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]

2

/ \

5 6

/

10

Min Heap 2: [7,12,9]

7

/ \

12 9

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

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.**