# ECE 340 Homework

1. C defines several different types of *storage class* for variables. In this class we typically only use two of them: *auto* and *static*. Briefly describe each and explain the difference.
2. What is the difference between a C function and a C macro? Why might you use one over the other?
3. List the bitwise operators available in C and provide a brief description.
4. Jim has declared an integer in his program called "motor\_speed". Explain what is meant by "&motor\_speed".
5. (a) What pin on our microcontroller is used to access bit 2 of Port A? (b) Jim is thinking of connecting an extra LED to pin 99 of our microcontroller. What port resource(s) will he need to light it?
6. Jim wants to "toggle" (i.e., complement or invert) only bits 7 and 3 of Port G.
   1. Show how to accomplish this using a function from the Peripheral Library.
   2. Show how to do this using the special function register (SFR) LATGINV.
   3. Show how to do this using only LATG and user variables or constants as needed.