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**Assignment-2**

# Build a python code assume you get temperature and humidity values and write a condition to continuously detect alarm in case of high temperature.

Code:

Ardino code:

#include <SimpleDHT.h>

#include <LiquidCrystal.h>

char d;

// for DHT11,

// VCC: 5V or 3V

// GND: GND

// DATA: 2

int pinDHT11 = 8;

SimpleDHT11 dht11(pinDHT11);

LiquidCrystal lcd(2,3,4,5,6,7);

void setup() {

Serial.begin(9600);

lcd.begin(16, 2);

}

void loop() {

if(Serial.available())

{

d=Serial.read();

}

if (d=='a')

{

// read without samples.

byte temperature = 0;

byte humidity = 0;

int err = SimpleDHTErrSuccess;

if ((err = dht11.read(&temperature, &humidity, NULL)) != SimpleDHTErrSuccess) {

return;

}

//lcd.setCursor(0,0);

//lcd.print("Temp is ");

//lcd.print((int)temperature); lcd.print(" \*C, ");

//lcd.setCursor(0,1);

//lcd.print("Humidity:");

//lcd.print((float)humidity);

Serial.println(temperature);

Serial.println(humidity);

// DHT11 sampling rate is 1HZ.

delay(1500);

}

}

Python code:

import serial

import time

import pyttsx3

import speech\_recognition as sr

def takeCommand():

r = sr.Recognizer()

with sr.Microphone() as source:

print("Listening...")

r.pause\_threshold = 0.5

audio = r.listen(source)

try:

print("Recognizing... wait a minute")

query = r.recognize\_google(audio, language='en-in')

print(f"User said: {query}\n")

except Exception as e:

# print(e)

print("Say that again please... icannot recognizing")

query = "none"

return query

def speak(audio):

engine.say(audio)

engine.runAndWait()

engine = pyttsx3.init('sapi5')

voices=engine.getProperty('voices')

engine.setProperty("voice",voices[0].id)

engine.setProperty("rate",140)

engine.setProperty("volume",1000)

if \_\_name\_\_ == "\_\_main\_\_":

ard = serial.Serial('com10' ,9600)

time.sleep(2)

var = 'pt'

query=takeCommand().lower()

if 'tell me temperature' in query:

var ='a'

c=var.encode()

speak("yeah..")

if var == 'a':

ard.write(c)

time.sleep(1)

iny =(ard.readline())

iny=iny.decode()

iny=str(iny)

print(iny)

speak(str(iny)+"degree centigrade is the temperature!!")

if var == 'b':

ard.write(c)