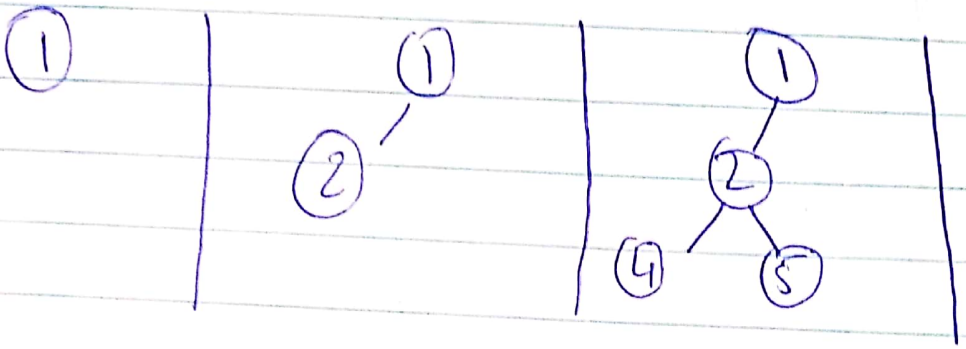
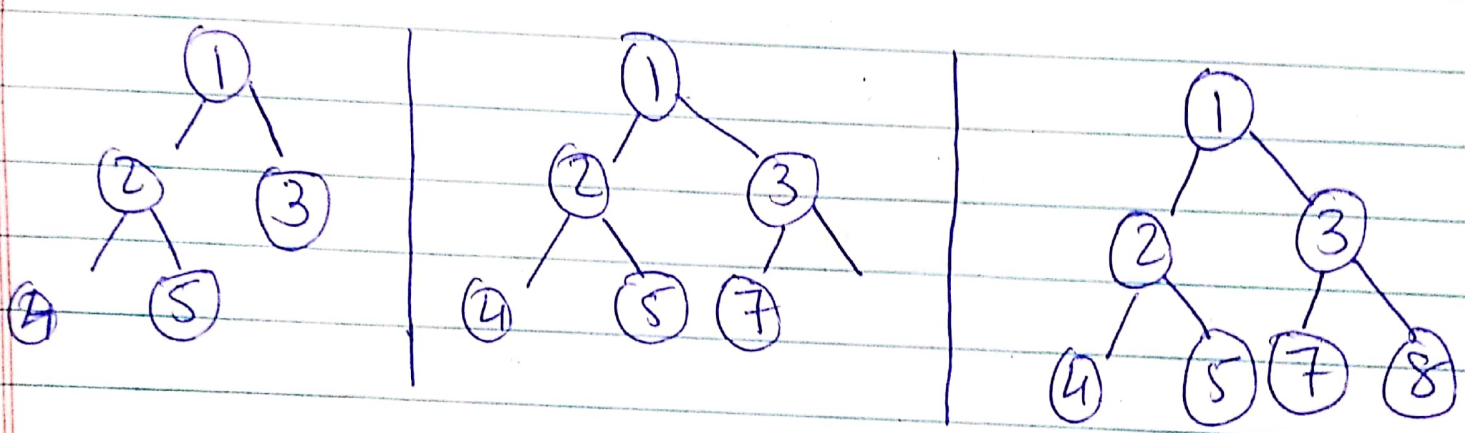
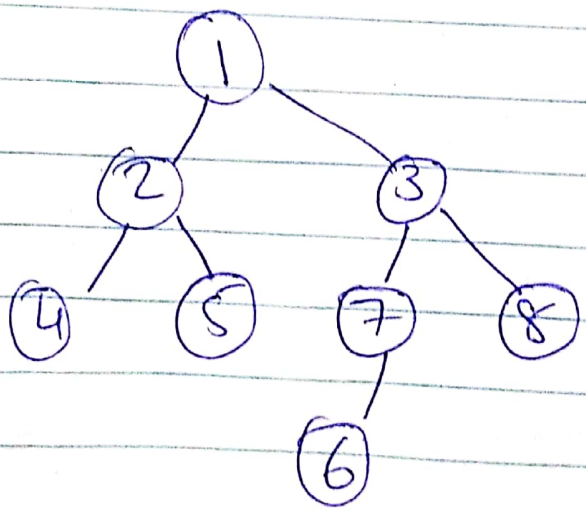
C1.

