FACULTAD DE INGENIERÍA

CARRERA DE INGENIERÍA DE SISTEMAS COMPUTACIONALES

MOVER SERVO CON EL ROSTRO

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Curso:
SISTEMAS INTELIGENTES

Docente del Curso:
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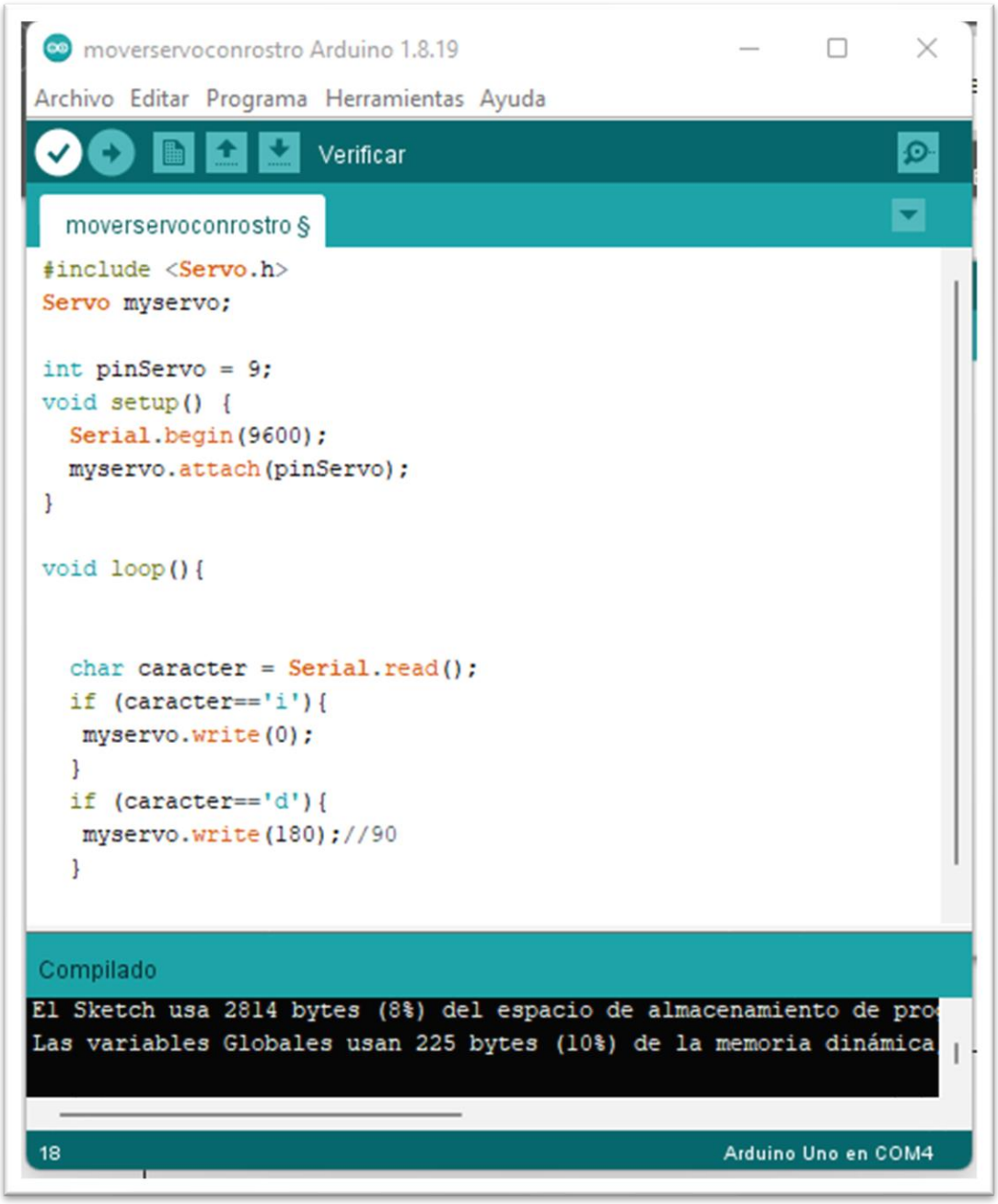
Código Arduino



