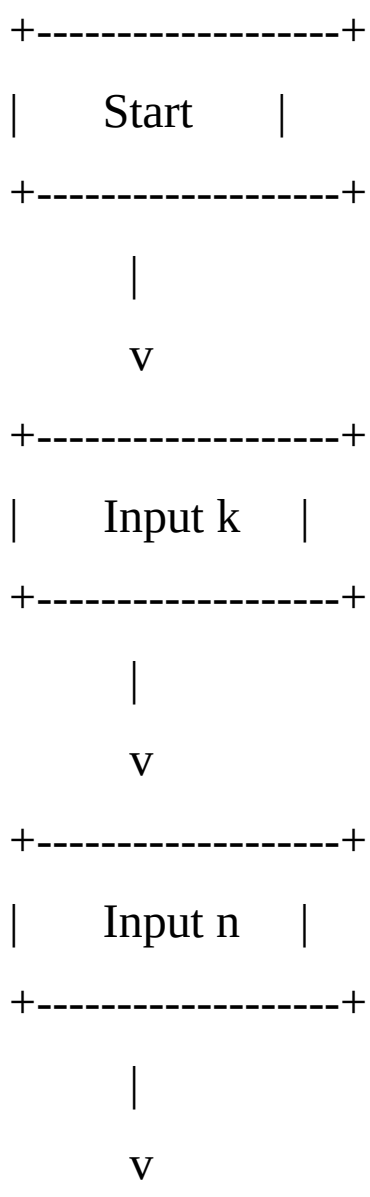
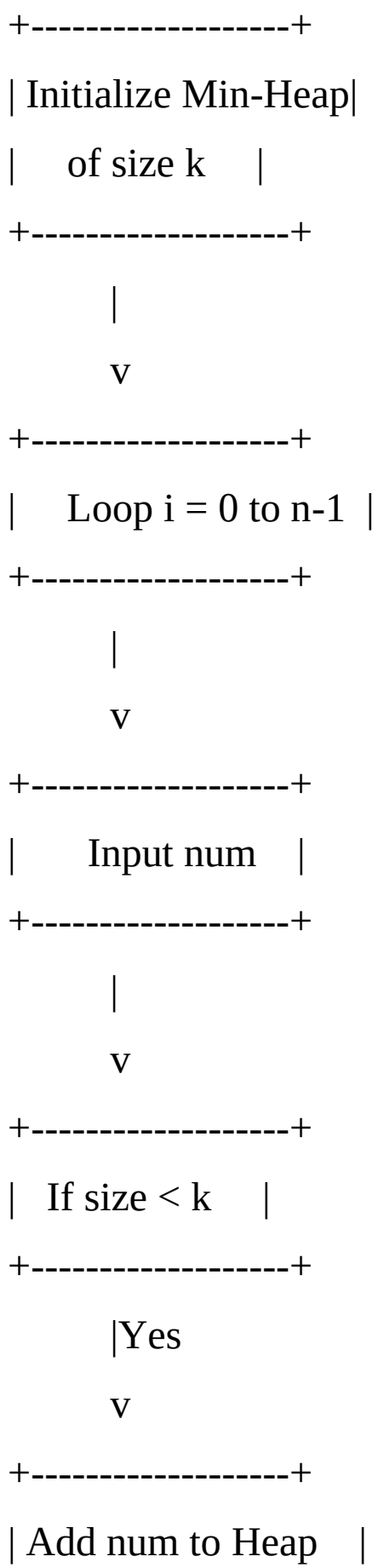
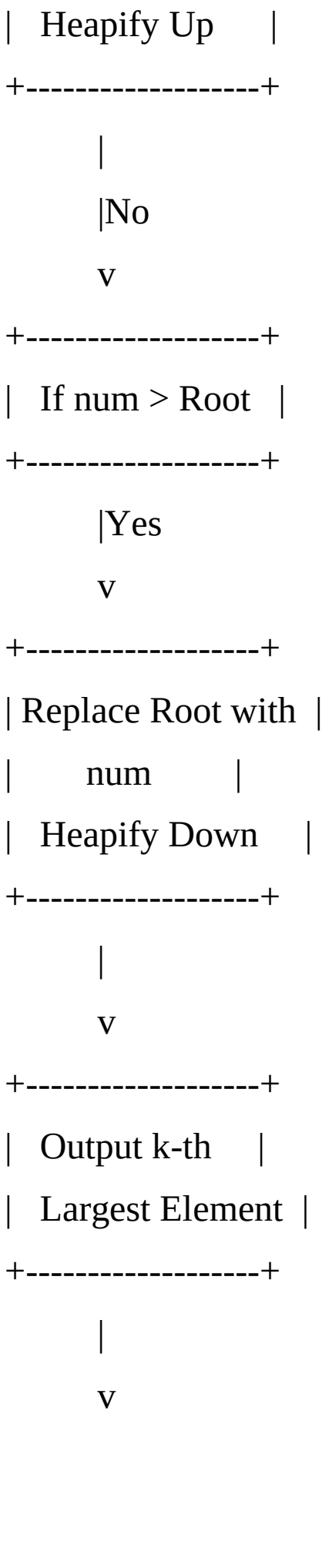
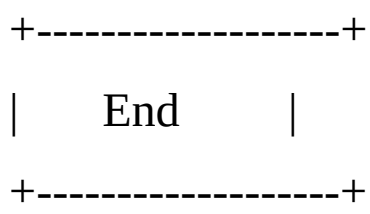
❖ Kth Largest Element:

- Explanation- The problem involves finding the k-th largest element in a dynamic stream of integers. As each number is received, it is processed to maintain a Min-Heap of size k. Once all elements have been added, the root of the Min-Heap represents the k-th largest element in the stream.
- Time Complexity- O(nlogk)
- Space Complexity- O(k)
- Flowchart-




Initialize Min-Heap
of size k
Loop i = 0 to n-1
Input num
If size < k
Yes
Add num to Heap


| Heapify Up |
|No
v
| If num > Root |
|Yes
v
| Replace Root with |
| num |
| Heapify Down |
| Output k-th |
| Largest Element |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