Assignment 9

Part A

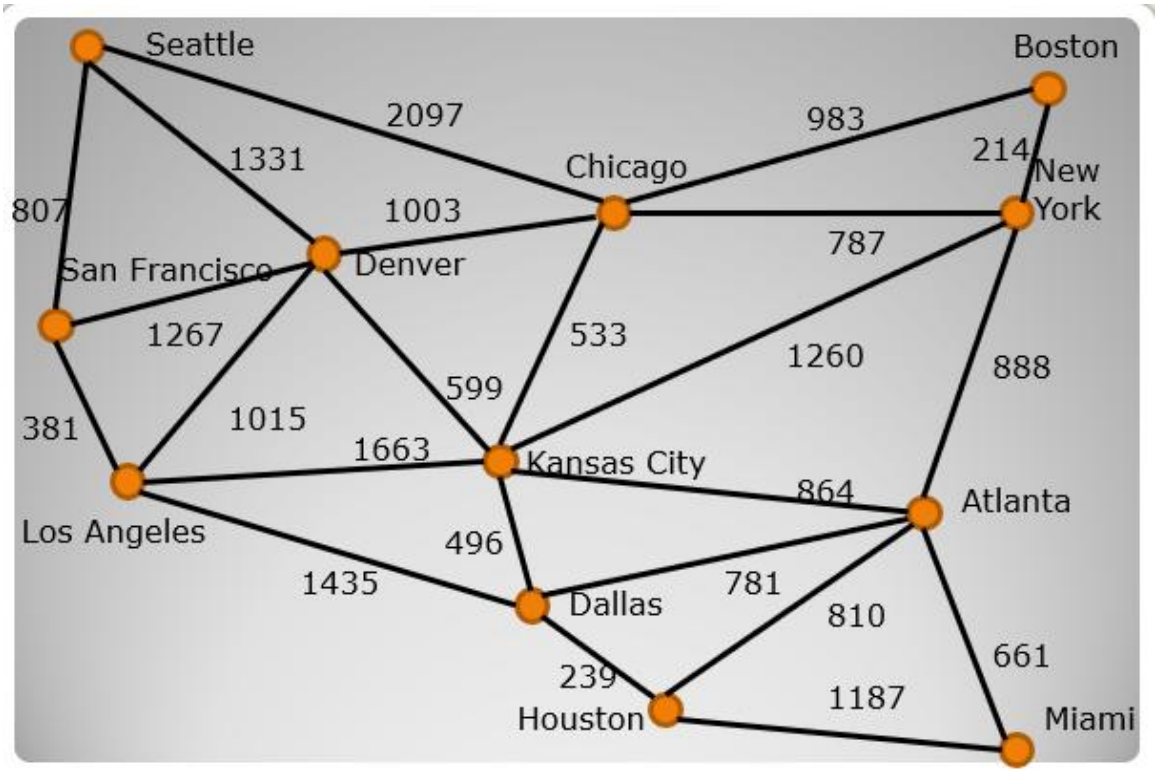
Develop software to perform a DFS starting at Denver (always choose the edge with the smallest mileage). Identify the discovery edges and the back edges within your code. When identifying edges output the origin vertex and destination vertex (not the actual distance). There should only be one output per edge with the corresponding type. What is the total distance travelled on the discovery edges? Use an Adjacency List structure.

Part B

Develop software to perform a BFS starting at Denver (always choose the edge with the smallest mileage). Identify the discovery edges and the cross edges within your code. When identifying edges output the origin vertex and destination vertex (not the actual distance). There should only be one output per edge with the corresponding type. What is the total distance travelled on the discovery edges? Use an Adjacency Matrix structure.

For the levels after level 1, use the first vertex chosen in the previous level to determine the order to choose the vertices.

Assignment 9



Work with <u>one</u> partner from your project 2 team.

DFS: Denver - Kansas City - Dallas - Houston - Atlanta - Miami - Atlanta - New York - Botson - Chicago - Seattle - San Francisco - Los Angeles

BFS:

Denver - KC - CHI - LA - SF - Seattle - Dallas - ATL - NY - BOS

0 Denver
1 Chicago (CHI), San Francisco (SF), Seattle, Kansas City (KC), LA
2 Dallas (DAL), Atlanta (ATL), New York (NY), Boston (BOS)