

Homework Assignment #10: Programming Exercise #2

Note

This assignment constitutes 4% of your grade and is due 2:10PM Monday, June 11, 2012. Please write/type your answers/code on A4 (or similar size) paper. Drop your homework by the due time in Yih-Kuen Tsay's mail box on the first floor of Management College Building II. Late submission will be penalized by 20% for each working day overdue. You may discuss the problem with others, but copying answers/code is strictly forbidden.

Your work will be graded according to its correctness and presentation. Specifically, you should provide evidences showing that your program is correct. You should also organize and document your program in such a way that other programmers, for example your classmates, can understand it. **Some of you may be requested to demonstrate your program.**

Problem

Implement the algorithm (discussed in class) for computing the strongly connected components of a directed graph. Please prepare a file with several input graphs and test your program on the inputs. The input graphs must be represented as *adjacency lists* or *incidence lists* (but not adjacency matrices), while it is up to you to decide the exact textual format for the input and output.

Note: you may want to take this opportunity to try the two different ways of updating the *High* value of a vertex when it sees another vertex through a cross or back edge.