

CSE 4392 Lab Assignment 2

Due July 11, 2002

Goals:

1. Understanding of elementary MPI programming.
2. Speed-up and efficiency evaluation..

Requirements:

1. Convert the program `warshallM.c` in Notes 3 to handle the additional details of the Floyd-Warshall all-pairs shortest path algorithm. Your code should maintain path successors as in the original program. The code is available at `/home/CODE/NOTES03` on `ketchup`, `mustard`, and `shiva`. Submit hardcopy of your program.
2. Execute your program on the Linux systems using various machine files to execute with up to 4 MPI processes for 600 and 800 vertices. Submit hardcopy of your executions.
3. Write a brief report discussing the speed-up and efficiency of your program.

Getting Started:

1. Review the Floyd-Warshall algorithm before working with the code. In addition, be sure that your accounts are properly configured for MPI.
2. You should include code to verify that your computed results correspond to those produced by your sequential Floyd-Warshall code. The time to verify should not be included in your performance analysis.
3. It is useful to debug with small cases with all processes running on the same system.