Check point 1

// Example testing sketch for various DHT humidity/temperature sensors

// Written by ladyada, public domain

// REQUIRES the following Arduino libraries:

// - DHT Sensor Library: https://github.com/adafruit/DHT-sensor-library

// - Adafruit Unified Sensor Lib: https://github.com/adafruit/Adafruit\_Sensor

#include "DHT.h"

#define DHTPIN 2 // Digital pin connected to the DHT sensor

// Feather HUZZAH ESP8266 note: use pins 3, 4, 5, 12, 13 or 14 --

// Pin 15 can work but DHT must be disconnected during program upload.

// Uncomment whatever type you're using!

//#define DHTTYPE DHT11 // DHT 11

#define DHTTYPE DHT11 // DHT 22 (AM2302), AM2321

//#define DHTTYPE DHT21 // DHT 21 (AM2301)

// Connect pin 1 (on the left) of the sensor to +5V

// NOTE: If using a board with 3.3V logic like an Arduino Due connect pin 1

// to 3.3V instead of 5V!

// Connect pin 2 of the sensor to whatever your DHTPIN is

// Connect pin 4 (on the right) of the sensor to GROUND

// Connect a 10K resistor from pin 2 (data) to pin 1 (power) of the sensor

// Initialize DHT sensor.

// Note that older versions of this library took an optional third parameter to

// tweak the timings for faster processors. This parameter is no longer needed

// as the current DHT reading algorithm adjusts itself to work on faster procs.

DHT dht(DHTPIN, DHTTYPE);

void setup() {

Serial.begin(9600);

Serial.println(F("DHTxx test!"));

dht.begin();

}

void loop() {

// Wait a few seconds between measurements.

delay(2000);

// Reading temperature or humidity takes about 250 milliseconds!

// Sensor readings may also be up to 2 seconds 'old' (its a very slow sensor)

float h = dht.readHumidity();

// Read temperature as Celsius (the default)

float t = dht.readTemperature();

// Read temperature as Fahrenheit (isFahrenheit = true)

float f = dht.readTemperature(true);

// Check if any reads failed and exit early (to try again).

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

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

return;

}

// Compute heat index in Fahrenheit (the default)

float hif = dht.computeHeatIndex(f, h);

// Compute heat index in Celsius (isFahreheit = false)

float hic = dht.computeHeatIndex(t, h, false);

Serial.print(F("Humidity: "));

Serial.print(h);

Serial.print(F("% Temperature: "));

Serial.print(t);

Serial.print(F("°C "));

Serial.print(f);

Serial.print(F("°F Heat index: "));

Serial.print(hic);

Serial.print(F("°C "));

Serial.print(hif);

Serial.println(F("°F"));

}

Check point 2

#include "Arduino.h"

#include "LTimer.h"

#include "DHT.h"

#define DHTPIN 2

#define DHTTYPE DHT11

float h;

float t ;

float f ;

float hif ;

float hic ;

DHT dht(DHTPIN, DHTTYPE);

// instantiation

LTimer timer1(LTIMER\_1);

void \_callback1(void \*usr\_data)

{

h = dht.readHumidity();

t = dht.readTemperature();

f = dht.readTemperature(true);

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

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

return;

}

hif = dht.computeHeatIndex(f, h);

hic = dht.computeHeatIndex(t, h, false);

Serial.print(F("Humidity: "));

Serial.print(h);

Serial.print(F("% Temperature: "));

Serial.print(t);

Serial.print(F("'C "));

Serial.print(f);

Serial.print(F("'F Heat index: "));

Serial.print(hic);

Serial.print(F("'C "));

Serial.print(hif);

Serial.println(F("'F"));

}

void setup() {

Serial.begin(9600);

Serial.println(F("DHTxx test!"));

dht.begin();

timer1.begin();

timer1.start(1000, LTIMER\_REPEAT\_MODE, \_callback1, NULL);

}

void loop() {

dht.readTemperature();

}

Check point 3

#include<WiFiClient.h>

#include "MCS.h"

#include "Arduino.h"

#include "LTimer.h"

#include "DHT.h"

#define DHTPIN 2

#define DHTTYPE DHT11

#define \_SSID "yingde"

#define \_KEY "011701170117"

MCSDevice mcs("D8WBRaax", "IZSU6dUrgG0ByPLS");

MCSDisplayFloat Temp("Temperature");

MCSDisplayFloat Humidity("Humidity");

float h;

float t ;

float f ;

float hif ;

float hic ;

DHT dht(DHTPIN, DHTTYPE);

// instantiation

LTimer timer1(LTIMER\_1);

void \_callback1(void \*usr\_data)

{

h = dht.readHumidity();

t = dht.readTemperature();

f = dht.readTemperature(true);

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

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

return;

}

hif = dht.computeHeatIndex(f, h);

hic = dht.computeHeatIndex(t, h, false);

Serial.print(F("Humidity: "));

Serial.print(h);

Serial.print(F("% Temperature: "));

Serial.print(t);

Serial.print(F("'C "));

Serial.print(f);

Serial.print(F("'F Heat index: "));

Serial.print(hic);

Serial.print(F("'C "));

Serial.print(hif);

Serial.println(F("'F"));

}

void setup() {

Serial.begin(9600);

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

{

Serial.print("WiFi.begin(");

Serial.print(\_SSID);

Serial.print(",");

Serial.print(\_KEY);

Serial.println(")...");

WiFi.begin(\_SSID, \_KEY);

}

Serial.println("WiFi connected !!");

// setup MCS connection

mcs.addChannel(Humidity);

mcs.addChannel(Temp);

while(!mcs.connected())

{

Serial.println("MCS.connect()...");

mcs.connect();

}

Serial.println("MCS connected !!");

Serial.println(F("DHTxx test!"));

dht.begin();

timer1.begin();

timer1.start(10000, LTIMER\_REPEAT\_MODE, \_callback1, NULL);

}

void loop() {

mcs.process(100);

Temp.set(hic);

Humidity.set(h);

dht.readTemperature();

}