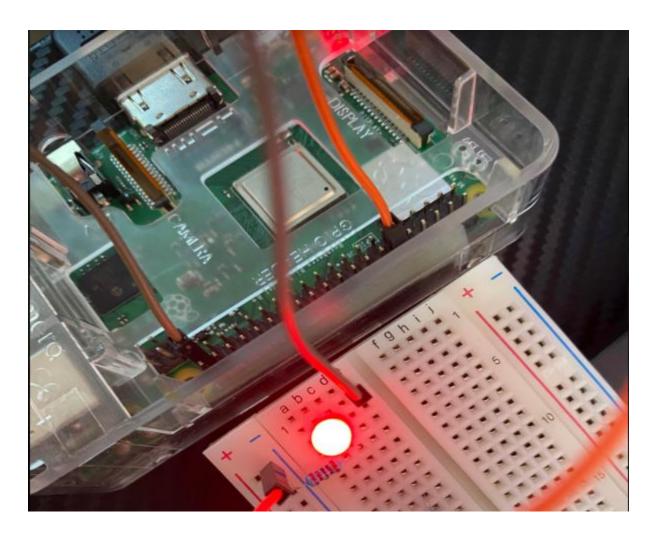Kevin Tavara

ECE-350-001

09.20.2020
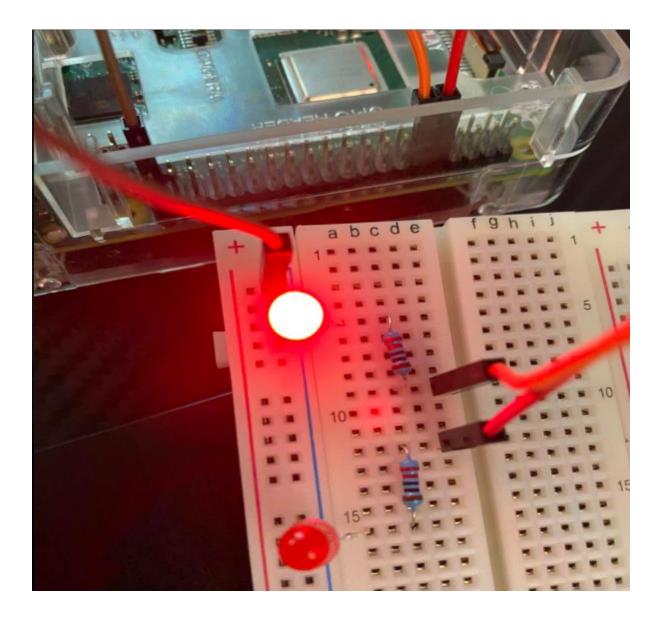
Lab 1: Configuring the Raspberry Pi

One LED:
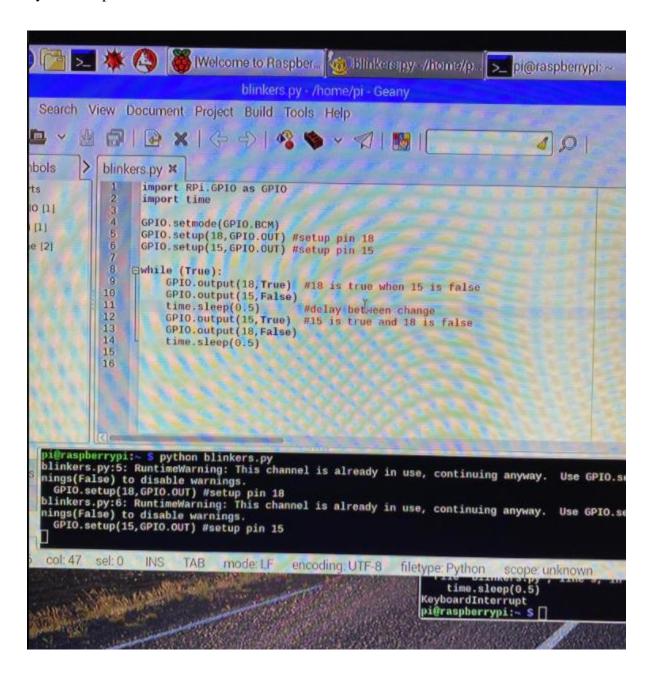

- Using GPIO18 in series with an LED, 220Ω resistor, and GPIO39 (ground).

Two LEDs:

-   Using GPIO18 and GPIO15 each in series with an LED, 220Ω resistor, and GPIO39 (ground).

Python Script Session:


```
import RPi.GPIO as GPIO
import time

GPIO.setmode(GPIO.BCM)
GPIO.setup(18,GPIO.OUT) #setup pin 18
GPIO.setup(15,GPIO.OUT) #setup pin 15

while (True):
    GPIO.output(18,True)   #18 is true when 15 is false
    GPIO.output(15,False)
    time.sleep(0.5)        #delay between change
    GPIO.output(15,True)   #15 is true and 18 is false
    GPIO.output(18,False)
    time.sleep(0.5)
```

```
pi@raspberrypi:~ $ python blinkers.py
blinkers.py:5: RuntimeWarning: This channel is already in use, continuing anyway.  Use GPIO.se
nings(False) to disable warnings.
  GPIO.setup(18,GPIO.OUT) #setup pin 18
blinkers.py:6: RuntimeWarning: This channel is already in use, continuing anyway.  Use GPIO.se
nings(False) to disable warnings.
  GPIO.setup(15,GPIO.OUT) #setup pin 15
```

```
    time.sleep(0.5)
KeyboardInterrupt
pi@raspberrypi:~ $
```

Questions:

The delay does change over time. The maximum appears to be 0.5ms while the minimum

appears to be 0.25ms. The average delay is 0.375ms.