**Merge two sorted arrays**

[**https://www.geeksforgeeks.org/merge-two-sorted-arrays/**](https://www.geeksforgeeks.org/merge-two-sorted-arrays/)

* Difficulty Level : [Easy](https://www.geeksforgeeks.org/easy/)
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Given two sorted arrays, the task is to merge them in a sorted manner.  
**Examples:**

**Input**: arr1[] = { 1, 3, 4, 5}, arr2[] = {2, 4, 6, 8}   
**Output**: arr3[] = {1, 2, 3, 4, 4, 5, 6, 8}

**Input**: arr1[] = { 5, 8, 9}, arr2[] = {4, 7, 8}   
**Output**: arr3[] = {4, 5, 7, 8, 8, 9}

[Recommended: Please solve it on “***PRACTICE*** ” first, before moving on to the solution.](https://practice.geeksforgeeks.org/problems/merge-two-sorted-arrays/0) 

**Naive Approach:**

It is the brute force method to do the same. Take all the elements of arr1 and arr2 in arr3. Then simply sort the arr3.

The implementation of above approach is:

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| --- |
| // Java program to merge two sorted arrays/  import java.util.\*;    public class GFG {      // Driver code      public static void main(String[] args) {          int arr1[] = {1, 3, 5, 7};          int n1 = arr1.length;            int arr2[] = {2, 4, 6, 8};          int n2 = arr2.length;            int arr3[] = new int[n1 + n2];          mergeArrays(arr1, arr2, n1, n2, arr3);            System.out.println("Array after merging");          for (int i=0; i < n1+n2; i++)              System.out.print(arr3[i] + " ");        }        public static void mergeArrays(int[] arr1, int[] arr2, int n1, int n2, int[] arr3){          int i = 0;          int j = 0;          int k = 0;            // traverse the arr1 and insert its element in arr3          while(i < n1){           arr3[k++] = arr1[i++];          }            // now traverse arr2 and insert in arr3          while(j < n2){           arr3[k++] = arr2[j++];          }            // sort the whole array arr3          Arrays.sort(arr3);      }  }    // This code is contributed by Tapesh(tapeshdua420) |

**Output**

Array after merging

1 2 3 4 5 6 7 8