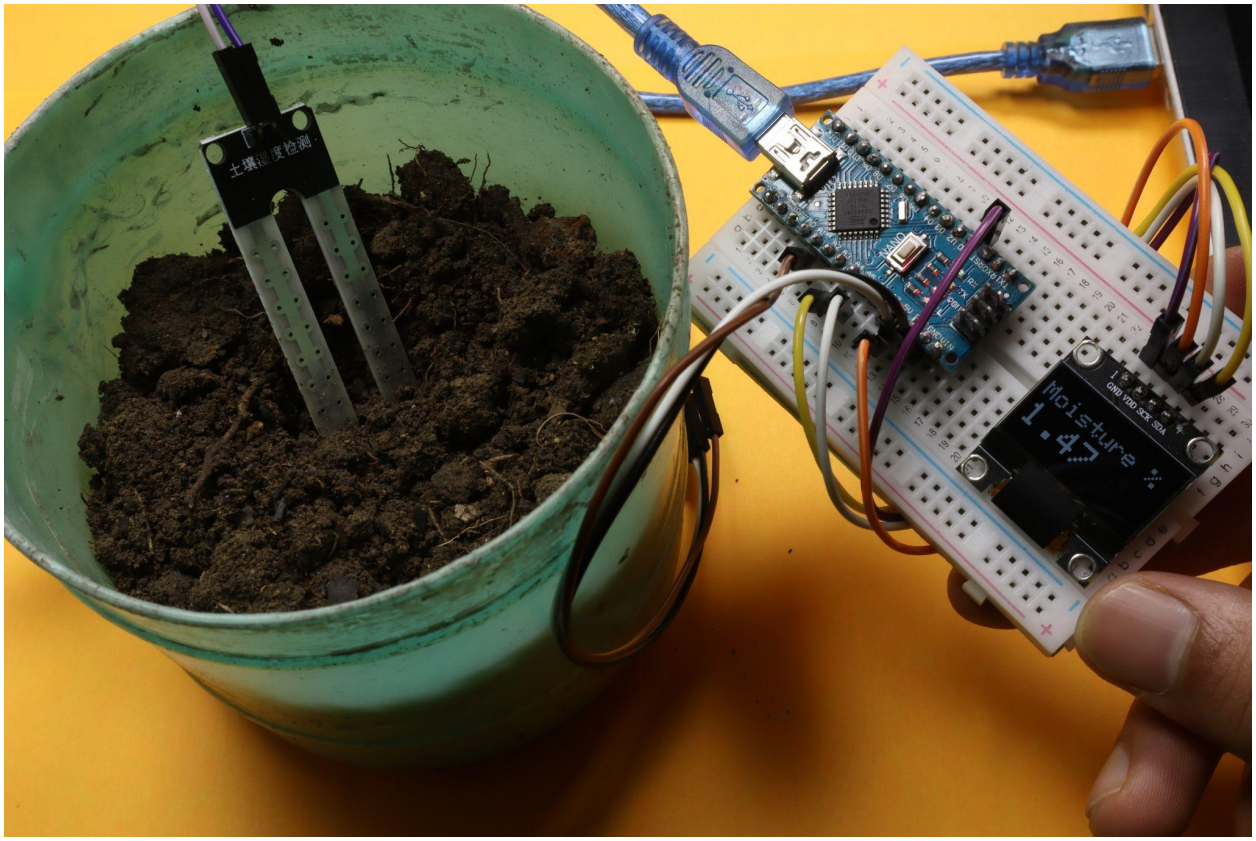
Robotix.io

Interfacing of soil moisture sensor with arduino and show sensors value on OLED display



