

Practical -7

Objective: Create program to generating the data of DHT sensor and controlling the LED with Node MCU EPS8266.

Program:

```
#include "DHT.h"    // This is library code
#define DHTPIN D7 // here I'm defining DHT pin number D7
#define DHTTYPE DHT11 //i want to use dht 11 sensor so i firstly define DHTTYPE DHT11
DHT dht(DHTPIN, DHTTYPE);
int LED1 = D5;
int LED2 = D6;

void setup() {
  Serial.begin(9600);
  Serial.println("Welcome DHT11 Sensor");
  pinMode(LED1, OUTPUT);
  pinMode(LED2, OUTPUT);
  dht.begin();
}

void loop() {

  delay(2000);
  float h = dht.readHumidity();
  float t = dht.readTemperature();
  float f = dht.readTemperature(true);

  if (isnan(h) || isnan(t) || isnan(f)) { // I am using this function cause my result is giving me to nan result
    Serial.println("Failed to read from DHT sensor!");
    return;
  }

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

  Serial.print("Humidity: ");
  Serial.print(h);
  Serial.print(" %\t");
  Serial.print("Temperature: ");
  Serial.print(t);
  Serial.print(" *C ");
  Serial.print(f);
  Serial.print(" *F\t");

  Serial.print("Heat index: ");
```

```
Serial.print(hic);
Serial.print(" *C ");
Serial.print(hif);
Serial.println(" *F");
if(t<20){
  digitalWrite(LED1, HIGH);
  digitalWrite(LED2, LOW);
}
else{
  digitalWrite(LED2, HIGH);
  digitalWrite(LED1, LOW);
}
}
```

Note:

- If any problem displaying such as “A device attached is not working properly or Permission Access Denied” then you need to install a Driver “CH340G” for your using operating system. This is for NodeMCU V3.
- If you are working with NodeMCU Amica then you need to install “CP2102 Driver”.