

CPE 301 - MICROPROCESSOR SYSTEM DESIGN
Fall 2013

HOMEWORK No. 06 - DUE (beginning of class) October 8

BEGINING WITH THIS HOMEWORK ASSIGNMENT ALL CODE MUST BE SUBMITTED AS A PRINTOUT. HANDWRITTEN CODE WILL RECEIVE ZERO CREDIT.

1. Read Chapter 6 in the Textbook "*Introduction to Embedded Systems: Using ANSI C and the Arduino Development Environment*".
2. Answer Question 6.1 as modified to read as follows:
 - a. Using the ATmega328P pin configuration table and the Arduino Duemilanove Schematic in Appendix A, identify in a new Table all of the pins on the three ports (PB, PC, and PD) that are already dedicated to an alternative function via pin-muxing.
 - b. Make an equivalent Table for the ATmega2560 used in the Arduino Mega SBC for the equivalent alternative functions (for example, we found that the LED is connected to PB5 on the Arduino Duemilanove and PB7 on the Arduino Mega).

Hint: all the pins in the table correspond to pins on the schematic; the pins to be identified will go to specific circuitry other than the headers. The schematic for the Arduino Mega is posted on webcampus.

3. Answer questions 6.2, 6.3, and 6.4.

Hint: read Lab 6 and read the switch de-bounce pdf posted with Lab 3.

