INT262 Programming II

Delaware Technical Community College, Wilmington Campus

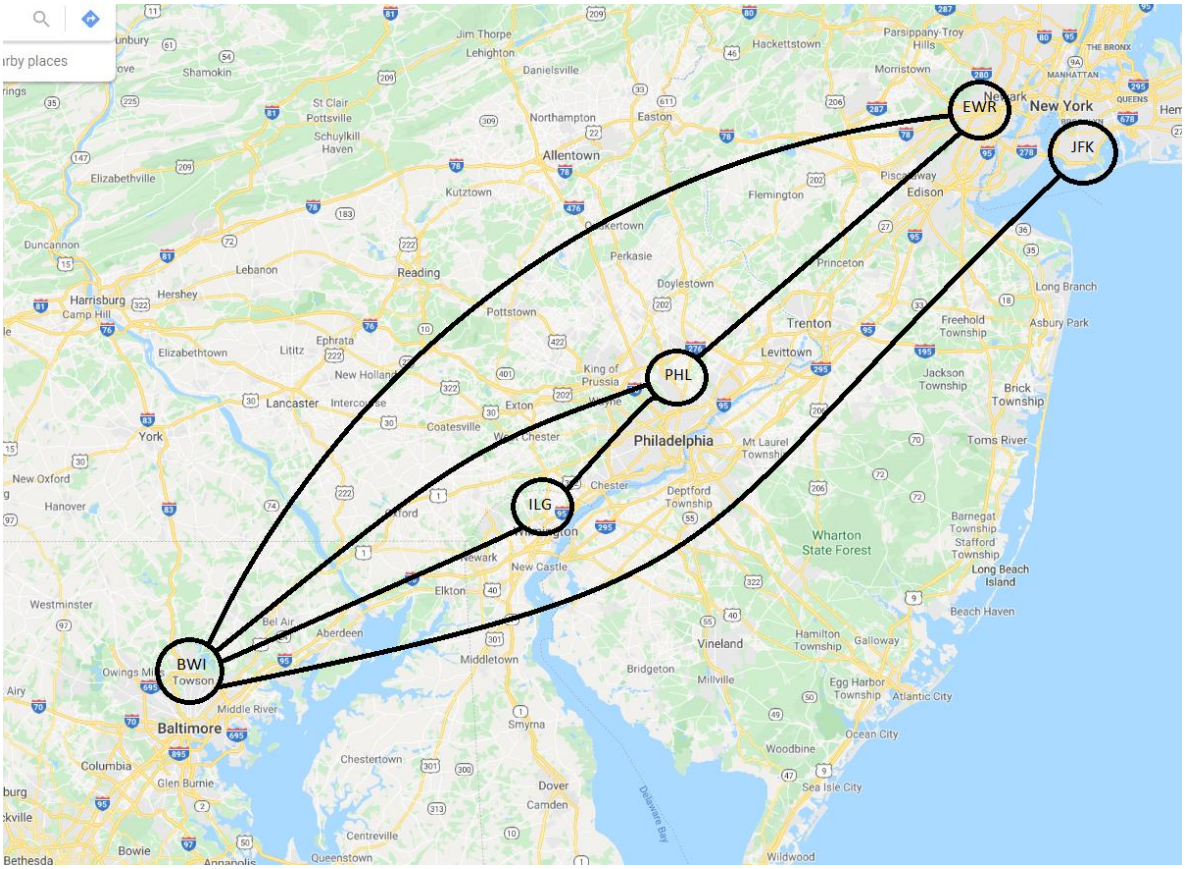
Final Project-Graph Traversal

Code will be graded on:

- 70% Code quality/Correct usage of programming concepts
  - 50% Correct implementation/usage of graph ADT
  - 20% Correct implementation of logic/helper methods for application
- 10% Correct answer/Program runs
- 5% Descriptive variable names
- 5% User friendliness (good prompts and outputs)
- 5% Comments (minimum required comments and human readable clarification for any unclear or unintuitive code)
- 5% Proper indentation/formatting

Introduction: In this final project for the semester, we're going to build on the previous assignment and explore a Graph ADT algorithm traversal called depth first search (DFS). A DFS traversal is useful for finding ALL paths through a given graph, so we can use it in order to find a flight between airports. This algorithm does not care about how many edges are in the path. In this context, it means that the DFS will not make distinctions between direct flights or flights with many layovers.

Assignment: Implement and initialize an unweighted, undirected graph to store the information of possible flights between local airports. The airports and the flights between them are shown in the following picture:



Use a DFS algorithm to print ALL paths between two given airports.

Extra credit (10 points): Find and display the shortest path between two given airports.