ECSE210L: Design and Analysis of Algorithms

Lab 8 (Week 12: March, 23 - 27 , 2020)

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Implement Kruskal's and Prim's algorithms, to find a minimum spanning tree, for the following (undirected) graphs. Show all the steps, how the minimum spanning tree is building.

1. Let $G = (V, E)$ be a graph with $V = \{0, 1, 2, 3, 4, 5, 6, 7, 8\}$ and edges with weights are given in the following table.

edge	$(0,1)$	$(0,7)$	$(1,2)$	$(1,7)$	$(2,3)$	$(2,8)$	$(2,5)$	$(3,4)$	$(3,5)$
cost	4	8	8	11	7	2	4	9	14

edge	$(4,5)$	$(5,6)$	$(6,7)$	$(6,8)$	$(7,8)$
cost	10	2	1	6	7

2. Consider the following graph (source: google images). The values against each edge denotes the cost of the edge.