SPRINT 1

Date	15 NOVEMBER 2022
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Project Name	Smart Farmer-IoT Enabled Smart Farming Application

CONNECTING SENSORS WITH ARDUINO

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)

  {
```

```arduino
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 :