EE1910 Lab 9/10: Lab Project

Objectives

- Independently pull together all the concepts from the lab

Rules

- You must work independently on this project – no giving or getting help from classmates
- Your code must primarily use functions (very limited code in main)
- You must use register I/O
- Demonstrations due no later than 4:00pm, **Friday**, Week 10 – no exceptions

Prelab

Assignment

Part1: Using a photo sensor, display the binary output of the measured light on the 10 segment LED block. Use a switch (not a button) to put the system into one or the other of two modes. The display must range from near 0 to near 1023.

Mode 1: Display the measured light continuously.

Mode 2: Capture the measured light when a push button has been pressed (the button must be debounced and cannot be held down) and display it on the LED block.

Part 2: Read a letter (a-z) from the serial monitor and display the corresponding Morse code on an LED and in text on the monitor (dot dot dash). You must use an array to retrieve the appropriate Morse code.

Check Off

- Demo and document your photo sensor program 50%
- Demo and document your Morse Code program 50%

Checkoff due by 4:00 pm Friday of week 10 (in-person or via Teams chat)

Submit (in the box): flow diagram(2), schematic, and code(2) - due 4:00 pm, Friday week 10.