Alarm system to high

Temperature

Assignment -2

By

K.Gayathri

952319104012

**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**

* • 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 **

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.

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| **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 = [0x02,0x02,0x00] | |