LAB Assignment #7 for CMPE 312L

Description: Synchronous Up-Down Counters.

Total 100 points.

Problem1 (50 points): Up-down counter: Design a 4-bit synchronous up-down counter. The counter should have asynchronous clear and reset. The report should contain the circuit diagram and an explanation of how the counter works.

Problem1 (50 points): Up-down counter: Connect the 74193 IC and show its operation. What is the difference between the 74193 and the counter you made in problem1? What changes should be made to the counter in problem1 to make it perform exactly as the 74193 IC. Draw the circuit diagram of this modified counter and explain its operation.

Show your outputs to the instructor or the TA.

You have two turns to finish this lab.

Reports will be due beginning of class next time. No excuses will be allowed. If you don’t submit at the beginning of class next time it will be considered one day late. Late submission penalty is 20% of the total grade per day late.

THE LABS ARE INDIVIDUAL EFFORTS. INSTANCES OF CHEATING WILL RESULT IN YOU FAILING THE COURSE.