AlgoExpert   Quad Layout   JavaScript   14px   Sublime   Monokai   00:00:0

Our Solution(s)   Run Code

Solution 1   Solution 2

```
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// Best: O(nlog(n)) time | O(n) space
// Average: O(nlog(n)) time | O(n) space
// Worst: O(nlog(n)) time | O(n) space
function mergeSort(array) {
  if (array.length <= 1) return array;
  const auxiliaryArray = array.slice();
  mergeSortHelper(array, 0, array.length - 1, auxiliaryArray);
  return array;
}

function mergeSortHelper(mainArray, startIdx, endIdx, auxiliaryArray)
  if (startIdx === endIdx) return;
  const middleIdx = Math.floor((startIdx + endIdx) / 2);
  mergeSortHelper(auxiliaryArray, startIdx, middleIdx, mainArray);
  mergeSortHelper(auxiliaryArray, middleIdx + 1, endIdx, mainArray);
  doMerge(mainArray, startIdx, middleIdx, endIdx, auxiliaryArray);
}

function doMerge(mainArray, startIdx, middleIdx, endIdx, auxiliaryArra
  let k = startIdx;
  let i = startIdx;
  let j = middleIdx + 1;
  while (i <= middleIdx && j <= endIdx) {
    if (auxiliaryArray[i] <= auxiliaryArray[j]) {
      mainArray[k++] = auxiliaryArray[i++];
    } else {
      mainArray[k++] = auxiliaryArray[j++];
    }
  }
  while (i <= middleIdx) {
    mainArray[k++] = auxiliaryArray[i++];
```

Your Solutions   Run Code

Solution 1   Solution 2   Solution 3

```
function mergeSort(array) {
  // Write your code here.
}

// Do not edit the line below.
exports.mergeSort = mergeSort;
```

Our Tests

[illegible]

Custom Output   Submit Code

```
[illegible]
```

Run or submit code when you're ready.