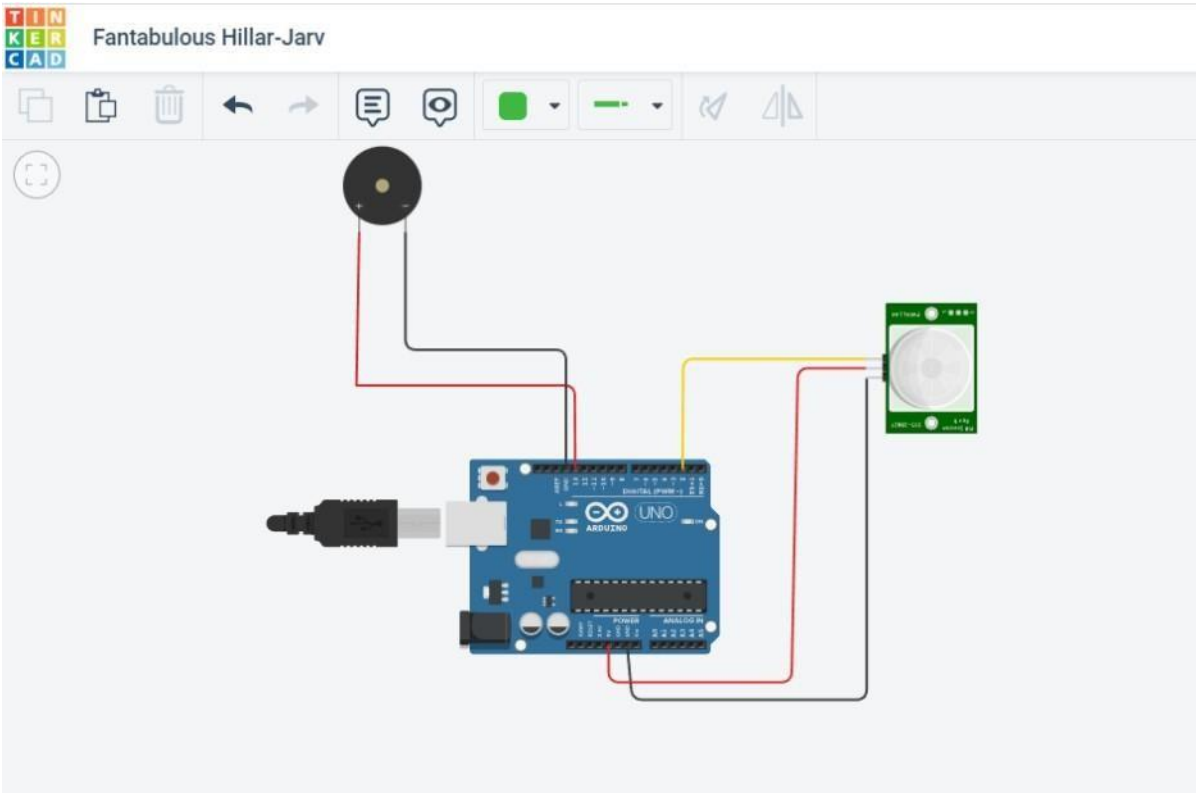
SPRINT-1

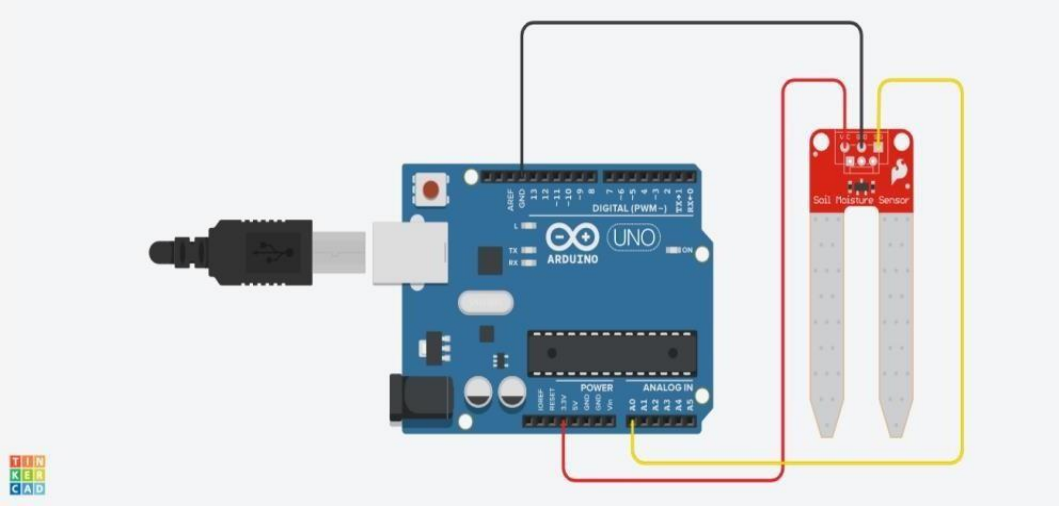
TEAM ID: PNT2022TMID06411

PROJECT NAME: IoT based smart crop protection system for Agriculture

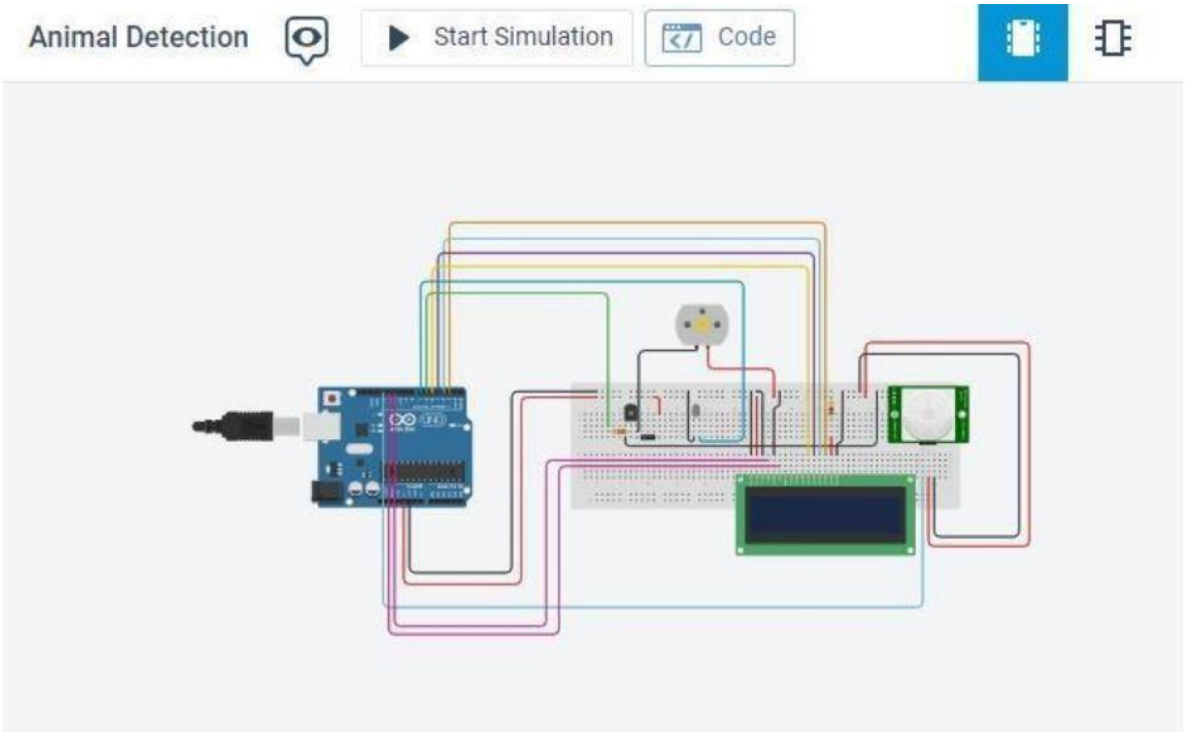
Bird's detection circuit: Protect the fruits and vegetables from the birds by using Piezo electric buzzer with Arduino.



Moisture circuit: To detect the moisture level in the soil



Animal detection circuit: without fencing, to detect the animal entry in the field



CODE:

Birds detection circuit: Protect the fruits and vegetables from the birds by using piezo electric buzzer with Arduino

```
void setup()
{
 pinMode(2,INPUT);
 pinMode(13,OUTPUT);
}
void loop()
{
 if (digitalRead(2)==HIGH)
 {
 digitalWrite(13,HIGH);
}
 else
 {
 digitalWrite(13,LOW);
 }
 delay(10);
 }
```

Moisture circuit: To detect the moisture level in the soil

```
int moistureValue;
float moisture_percentage;
void setup()
{
Serial.begin(9600);
}
void loop()
```

```
{
 moistureValue = analogRead(A0);
 moisture_percentage = ((moistureValue/539.00)*100);
 Serial.print("\nMoisture Value : ");
 Serial.print(moisture_percentage);
 Serial.print("%");
 delay(1000);
}
```

Animal detection circuit: without fencing , to detect the animals entry in the field

```
#include<LiquidCrystal.h>
LiquidCrystal lcd(11,12,5,4,3,2);
int led = 7;
int pirPin = 13;
void setup(){
 pinMode(6,OUTPUT);
 lcd.begin(16,2);
 pinMode(led, OUTPUT);
 pinMode(pirPin, INPUT);
 Serial.begin(9600);
}
void loop()
{
 lcd.blink();
 int a = digitalRead(pirPin);
 Serial.println(a);
```

```
if(a==HIGH)
{
lcd.setCursor(1,1);
lcd.print("Animal Detected");
digitalWrite(led, HIGH);
digitalWrite(6, LOW);
delay(2000);
lcd.clear();
}
else
{
digitalWrite(led, LOW);
digitalWrite(6, HIGH);
lcd.clear();
}
}
```