

Alarm system to high  
Temperature  
Assignment -2

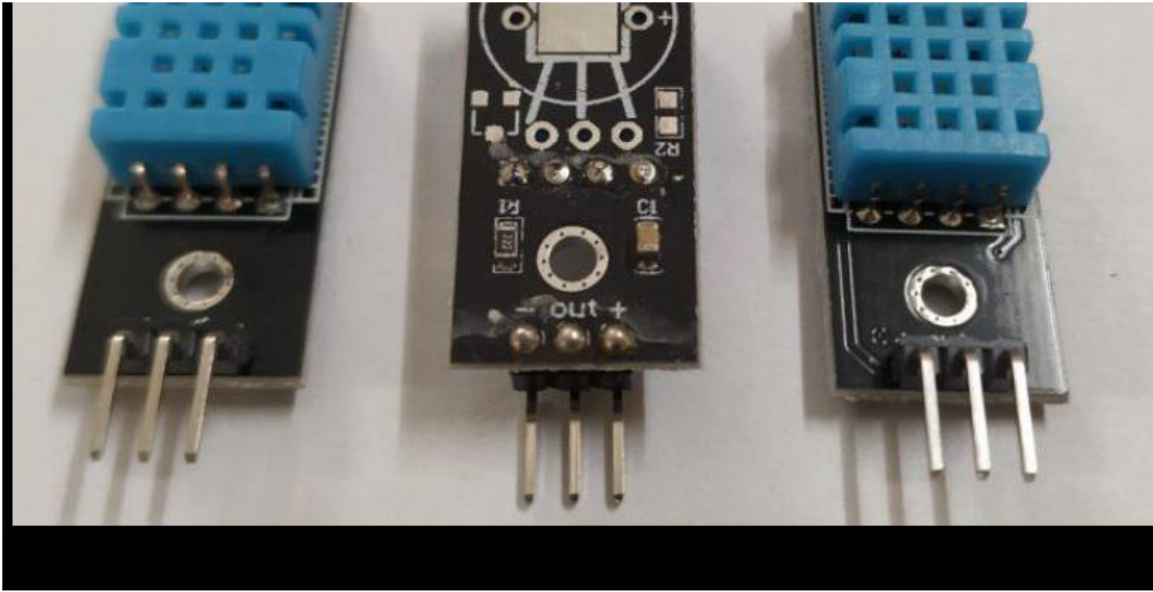
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**BUILD A PYTHON CODE,ASSUME U GET  
TEMPERATURE AND HUMIDITY VALUE AND WRITE A  
CONDITION TO CONTINUOUSLY DETECT ALARM IN  
CASE IGH TEMPERATURE:**

This article, we'll discuss interacting DHT11 with Raspberry Pi and see it working using Python code. Also, we'll display real-time Data on the 16×2 LCD. The code and explanation used in the code will be explained further below also all the modules regarding 16×2 LCD will be included with its article home page. So let's begin.

**DHT-11**





- It is the most common and famous temperature and humidity combined sensor you'll ever come to know. It has many tutorials with boards similar to Arduino.

- You may visit It's Arduino Tutorial to have a more clear Idea of Its working if you are

working so, here we are giving you the tutorial on how to connect dht11 with Raspberry Pi.

- DHT11 is a simple sensor and has a very simple structure for measuring temperature and humidity. Basically, it is an enclosed structure that consists of two wires which are responsible for checking humidity and temperature.



