// c++ code

// plant health monitoring system

// code written by gaurav kumar jaiswal

#define BLYNK\_PRINT Serial

#include <OneWire.h>

#include <SPI.h>

#include <BlynkSimpleEsp8266.h>

#include <DHT.h>

#include <DallasTemperature.h>

#define ONE\_WIRE\_BUS D2

OneWire oneWire(ONE\_WIRE\_BUS);

DallasTemperature sensors(&oneWire);

char auth[] ="FcY1KPcV7KuO3rPaxtaooUsP6HVEIxfa";// blynk token key recieved on registered email id

char ssid[] = "Vivek Kumar\_5G"; // wifi name

char pass[] = "password";// wifi password

#define DHTPIN 2

#define DHTTYPE DHT11

DHT dht(DHTPIN, DHTTYPE);

SimpleTimer timer;

void sendSensor()

{

float h = dht.readHumidity();

float t = dht.readTemperature();

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

Serial.println("Failed to read from DHT sensor!");

return;

}

Blynk.virtualWrite(V5, h); //V5 is for Humidity

Blynk.virtualWrite(V6, t); //V6 is for Temperature

}

void setup()

{

Serial.begin(9600);

dht.begin();

timer.setInterval(1000L, sendSensor);

Blynk.begin(auth, ssid, pass);

sensors.begin();

}

int sensor=0;

int output=0;

void sendTemps()

{

sensor=analogRead(A0);

output=(145-map(sensor,0,1023,0,100)); //in place 145 there is 100(it change with the change in sensor)

delay(1000);

sensors.requestTemperatures();

float temp = sensors.getTempCByIndex(0);

Serial.println(temp);

Serial.print("moisture = ");

Serial.print(output);

Serial.println("%");

Blynk.virtualWrite(V1, temp);

Blynk.virtualWrite(V2,output);

delay(1000);

}

void loop()

{

Blynk.run();

timer.run();

sendTemps();

}