Código Python

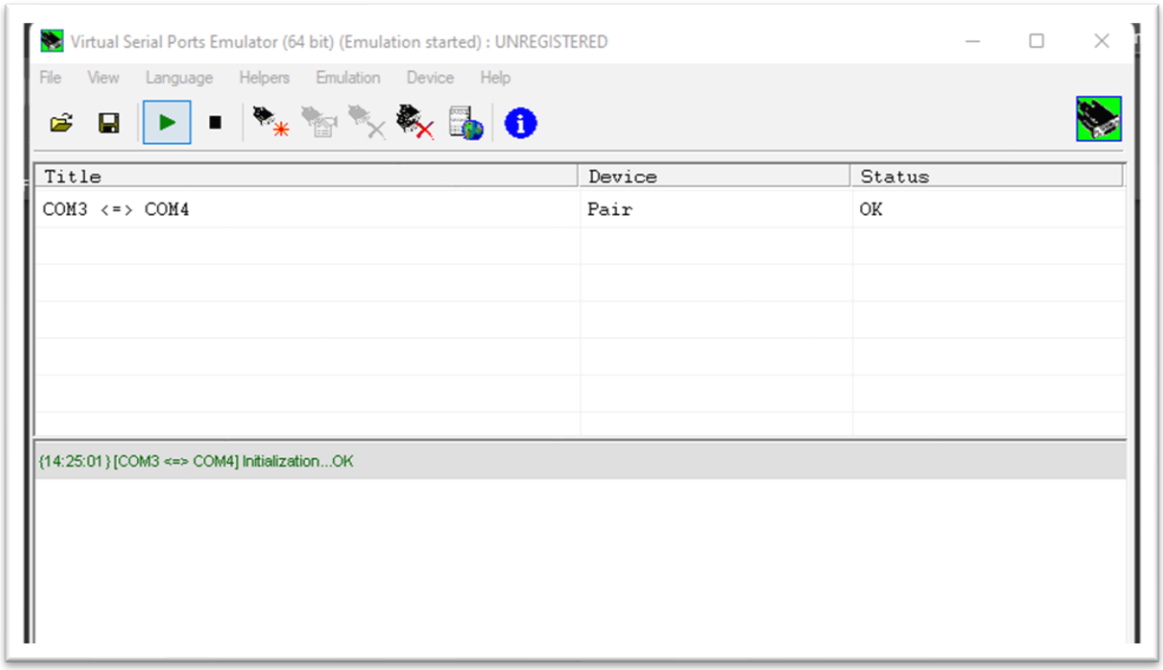
moverservoconrostro.py - C:\Users\erick\Documents\agentes\moverservoconrostro.py (3.10.7)

