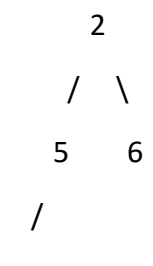
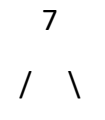
Merge Two Binary Min Heaps

Given two binary min heaps as arrays, merge the given heaps to form a new min heap.

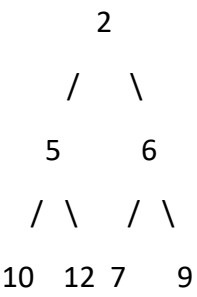
Example: Min Heap 1: [2,5,6,10]



Min Heap 2: [7,12,9]



Output: [2, 5, 6, 10, 12, 7, 9]



Approach 1: Function to merge two min-heaps represented by vectors a and b

- **Function Purpose:** To merge two min heaps represented by vectors 'a' and 'b' into a single min heap.
- **Explanation:**
    - The **mergeHeaps** function takes two min heaps represented by vectors 'a' and 'b' along with their sizes 'n' and 'm' as input.
    - It creates a new vector 'ans' to hold the merged min heap.
    - The elements from heap 'a' are copied into 'ans' first, followed by elements from heap 'b'.

    - After copying all the elements, min-heapify is performed on 'ans' starting from the last non-leaf node and working up to the root to maintain the min-heap property.
    - The merged min heap 'ans' is returned.
- **Time Complexity: O(n + m) for merging the two heaps and O((n + m) log(n + m)) for the min-heapify step.**
- **Space Complexity: O(n + m) for the merged min heap.**