**Lesson­ 1 Code Review**

# import necessary libraries

import machine

import time

# Define GPIO Pins for the LED's

red\_pin = machine.Pin(0, machine.Pin.OUT)

yellow\_pin = machine.Pin(1, machine.Pin.OUT)

green\_pin = machine.Pin(3, machine.Pin.OUT) # I think this is pin 3 in the diagram I am using

# Function to turn the LED's on in a specific sequence

def traffic\_light():

red\_pin.on()

time.sleep(2) #Wait 2 seconds

red\_pin.off()

green\_pin.on()

time.sleep(2) #Wait 2 seconds

green\_pin.off()

yellow\_pin.on()

time.sleep(1) #Wait 1 second

yellow\_pin.off()

# Call the traffic light function

traffic\_light()

From: https://docs.micropython.org/en/latest/rp2/quickref.html

**Pins and GPIO**[**¶**](https://docs.micropython.org/en/latest/rp2/quickref.html#pins-and-gpio)

Use the [machine.Pin](https://docs.micropython.org/en/latest/library/machine.Pin.html#machine-pin) class:

from machine import Pin

p0 = Pin(0, Pin.OUT) # create output pin on GPIO0

p0.on() # set pin to "on" (high) level

p0.off() # set pin to "off" (low) level

p0.value(1) # set pin to on/high

p2 = Pin(2, Pin.IN) # create input pin on GPIO2

print(p2.value()) # get value, 0 or 1

p4 = Pin(4, Pin.IN, Pin.PULL\_UP) # enable internal pull-up resistor

p5 = Pin(5, Pin.OUT, value=1) # set pin high on creation

**My Original Code:**

# Define GPIO Pins for the LED's

red\_pin = machine.Pin(0, machine.Pin.OUT)

yellow\_pin = machine.Pin(1, machine.Pin.OUT)

green\_pin = machine.Pin(3, machine.Pin.OUT) # I think this is pin 3 in the diagram I am using

**R1 -- Revised Code:**

# Define GPIO Pins for the LED's

# p0 = Pin(0, Pin.OUT) # create output pin on GPIO0

# WAS: red\_pin = machine.Pin(0, machine.Pin.OUT)

red\_pin = machine.Pin(16, machine.Pin.OUT) # Red LED is wired to GP16

# WAS: yellow\_pin = machine.Pin(1, machine.Pin.OUT)

yellow\_pin = machine.Pin(17, machine.Pin.OUT) # Yellow LED is wired to GP17

# WAS: green\_pin = machine.Pin(3, machine.Pin.OUT) # I think this is pin 3 in the diagram I am using

green\_pin = machine.Pin(18, machine.Pin.OUT) # Green Led is wired to GP18

**Works one time through, but does not loop**

Next learn about looping

**My Original Code:**

# Call the traffic light function

traffic\_light()

**R2 -- Revised Code:**

Build a loop

A screenshot of a computer program

Description automatically generated

**R3 -- Revised Code:**

Make loop infinite by changing increment to 0

Green Led is wired to GP18

Yellow LED is wired to GP17

Red LED is wired to GP16

