

Solution 1

Solution 2

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1  # Copyright © 2020 AlgoExpert, LLC. All rights reserved.
2
3  # O(nk) time | O(n + k) space - where n is the total
4  # number of array elements and k is the number of arrays
5  ▾ def mergeSortedArrays(arrays):
6      sortedList = []
7      elementIdxs = [0 for array in arrays]
8  ▾      while True:
9          smallestItems = []
10 ▾          for arrayIdx in range(len(arrays)):
11              relevantArray = arrays[arrayIdx]
12              elementIdx = elementIdxs[arrayIdx]
13 ▾              if elementIdx == len(relevantArray):
14                  continue
15              smallestItems.append({"arrayIdx": arrayIdx, "num": relevantArray[elementIdx]})
16 ▾          if len(smallestItems) == 0:
17              break
18              nextItem = getMinValue(smallestItems)
19              sortedList.append(nextItem["num"])
20              elementIdxs[nextItem["arrayIdx"]] += 1
21          return sortedList
22
23
24 ▾ def getMinValue(items):
25     minValueIdx = 0
26 ▾     for i in range(1, len(items)):
27 ▾         if items[i]["num"] < items[minValueIdx]["num"]:
28             minValueIdx = i
29     return items[minValueIdx]
```

