

SPRINT 1

Date	11 November 2022
Team ID	PNT2022TMID13187
Project Name	Project – Smart Farmer-IoT Enabled smart Farming Application

CODE:

```
#include "Arduino.h"

#include "dht.h"
#include "SoilMoisture.h"
#define dht_apin A0

const int sensor_pin = A1; //soil moisture

int pin_out = 9;
dht DHT; int c=0;
void setup()
{
  pinMode(2, INPUT); //Pin 2 as INPUT
  pinMode(3, OUTPUT); //PIN 3 as OUTPUT
  pinMode(9, OUTPUT); //output for pump
}

void loop()
{
  if (digitalRead(2) == HIGH)
  {

    digitalWrite(3, HIGH);          // turn the LED/Buzz ON
    delay(10000); // wait for 100 msecond
    digitalWrite(3, LOW);           // turn the LED/Buzz OFF delay(100);
  }

  Serial.begin(9600);
  delay(1000);
  DHT.read11(dht_apin); //temprature float
  h=DHT.humidity;
  float t=DHT.temperature; delay(5000);
```

```

    Serial.begin(9600);
    float moisture_percentage; int
    sensor_analog;
    sensor_analog = analogRead(sensor_pin);

    moisture_percentage = ( 100 - ( (sensor_analog/1023.00) * 100 ) );

    float m=moisture_percentage; delay(1000);
    if(m<40)//pump
    {
    while(m<40)
    {
    digitalWrite(pin_out,HIGH);          //open pump
    sensor_analog = analogRead(sensor_pin);
    moisture_percentage = ( 100 - ( (sensor_analog/1023.00) * 100 ) );
    m=moisture_percentage; delay(1000);
    }
    digitalWrite(pin_out,LOW);          //closepump
    }
    if(c>=0)
    {
    mySerial.begin(9600);
    delay(15000); Serial.begin(9600);
    delay(1000); Serial.print("\r");
    delay(1000);

    Serial.print((String)"update-
>" + (String)"Temprature=" + t + (String)"Humidity=" + h + (String)
)"Moisture=" + m);
    delay(1000);
    }
}

```

Circuit Diagram

