Date	29 October 2022
Team ID	PNT2022TMID11578
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 moistureint 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 OFFdelay(100);

}
```

```
Serial.begin(9600);

 delay(1000);

 DHT.read11(dht_apin); //tempraturefloat

 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: