

# EE361 Microcomputer-Based Digital Design

Fall 2008

Lab 2

LED

## Part 1

Program a PIC16F884 to accept four bits of input representing a desired hexadecimal digit, process the bits to interpret them as a pair of decimal digits, and output the signal to a pair of seven-segment displays. When the leading digit of the pair is a zero, the corresponding seven-segment display should be blank, rather than displaying the value zero for that digit.

Your report should include an oscilloscope display that shows the four inputs and just those outputs that operate the least significant seven-segment display.

## Part 2

Modify the program so that it starts at zero and counts up to the number specified by the input, pausing for one second between each number, and updating the seven-segment display.

Your report should include an oscilloscope display that shows the four inputs and just those outputs that operate the least significant seven-segment display. Include all the signal changes through at least one complete cycle.