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<b>Started on</b>	Tuesday, 8 October 2024, 2:16 PM
<b>State</b>	Finished
<b>Completed on</b>	Tuesday, 8 October 2024, 2:21 PM
<b>Time taken</b>	4 mins 25 secs
<b>Marks</b>	1.00/1.00
<b>Grade</b>	<b>10.00</b> out of 10.00 ( <b>100%</b> )

## 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
3  void swap(int *a, int *b) {
4      int temp = *a;
5      *a = *b;
6      *b = temp;
7  }
8
9  int partition(int arr[], int low, int high) {
10     int pivot = arr[high];
11     int i = low - 1;
12
13     for (int j = low; j < high; j++) {
14         if (arr[j] <= pivot) {
15             i++;
16             swap(&arr[i], &arr[j]);
17         }
18     }
19     swap(&arr[i + 1], &arr[high]);
20     return i + 1;
21 }
22
23 void quickSort(int arr[], int low, int high) {
24     if (low < high) {
25         int pi = partition(arr, low, high);
26         quickSort(arr, low, pi - 1);
27         quickSort(arr, pi + 1, high);
28     }
29 }
30
31 void printArray(int arr[], int size) {
32     for (int i = 0; i < size; i++)
33         printf("%d ", arr[i]);
34     printf("\n");
35 }
36
37 int main() {
38     int n;
39     scanf("%d", &n);
40     int arr[n];
41     for(int i=0; i<n; i++){
42         scanf("%d", &arr[i]);
43     }
44
45     quickSort(arr, 0, n - 1);
46     printArray(arr, n);
47     return 0;
48 }
49
50

```

	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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1-DP-Playing with Numbers ▶