CE Shortest Paths CODE

10 Possible Points

| 12/5/2022

Attempt 1 ⌄	◯ **IN PROGRESS** Next Up: Submit Assignment	🗨 Add Comment

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Graphs

CE: Shortest Paths CODE

✔

Learning Objectives

- Determine the shortest path (shortest distance) from a start vertex to an end vertex.
- Create an edge-weighted graph object based on data provided as a graph (image).

👀

Overview

In this CE, you will dynamically determine the shortest distance from start to finish, based on a graph of US airports.
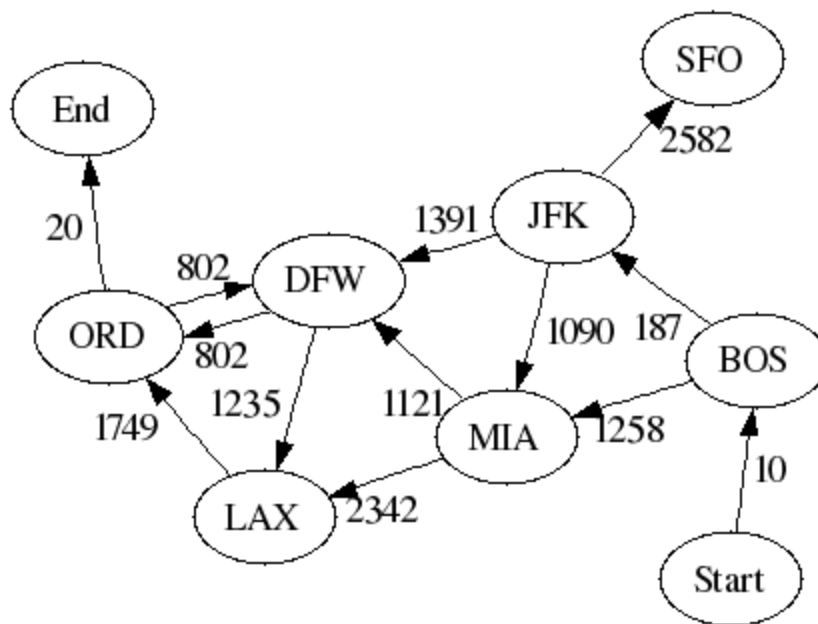
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- Create a new package called **graphShortestPath**
- Inside the package, create a text file called **airports.txt**.
  It represents the data from the graph above and uses a similar format as tinyEWD.txt
  except that we have strings instead of integers to identify vertices and we don't include
  the first two lines that list the number or vertices and edges at the beginning of the file.
  Example line:
  BOS MIA 1258.0
- Create an EdgeWeightedSymbolDigraph similar to the **[EdgeWeightedSymbolGraph](https://slcc.instructure.com/courses/817632/files/135713826/download)** we created for CE
  City Connections CODE. It should provide us with an EdgeWeightedDigraph based on the
  data provided in airports.txt.
- Create a class called **ShortestPathCE**. It includes the main method.
  Use one or more classes from algs4 to find the shortest path from Start to End.
- List all the legs of the journey and display the total distance from start to finish.
  Match the format shown in the expected output.
  Important:
  Resist the temptation to print any hard-coded information. The program still needs to work
  if you add or remove airports from the original graph file.

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```
Shortest path from Start to End:
---------------------------------
Start to BOS (10.0)
BOS to JFK (187.0)
JFK to DFW (1391.0)
DFW to ORD (802.0)
ORD to End (20.0)


Total length from Start to End: 2410.0
```

Submission

Create a screen recording following the **guidelines for CE recordings
(https://slcc.instructure.com/courses/817632/pages/guidelines-for-ce-recordings)** .
The video should be **30 - 60 seconds** long.
Post the video.

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