00:00:00 Sublime AlgoExpert **Quad Layout** JavaScript 12px Monokai

Run Code Scratchpad Our Solution(s) Video Explanation

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Solution 1 Solution 2
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Prompt

```
1\, // Copyright @ 2020 AlgoExpert, LLC. All rights reserved.
 3 // Best: O(nlog(n)) time | O(nlog(n)) space
 4 // Average: O(nlog(n)) time | O(nlog(n)) space
 5 // Worst: O(nlog(n)) time | O(nlog(n)) space
 6 function mergeSort(array) {
     if (array.length <= 1) return array;</pre>
      const middleIdx = Math.floor(array.length / 2);
      const leftHalf = array.slice(0, middleIdx);
      const rightHalf = array.slice(middleIdx);
10
      return mergeSortedArrays(mergeSort(leftHalf), mergeSort(rightHalf));
12 }
13
14 function mergeSortedArrays(leftHalf, rightHalf) {
      const sortedArray = new Array(leftHalf.length + rightHalf.length);
15
16
      let k = 0;
      let i = 0;
17
18
      let j = 0;
      while (i < leftHalf.length && j < rightHalf.length) {</pre>
19
20
21
        if (leftHalf[i] <= rightHalf[j]) {</pre>
          sortedArray[k++] = leftHalf[i++];
22
        } else {
23
          sortedArray[k++] = rightHalf[j++];
24
25
26
      while (i < leftHalf.length) {</pre>
27
28
29
        sortedArray[k++] = leftHalf[i++];
      while (j < rightHalf.length) {</pre>
30
        sortedArray[k++] = rightHalf[j++];
31
32
      return sortedArray;
33 }
34
35 exports.mergeSort = mergeSort;
```