# Alarm system to high Temperature

Assignment -2

By

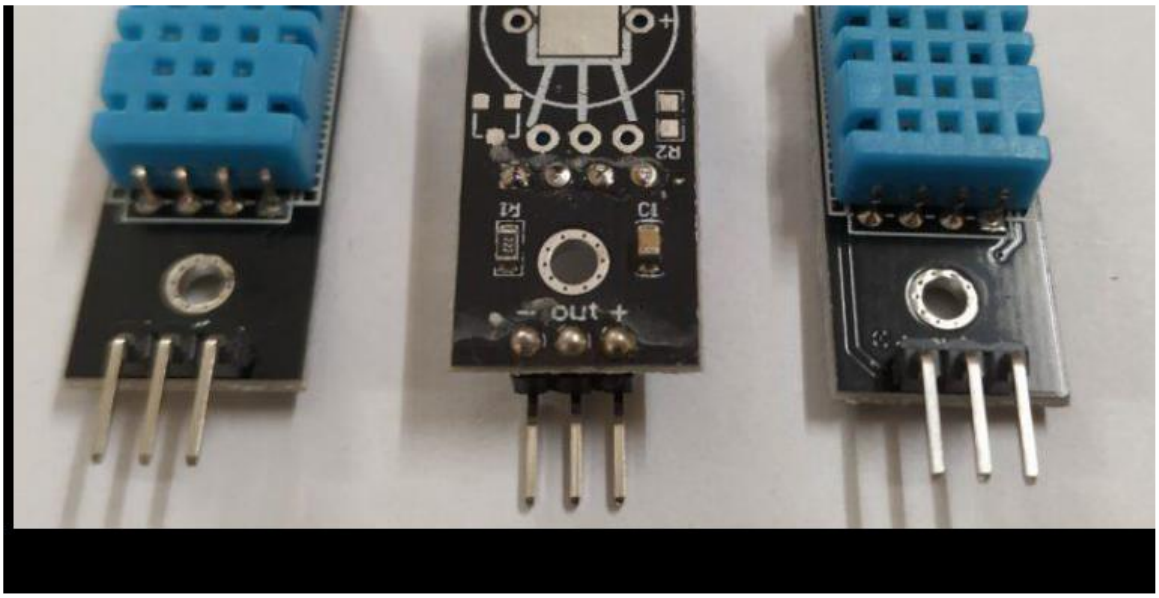
P.LAVANYA

952319104022

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


R2
R1
C1
- out +

•• 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 thetutorial 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

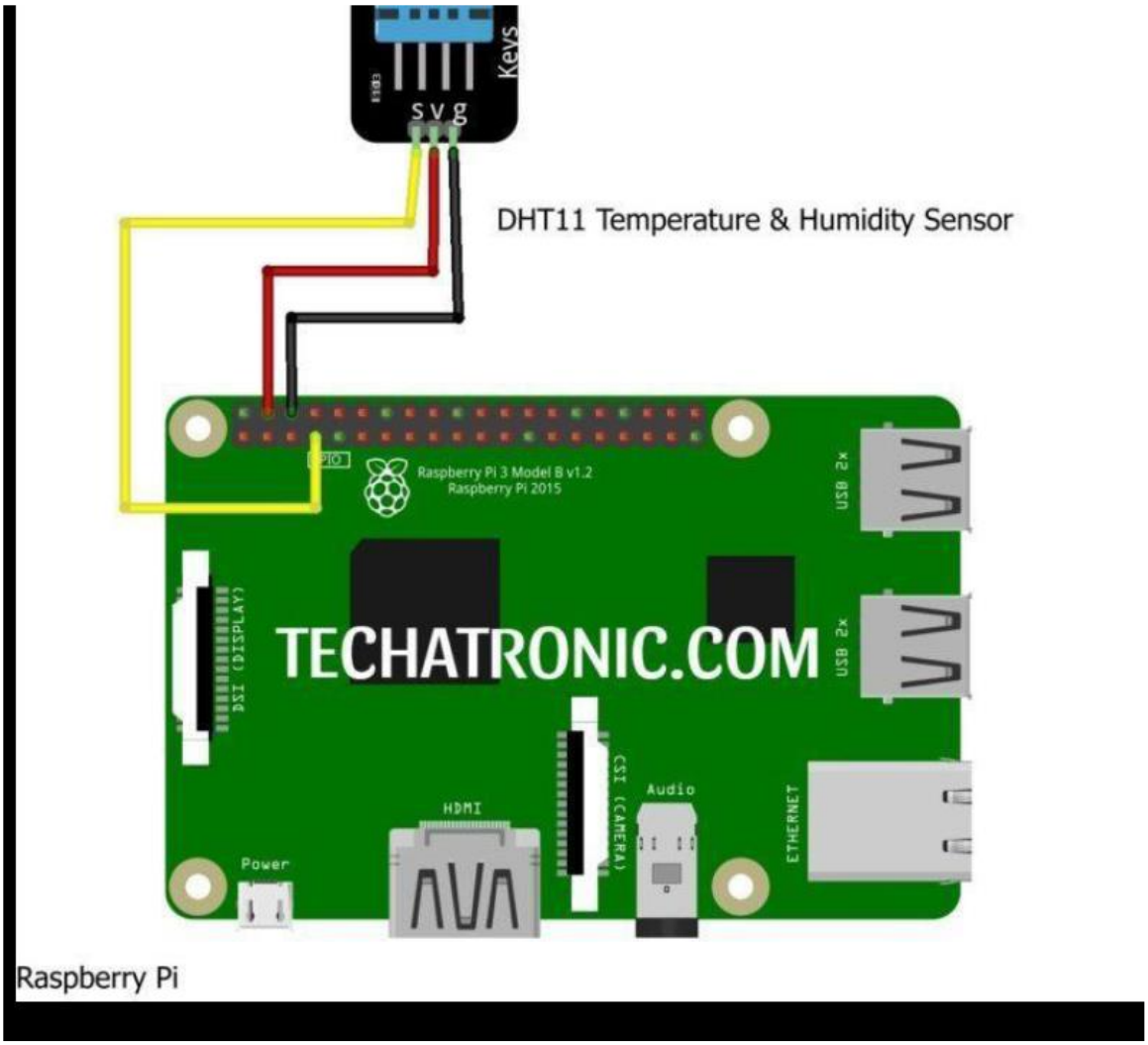
- Raspberry Pi with keyboard and mouse. Or putty terminal.

- Breadboard

- Jumper wires

- DHT11 Sensor

# DHT11 with Raspberry pi Circuit Diagram


Keys
s v g
DHT11 Temperature & Humidity Sensor
Raspberry Pi 3 Model B v1.2
Raspberry Pi 2015
USB 2x
USB 2x
DSI (DISPLAY)
TECHATRONIC.COM
CSI (CAMERA)
Audio
ETHERNET
HDMI
Power
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 ithe 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 =
```