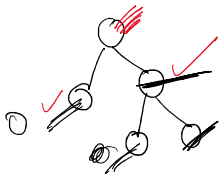
Almost Complete Binary Tree.

Leaf nodes – Nodes with 0 children.

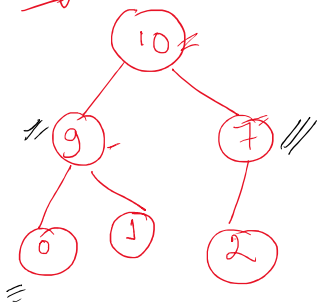
Non-leaf → 1/2 children.



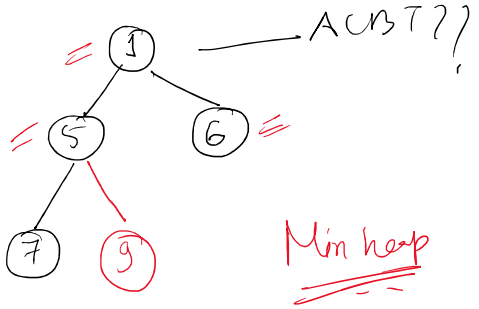
Almost complete Binary Tree.

HEAP –
1. Almost Complete BT.
2. Max heap (Parents > Children)
   Min heap (Parents < Children)

Max Heap Eg –

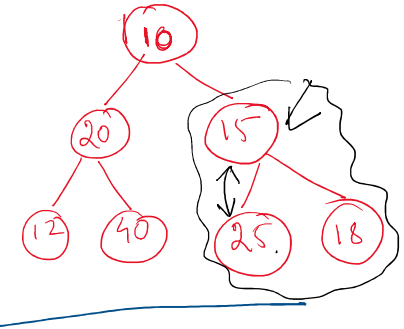


Minheap (Parent < child)



Min heap

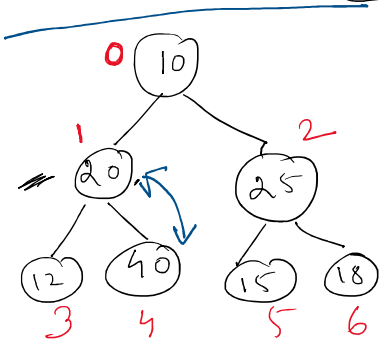
Heapify – 10 20 15 12 40 25 18.

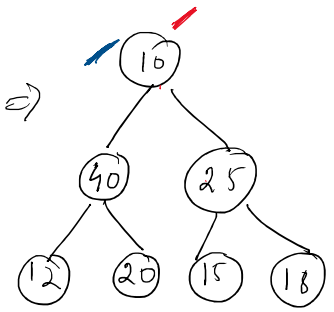


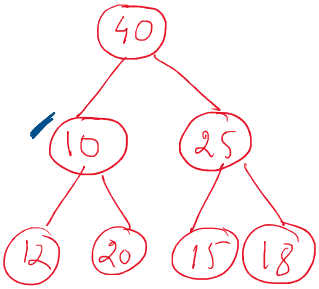
→ Convert it to Max heap.

→ Start from last non-leaf node.

Cond", parent.val > child.value.

