

LABCONTROL

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#!/usr/bin/env python

import MySQLdb
from time import sleep
from picamera import PiCamera
from subprocess import call
import time
import serial

#####VARIABLES#####
usuari=['1234','5678','6666','7777','8888','9999']
contador=0
##### DROPBOX-labcontrol #####
app_key='1k6hpk55aja4v6'
app_secret='970soz9g3pr9kmn'
cuenta='iWcYSNjQbGAAAAAAAAAADsifwDbonS94_gkCzbvs65UMuJqNsIFfkZiaYnkHRxuy'

##### BASEDADES-labcontrol #####
db= MySQLdb.connect("localhost", "labcontrol", "12345", "laboratori")
curs= db.cursor()

##### AGAFEM HORA #####
DataIHora=time.strftime("%Y"-"%"B"-"%"d"-">"%H"":"%"M")
Data=time.strftime("%Y"%"B"%"d")
Hora=time.strftime("%H"":"%"M"":"%S")
#####ARDUINO#####
arduino=serial.Serial('/dev/ttyACM0',9600,timeout=1)
txt=''

##### FUNCIO FOTO #####
def foto(usuari):
    DataIHora=time.strftime("%Y"-"%"B"-"%"d"-">"%H"":"%"M")
    Data=time.strftime("%Y"%"B"%"d")
    Hora=time.strftime("%H"":"%"M"":"%S")
    CF= usuari
    camera = PiCamera()
    camera.resolution = (1024,788)
    camera.start_preview()
    sleep(10)
    camera.rotation=180
    #guardem la foto a la carpeta de la RasPi amb el nom que volem
    nom_fc="/home/pi/Desktop/fotos_camera/USER:"+str(CF)+"-"+str(Hora)+".jpg"
    camera.capture(nom_fc)
    #pujem la foto i la carpeta al dropbox
    photofile = "/home/pi/Dropbox-Uploader/dropbox_uploader.sh upload
/home/pi/Desktop/fotos_camera/USER:"+str(CF)+"-"+str(Hora)+".jpg
"+str(Data)+"/USER:"+str(CF)+"-"+str(Hora)+".jpg"
    call ([photofile], shell=True)
    camera.close()

##### FUNCIO BASE DADES #####
def basedades(temps, humitat):
    t= temps
    h= humitat
    DataIHora=time.strftime("%Y"-"%"B"-"%"d"-">"%H"":"%"M")
    Data=time.strftime("%Y"%"B"%"d")
    Hora=time.strftime("%H"":"%"M"":"%S")
    try:
        curs.execute ("INSERT INTO labcontrol
            values(CURRENT_DATE(), NOW(), %s, %s)""",(t,h))
        db.commit()
        print ("Data committed")

        curs.execute("SELECT * FROM labcontrol")

        print ("\nDate            Time            Temperatura            Humitat")
        print ("=====")

        for reading in curs.fetchall():
            print (str(reading[0])+"            "+str(reading[1])+"            "+str(reading[2])+"
"+str(reading[3]))
    except:
        print ("Error: the database is being rolled back")
        db.rollback()
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##### MAIN PROGRAM #####
while True:
    tempe=''
    humi=''

    try:
        print("bucle")
        #part per fer la foto si el usuari es correcte
        x=arduino.readline(4)
        print(x)
        if x in usuarios:
            print("codi bo")
            foto(x)
        #part per rebre el clima
        if ((time.strftime("%M")=='30')|((time.strftime("%M")=='00'))):
            if contador==1:
                arduino.write('T')
                print("demano temperatura")
                sleep(3)
                while arduino.inWaiting()>0:
                    txt +=arduino.readline(2)
                    tempe=txt
                    #print tempe
                    txt= ''
                sleep(2)
                arduino.write('H')
                print("demano Humitat")
                sleep(3)
                while arduino.inWaiting()>0:
                    txt +=arduino.readline(2)
                    humi=txt
                    #print humi
                    txt= ''
                basedades(tempe,humi)
                contador=2
            if contador==0:
                arduino.write('T')
                print("demano temperatura")
                sleep(3)
                while arduino.inWaiting()>0:
                    txt +=arduino.readline(2)
                    tempe=txt
                    #print tempe
                    txt= ''
                sleep(2)
                arduino.write('H')
                print("demano Humitat")
                sleep(3)
                while arduino.inWaiting()>0:
                    txt +=arduino.readline(2)
                    humi=txt
                    #print humi
                    txt= ''
                contador=1
            if ((time.strftime("%M")=='31')|((time.strftime("%M")=='01'))):
                contador=0

    except KeyboardInterrupt:
        print("Fi del programa")

```