**Question 1: What starts the timer running?**

By calling the IntervalTimer myTimer object you initialize the timer. Then we use myTimer.begin(function, microseconds);

**Question 2: What function executes when the timer interrupt occurs?**

The function blinkLED.

**Question 3: What section of the code is interrupted by the timer interrupt?**

The section before noIntterupt() and after Intterupts()

**Question 4: What is the purpose of the following functions?**

**noInterrupts():** Disables interrupts for particularly critical sections of code, Some functions will not work while interrupts are disabled, and incoming communication may be ignored.

**interrupts():** Re-enables interrupts after it been disable by noInterrupts. Interrupts allow certain important tasks to happen in the background. Interrupts can slightly disrupt the timing of code.

**Question 5: What is the purpose of bypass capacitors? Why might they be useful for this lab?**

The function of the bypass capacitor is to dampen the AC, or the noise. Bypass capacitors help filter the electrical noise out of your circuits. They do this by removing the alternating currents caused by ripple voltage (which present in almost any DC circuit).

For this lab, when we do the PMW timer, the LED not completely dim or not fully bright due to ripple voltage. So adding a bypass capacitor may filter out the signal noise.

**Question 6: Is the LED affected by the period of the PWM output, or by the duty cycle (on time), or both? Can you run it too fast or too slowly?**

The LED is effected by both the PWM output and by the duty cycle (the duty cycle decide how long the signal is high in 1 cycle, 100% mean the LED always on). We can’t neither run it too fast or too slowly if we’re aiming for a dimming effect. For example, a 20% duty cycle wave at 1 Hz will be obvious that it’s turning on and off to your eyes meanwhile, 20% duty cycle at 100 Hz or above will just look dimmer than fully on.