

KARTHIK J 2024-IT ▾**K2****Started on** Friday, 3 October 2025, 1:47 PM**State** Finished**Completed on** Friday, 3 October 2025, 1:49 PM**Time taken** 1 min 50 secs**Marks** 1.00/1.00**Grade** **10.00** out of 10.00 (**100%**)

Question 1 | Correct Mark 1.00 out of 1.00

Write a Program to Implement the Quick Sort Algorithm

Input Format:

The first line contains the no of elements in the list-n

The next n lines contain the elements.

Output:

Sorted list of elements

For example:

Input	Result
5	12 34 67 78 98
67 34 12 98 78	

Answer:

```

1 #include <stdio.h>
2 void swap(int* a, int* b) {
3     int temp = *a;
4     *a = *b;
5     *b = temp;
6 }
7 int partition(int arr[], int low, int high) {
8     int pivot = arr[high];
9     int i = low - 1;
10
11    for (int j = low; j < high; j++) {
12        if (arr[j] < pivot) {
13            i++;
14            swap(&arr[i], &arr[j]);
15        }
16    }
17
18    swap(&arr[i + 1], &arr[high]);
19    return i + 1;
20 }
21 void quickSort(int arr[], int low, int high) {
22     if (low < high) {
23         int pi = partition(arr, low, high);
24
25         quickSort(arr, low, pi - 1);
26         quickSort(arr, pi + 1, high);
27     }
28 }
29
30 int main() {
31     int n;
32     scanf("%d", &n);
33
34     int arr[n];
35     for (int i = 0; i < n; i++) {
36         scanf("%d", &arr[i]);
37     }
38
39     quickSort(arr, 0, n - 1);
40
41     for (int i = 0; i < n; i++) {
42         printf("%d ", arr[i]);
43     }
44
45     return 0;
46 }
```

	Input	Expected	Got	
✓	5 67 34 12 98 78	12 34 67 78 98	12 34 67 78 98	✓
✓	10 1 56 78 90 32 56 11 10 90 114	1 10 11 32 56 56 78 90 90 114	1 10 11 32 56 56 78 90 90 114	✓
✓	12 9 8 7 6 5 4 3 2 1 10 11 90	1 2 3 4 5 6 7 8 9 10 11 90	1 2 3 4 5 6 7 8 9 10 11 90	✓

Passed all tests! ✓

Correct

Marks for this submission: 1.00/1.00.

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