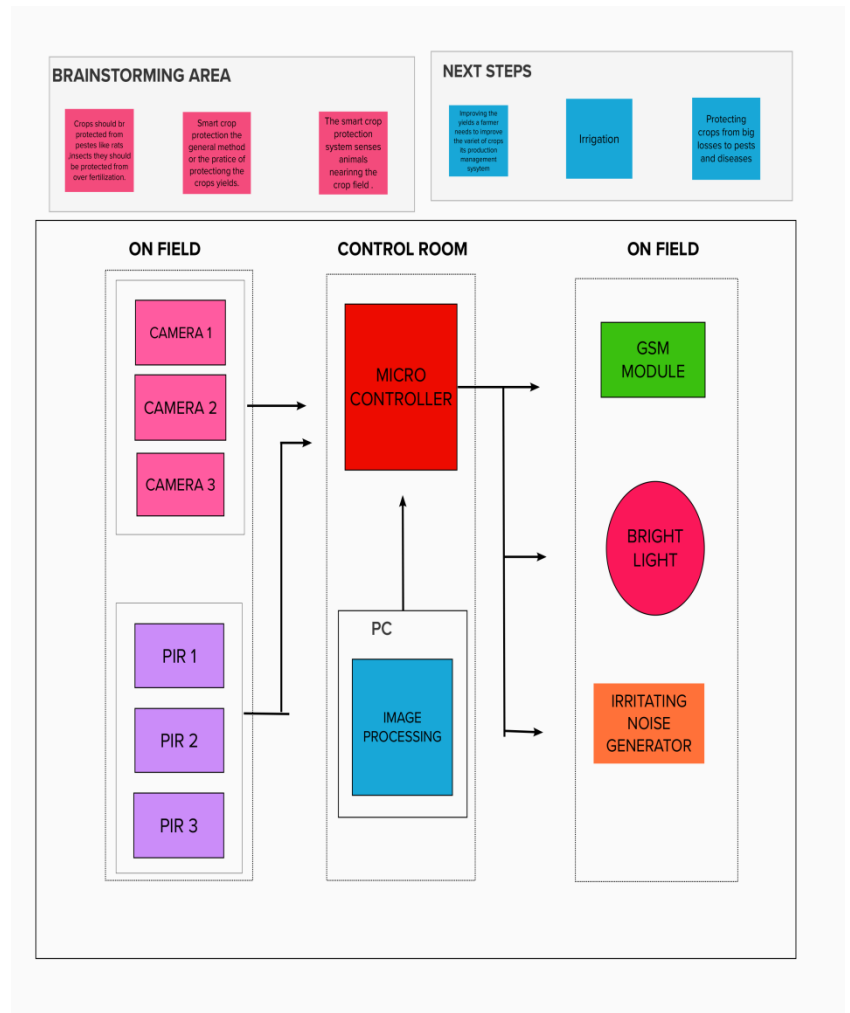
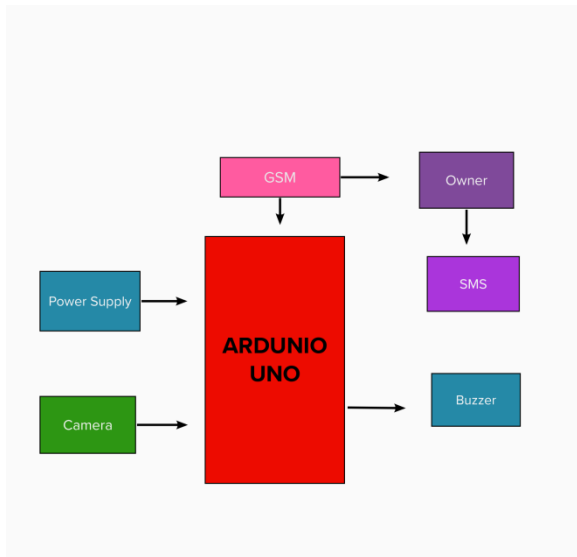
PROJECT DESIGN PHASE-II

DATA FLOW DIAGRAMS AND USER STORIES

TEAM ID:PNT2022TMID36188

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|---------------|--|
| Date | 15 October 2022 |
| Team ID | PNT2022TMID36188 |
| Project Name | IOT based Smart Crop Protection System for Agriculture |
| Maximum Marks | 4 Marks |

DATA FLOW DIAGRAM:



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Simplified Diagram:

- ❖ This is an Arduino Uno based framework utilizing microcontroller.
- ❖ This framework utilizes a PIR sensor to identify intruders close to the field and additional to it a temperature and humidity sensor to maintain a soil moisture.
- ❖ When animal and birds approach close to the PIR(passive infrared Sensor), it detects the movement birds or animals
- ❖ After getting the initial input signal from the warm body, it is passed for further processing, then it will be passed one to the microcontroller.
- ❖ Then the system will be activated, immediately the buzzer goes on and simultaneously it sends a SMS to the user.
- ❖ Microcontroller (Arduino Uno) is used for reading the inputs from PIR .
- ❖ The temperature sensor used to maintain a moisture of soil,it can help to maintain a water quantity in land.
- ❖ The GSM module is used for sending SMS to user.

User Stories:

| User type | Functional Requirement | User Story Number | User Story / Task | Acceptance criteria | Priority | Release |
|-----------|------------------------|-------------------|---|--|----------|----------|
| User | Data collecting | USN-1 | Smart farming based IOT | Sensing of Agriculture data and storing. | High | Sprint-4 |
| | | USN-2 | As an user, I will inform the farmer to protect the crops. | I can inform the farmer. | Medium | Sprint-2 |
| | | USN-3 | Extract data from source. | Management of data through expert and investigation method | High | Sprint-2 |
| User 2 | Login | USN-4 | As an co-user, I can send the alert message to the farmers. | I can alert farmers. | High | Sprint-1 |
| Farmer | Login | USN-5 | As a farmer, I will follow the route to the crop which can avoid are detect animal intrusion. | I can reach the crops. | High | Sprint-2 |

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|----------------|----------|-------|--|--|--------|----------|
| Crop Protector | | USN-6 | A an crop protector. | In can protect the crop. | Medium | Sprint-2 |
| Farmer | Login | USN-7 | As a supervisor,I can Supervise the crop and ensure the hygiene process. | I can manage all these process going good. | High | Spirit-1 |
| Crop yielder | Register | USN-8 | As a crop yielder,I can yield more crop. | I can register smart crop. | Medium | Spirit-3 |
| Crop Monitor | | USN-9 | As a crop monitor,I check the quality of IOTdevice's quality. | I can check the IOT device. | Medium | Spirit-3 |