SPRINT 1

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Team ID	PNT2022TMID04707
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