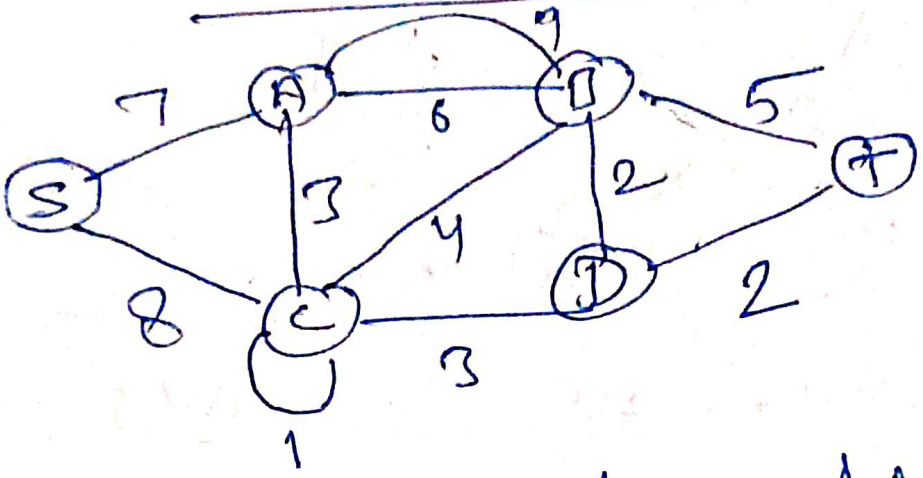
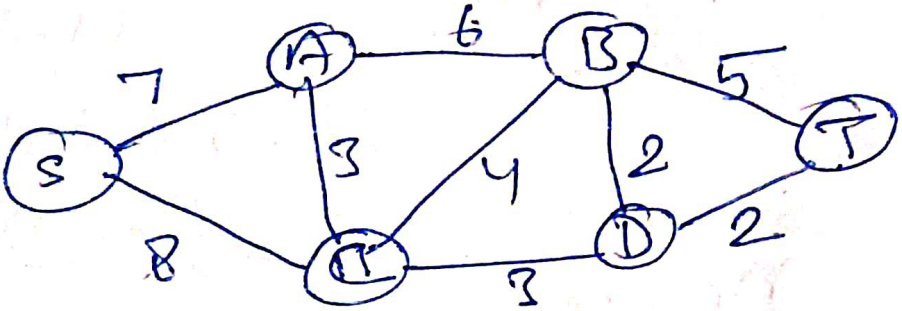
Kruskal's Algorithm



(1) Remove all loops and parallel edges

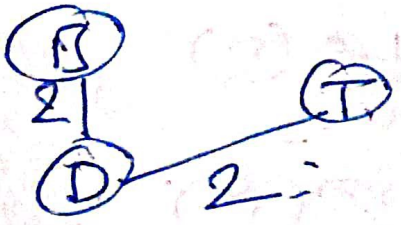


(2) Arrange all edges in the increasing order of weight.

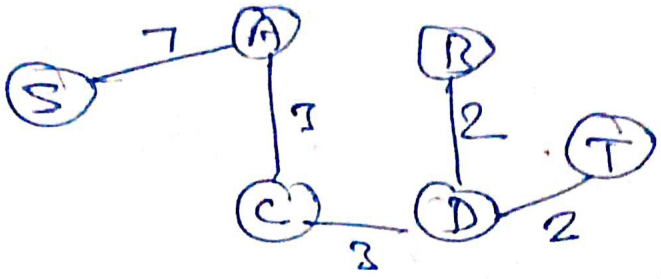
{B, D}, {D, T}, {A, C}, {C, D} {C, B}, {B, T}
2 2 3 3 4 5

{A, B}, {S, A}, {S, C}
6, 7, 8

(3) Add the edge which has least weight.



next cost is 3

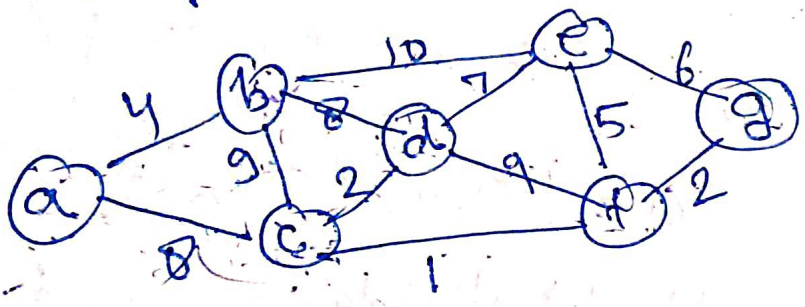


Prim's Algorithm

(1) - Select any connected vertices with min weight.

