SPRINT - 1

Date	13 November 2022
Team ID	PNT2022TMID07461
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: