Merge Without Extra Space

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Hard Accuracy: 36.41% Submissions: 96947 Points: 8

Given two sorted arrays arr1[] of size N and arr2[] of size M. Each array is sorted in non-decreasing order. Merge the two arrays into one sorted array in non-decreasing order without using any extra space.

Example 1:

Input:
N = 4, M = 5
arr1[] = {1, 3, 5, 7}
arr2[] = {0, 2, 6, 8, 9}
Output: 0 1 2 3 5 6 7 8 9
Explanation: Since you can't use any extra space, modify the given arrays to form arr1[] = {0, 1, 2, 3}
arr2[] = {5, 6, 7, 8, 9}

Example 2:

Input:
N = 2, M = 3
arr1[] = {10, 12}
arr2[] = {5, 18, 20}
Output: 5 10 12 18 20
Explanation: Since you can't use any extra space, modify the given arrays to form arr1[] = {5, 10}
arr2[] = {12, 18, 20}

Your Task:

You don't need to read input or print anything. Complete the function **merge()** which takes the two arrays arr1[]**,** arr2[] and their sizes n and m, as input parameters. The function does not return anything. Use the given arrays to sort and merge arr1[] and arr2[] in-place.

Note: The generated output will print all the elements of arr1[] followed by all the elements of arr2[].

From <https://practice.geeksforgeeks.org/problems/merge-two-sorted-arrays5135/1>

Expected Time Complexity: O((n+m)*log(n+m))
Expected Auxiliary Space: O(1)

Constraints:
$1 <= N, M <= 5*10^4$
$0 <= arr1_i, arr2_i <= 10^6$

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