EE 109 Lab Help Checklist

Behavioral Norms and Expectations

- [ ] Course staff are NOT there to write your code or find your errors FOR you without you doing a VAST MAJORITY of the work.
- [ ] Course staff have been instructed to only spend **3-5 minutes** with each student. You may NOT fully solve your problem in that time. We do hope that the staff person will be able to point you in the right direction or give you ideas that you can spend time and try on your own. But it is your responsibility to solve your own problems. It is a sad fact of life that mother nature, physics, and the computer are "always right". It's ALWAYS our fault!! It stinks, but it is true. So, you introduced the error, and you need to solve it.
- [ ] When the lab is busy, you will need to place your name on a help waiting list at the front of the room. Course staff will call names in that order. We may have a separate check-off signup sheet to prioritize (fast) checkoffs vs. more drawn out questions.
- [ ] Speak respectfully to the course staff, and don't interrupt them if they are working with another student.
- [ ] If your code or wiring is quite messy, not indented, takes a very convoluted approach, or does not follow our recommended best practices/templates, we may simply ask you to recode / rewire your lab before we help you. Neatness is unto engineering godliness!

A Checklist to Use *Before* You Ask For Help!

Don't Stare too long, Take Action! Here are some actions you can take:

- [ ] Refer to the Detailed Lab Debugging document
- [ ] I have checked that I am compiling and editing the right files?
- [ ] I have checked using the DMM or oscilloscope that all my buttons are able to generate 5V and 0V appropriately, when I press/release them.
- [ ] Using a small test code sequence (maybe with some temporary infinite while loop before the actual main while loop), I can:
  - [ ] Turn on each LED that is attached
  - [ ] Output a simple string to the LCD (i.e. does your splash screen appear).
- [ ] I have gone back to the slides for specific configuration registers and verified all the bits I think I should set are set correctly.
  - [ ] I have looked carefully at my bit fiddling commands to ensure parentheses and comparisons seem correct.
  - [ ] Consider just figuring out what hex value you'd want for all 8-bits and just writing a full assignment: `TCCR1B = 0x0a;` Does that work? If so, maybe your individual bit fiddling is wrong.
- [ ] I have tried to comment out sections of code to get something very basic working first!
- [ ] I have added an `lcd_stringout()` in certain `if` statements or `ISRs` to ensure I'm getting into those blocks of code!
- [ ] I have tried to characterize the problem: does it only occur when you press a button, go to some specific state, hit a count of 9 or 0, etc? Is it consistent or irregular? What can you tell the course staff about what triggers the problem, or does it happen all the time?