Khoi Duong

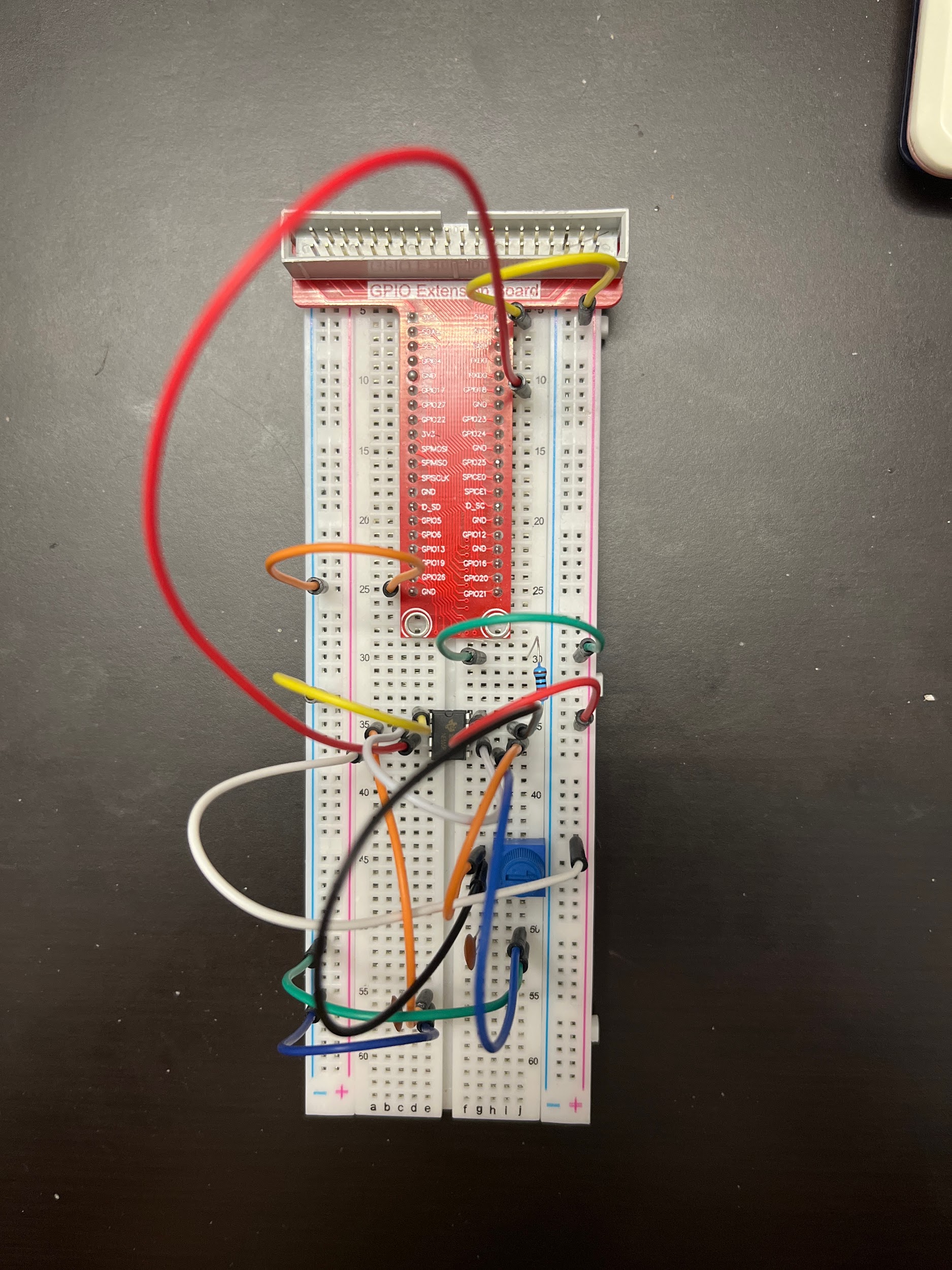
Prof. Yang

CE450L

12/17/2022

QUIZ#2

GitHub link: <https://github.com/MynameisKoi/CE450L/blob/main/Quiz%232>

Breadboard setup:

Source code: <https://github.com/MynameisKoi/CE450L/blob/main/Quiz%232/ne_555.py>

#!/usr/bin/env python3

import RPi.GPIO as GPIO

import time

from sys import version\_info

if version\_info.major == 3:

raw\_input = input

# ne555 pin3 connect to BCM GPIO18

SigPin = 18 # BCM 18

g\_count = 0

def print\_msg():

print ("========================================")*;*

print ("| Ne555 |")*;*

print ("| ------------------------------ |")*;*

print ("| Output pin of ne555 connect to gpio18|")*;*

print ("| |")*;*

print ("| Count the pulses produce by NE555. |")*;*

print ("| |")*;*

print ("| SunFounder|")*;*

print ("======================================\n")*;*

print ("Program is running...")

print ("Please press Ctrl+C to end the program...")

raw\_input ("Press Enter to begin\n")

def count(*ev*=None):

global g\_count

g\_count += 1

def setup():

GPIO.setmode(GPIO.BCM) # Numbers GPIOs by physical location

GPIO.setup(SigPin, GPIO.IN, *pull\_up\_down*=GPIO.PUD\_UP) # Set Pin's mode is input, and pull up to high level(3.3V)

GPIO.add\_event\_detect(SigPin, GPIO.RISING, *callback*=count) # wait for rasing

def main():

print\_msg()

while True:

print ("g\_count = %d" % g\_count)

time.sleep(0.001)

def destroy():

GPIO.cleanup() # Release resource

if \_\_name\_\_ == '\_\_main\_\_': # Program start from here

setup()

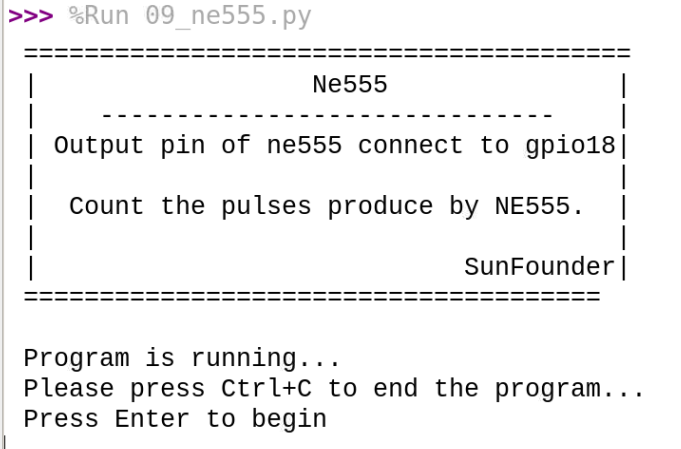
try:

main()

except KeyboardInterrupt: # When 'Ctrl+C' is pressed, the child program destroy() will be executed.

destroy()

Run program & demonstration:



Video link: <https://youtu.be/7puzBO4eSHE>

The NE555 always continues to generate many pulses, therefore the g\_count increases drastically.