Write C++ code for Quick sort

#include <iostream>

using namespace std;

int partition(int arr[], int start, int end)

{

    int pivot = arr[start];

    int count = 0;

    for (int i = start + 1; i <= end; i++) {

        if (arr[i] <= pivot)

            count++;

    }

    // Giving pivot element its correct position

    int pivotIndex = start + count;

    swap(arr[pivotIndex], arr[start]);

    // Sorting left and right parts of the pivot element

    int i = start, j = end;

    while (i < pivotIndex && j > pivotIndex) {

        while (arr[i] <= pivot) {

            i++;

        }

        while (arr[j] > pivot) {

            j--;

        }

        if (i < pivotIndex && j > pivotIndex) {

            swap(arr[i++], arr[j--]);

        }

    }

    return pivotIndex;

}

void quickSort(int arr[], int start, int end)

{

    // base case

    if (start >= end)

        return;

    // partitioning the array

    int p = partition(arr, start, end);

    // Sorting the left part

    quickSort(arr, start, p - 1);

    // Sorting the right part

    quickSort(arr, p + 1, end);

}

int main()

{

    int arr[] = { 9, 3, 4, 2, 1, 8 };

    int n = 6;

    quickSort(arr, 0, n - 1);

    for (int i = 0; i < n; i++) {

        cout << arr[i] << " ";

    }

    return 0;

}