Inorder : 4, 2, 5, 1, 6, 7, 3, 8

Preorder : 1, 2, 4, 5, 3, 7, 6, 8







Q2:

vertex	known	D_v	P_v
A	T	0	0
B	F	∞	-
C	F	∞	-
D	F	∞	-
E	F	∞	-

ver	known	D_v	P_v
A	T	0	0
B	T	1	A
C	F	∞	-
D	F	∞	-
E	F	∞	-

ver	known	D_v	P_v
A	T	0	0
B	T	1	A
C	T	1	A
D	F	∞	-
E	F	∞	-

ver	known	D_v	P_v
A	T	0	0
B	T	1	A
C	T	1	A
D	T	2	B
E	F	∞	-

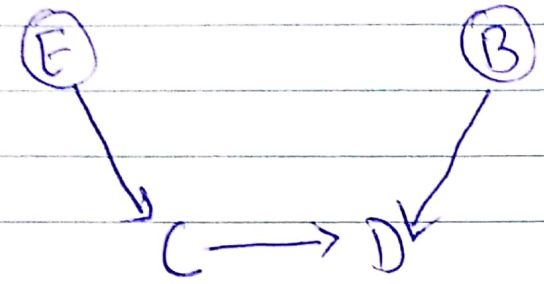
ver	known	D_v	P_v
A	T	0	0
B	T	1	A
C	T	1	A
D	T	2	B
E	T	2	B

PATH

- For A to C → A - C
- For A to D → A - B - D
- For A to E → A - B - E

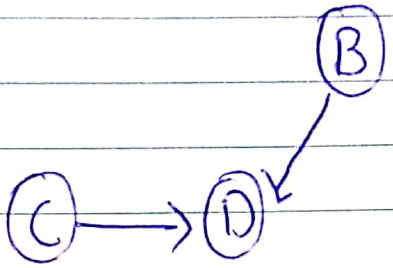
C3

T-order : A

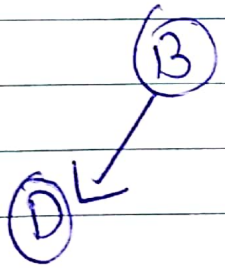


T-order : E

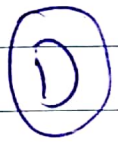
A, B E



T- order : A, E, C



T- order : A, E, C, B



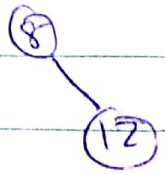
Final Topological order : A, E, C, B, D

Q4:

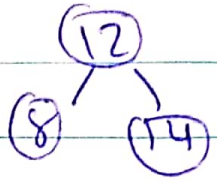
Insert: 8, 12, 14, 1, 5, 9, 16, 18, 17, 6

