#define BLYNK\_TEMPLATE\_ID "TMPL3CXHs\_W9t"

#define BLYNK\_TEMPLATE\_NAME "temp humidity "

#define BLYNK\_AUTH\_TOKEN "hcvjNz5BWl4jnR5lrC-DgHqZtvN2IvdT"

#include <BlynkSimpleEsp8266.h>

#include <DHT.h>

#define DHTPIN D2

#define DHTTYPE DHT11

DHT dht(DHTPIN, DHTTYPE);

char ssid[] = "Galaxy Tab A (8.0, 2019)8254";

char pass[] = "saichandana";

#define LED\_PIN D4

void setup() {

Serial.begin(9600);

pinMode(LED\_PIN, OUTPUT);

WiFi.setSleepMode(WIFI\_NONE\_SLEEP); // Prevent Wi-Fi sleep

// Attempt Wi-Fi connection until successful

Serial.print("Connecting to Wi-Fi");

WiFi.begin(ssid, pass);

int attempt = 0;

while (WiFi.status() != WL\_CONNECTED) {

for (int i = 0; i < 5; i++) {

digitalWrite(LED\_PIN, LOW);

delay(250);

digitalWrite(LED\_PIN, HIGH);

delay(250);

Serial.print(".");

}

attempt++;

if (attempt > 10) { // Give up after 10 attempts

Serial.println("\nFailed to connect to Wi-Fi ❌");

return;

}

}

Serial.println("\nWi-Fi connected ✅");

Serial.print("IP Address: ");

Serial.println(WiFi.localIP());

// Configure and connect to Blynk

Blynk.config(BLYNK\_AUTH\_TOKEN);

if (Blynk.connect()) {

Serial.println("Connected to Blynk ✅");

} else {

Serial.println("Failed to connect to Blynk ❌");

}

dht.begin();

// Confirm connection with a quick LED blink

digitalWrite(LED\_PIN, LOW);

delay(500);

digitalWrite(LED\_PIN, HIGH);

}

void loop() {

Blynk.run();

sendSensorData(); // Send both temperature and humidity

delay(2000);

}

void sendSensorData() {

float temp = dht.readTemperature(); // Read temperature in Celsius

float hum = dht.readHumidity(); // Read humidity in percentage

if (isnan(temp) || isnan(hum)) {

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

Blynk.virtualWrite(V1, "Sensor Error");

Blynk.virtualWrite(V2, "Sensor Error");

} else {

// Send temperature to gauge widget on V0

Serial.print("Temperature: ");

Serial.print(temp);

Serial.println(" °C");

Blynk.virtualWrite(V0, temp);

// Send humidity to gauge widget on V2

Serial.print("Humidity: ");

Serial.print(hum);

Serial.println(" %");

Blynk.virtualWrite(V2, hum);

// Update status message based on temperature

if (temp > 30) {

Blynk.virtualWrite(V1, "🔥 Too Hot!");

} else if (temp < 18) {

Blynk.virtualWrite(V1, "❄️ Too Cold!");

} else {

Blynk.virtualWrite(V1, "✅ Normal");

}

// Update status message based on humidity

if (hum > 70) {

Blynk.virtualWrite(V3, "💧 High Humidity!");

} else if (hum < 30) {

Blynk.virtualWrite(V3, "🌵 Low Humidity!");

} else {

Blynk.virtualWrite(V3, "✅ Humidity OK");

}

}

}