(2) Select unvisited vertex which is adjacent of visited vertices with min weight.

(3) Repeat (2) until all vertices visited



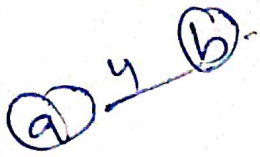
(1) $S = \{a\}$

$V_S = \{b, c, d, e, f, g\}$ remaining

(a) $A = \{\ \}$

lighted-edge $= \{a, b\}$

(2)



$S = \{a, b\}$

$V_S = \{c, d, e, f, g\}$

$A = \{\{a, b\}\}$

lightest edge = $\{(b, d), (a, c)\}$

(3)

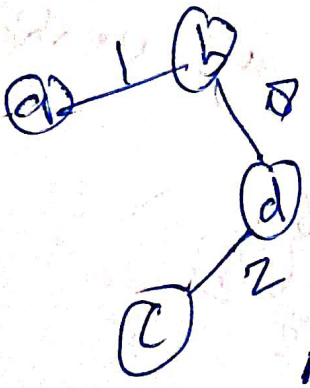
$S = \{a, b, d\}$

$V_S = \{c, e, f, g\}$

$A = \{\{a, b\}, \{b, d\}\}$

lightest edge = $\{d, c\}$

(4)



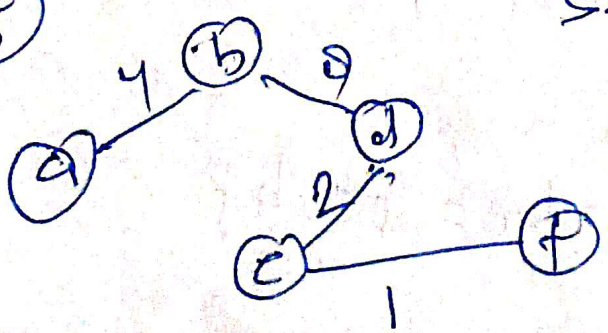
$S = \{a, b, c, d\}$

$V_S = \{e, f, g\}$

$A = \{(a, b), (b, d), (d, c)\}$

next lightest edge = $\{c, f\}$

(5)



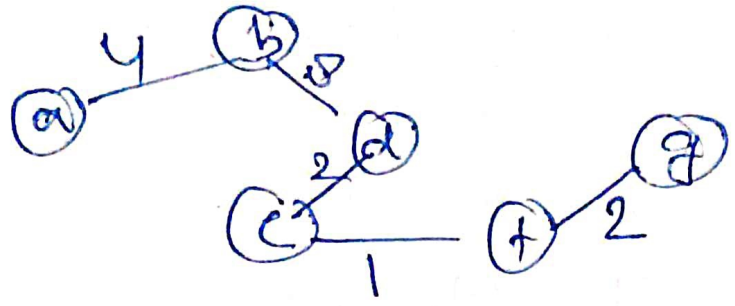
$S = \{a, b, d, e, f\}$

$V_S = \{e, g\}$

$A = \{(a, b), (b, d), (d, c), (c, f)\}$

lightest edge = $\{f, g\}$

6



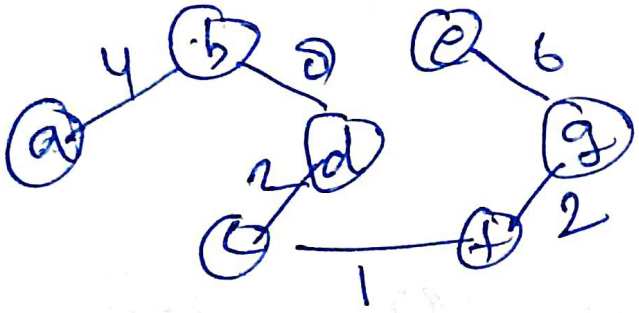
$S = \{ a, b, c, d, f, g \}$

$V_S = \{ e \}$

$A = \{(a,b), (b,d), (d,c), (c,f), (f,g)\}$

Lightest edge $= \{ g, e \}$

7



$S = \{ a, b, c, d, e, f, g \}$

$V_S = \{ \}$

$A = \{(a,b), (b,d), (d,c), (c,f), (f,g), (g,f$

Lightest edge $= \{ \}$