**CSC 447: Parallel Programming for Multicore and Cluster Systems**

*Instructor: Haidar M. Harmanani*

Spring 2018

Lab 01

Experiment with Parallel Performance

Due: January 23, 2018 [In Lab]

Part 1. Compile the dotprod\_serial.c. Measure the time it takes to compute the dotprod() function. Rerun the program for the following vector sizes: 10000, 100000, 1000000, and 10000000. Record and plot all values using Excel.

Part II. Compile the dotprod\_mutex.c. The program uses pthreads for parallelization. Measure the time it takes to compute the dotprod() function. Rerun the program for the following vector sizes: 10000, 100000, 1000000, and 10000000. Record and plot all values using Excel.

Part III. Compute the performance in each case. Plot the values. What observations do you make?

**Requirement**

Implement your code and signoff with your TA to show it works.