Lab Questions

1. At what frequency can you see the LED start to blink?

Should be able to see the blinking of the led at frequencies below 30 Hz. Similar to blinking as it would be a steady image on my eyes. I wasn’t able to successfully get it to blink, but I did connect two double AA batteries to mimic the turning on & off of the light by disconnecting the circuit.

2. At what duty cycle is the intensity of the LED perceptibly diminished from the initial 50% duty cycle?

I would assume that brightness would become visible as it drops below 40%. As light perceived from the eye dims, I expect it’s not noticeable until then.

3. When changing the duty cycle of the PWM, the loop used an increment of 5 every tenth of a second. Was this perceptibly smooth? If not, what could you change to improve the visual response? Why?

I was not able to get my light to change. Based on experience, a unbalanced increment every 5% in a second would make it appear quite jerky.

4. What function sets the PWM frequency for a GPIO line?

In order to set the PWM frequency, make use of the GPIO.pwm (pin, frequency) before initializing the PWM object.

5. What function sets the duty cycle for a GPIO line?

The line ChangeDutyCycle(dc) method needs to be set to adjust the duty cycle. This method is to be used on the PWM object.