

## ICS 340 Programming Project, Deliverable B

### **Specification:**

Start with your Java program “prog340”, ideally it should be working for Deliverable A.

Perform Depth First Search (DFS) on the graph, starting from the node with value “S”. When you have the choice of two or more unexplored nodes to visit next, choose the nearest one. Break ties alphabetically by name. If your depth first search terminates without visiting every node in the graph, start again from the first node in the graph in alphabetical order by name that hasn’t been visited.

After the DFS is completed, print the following:

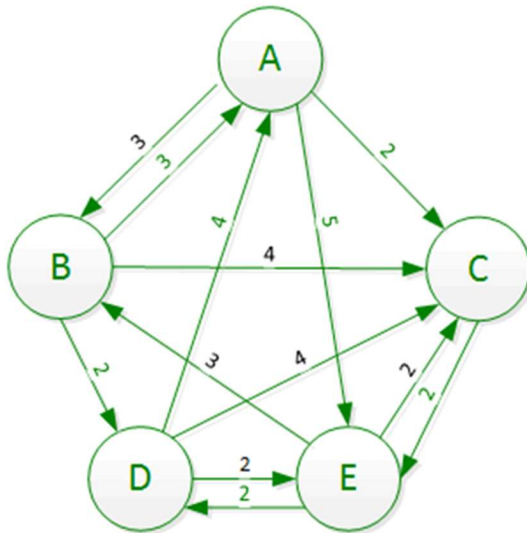
1. The discovery and finish times of each node in the graph.
2. The classification of each edge in the graph. (Tree, Forward, Back, or Cross.)

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.

Submit the package to the open Deliverable B submission folder.

### **Output:**

Please see the test files and corresponding output files in D2L under Deliverable B/Test Files. Here is a graph of test file b0 for your reference.



### **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 55 points: Correctness will be assessed for 5 files, including both of the test files provided. You will get 10 points for each correct test file and 5 points for regression testing of Deliverable A

### **Due Dates:**

The program is due on Saturday, February 12<sup>th</sup> at noon for full credit in the D2L “Deliverable B” dropbox. For a 10-point deduction, you may (re)submit it by noon Saturday, February 19<sup>th</sup>. The time of submission is the time that D2L lists the file as submitted.