

Our Solution(s)

Run Code

Your Solutions

Run Code

Solution 1

```
1 # Copyright © 2020 AlgoExpert, LLC. All rights reserved.
2
3 # Best: O(nlog(n)) time | O(log(n)) space
4 # Average: O(nlog(n)) time | O(log(n)) space
5 # Worst: O(n^2) time | O(log(n)) space
6 def quickSort(array):
7     quickSortHelper(array, 0, len(array) - 1)
8     return array
9
10
11 def quickSortHelper(array, startIdx, endIdx):
12     if startIdx >= endIdx:
13         return
14     pivotIdx = startIdx
15     leftIdx = startIdx + 1
16     rightIdx = endIdx
17     while rightIdx >= leftIdx:
18         if array[leftIdx] > array[pivotIdx] and array[rightIdx] < arra
19             swap(leftIdx, rightIdx, array)
20         if array[leftIdx] <= array[pivotIdx]:
21             leftIdx += 1
22         if array[rightIdx] >= array[pivotIdx]:
23             rightIdx -= 1
24     swap(pivotIdx, rightIdx, array)
25     leftSubarrayIsSmaller = rightIdx - 1 - startIdx < endIdx - (rightI
26     if leftSubarrayIsSmaller:
27         quickSortHelper(array, startIdx, rightIdx - 1)
28         quickSortHelper(array, rightIdx + 1, endIdx)
29     else:
30         quickSortHelper(array, rightIdx + 1, endIdx)
31         quickSortHelper(array, startIdx, rightIdx - 1)
32
33
```

Solution 1

Solution 2

Solution 3

```
1 def quickSort(array):
2     # Write your code here.
3     pass
4
```

Our Tests

Custom Output

Submit Code

```
1 def quickSort(array):
2     # Write your code here.
3     pass
4
```

```
1 def quickSort(array):
2     # Write your code here.
3     pass
4
```

```
10 # Test, pass, 20 points
11 test_assertEqual(compare_approx(20, 10), 10, 10)
12
13 # Test, pass, 20 points
14 test_assertEqual(compare_approx(20, 10), 10, 10)
15
16 # Test, pass, 20 points
17 test_assertEqual(compare_approx(20, 10, 10), 10, 10, 10)
18
19 # Test, pass, 20 points
20 test_assertEqual(compare_approx(20, 10, 10), 10, 10, 10)
21
22 # Test, pass, 20 points
23 test_assertEqual(compare_approx(20, 10, 10), 10, 10, 10)
```

Run or submit code when you're ready.