CPSC 5031 Homework 6 (5 pts)

Visualizing Graphs

Let’s write more code!

Remember this image?

Water drops on a surface

Description automatically generated with low confidence

Per the post in Announcements, this was generated using a toolkit called GraphViz (<http://www.graphviz.org/>). It’s a very handy tool to have in your personal toolkit. You can download/install it from these directions: <http://www.graphviz.org/download/>

# Assignment

Write a program that can take an adjacency matrix file and generate a GraphViz “dot file”. Run the dot files through dot (one of the GraphViz command line tools) and generate a PNG file.

Example command line:

dot -Tpng myfile.dot -o myfile.png

**OH, ONE LITTLE DETAIL:**

You must determine if the adjacency file could be a digraph. If it is, use the digraph command in your dot file. Otherwise, use graph. Remember, unless it’s a directed graph, there shouldn’t be two edges connecting the same two vertices.

What you need to turn in:

1. Your code. (I don’t need the dot files.)
2. An explanation of the test cases you used.
3. The images generated for each adjacency matrix included in the homework.

# FAQ

**How do I use GraphViz?**  
Read the directions. Here’s the reference: <http://www.graphviz.org/pdf/dotguide.pdf>

**What are some example dot files I can look at?**

Check out <https://graphs.grevian.org/example>

**How about a little hint?**

Okay, the graph for adj1.txt should look like this:

![Diagram

Description automatically generated]()

**Do I need test cases for this?**

Always! See #2 of the checklist of things you need to turn in. ☺