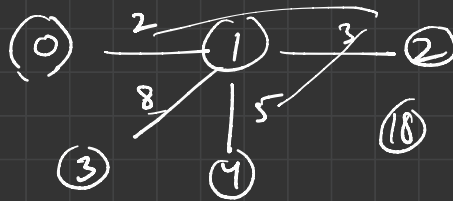
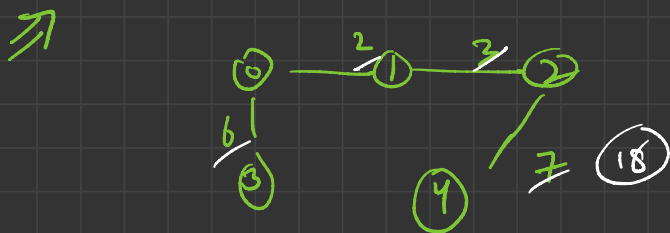
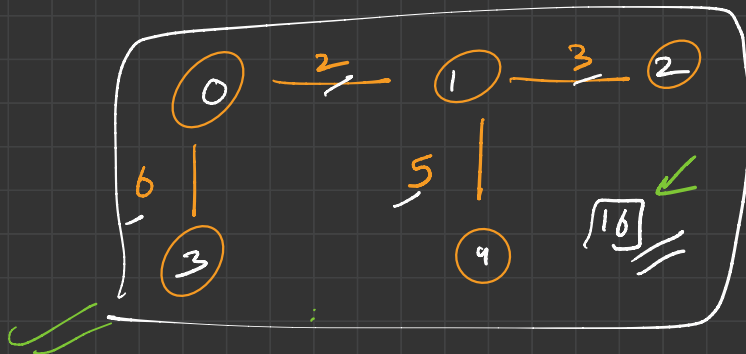
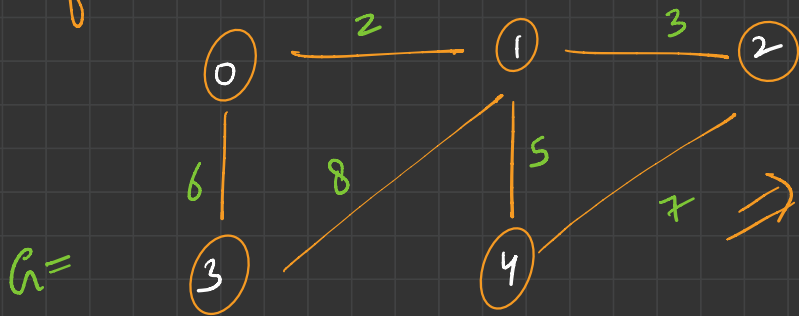



MST \rightarrow ?
 minimum cost of weight

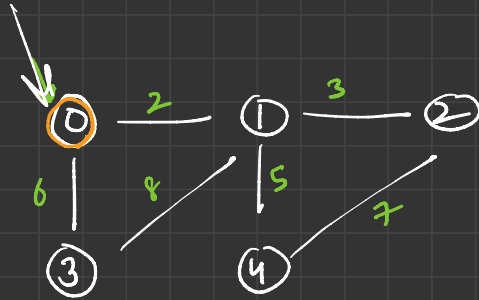
Prim's Algo

Spanning Tree

n nodes
 $n-1$ edges



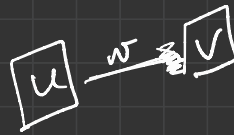
Prim's Algo:-



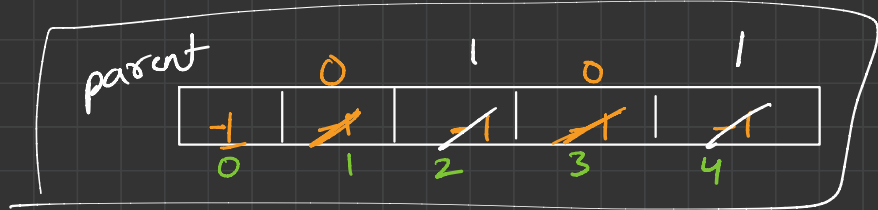
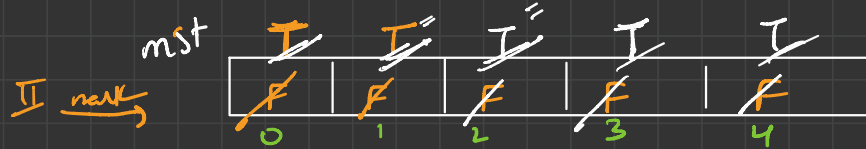
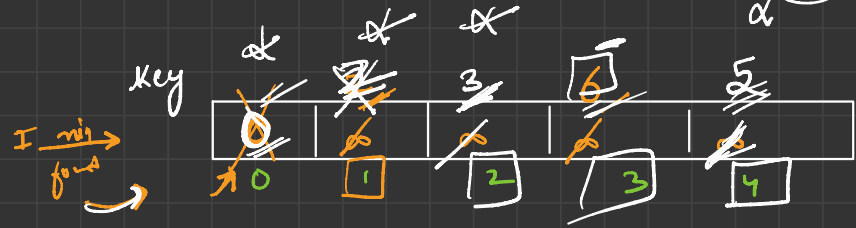
key[0] = 0

parent[0] = -1

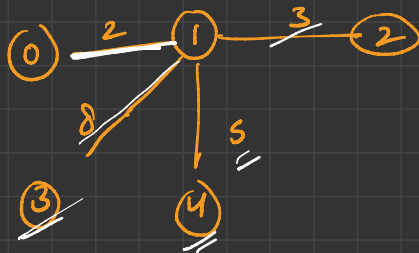
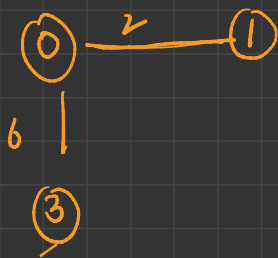
- ⑦ → $u \rightarrow 0$
- ⑩ → $mst[u] \rightarrow true$
- ⑭ → adj



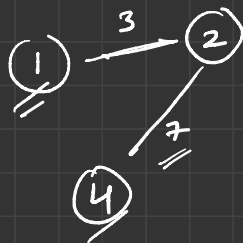
$\rightarrow O(n^2) \rightarrow O(n \log n)$
 (H/W)



- ① → $mst[i] = false \ \&\& \ key[i] < min_i$
- ② → $u \rightarrow i$
- ③ → $mst[u] = true$
- ④ → adj

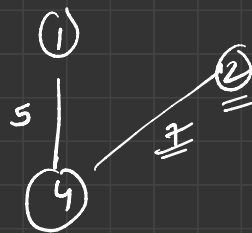
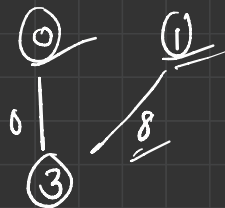


① $\rightarrow u \rightarrow 2$
 ⑩ $\rightarrow \text{vis}[2] = \text{True}$
 ⑪ $\rightarrow \text{adj}$



① $\rightarrow \text{min}$
 $u \rightarrow 4$
 $\text{vis}[4] = \text{true}$

① $u \rightarrow 3$
 $\text{vis}[3] = \text{true}$



STOP

