SPRINT 1

Team ID	PNT2022TMID08036
Project Name	SmartFarmer - IoT Enabled Smart Farming Application

Arduino using C++ code To Connect Sensors

```
#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); //PIN3 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 theLED/Buzz OFF
delay(100);
}

 Serial.begin(9600);
    delay(1000);
  DHT.read11(dht_apin);  //temperature
  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