

91. quick sort

PROGRAM:

```
def quick_sort(arr):  
    if len(arr) <= 1:  
        return arr  
    else:  
        pivot = arr[0]  
        less_than_pivot = [x for x in arr[1:] if x <= pivot]  
        greater_than_pivot = [x for x in arr[1:] if x > pivot]  
        return quick_sort(less_than_pivot) + [pivot] + quick_sort(greater_than_pivot)
```

Example

```
arr = [29, 10, 14, 37, 13]  
sorted_arr = quick_sort(arr)  
print(sorted_arr)
```

OUTPUT:

```
[10, 13, 14, 29, 37]
```

```
=== Code Execution Successful ===
```

TIME COMPLEXITY: $O(N \log N)$