Lesson 15 Temperature & Humidity Sensor—DHT-11

Overview

In this lesson, we will learn how to use DHT-11 to collect temperature and humidity data.

Requirement

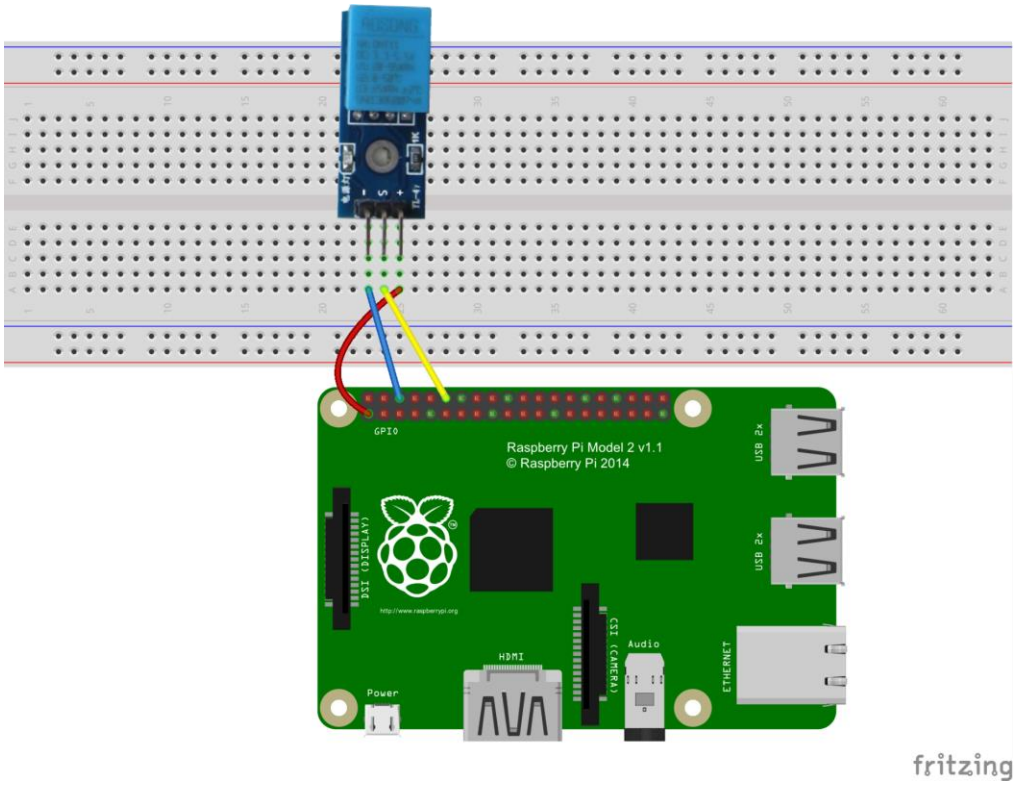
- 1* Raspberry Pi
- 1* DHT-11
- 1* Breadboard
- Several Jumper wires

Principle

This DHT-11 temperature & humidity sensor features a temperature & humidity sensor complex with a calibrated digital signal output. By using the exclusive digital-signal-acquisition technique and temperature & humidity sensing technology, it ensures high reliability and excellent long-term stability. This sensor includes a resistive-type humidity measurement component and an NTC temperature measurement component, and connects to a high-performance 8-bit microcontroller, offering excellent quality, fast response, anti-interference ability and cost-effectiveness.

Procedures

1. Build the circuit



2. Program

C user:

2.1 Edit and save the code with vim or nano.

(Code path: /home/Adeept_Ultimate_Starter_Kit_C_Code_for_RPi/15_DHT11/dht11.c)

2.2 Compile the program

```
$ gcc dht11.c -o dht11 -lwiringPi
```

2.3 Run the program

```
$ sudo ./dht11
```

Python user:

2.1 Edit and save the code with vim or nano.

(Code path: /home/Adeept_Ultimate_Starter_Kit_Python_Code_for_RPi/15_dht11.py)

2.2 Run the program

```
$ sudo python 15_dht11.py
```

Now, you can see the temperature and humidity data displayed on the terminal.