COSC 625 Programming Project #3' : for Arduino or other microprocessor
Replaces previously distributed PP#3
Groups of size THREE at most.

Distributed: 6 October 2010
Due: 25 October 2010

Synopsis:
Write a reaction timer on the Arduino. Output the average reaction time in microseconds. Have separate LED + pushbutton for right hand and for left hand (2 LEDs and 2 buttons)

Reaction timer operation:

(1) Flash right hand LED 3 times to warn the subject the board is about to begin, then do 5 times:
    wait a random time between 2 and 5 seconds
    flash Right LED once, start clock
    when signal from right pushbutton is received (via interrupt), stop timer

(2) Repeat with left hand LED and push button

(3) Repeat using both LEDs and buttons. Do 10 times:
    wait a random time between 2 and 5 seconds
    flash a random LED once, start clock
    when signal from **correct** button is received (via interrupt), stop timer

Output to serial monitor the average reaction time for right hand alone, left hand alone, both hands. Use appropriate labeling of results.

Deliverables:
- Entire group must be present and demonstrate.
- Each member of the group is expected to be able to explain code and modify code on-the-fly.
- Hardcopy of code. Use coding standards!

Grade based on:
- Following specification: 75%
- Following coding standards: 25%

If a member of the group cannot perform the demo, explanation, and modification, then that member's grade is reduced by 30%.