

CS404 - Real-Time Operating Systems

Lab Assignment #1

Spring 2009

The purpose of this assignment is to introduce you to the software tools we will use for the AVR microprocessor, and to give you a better understanding of the run-time environment that a C program operates under.

For this assignment, you will write a C main program and two subroutines - one in AVR assembly, and the other in C. The subroutines should each do the same thing:

1. Monitor a port (your choice) that is connected to a switch. Wait until the switch is pressed.
2. Once pressed, the routine should keep track of how long the switch is held down.
3. Wait for approximately one second.
4. Using another port (your choice) connected to a LED, turn on the LED for the same amount of time that the switch was pressed earlier.

In addition to writing the code, determine the size of the code (main and both subroutines) in your program.