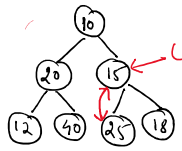
Heap Sort -

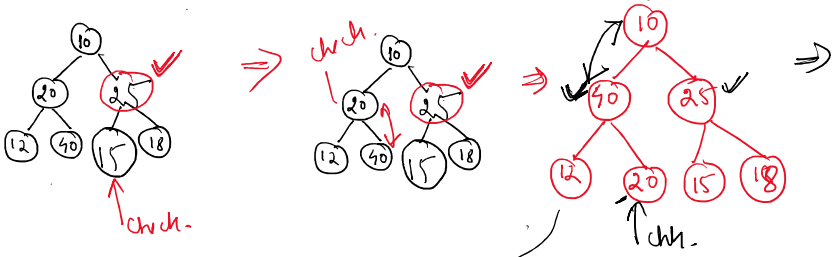
10 20 15 12 40 25 18.

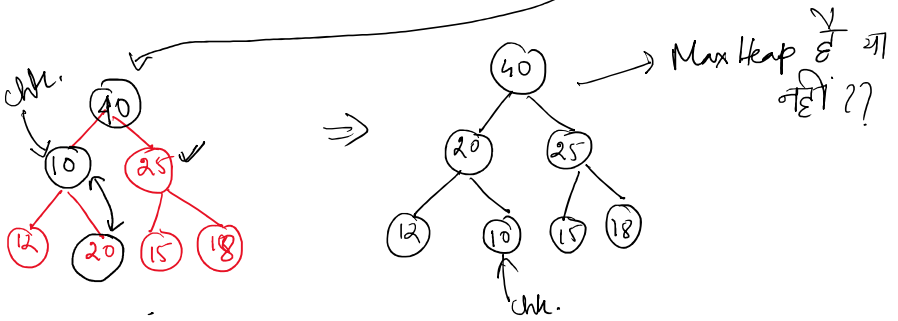
① Array ~~to~~ → convert into Max/Min heap. (use heapify).

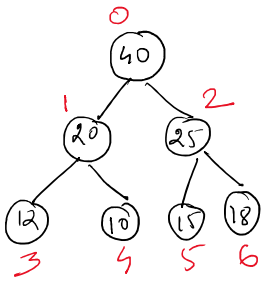
②




Heapify →
Start from last non-leaf node.



→ Find Sorted order.

| 40 | 20 | 25 | 12 | 10 | 15 | 18 |
|---|---|---|---|---|---|---|
| 0 | 1 | 2 | 3 | 4 | 5 | 6 |

Steps -

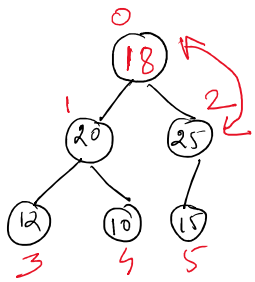
① Root value को अलग से Store करो।

② Root. value = Last node value.

③ Last node को Delete.

④ Heapify Root.

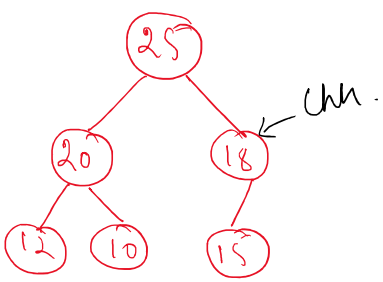
⇓ Temp = 40



| 18 | 20 | 25 | 12 | 10 | 15 | 40 |
|---|---|---|---|---|---|---|
| 0 | 1 | 2 | 3 | 4 | 5 | 6 |

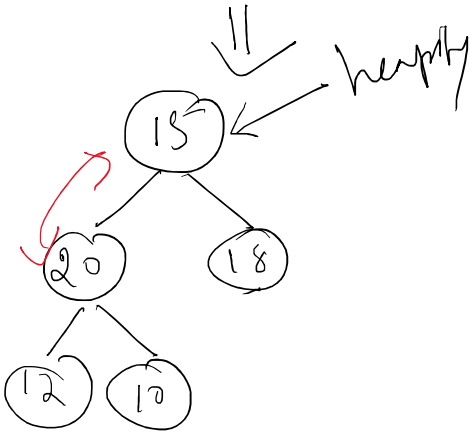
6 → Sorted.

⇓



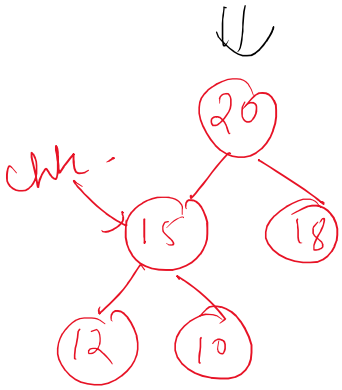

25 20 18 12 10 15 40
sorted.

Temp = 25.



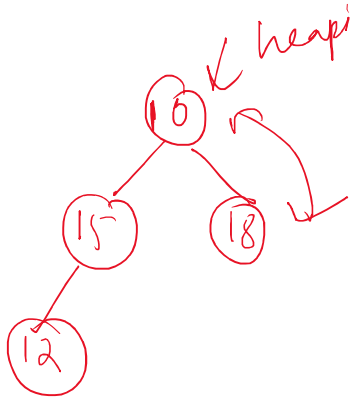

15 20 18 12 10 25 40

sorted.



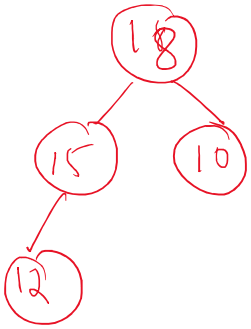

20 15 18 12 10 25 40

Sorted.



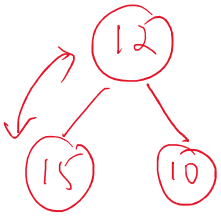

10 15 18 12 20 25 40.

sorted.



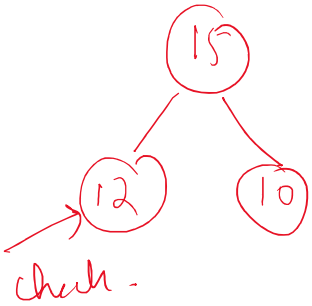

18 15 10 12 20 25 40

sorted.



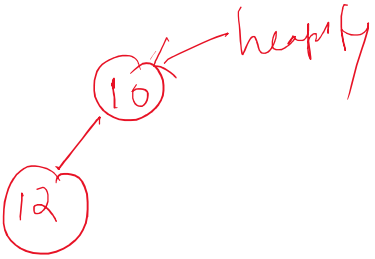

12 15 10 18 20 25 40

sorted.



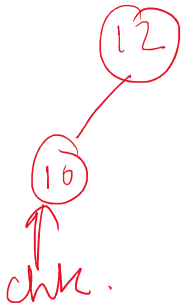

15 12 10 | 18 20 25 40

sorted.




10 12 | 15 18 20 25 40

sorted.




12 10 | 15 18 20 25 40

sorted.

10 12 15 18 20 25 40

sorted.