

① Balance a tree using AVL.

Insert = 20, 10, 40, 50, 90, 30, 100

20

20  
Balanced

Insert 10

20  
10  
Balanced.

Insert 40

20  
10 40  
Balanced.

Insert 50

20  
10 40  
50  
Balanced.

Insert 90

20  
10 40  
50 90  
unbalanced.

⇒

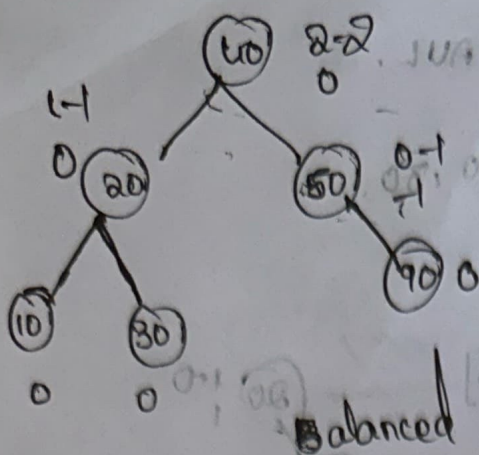
20  
10 50  
40 90  
Balanced

Insert 30

20  
10 50  
40 90  
30  
unbalanced

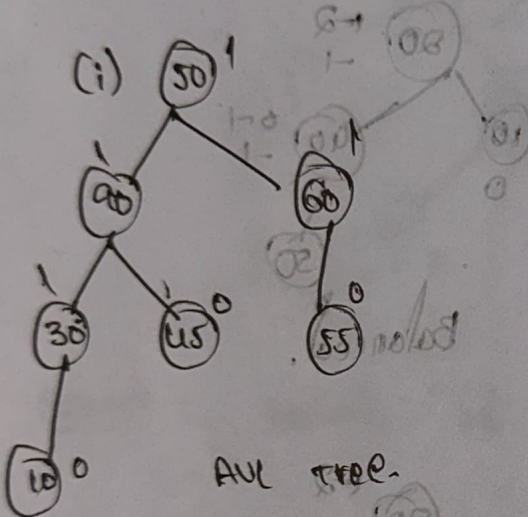
⇒

20  
10 40  
30 50 90

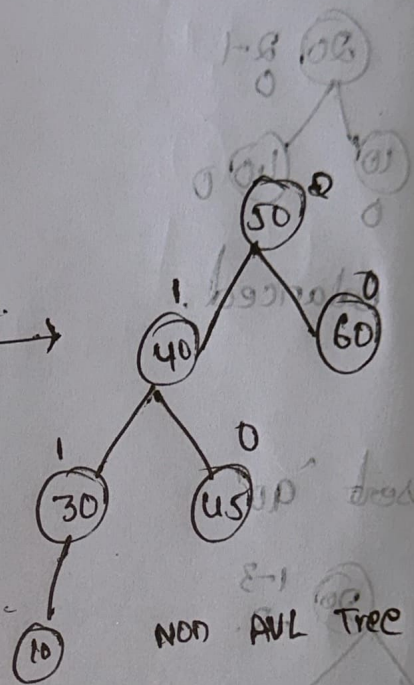


Balanced

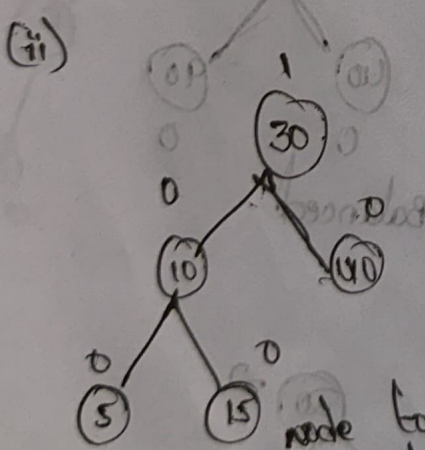
2) Deletion:



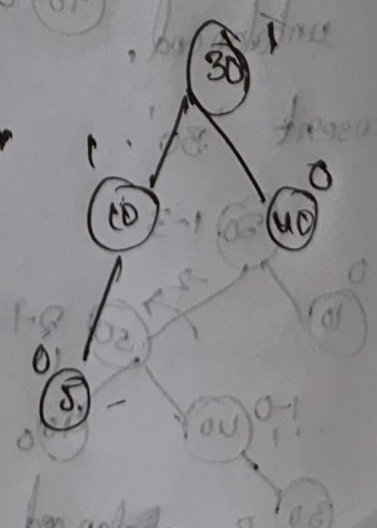
Delete.  
55



NOT AVL Tree.

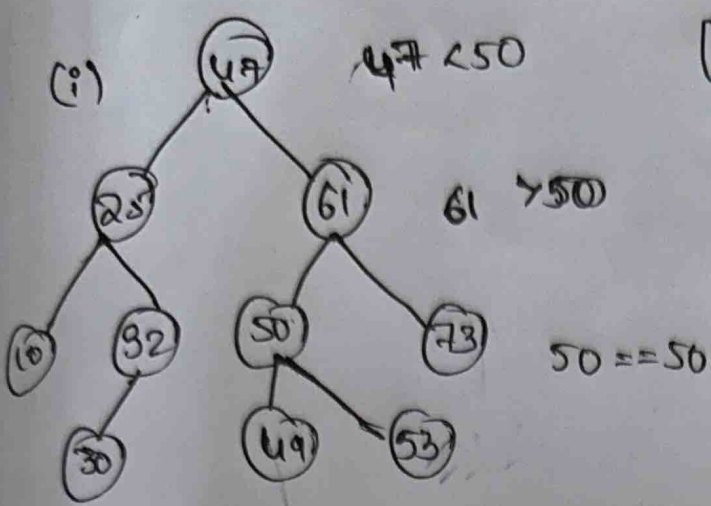


Delete.  
15



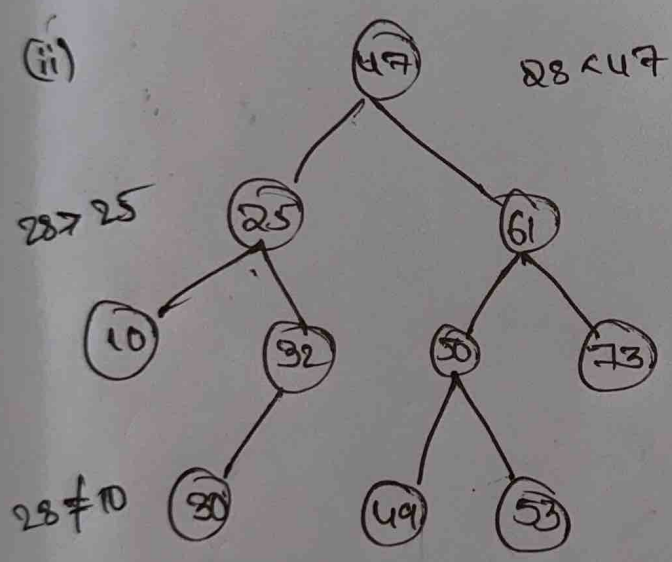
node to be deleted

### ③ searching :



search = 50

→ 50 is found.



search = 28

→ 28 is found.