

SPRINT DELIVERY – 1

Team ID	PNT2022TMID17579
Project Name	IoT-Enabled Smart Farming Application
Date	9 November 2022

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(960
0); delay(1000);

DHT.read11(dht_apin); //temprature
float h=DHT.humidity;

```

```

float          t=DHT.temperate;
delay(500);    Serial.begin(960);

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

