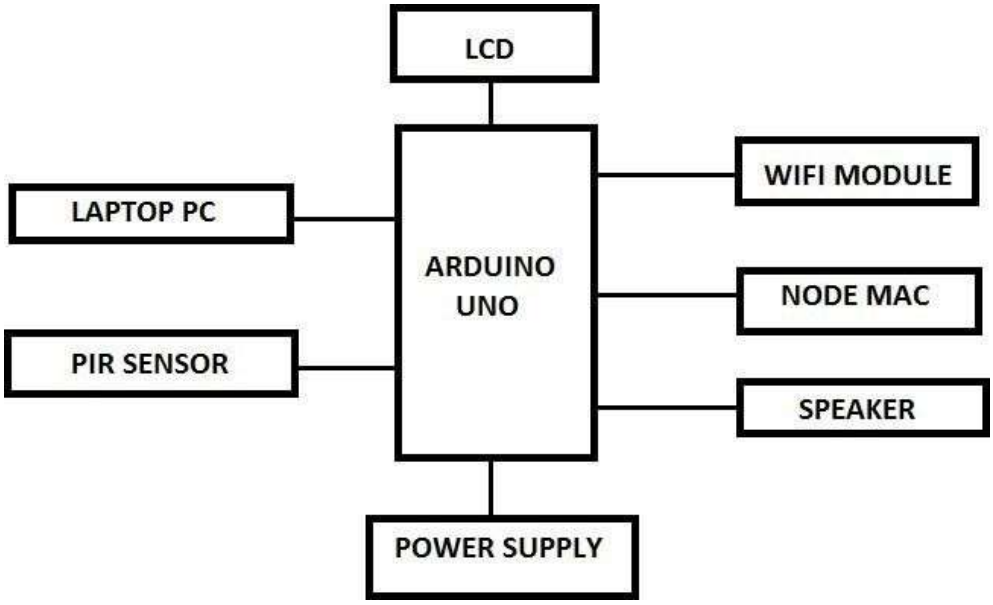
Project Development –Delivery Of Sprint-2

Date	22 October 2022
Team ID	PNT2022TMID15011
Project Name	IoT Based Smart Crop ProtectionSystem for Agriculture



Arduino UNO: Arduino Uno is a microcontroller board based on the ATmega328. It has 14 digital input/output pins (of which 6 can be used as PWM outputs), 6 analog inputs, a 16 MHz crystal oscillator,a USB connection, a power jack, an ICSP header, and a reset button. It contains everything needed to support the microcontroller; simply connect it to a computer with a USB cable or power it with a AC- toDC adapter or battery to get started. Operating Voltage- 5V.Input voltage 7-12V

Pir Sensor: The Passive Infrared Sensor (PIR) sensor module is used for motion detection. It is often referred to as a "PIR", "Pyroelectric", "Passive Infrared" and "IR Motion" sensor,the module has an onboardpyroelectric sensor, conditioning circuitry and a dome shaped Fresnel lens. It is used to sense movement of people, animals, or other objects. They are commonly used in burglar alarms and automatically-activatedlighting systems.

Power Supply: A power supply is an electrical device that supplies electric power to an electric load. Theprimary function of a power supply is to convert electric current from a source to the correct voltage, current, and frequency to power the load

LCD Liquid Crystal Display: Liquid crystal display is a very important device. It offers high flexibility to users as it can display the required data on it. It is a type of flat panel display which uses liquid crystals in its primary form of operation .It is a 12*12 displays which display animal informationwhen an animal is detected.

Laptop:When the PIR sensor detects the obstacle, the camera of the Laptop turns on and captures the video input. Once the input is captured the animal detection code runs in PYTHON'S ANACONDA platform and identifies the animal.

ESP8266 WiFi Module:ESP8266 WIFI module is a self contained SOC with integrated TCP/IP protocol stack, that gives any microcontroller access to WIFI network.It is pre programmed withan AT command set firmware , it is simply hooked on Arduino device to get wi-fi ability.It fetches data from internet using API's ,hence we can access any information available in the internet.

Node-MCU Node MCU is an open source firmware for which open source prototyping board designsare available. The name "Node MCU" combines "node" and "MCU" (micro-controller unit). Node MCUis used to access the location of the agricultural farm.

Speaker:A loudspeaker is an electroacoustic transducer, that is, a device that converts an electrical audiosignal into a corresponding sound. Different audio files are played to scare the animals.

IOT Based Crop Protection System against Birds andWild Animal Attacks

The main aim of our project is to protect from damage caused by animal as well as divert the animalwithout any harm.

Crops in farms are many times ravaged by local animals like buffaloes, cows, goats, birds etc,.

This leads to huge losses for the farmers. It is not possible for farmers to barricade entire fields or stay onfield 24 hours and guard it.

So here we propose an automatic crop protection system from Animals.

Animal detection system is designed to detect the presence of animals and offer a warning.