File Edit Format Run Options Window Help

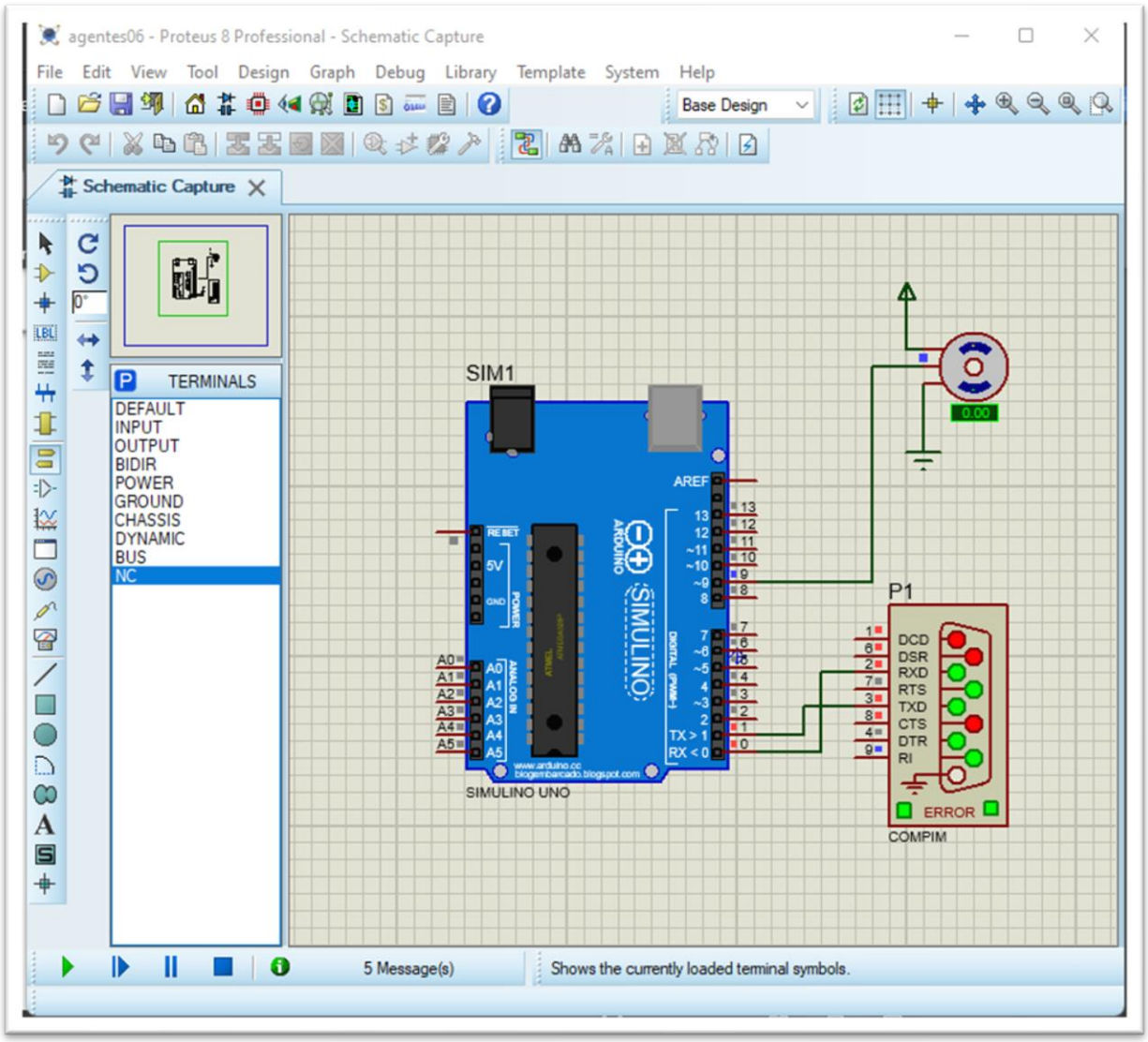
```
import cv2
import serial
import time
face_cascade = cv2.CascadeClassifier('haarcascade_frontalface_default.xml')
eye_cascade = cv2.CascadeClassifier('haarcascade_eye.xml')
video = cv2.VideoCapture(0)
arduino = serial.Serial('COM3', 9600)
time.sleep(2)
while video.isOpened():
    ret, frame = video.read()
    if frame is not None:
        gray = cv2.cvtColor(frame, cv2.COLOR_BGR2GRAY)
        faces = face_cascade.detectMultiScale(gray, 1.3, 5)
        hh,ww = gray.shape #obtener la dimension de la escena
        cv2.line(frame,(int (ww/2),0),(int (ww/2),hh),(255,0,255),2)
        for (x, y, w, h) in faces:
            if x<ww/2:
                arduino.write(b'i')
            else:
                arduino.write(b'd')
            cv2.rectangle(frame, (x, y), (x + w, y + h), (255, 0, 0), 2)
            roi_gray = gray[y:y + h, x:x + w]
            roi_color = frame[y:y + h, x:x + w]
            eyes = eye_cascade.detectMultiScale(roi_gray)
            for (ex, ey, ew, eh) in eyes:
                cv2.rectangle(roi_color, (ex, ey), (ex + ew, ey + eh), (0, 255,
        cv2.imshow('Video', frame)
    if cv2.waitKey(1) & 0xFF == ord('q'):
        break
video.release()
cv2.destroyAllWindows()
arduino.close()
```

