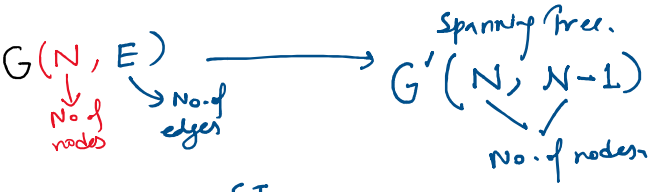
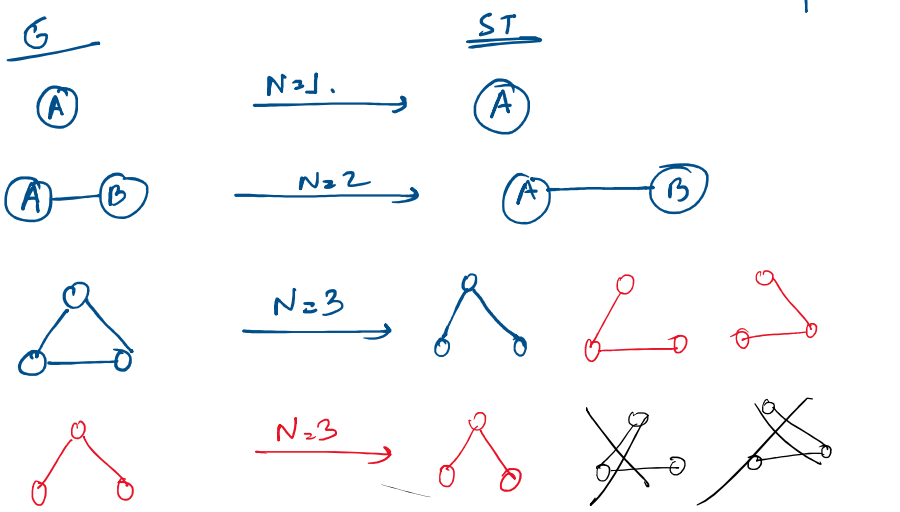
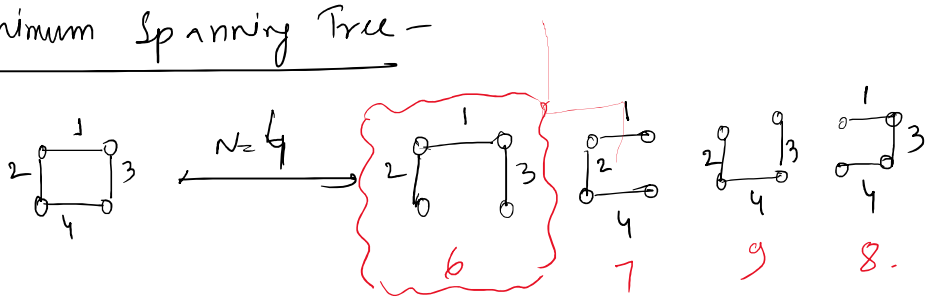
Spanning Tree —



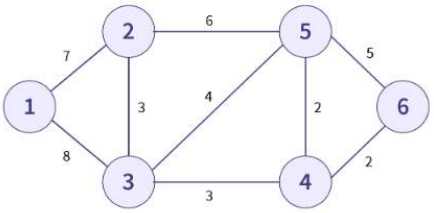


Minimum Spanning Tree —



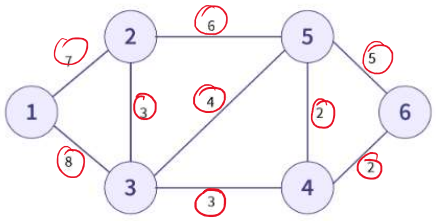
MST

Kruskal's algorithm is a greedy algorithm in graph theory that is used to find the Minimum spanning tree.

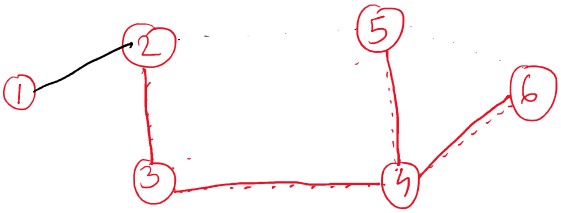


Graph G

- Sort all the edges of the graph in ascending order of their weights.
- Check the edge with minimum weight, if including it in the answer forms a cycle discard it, otherwise include it in the answer.
- Repeat the above step until we have chosen $V - 1$ edges.



Graph G



Node A	Node B	Weight
5	4	2 ✓
4	6	2 ✓
2	3	3 ✓
3	4	3 ✓
3	5	4 × (Cycle)
5	6	5 × (cycle)
2	5	6 × (cycle)
1	2	7 ✓
1	3	8

Minimum Weight = 17.