

## SPRINT 1

Date	13 November 2022
Team ID	PNT2022TMID41134
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+(Strin
g
)"Moisture="+m);
    delay(1000);
    }

}

```

## Circuit Diagram