Insert 8

Insert 12

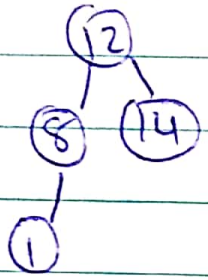


Insert 14

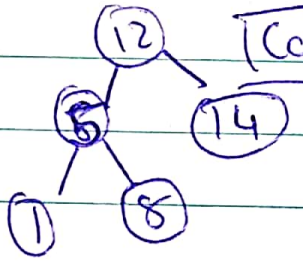


Case 4

Insert 1

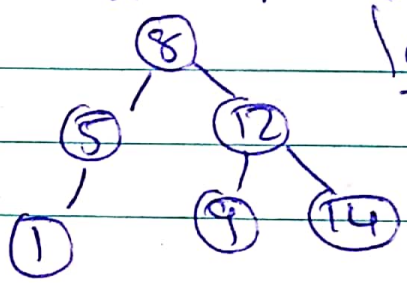


Insert 5



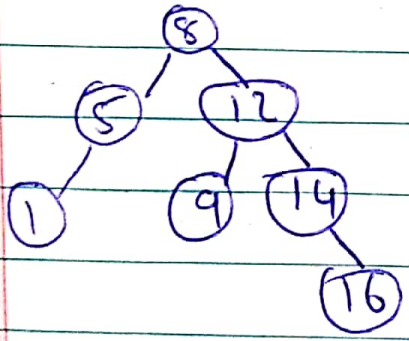
Case 2

Insert 9

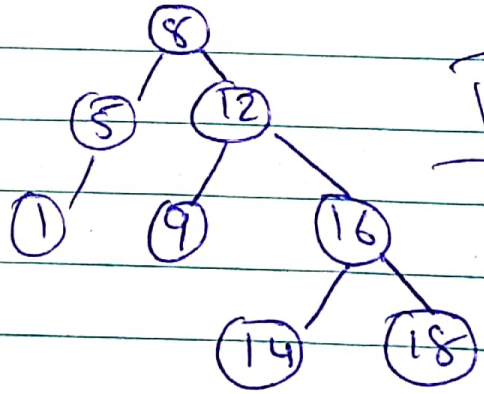


Case 2

Insert 16

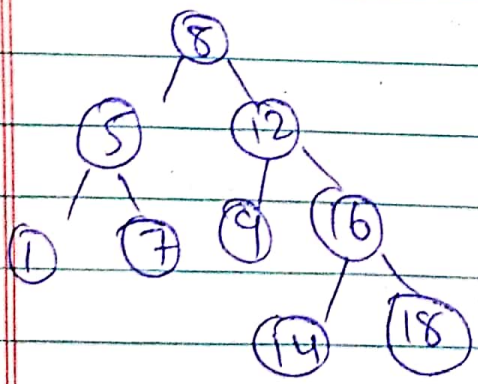


Insert 18

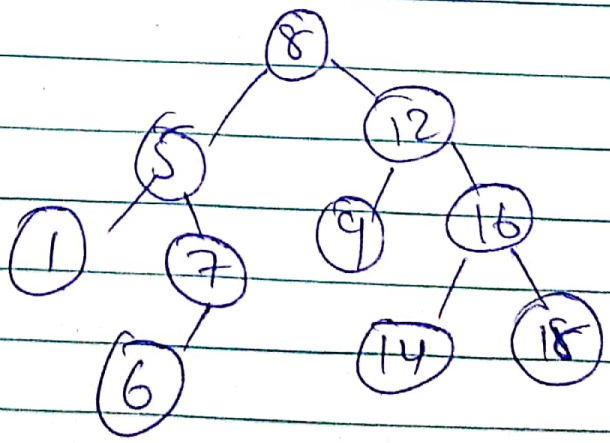


Case 4

Insert 7

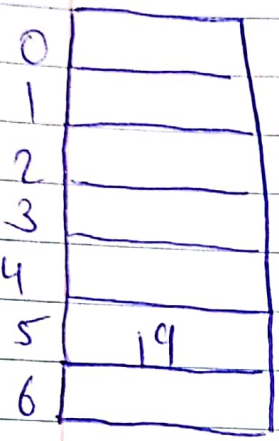


Insert 6



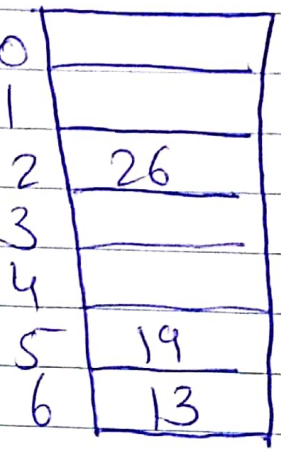
C5:

