

- 1) Debug the following program. Highlight the line(s) of code that are incorrect and explain why it is incorrect. If a line of code is missing, highlight where it should go and write the line of code.

```
from hub import light_matrix
import runloop
import motor, force_sensor
from hub import port

def is_force_sensor_pressed():
    #collect input from force sensor...is it pressed?
    return force_sensor.pressed(port.E)

def is_force_sensor_not_pressed():
    #collect input from force sensor...is it not pressed?
    return not force_sensor.pressed(port.E)

async def main():
    #Define the variable x and set its initial value to zero
    x=0
    #Repeat 10 times
    for i in range(10):
        #Wait until the force sensor is pressed, shut the claw and count a closing
        await runloop.until(is_force_sensor_pressed)
        x+=1
        motor.COAST
        motor.run_for_time(port.A, 500, -500)
        Write the number of times the claw has closed on the light matrix
        light_matrix.write(x)
        #Wait until the force sensor is not pressed and open the claw
        await runloop.until(is_force_sensor_not_pressed)
        motor.run_to_absolute_position(port.A, 50, 500)

    #The final time the force sensor is pressed, notify the user they are all out
    await runloop.until(is_force_sensor_pressed)
    light_matrix.write("All out!")
    #Open and close the claw five times
    for i in range(5):
        await motor.run_for_time(port.A, 500, -500)
        await motor.run_for_time(port.A, 500, 500)
    #display a sad image on the light matrix
    light_matrix.show_image(light_matrix.IMAGE_SAD)
    await runloop.sleep_ms(500)

runloop.run(main())
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- 2) Debug the following program. Highlight the line(s) of code that are incorrect and explain why it is incorrect. If a line of code is missing, highlight where it should go and write the line of code.

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        light_matrix.write(str(x))
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