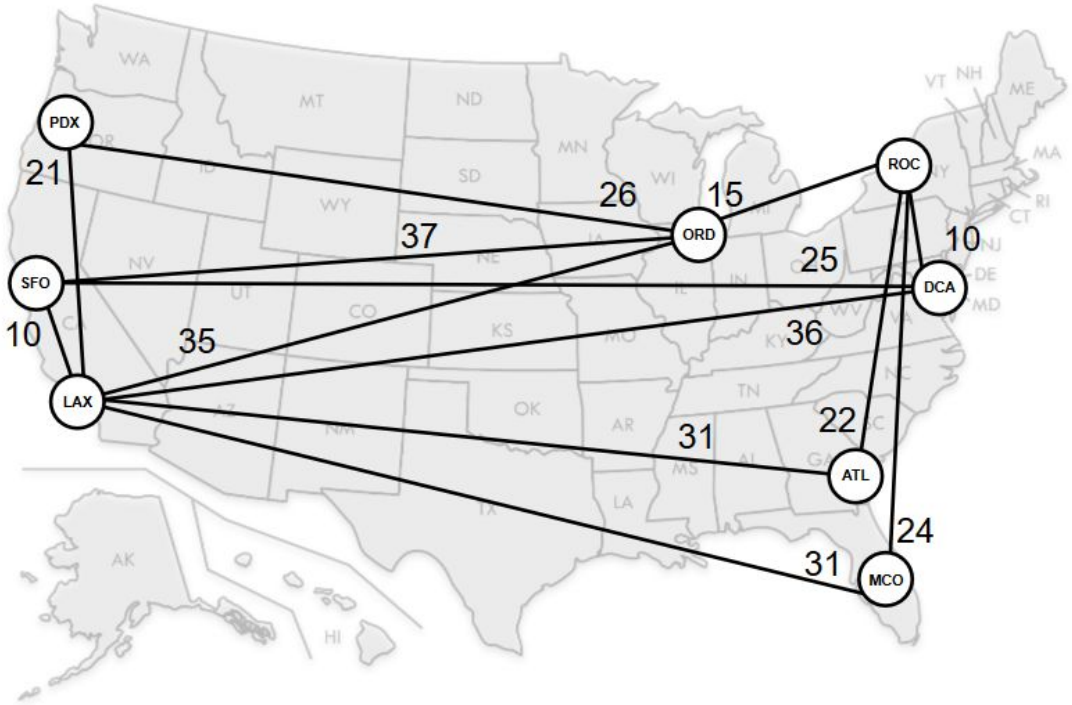
SWEN 601 HOMEWORK

Dijkstra's Algorithm

You should have already accepted the GitHub classroom invite for this assignment, but if for some reason you have not, do so now. Create a package for this `homework`, and commit/push your project to GitHub.

As usual, you are expected to write JUnit Unit Tests for your homework assignments.

1. Begin by creating your `homework` package and copying the classes and interfaces that you wrote to implement the weighted adjacency list graph into it (i.e. the contents of the `session.weighted` package).



2. Create a class, `RouteNetwork`, and add a `main` method that makes a graph to represent the network of airports shown in the image above.
    a. Each airport is a vertex. The airport code is a string, e.g. "`ROC`".
    b. The weight of each edge is an amount in tens of dollars, e.g. 15 = $150.

3. Implement Dijkstra's Algorithm as described in class. Modify the `main` method in your `RouteNetwork` class to:
    a. Prompt the user to enter two airport codes, e.g. DCA and ORD
    b. Print the lowest cost path between the two airports as determined by Dijkstra's Algorithm, e.g. "`DCA ROC ORD, 250 dollars.`"

When you are finished, draft a new GitHub release. Use the “Source code (.zip)” link to download your release. Submit this to the assignment on MyCourses. Late submissions are not accepted.

Grading Rubric

Exceptional Performance 4	Competent Performance 3	Acceptable Performance 2	Developing Performance 1	Beginning Performance 0
All assignment instructions followed. Program runs as described.	A small number of minor problems, e.g. 1-2 instructions not followed, specifications not met, few commits, few comments, etc.	Several minor problems, e.g. several instructions not followed, specifications not met, few commits, few comments, etc.	Many minor or major problems, e.g. code does not compile or run, does not meet functionality requirements, etc.	Very little effort or no submission at all.
100%	88%	75%	50%	0%