Ln: 18 Col: 34

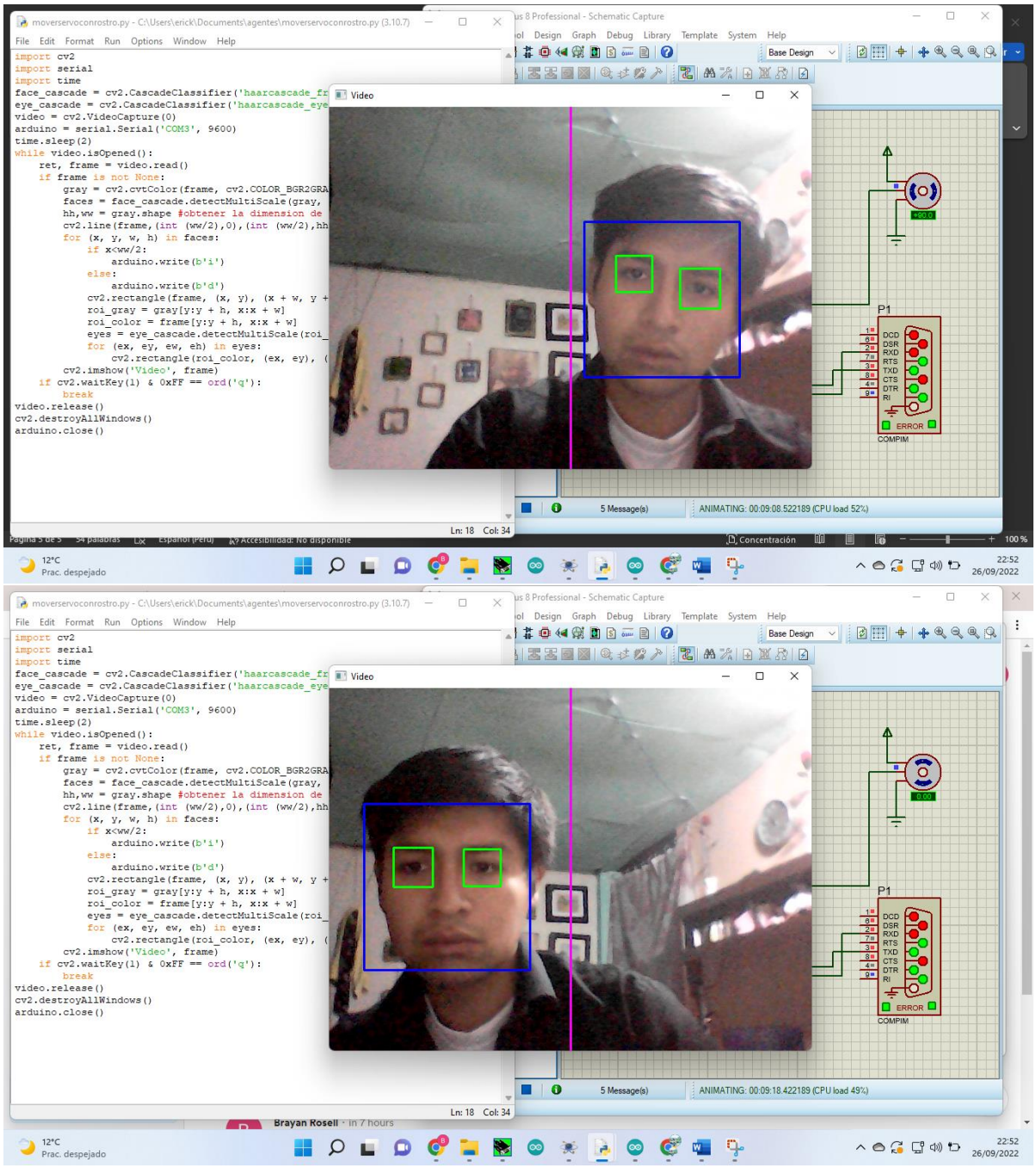
PAIR


Virtual Serial Ports Emulator (64 bit) (Emulation started) : UNREGISTERED
File
View
Language
Helpers
Emulation
Device
Help
Title
Device
Status
COM3 <=> COM4
Pair
OK
{14:25:01} [COM3 <=> COM4] Initialization...OK

Proteus



Evidencias:



Link de video:
https://www.loom.com/share/b22481af9c7e4ba5b9210eb6dbf75902

Link de git:
https://github.com/BrayanRosell/MoverServoConRostro