Insert 19

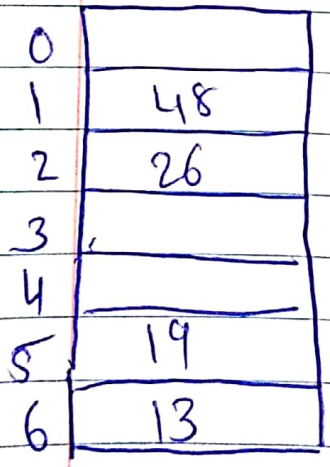


Insert 26

Insert 13



Insert 48



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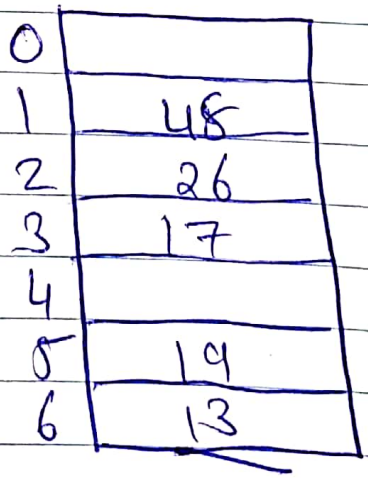
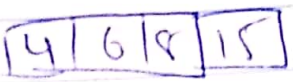
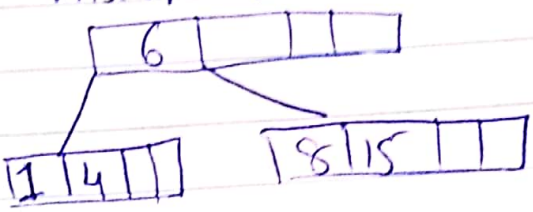


C6:

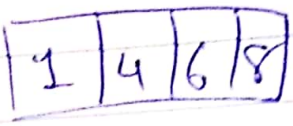
Insert 15



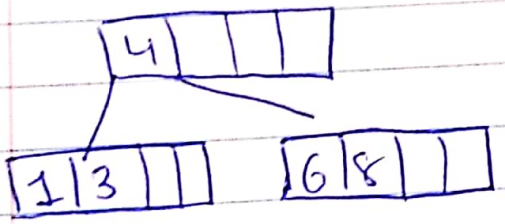
Insert 1



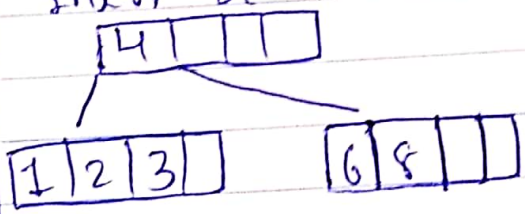
delete 15



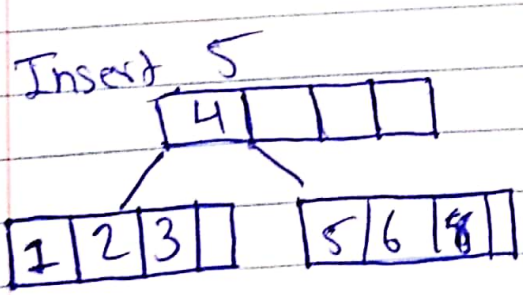
Insert 3



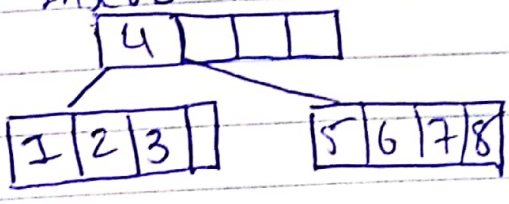
Insert 2



Insert 5



Insert 7



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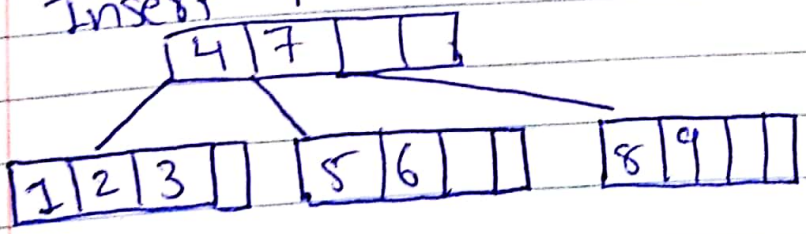

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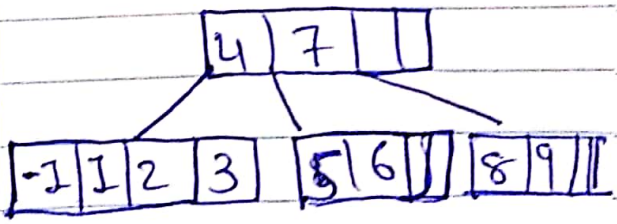

delete 5