RAJALAKSHMI ENGINEERING COLLEGE

VISAANTH M 2024-IT

V2

Started on	Wednesday, 17 September 2025, 2:40 PM
State	Finished
Completed on	Wednesday, 17 September 2025, 2:51 PM
Time taken	11 mins 21 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:

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

void quickSort(int arr[], int low, int high)
{
    if (low < high)
    {
        int pi = partition(arr, low, high);
        quickSort(arr, low, pi - 1);
        quickSort(arr, pi + 1, high);
    }
}

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]);
        if (i < n - 1) printf(" ");
    }
    printf("\n");
```

```
47      return 0;
48  }
49
```

	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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