Project #5

Due Dates: Thursday, August 4 at 11:59pm

Submit: eLearning

Late Policy: -10 points per hour late

Instructions: This is an individual assignment. Answers should be your own work.
              You should use good programming style, such as using meaningful
              variable names, proper alignment, plenty of comments, etc.

Objective:

    Work with Dijkstra's single-source shortest path algorithm.

Overview:

    In this project you will use Dijkstra's algorithm to find route information
    between two airports chosen by the user. The user will be shown a route that
    results in the lowest price.

Details:

    Write a Java program that lets the user choose two airports and finds
    the route that has the least price.

    Your program should read the airports.txt file that is posted, or any file
    having the same format.
    It should then prompt the user to enter two airports.

    Dijkstra's algorithm should be run to find the cheapest route. The price,
    number of connections, and actual route should be shown.

    The user should be able to continue checking routes until no more routes are requested.

    You are expected to write Dijkstra's algorithm yourself following the pseudocode
    found in both the slides and in the textbook. You can use the Vertex class and
    printPath found in the textbook if you wish.
    You may not use code for Dijkstra's algorithm found from other sources.

    Your output should match the sample output below:

    Sample output:

    Enter departure airport: DFW
    Enter arrival airport: SFO

    By price:
      Price: 1100
      Connections: 1
      Route: DFW -> LAX -> SFO

    Check another route (Y/N)?

Submit to eLearning:
   Put your source file(s) into a .zip file called project5.zip

and submit only the .zip file.