ICS 340 Programming Project, Deliverable A

Specification:

Start with the given Java program "prog340", which lets you select a file to read from your computer, reads the file, and interprets that file as the specification of a graph. Then enhance it to print out indegree and the outdegree of each node in the graph in the following format:

> Node <node abbreviation> has <indegree/outdegree> <degree of node>.

Break ties as follows:

Indegree:

- Print the nodes in order from greatest to least indegree. If two or more nodes have the same indegree, order them from greatest to least outdegree.
- If two or more nodes have both the same indegree and outdegree, order them alphabetically by abbreviation (not full name)

Outdegree:

- Print the nodes in order from greatest to least outdegree. If two or more nodes have the same outdegree, order them from greatest to least indegree.
- If two or more nodes have both the same indegree and outdegree, order them alphabetically by abbreviation (not full name)

As will always be the case in this class, the program must be written in Java and must run on the University Windows computer systems. To ensure this I strongly recommend that you:

1. Use only Oracle Java 13 SE and earlier constructs, and
2. Test it on the University systems before submission if you have any doubts about its ability to run on the University Windows.

Submit the package to the open Deliverable A submission folder.

Submit:

Submit your code as an Eclipse package, or submit all the ".java" source files in a zipped archive. Do not include test files.

Grading:

This deliverable is worth 25 points: Correctness will be assessed for 5 files, including both of the test files provided. You will get 5 points for each correct test file.

Due Dates:

The program is due on Saturday, January 22nd at noon for full credit in the D2L "Deliverable A" dropbox. For a 5-point deduction, you may (re)submit it by noon Saturday, January 29th. The time of submission is the time that D2L lists the file as submitted.