# AoA Exercise 03- Drawing Graphs

Part 1- Read From a File

Modify TestGraph.java, to write a program that reads a graph from a file. The first line in the file contains a number that indicates the number of vertices (n). The vertices are labeled as 0, 1…, n-1. Each subsequent line, with the format u x y v1, v2… describes the position of u at (x, y) and edges (u, v1), (u, v2), and so on. The figure below gives an example of the file for their corresponding graph. Your program prompts the user to enter the name of the file, reads data from the file, and displays the graph on a pane using GraphView.java. Your program should read the data from GraphVertices.txt (included). **You will need to create an object for the vertices that implements the Displayable interface. Your edges will be a 2D array.**

Vertex 0 is connected with 1 , 2
Vertex 1 is connected with 0, 3, 6
Vertex 2 is connected with 0, 3, 4
Vertex 3 is connected with 1, 2, 4, 5
Vertex 4 is connected with 2, 3, 5
Vertex 5 is connected with 3, 4, 6
Vertex 6 is connected with 1, 5
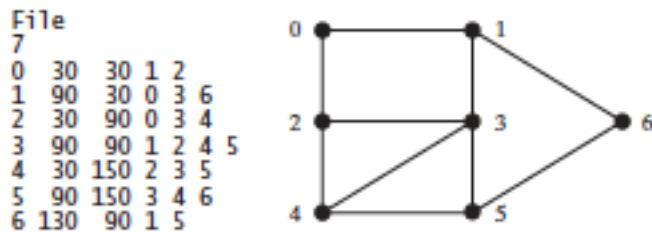
Please:
- Use the given source code in your implementation, or else credit will not be given for the project.
- There should display both an output to the console, and a JavaFX representation of GraphVertices.txt.
- The GraphVertices.txt file should be used to run the program, and should be addressed at the project level.

Part 2: Impress Me

Now that you have gotten the hang of drawing some graphs, I would like you to create at least two different graphs (and subsequent objects). Please make sure you:
- Use real world data/graphs (The more niche/interesting the better)
- Must have at least 7 vertices and 10 edges
- Must be in separate java classes called MyGraph1.java and MyGraph2.java