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Started on	Friday, 4 October 2024, 1:39 PM
State	Finished
Completed on	Friday, 4 October 2024, 1:42 PM
Time taken	3 mins 6 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 67 34 12 98 78	12 34 67 78 98

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     for (int j = low; j < high; j++) {
11         if (arr[j] <= pivot) {
12             i++;
13             swap(&arr[i], &arr[j]);
14         }
15     }
16     swap(&arr[i + 1], &arr[high]);
17     return i + 1;
18 }
19 void quickSort(int arr[], int low, int high) {
20     if (low < high) {
21         int pi = partition(arr, low, high);
22         quickSort(arr, low, pi - 1);
23         quickSort(arr, pi + 1, high);
24     }
25 }
26 int main() {
27     int n;
28     scanf("%d", &n);
29
30     int arr[n];
31     for (int i = 0; i < n; i++) {
32         scanf("%d", &arr[i]);
33     }
34
35     quickSort(arr, 0, n - 1);
36
37     for (int i = 0; i < n; i++) {
38         printf("%d ", arr[i]);
39     }
40
41     return 0;
42 }
43

```

	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.

[◀ 4-Two Elements sum to x](#)

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