Lab 6 (28 Feb 2019)

Problem 1 : Implement Prim's algorithm to compute the MST of an undirected graph. Do not write code for a binary heap, you may use an existing implementation of Binary Heaps for the priority queue. Print the edges picked by the algorithm.

Problem 2: Compare the performance (i.e. measure the runtime) of Prim's algorithm and Kruskal's algorithm on *cliques i.e. complete graphs*, where there is an edge between every two vertices in the graph. Assign random weights to the edges. Plot the graph of runtime of the two algorithms for different sized graphs; measure the time taken on graphs with the number of vertices equal to 10, 100, 1000, 10000..and so on till possible. The x-axis is the number of vertices in the complete graph and the y-axis is the runtime.