

Solution 1	Solution 2
<pre>1 // Copyright © 2020 AlgoExpert, LLC. All rights reserved. 2 3 ▾ class Program { 4 ▾ struct Item { 5 var arrayIdx: Int 6 var num: Int 7 } 8 9 // O(nk) time O(n + k) space - where where n is the total 10 // number of array elements and k is the number of arrays 11 ▾ static func mergeSortedArrays(_ arrays: [[Int]]) -> [Int] { 12 var sortedList = [Int]() 13 var elementIdxs = [Int]() 14 ▾ for el in arrays { 15 elementIdxs.append(0) 16 } 17 18 ▾ while true { 19 var smallestItems = [Item]() 20 ▾ for arrayIdx in 0 ..< arrays.count { 21 var relevantArray = arrays[arrayIdx] 22 var elementIdx = elementIdxs[arrayIdx] 23 ▾ if elementIdx == relevantArray.count { 24 continue 25 } 26 smallestItems.append(Item(arrayIdx: arrayIdx, num: relevantArray[elementIdx])) 27 } 28 29 ▾ if smallestItems.count == 0 { 30 break 31 } 32 var nextItem = getMinValue(&smallestItems) 33 sortedList.append(nextItem.num) 34 elementIdxs[nextItem.arrayIdx] += 1 35 } 36 return sortedList 37 } 38 39 ▾ static func getMinValue(_ items: inout [Item]) -> Item { 40 var minValueItem = items[0] 41 ▾ for i in 1 ..< items.count { 42 ▾ if items[i].num < minValueItem.num { 43 minValueItem = items[i] 44 } 45 } 46 return minValueItem 47 } 48 } 49</pre>	