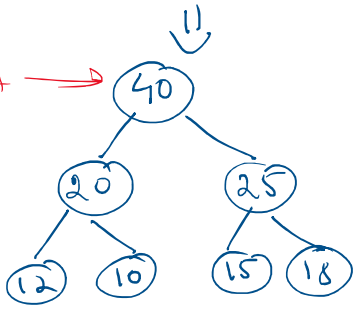






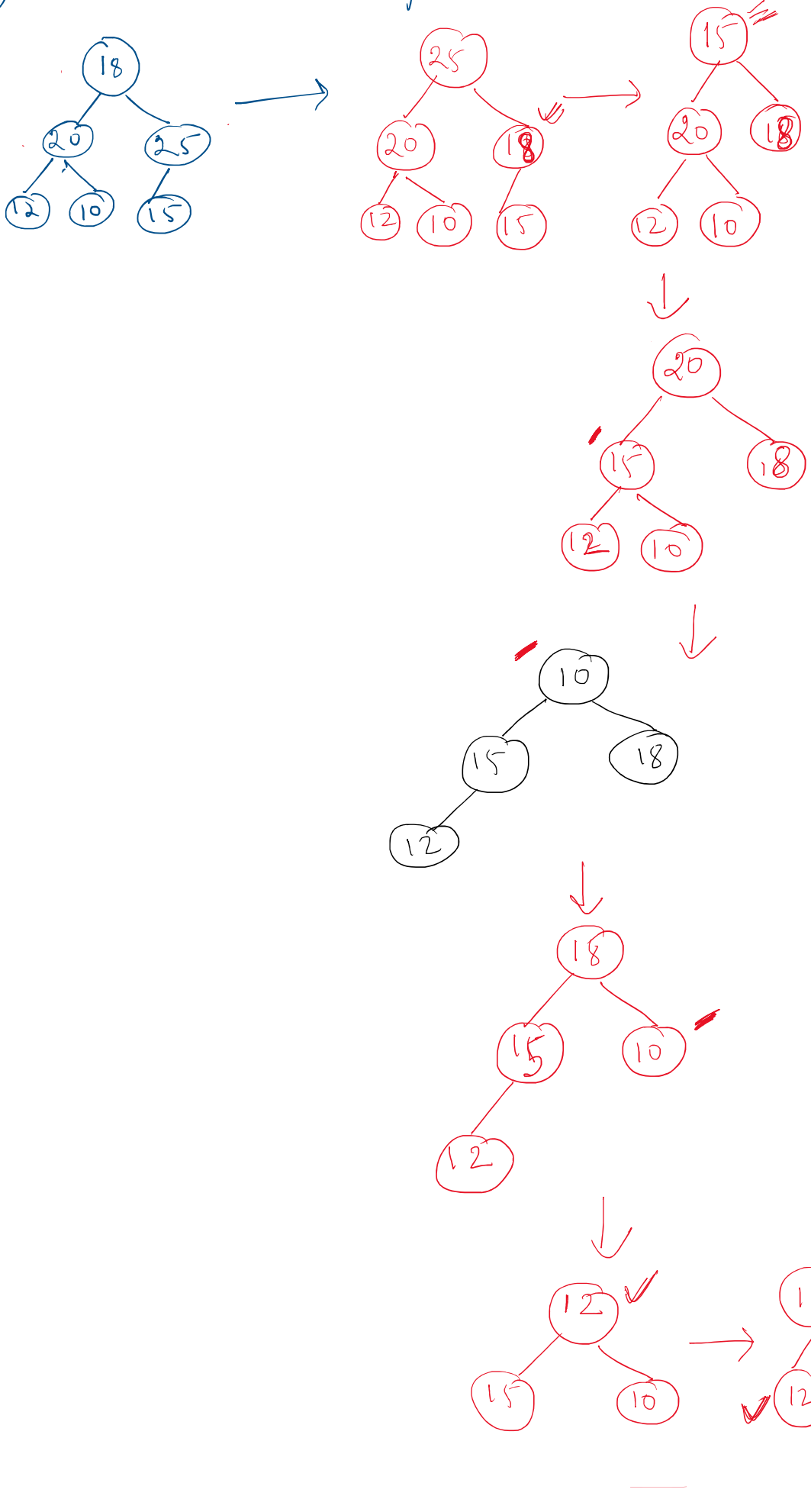
Sorting – 40 25 20 18 15 12 10

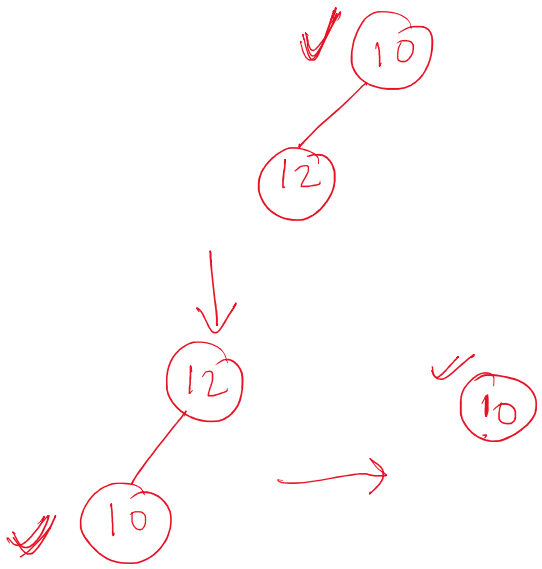
Root →



(1) Root node → value → अलग से लिखो

(2) Root node → value ≡ Last leaf node → value.





TC → O(nlogn)

SC → O(1).