#include <Blynk.h>

#define BLYNK\_PRINT SwSerial

#include <SoftwareSerial.h>

SoftwareSerial SwSerial(2, 3); // RX, TX

#include <BlynkSimpleStream.h>

// You should get Auth Token in the Blynk App.

// Go to the Project Settings (nut icon).

//Importando as libraries

#include <Wire.h>

#include <LiquidCrystal\_I2C.h> // Using version 1.2.1

#include <DHT.h>

#define DHTPIN A1 // pino que estamos conectado

#define DHTTYPE DHT11 // DHT 11

// The LCD constructor - address shown is 0x27 - may or may not be correct for yours

// Also based on YWRobot LCM1602 IIC V1

//LiquidCrystal\_I2C lcd(0x27, 2, 1, 0, 4, 5, 6, 7, 3, POSITIVE);

LiquidCrystal\_I2C lcd(0x27, 2, 1, 0, 4, 5, 6, 7, 3, POSITIVE);

DHT dht(DHTPIN, DHTTYPE);

//chave para conexao Blynk

char auth[] = "43e4ac4183b14834bfd2a164a4fd30cb";

// Attach virtual serial terminal to Virtual Pin V1

WidgetTerminal terminal(V1);

// You can send commands from Terminal to your hardware. Just use

// the same Virtual Pin as your Terminal Widget

BLYNK\_WRITE(V1)

{

//if you type "Start" into Terminal Widget

if (String("start") == param.asStr()) {

terminal.println("Verifique as informacoes de temperatura") ;

terminal.println("Verifique as informacoes de CO") ;

terminal.println("Verifique as informacoes de humidade no LCD") ;

} else {

// Send it back

terminal.print("Entre com start");

terminal.write(param.getBuffer(), param.getLength());

terminal.println();

}

// Ensure everything is sent

terminal.flush();

}

void setup()

{

// Debug console

SwSerial.begin(9600);

// Blynk will work through Serial

// Do not read or write this serial manually in your sketch

Serial.begin(9600);

Blynk.begin(Serial, auth);

dht.begin();

lcd.begin(16,2); // sixteen characters across - 2 lines

lcd.backlight();

// This will print Blynk Software version to the Terminal Widget when

// your hardware gets connected to Blynk Server

terminal.println(F("Digite start para verificar as informacoes"));

terminal.flush();

}

BLYNK\_WRITE(V5)

{

// A leitura da temperatura e umidade pode levar 250ms!

// O atraso do sensor pode chegar a 2 segundos.

float h = dht.readHumidity();

float t = dht.readTemperature();

// testa se retorno é valido, caso contrário algo está errado.

if (isnan(t) || isnan(h))

{

lcd.setCursor(0,0);

lcd.print("DHT11 FALHOU");

}

else

{

lcd.setCursor(0,0);

lcd.print("Temp: ");

lcd.setCursor(8,0);

lcd.print(t);

lcd.setCursor(0,1);

lcd.print("Humid: ");

lcd.setCursor(8,1);

lcd.print(h);

}

delay(2000);

lcd.clear();

int val;

val=analogRead(0); //Read Gas value from analog 0

lcd.setCursor(0,0);

lcd.print("CO: ");//Print the value to serial port

lcd.setCursor(8,0);

lcd.print(val,DEC);//Print the value to serial port

delay(2000);

lcd.clear();

}

void loop()

{

Blynk.run();

}