CSE 5400 Interdisciplinary CS — HW1
Due 5pm, Jan 30, 2014
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"Who is the most connected?" We would like to find the "Connector" according to our discussion in class.

1. Use Java (or C, C++, Python) to implement:
   (a) Algorithm 2: degree of separation — `Separation.java` has the main method
   (b) Algorithm 3: betweenness — `Betweenness.java` has the main method

   You can have other Java files.

2. Input data sets:
   (a) three are posted on the course web site—each line in a file has two vertices of an edge
   (b) create/find a third data set with at least 10 vertices

3. Output the top 3 vertices/connectors and their connector scores. If there are ties, output all vertices with the same score—ie, top 3 scores and their vertices.

4. Provide a report (pdf):
   (a) Besides friendship, discuss three other kinds of "relationship" that can be represented by an edge/link in a social network
   (b) Compare the two algorithms:
      i. quality of output — top 3 connectors and their order
      ii. time/speed
      iii. space/memory

5. Provide `readme.txt`
   (a) how to compile your programs — your program should run on code.fit.edu (linux/unix) or hopper.cs.fit.edu (windows).
   (b) how to run the two algorithms
   (c) output of each algorithm for each input data set

6. Submit: source code, report (pdf), your data set, and `readme.txt`