

## SPRINT 1

<b>Date</b>	15 NOVEMBER 2022
<b>Team ID</b>	PNT2022TMID02143
<b>Project Name</b>	Smart Farmer-IoT Enabled Smart Farming Application

### CONNECTING SENSORS WITH ARDUINO

*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)"Temperature=" +t+(String)"Humidity="
+h+(String )"Moisture=" +m);
delay(1000);
}
}

```

### ***CIRCUIT DIAGRAM :***



