#final code for camera movement

import socket, traceback

import serial

from time import sleep

import RPi.GPIO as GPIO

import time

GPIO.setmode(GPIO.BOARD)

GPIO.setup(38,GPIO.OUT)

GPIO.setup(40,GPIO.OUT)

p=GPIO.PWM(38,50) #horizontal

p1=GPIO.PWM(40,50) #vertical movement

p.start(7.5)

p1.start(7.5)

sleep(0.5)

p1.ChangeDutyCycle(2)

p.ChangeDutyCycle(2)

sleep(0.5)

p1.ChangeDutyCycle(7.5)

p.ChangeDutyCycle(7.5)

sleep(0.5)

p1.ChangeDutyCycle(12)

p.ChangeDutyCycle(12)

sleep(0.5)

p1.ChangeDutyCycle(7.5)

p.ChangeDutyCycle(7.5)

x\_duty = 0

y\_duty = 0

while 1 :

try:

s = socket.socket(socket.AF\_INET, socket.SOCK\_DGRAM)

s.setsockopt(socket.SOL\_SOCKET, socket.SO\_REUSEADDR, 1)

s.setsockopt(socket.SOL\_SOCKET, socket.SO\_BROADCAST, 1)

s.bind(('192.168.29.123', 5555))

print "Listening for broadcasts..."

time.sleep(0.1)

message, address = s.recvfrom(8192)

print(message)

no1,no2,x1,y1,z1,no3,x2,y2,z2,no4,m1,m2,m3=message.split(',')

#print(message) #whole message signal

print(m3)

a1=float(z1)

print(z2)

b1=float(m2)

s.close()

if a1>=9: #bottom

x\_duty=12

elif a1>=8 and a1<9:

x\_duty=11.8

elif a1>=7.5 and a1<8:

x\_duty=11.6

elif a1>=7 and a1<7.5:

x\_duty=11.2

elif a1>=6.5 and a1<7:

x\_duty=10.8

elif a1>=6 and a1<6.5:

x\_duty = 10.4

elif a1>=5.5 and a1<6:

x\_duty=10

elif a1>=5 and a1<5.5:

x\_duty=9.6

elif a1>=4.5 and a1<5:

x\_duty=9.2

elif a1>=4 and a1<4.5:

x\_duty=8.8

elif a1>=3.5 and a1<4:

x\_duty=8.5

elif a1>=3 and a1<3.5:

x\_duty=8.3

elif a1>=2.5 and a1<3:

x\_duty=8

elif a1>=2 and a1<2.5:

x\_duty=7.8

elif a1>=-0 and a1<2: #center

x\_duty=7.5

elif a1>=-1.5 and a1<-1:

x\_duty=7.1

elif a1>=-2 and a1<-1.5:

x\_duty=6.8

elif a1>=-2.5 and a1<-2:

x\_duty=6.5

elif a1>=-3 and a1<-2.5:

x\_duty=6.1

elif a1>=-3.5 and a1<-3:

x\_duty=5.8

elif a1>=-4 and a1<-3.5:

x\_duty=5.5

elif a1>=-4.5 and a1<-4:

x\_duty=5.1

elif a1>=-5 and a1<-4.5:

x\_duty=4.8

elif a1>=-6 and a1<-5:

x\_duty=4.4

elif a1>=-7 and a1<-6:

x\_duty=3.8

elif a1>=-8 and a1<-7:

x\_duty=3.0

elif a1>=-9 and a1<-8:

x\_duty=2.5

elif a1<=-10:

x\_duty=2.0 #top

else:

# x\_duty=7.5 #center

pass

if b1<=-40:

y\_duty=12

elif b1>-40 and b1<=-35:

y\_duty = 11.5

elif b1>-35 and b1<=-30:

y\_duty = 11

elif b1>-30 and b1<=-25:

y\_duty=10.5

elif b1>-25 and b1<=-20:

y\_duty=10

elif b1>-20 and b1<=-15:

y\_duty=9.5

elif b1>-15 and b1<=-10:

y\_duty=8.8

elif b1>=-10 and b1<=-5:

y\_duty = 8.2

elif b1<=6 and b1>-5:

y\_duty=7.5

elif b1<=12 and b1>6:

y\_duty = 7

elif b1<=17 and b1>12:

y\_duty = 6.5

elif b1<=22 and b1>17:

y\_duty = 6

elif b1<=26 and b1>22:

y\_duty = 5.5

elif b1<=30 and b1>26:

y\_duty = 4.5

elif b1>=30 and b1<=35:

y\_duty = 3.5

elif b1>35 and b1<=40:

y\_duty = 2.5

elif b1>40:

y\_duty=2

else:

pass

p1.ChangeDutyCycle(x\_duty)

p.ChangeDutyCycle(y\_duty)

sleep(0.05)

except Exception as e:

print("error : ",e)

p1.stop()

GPIO.cleanup()