

## **Laboratory 9: Lookup Tables and Subtraction**

### **Problem 16:**

Determine the lookup table for a 7-segment display with common anode that is connected to PORTB of a PIC 16F84A microcontroller.

### **Problem 17:**

- a. Write the following program for a 7-segment display with common cathode:
  1. Display the number 9 on a 7-segment display at PORTB
  2. Wait for 1 second
  3. Subtract 7 from the displayed number and display the new number if the button at RA2 is pressed. If the result is negative, add 10 to the result and display the result of this computation.
  4. go back to step 2.

Hint: A program with the delay subroutine can be found on the course webpage.

### **Problem 18:**

- a. Use the program from the lecture to display the number 98 on the two 7-segment displays of our test card.

Hint: A program with the delay subroutine can be found on the webpage.
- b. Test your program on the test card. Check the datasheet of the card and make sure that the jumpers are in the correct position.