EE 361C   **Multicore Computing**   **Vijay Garg**   **Spring 2024**

Assignment 4
Due: March 7
Instructor: Professor Vijay K. Garg (email: garg@ece.utexas.edu)

The goal of this assignment is to implement a parallel LLP algorithm and apply it to hosts of problems. The input and output format is specified in the template. You will submit the source code for your assignment along with the runtimes for each of the problems. Please name your zip folder EID1_EID2.zip and follow the format in the template.

1. **(100 points)** Implement a library in Java that allows one to use LLP parallel algorithm to solve a problem. You would need to design the API for the library such that it is easy to use the LLP algorithm for various problems. Apply your library to solve the following problems:
   (a) Job Scheduling
   (b) Parallel Reduce problem
   (c) Parallel Prefix problem
   (d) Stable Marriage Problem
   (e) List-Ranking Problem
   (f) Computing transitive closure of a directed graph