CpE301 - Design Assignment 2 DUE: See Website

The goal of the assignment is use GPIO, delays, and Interrupts:

1. Design a delay subroutine to generate a delay of 0.25 sec.
2. Connect a switch to PORTC.3 (active high - turn on the pull up transistor) to poll for an event to turn on the led at PORTB.2 for 1.25 sec after the event.
3. Connect a switch to INT0 (PD2 pin) (active high - turn on the pull up transistor) and using an interrupt mechanism turn on the led at PORTB.1 for 0.5 sec after the event.
4. All of the above constitutes for a single task. Verify the delay using simulation and logic analyzer.

Submission:

The following are required for successful completion of the design assignment:

a. AVR assembly and C code that has been compiled and working submitted to the github repository.
b. A word/pdf document that contains the assembly and C code well documented along with the kiCAD schematics with components used connected to the ATmega328P/PB.
c. In the word/pdf provide the screenshots of 1) successful compilation, 2) snapshot of the demo circuit, 3) screenshot of demo outputs, and 4) video links for each task.
d. Provide a text file in your github with links to youtube for all tasks.

Evaluation Rubrics:

See class website for the DA evaluation rubrics.