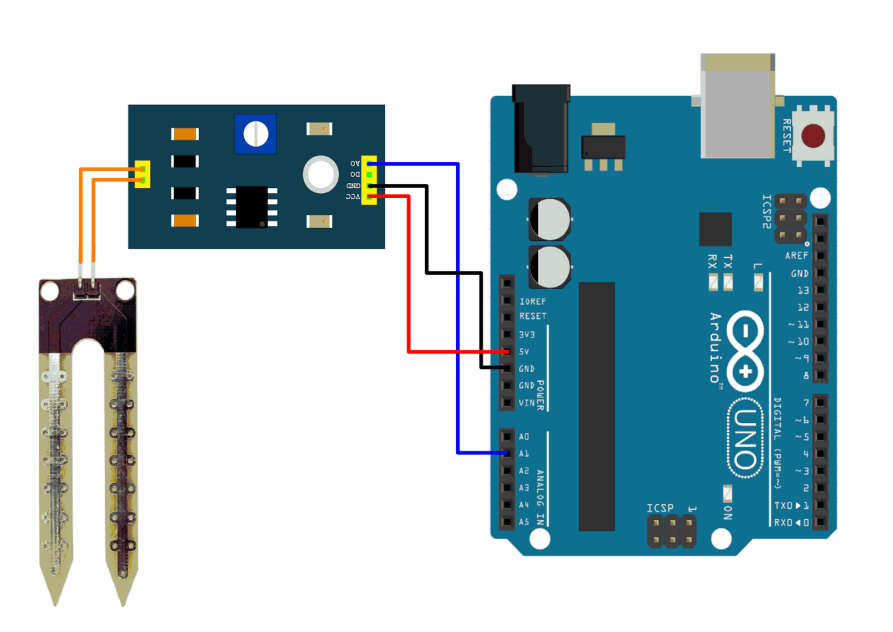
Material Required :

S No.	Components	Buy Components
1.	Soil Moisture sensor	https://amzn.to/3BRSeRK
2.	Arduino Nano + Cable	https://amzn.to/3ef8pA1
3.	Breadboard	https://amzn.to/3QdsROy
4.	Connecting Wires	https://amzn.to/3cl97EY
5.	OLED Display	https://amzn.to/3vfAQSU

Download this library :

```
#include <Adafruit_GFX.h>
#include <Adafruit_SSD1306.h>
```

Circuit Diagram ⚡ :



Code without OLED display 💻:

```
const int sensor_pin = A1;   /* Soil moisture sensor O/P pin */

void setup() {
  Serial.begin(9600);  /* Define baud rate for serial communication */
}

void loop() {
  float moisture_percentage;
  int sensor_analog;
  sensor_analog = analogRead(sensor_pin);
  moisture_percentage = ( 100 - ( (sensor_analog/1023.00) * 100 ) );
```

```
  Serial.print("Moisture Percentage = ");
  Serial.print(moisture_percentage);
  Serial.print("%\n\n");
  delay(1000);
}
```

Code With OLED display :

```
#include <Wire.h>
#include <Adafruit_GFX.h>
#include <Adafruit_SSD1306.h>

#define SCREEN_WIDTH 128 // OLED display width, in pixels
#define SCREEN_HEIGHT 64 // OLED display height, in pixels



const int sensor_pin = A1;  /* Soil moisture sensor O/P pin */

// Declaration for an SSD1306 display connected to I2C (SDA, SCL pins)
Adafruit_SSD1306 display(SCREEN_WIDTH, SCREEN_HEIGHT, &Wire, -1);



void setup() {
  Serial.begin(9600); /* Define baud rate for serial communication */

  if(!display.begin(SSD1306_SWITCHCAPVCC, 0x3C)) { // Address 0x3D for
128x64
    Serial.println(F("SSD1306 allocation failed"));
    for(;;);


}

void loop() {
```

```
 display.clearDisplay();
  float moisture_percentage;
  int sensor_analog;
  sensor_analog = analogRead(sensor_pin);
  moisture_percentage = ( 100 - ( (sensor_analog/1023.00) * 100 ) );
  Serial.print("Moisture Percentage = ");
  Serial.print(moisture_percentage);
  Serial.print("%\n\n");


  display.setTextSize(2);
  display.setTextColor(WHITE);
  display.setCursor(0, 10);
  // Display static text
   display.println("Moisture %");
   display.setTextSize(3);
    display.setCursor(0, 50);
   display.println(moisture_percentage);
   display.display();

  delay(1000);
}
```