SPRINT 1

Date	10 November 2022
Team ID	PNT2022TMID06680
Project Name	Project – Smart Farmer-IoT Enabled smart Farming Application

Connecting Sensors with Arduino using C++ code

```cpp
#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)
```

```arduino
{
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