//e3735@ptct.net

//Info@2025

#include<Wire.h>

#include <LCD\_I2C.h>

#include "DHT.h"

#define DHTPIN 4

#define DHTTYPE DHT11

#define moist 32

#define relay 23

#define BLYNK\_PRINT Serial

#include <WiFi.h>

#include <WiFiClient.h>

#include <BlynkSimpleEsp32.h>

#define BLYNK\_TEMPLATE\_ID "TMPL3Ezl3sAQp"

#define BLYNK\_TEMPLATE\_NAME "GARDENING SYSTEM"

#define BLYNK\_AUTH\_TOKEN "s8eeiG-XJSLDomSTpr0vd8IX0jqxnO-q"

LCD\_I2C lcd(0x27, 16, 2);

DHT dht(DHTPIN, DHTTYPE);

char auth[] = BLYNK\_AUTH\_TOKEN;

// Your WiFi credentials.

// Set password to "" for open networks.

char ssid[] = "IOT";

char pass[] = "123456789";

void setup()

{

   Serial.begin(9600);

   lcd.begin(); // If you are using more I2C devices using the Wire library use lcd.begin(false)

   lcd.backlight();

   lcd.setCursor(0, 0); // Or setting the cursor in the desired position.

   lcd.print("  GARDENING ");

   lcd.setCursor(0, 1); // Or setting the cursor in the desired position.

   lcd.print("  SYSTEM ");

   delay(3000);

   lcd.clear();

   dht.begin();

   pinMode(moist,INPUT);

   pinMode(relay,OUTPUT);

   Blynk.begin(auth, ssid, pass, "blynk.cloud", 80);

}

int h,t,moistval,iotsend;

void loop()

{

   h=dht.readHumidity();

   t=dht.readTemperature();

   if(t>100){t=33; h=52;}

   Serial.print("T:");

   Serial.println(t);

   Serial.print("H:");

   Serial.println(h);

   lcd.setCursor(0,0);

   lcd.print("T:");

   lcd.print(t);

   lcd.setCursor(8,0);

   lcd.print("H:");

   lcd.print(h);

   int moistval=analogRead(moist);

   Serial.print("MOIST:");

   Serial.println(moistval);

   moistval=map(moistval,1000,2600,100,0);

   Serial.print("MAPPED MOIST:");

   if(moistval<=0)

   {

    moistval=0;

   }

   if(moistval>=100)

   {

    moistval=100;

   }

   Serial.println(moistval);

   lcd.setCursor(0,1);

   lcd.print("MOI:");

   if(moistval<=9){lcd.print("00");lcd.print(moistval);}

   else if(moistval<=99){lcd.print("0");lcd.print(moistval);}

   else if(moistval<=999){lcd.print("");lcd.print(moistval);}

   if(moistval<=30 && moistval>1)

   {

    digitalWrite(relay,HIGH);

    lcd.setCursor(8,1);

    lcd.print("PUMP:ON ");

    Blynk.virtualWrite(V3,"PUMP IS ON");

   }

   else

   {

    digitalWrite(relay,LOW);

    lcd.setCursor(8,1);

    lcd.print("PUMP:OFF");

    Blynk.virtualWrite(V3,"PUMP IS OFF");

   }

    if(iotsend==1)

  {

    Serial.println("iot dara send ,,,,");

    Blynk.virtualWrite(V0,t);

    Blynk.virtualWrite(V1,h);

    Blynk.virtualWrite(V2,moistval);

    delay(1000);

  }

  Blynk.run();

   delay(300);

}

BLYNK\_WRITE(V4) {

  int button = param.asInt();

  Serial.print("Button value :");

  Serial.println(button);

  if (button == 1) {

    Serial.println("iot buttoin pressed");

    iotsend=1;

  }

  else {iotsend=0;}

}