University of Massachusetts
Department of Electrical and Computer Engineering

ECE 160 Name: bittwittle.txt
Project #2 due: see http://www.ece160.org

For full credit, write a single line of code to perform the specified action for each problem. You may solve each problem in multiples lines for partial credit. For any given variable (PORTA, PORTB, etc.), only the specified bits should be changed, and all other bits in the variable should remain as they are/were. All variables are to be treated as 8 bits. In PC type architecture, bit 0 is always the least significant bit (LSB). The word "toggle" as used below means to compliment a bit or bits (0 becomes 1, 1 becomes 0).

1. Write a line of code to set bit4 of PORTD to 1

2. Write a line of code to set bit7 of PORTC to 0

3. Write a line of code to set bit0 of PORTB to 0

4. Write a line of code to toggle bit5 of PORTA.

5. Write a line of code to set bits 5,4,3 of PORTD to 101

6. Write a line of code to toggle every bit of PORTD.

7. Write a line of code to set bit 2 to 0 and bit 3 to 1 on PORTA.

8. Write a line of code to shift the upper 4 bits of PORTX to the lower 4 bits. The upper 4 bits should be replaced with 1's.

9. Write a line of code to shift the lower 4 bits of PORTZ to the upper 4 bits. The lower 4 bits should be replaced with 0's.

10. Write a line of code to change PORTY as follows: bit 2 is set to 1, bit 0 is set to 0, and bit 5 is toggled.

11. Write a line of code to toggle all 8 bits of PORTW.

12. Write a line of code to set bits 6,4,2,0 of PORT X to 0.

13. Write a line of code to set bits 7,5,3,1 of PORTS to 1.

14. Write a line of code to set bits 7-4 or PORTT to 1101.

15. Write a line of code to set bit 6 to 0 and bit 2 to 1 on PORTR.