

EECS 119**Project #4****BCD Counter**

Design a 4 bit BCD up/down counter which will count in a loop, up or down, (0→1→2→3→4→5→6→7→8→9→0 or 0→9→8→7→6→5→4→3→2→1→0) depending upon the value of up/down bit.

- a. Design the circuit.
- b. Obtain the layout.
- c. Simulate the **layout** and plot each of the four outputs and the clock input to verify that the counter counts in correct sequence.
- d. Demonstrate layout simulation.
- e. You may work in groups with no more than two persons in a group.

Deadline: December 4, 2016