

SPRINT 1

Date	29 October 2022
Team ID	PNT2022TMID48581
Project Name	Project – Smart Farmer-IoT Enabled smart Farming Application

Connecting Sensors with Arduino using C++ 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

