Department of Electrical and Computer Engineering EECE 2560: Fundamentals of Engineering Algorithms

Project #5

Part b

Write void msfPrim(graph &g, graph &sf) which sets sf equal to a minimum spanning forest on graph g using Prim's algorithm. Start the algorithm at node 0, and use a priority queue based on a min-heap to store nodes that have not yet been added to the spanning forest.

The code you submit should read a graph's file name from the keyboard and then apply the minimum spanning forest function and the spanning forest function from part a of the project, to the graph. In each case, print out the edges that were selected, the total cost, and the number of connected components.