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 *  
 * In this sketch, we will show how to use your I2C 1602 LCD display the moisture data from  
 soil sensor  
 * Tutorial URL http://osoyoo.com/?p=17422  
 * Copyright www.osoyoo.com  
 */  
  
#include <Wire.h>  
#include <LiquidCrystal_I2C.h>  
String str;  
int oldmos=-1;  
LiquidCrystal_I2C lcd(0x27,16,2); // if your LCD I2C address is not 0x27 , you should  
replace 0x27 with correct I2C address(i.e 0x3f)  
void setup()  
{  
    Serial.begin(9600);  
    pinMode(3,INPUT);  
    pinMode(13,OUTPUT);  
    lcd.init(); // initialize the lcd  
    lcd.backlight();  
}  
void loop()  
{  
    int soil_mos;  
  
    soil_mos=1023-analogRead(A0);//get soil moisture value from A0 pin  
    soil_mos=map(soil_mos, 0, 1023, 0, 100); //convert moisture value in percentage format  
    if (oldmos!=soil_mos) {  
  
        // following 4 lines display moisture value to LCD  
        lcd.setCursor(0,0);  
        lcd.print("Soil Moist.");  
        lcd.print(soil_mos);  
        lcd.print("%");  
    }  
}
```