# Material Requirement

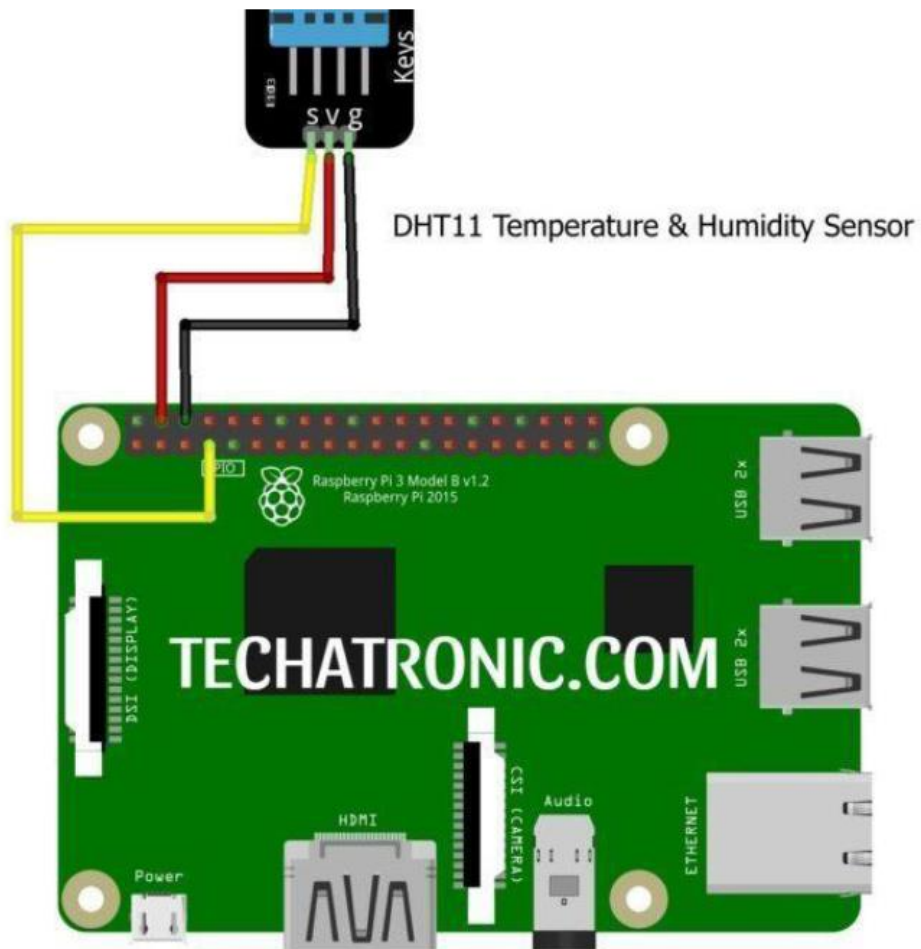




.Raspberry Pi with keyboard and mouse. Or  
putty terminal.

# **DHT11 with Raspberry pi Circuit Diagram**





Raspberry Pi

Import Adafruit\_DHT



```
DHT11=Adafruit_DHT.DHT11 #  
Adafruit_DHT.DHT22 for DHT22 sensor.  
While True:  
    Try:  
        Temp,humid=Adafruit_DHT.read_retry(DHT11,4)  
        # 4 is the GPIO number you can change this to  
        your required need  
        Print("TEMP={0:0.1f}°C  
        HUMIDITY={1:0.1f}%".format(temp,humid))  
    Except KeyboardInterrupt:  
        Break
```

- The first line as we have said we have imported the library for the DHT11 Sensor to work i.e., `Adafruit_DHT`. You can use this library with DHT22 also, but you need to change the DHT11 object line.

- Then we create a DHT object which store the DHT11 sensor configuration details and further in code we use this object name to refer to all working statements.

- Next we create an infinite while loop within Try and except method to create a

- keyboard interrupt terminating condition i.e., Ctrl+C

- In next line we read data from the DHT11 sensor and stores it in two variable as two values are being received, one for temperature and other for humidity.

### **CODING:**

```
#!/usr/bin/python
import struct, array, time,
io, fcntl
I2C_SLAVE=0x0703
# find with sudo i2cdetect -y 1
HDC1008_ADDR = 0x40
bus=1
fr = io.open("/dev/i2c-
"+str(bus), "rb", buffering=0)
fw = io.open("/dev/i2c-
"+str(bus), "wb", buffering=0)
# set device address
fcntl.ioctl(fr, I2C_SLAVE,
HDC1008_ADDR)
fcntl.ioctl(fw, I2C_SLAVE,
```

```
HDC1008_ADDR)  
time.sleep(0.015) #15ms startup  
time  
s =
```