Introduction To Algorithms
CS430

Fall 2017
Project
Due: November 27th, 2017

Implement and compare 2 MST algorithms

1. Kruskal's with Union Find

2. Prim's with heap

Each program will take the same input file "graph.in" as input and output the results into the files "prim.out" and "kruskal.out" respectively. Your output minimum spanning trees should consist of a list of edges in the same order the algorithms find them. Here are 2 examples of input and output:

graph.in:	kruskal.out:	prim.out:
3	2	2
a,b,c	(a,b)=2	(a,b)=2
3	(a,c)=3	(a,c)=3
(a,b)=2		
(a,c)=3		
(b,c)=4		

graph.in:	kruskal.out:	prim.out:
4	3	3
a,b,c,d	(a,b)=1	(a,b)=1
4	(c,d)=2	(b,c)=3
(a,b)=1	(b,c)=3	(c,d)=2
(b,c)=3		
(c,d)=2		
(a,d)=4		

The first line of the input is the number of vertices n followed by a line of vertices, separated by comma. After the vertices is the number of edges m. Then there are m lines of edges with endpoints and weight. Your output should be a list of edges with the same format of the input. Note that the edges list should be in the order your algorithms find them.

Please include a README file in your submission to specify how to make and run your programs.

1. a README file in your submission to specify how to make and run your programs.

2. an executable that asks for an input path, and provides the output

Languages: Java, C/C++