

❖ MaxHeap:

- Explanation- The problem is to implement a Max-Heap data structure using an array, which allows efficient storage and retrieval of elements such that the maximum value is always at the root. The key operations include inserting new elements, extracting the maximum value without removing it, and displaying the current elements in the heap. This implementation provides a way to manage priorities in a dynamic list efficiently.

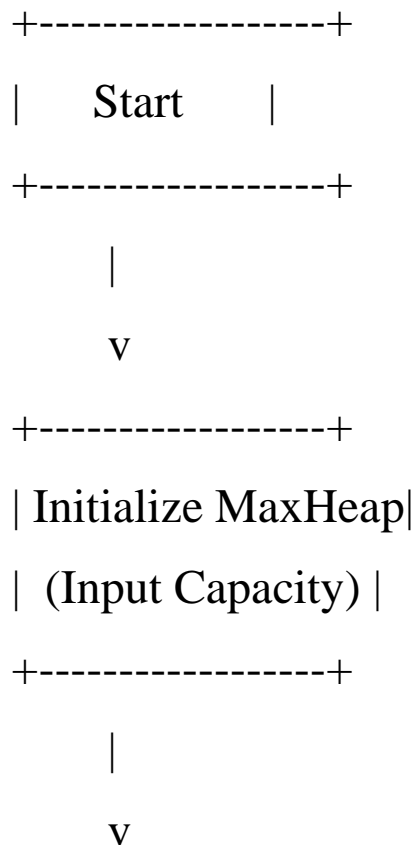
- Time Complexity- Insertion: $O(\log n)$

Extract Max: $O(1)$

Display: $O(n)$

- Space Complexity- $O(n)$

- Flowchart-



| Input Element| | Call extractMax | | Display Elements |
| End |

| (Element) | | Display max | +-----+ +-----
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| Heapify Up |

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