EE1910 Lab 2: Hardware and Software Fundamentals

Objectives

- Introduce MSP432 Hardware
- Interface an LED to the MSP432 system
- Create a first HW/SW system

Prelab **student check off**

- Review the Bit Manipulation and IO Register Access slides ☐
- Review the Printing Text slides ☐
- Review the LED Basics and Resistor Values slides ☐

Assignment

- Do not start the assignment portion of the lab before the lab class. We will walk through the prelab slides and basics prior to starting the student portion of the lab.

Part 1: Modify the LED design we created at the beginning of lab to use three LEDs. Program your system to emulate a stop light pattern. Print the status (go, caution, stop) to the console on a new line each time. ☐

Part 2: Crea Cancelled that increments a variable of type int8_t and a variable of type y half-second. Print the values to the console. Prepare to exp the program. This requires Thursdays lecture material. ☐

Check Off

- Demo and document your stop light program 40%
- Demo and document your counting program 50%
- Explain the results of part 2 10%

Checkoff due by 4:00 pm Friday of the lab week (in-person or via Teams chat)

Submit (in the box): flow diagram(2), code(2), schematic, and an explanation of the results of Part 2 - due 4:00 pm, Friday of the lab week.