

## CSE3442 (Fall 2020)

### Lab #7

In this lab, you will write software to create a modulated IR signal, which matches the formats of the IR signals received in Lab 6.

1. Connect an IR LED through a 220 ohm resistor to an available GPO that can be controlled by a PWM output.
2. Configure the GPO to be controlled by a PWM output.
3. Configure the PWM to output a square wave with approximately 50% duty cycle and 38 kHz frequency as accurately as possible.
4. Write a function `playComment(uint8_t address, uint8_t data)` that instructs a timer-driven interrupt to modulate the 38 kHz square wave by controlling the DIR pin as shown in class.
5. Show your solution to the GTA demonstrating that you can send IR commands using the same address and data of the remote and receive them using the code of Lab 6. Submit the code with the file name `lab7_your_name.c` to the GTA.