

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 quicksort(int a[],int low,int high){
3     int i,j,p,temp;
4     if(low<high){
5         i=low+1;
6         p=low;
7         j=high;
8         while(i<=j)
9         {
10             while(i<=high && a[i]<=a[p])
11                 i++;
12             while (a[j]>a[p])
13                 j--;
14             if(i<j)
15             {
16                 temp=a[i];
17                 a[i]=a[j];
18                 a[j]=temp;
19             }
20         }
21         temp=a[p];
22         a[p]=a[j];
23         a[j]=temp;
24         quicksort(a,low,j-1);
25         quicksort(a,j+1,high);
26     }
27 }
28 int main()
29 {
30     int n;
31     scanf("%d",&n);
32     int arr[n];
33     for(int i=0;i<n;i++)
34     {
35         scanf("%d",&arr[i]);
36     }
37     quicksort(arr,0,n-1);
38     for(int i=0;i<n;i++)
39     {
40         printf("%d ",arr[i]);
41     }
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! ✓