RAJALAKSHMI ENGINEERING COLLEGE

CHANDRU G S 2024-CSE C2

Started on	Thursday, 23 October 2025, 10:56 PM
State	Finished
Completed on	Tuesday, 4 November 2025, 7:02 PM
Time taken	11 days 20 hours
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:

```c
#include<stdio.h>
void swap(int*a,int*b){
    int t=*a;
    *a=*b;
    *b=t;
}
int partition(int arr[],int l,int r){
    int p=arr[r];
    int i=l-1;
    for(int j=l;j<=r-1;j++){
        if(arr[j]<p){
            i++;
            swap(&arr[i],&arr[j]);
        }
    }
    swap(&arr[r],&arr[i+1]);
    return (i+1);

}
void quickSort(int arr[],int l, int r){
    if(l<r){
        int m=partition(arr,l,r);
        quickSort(arr,l,m-1);
        quickSort(arr,m+1,r);

    }
}
int main(){
    int n;
    scanf("%d",&n);
    int arr[n];
    for(int i=0;i<n;i++){
        scanf("%d",&arr[i]);
    }
    quickSort(arr,0,n-1);
    for(int i=0;i<n;i++){
        printf("%d ",arr[i]);
    }
}
```

	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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