QUICK SORT :

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# include <iostream>
using namespace std;
// quick sort sorting algorithm
int Partition(int arr[], int s, int e)
{
 int pivot = arr[e];
 int pIndex = s;

 for(int i = s;i<e;i++)
 {
 if(arr[i]<pivot)
 {
 int temp = arr[i];
 arr[i] = arr[pIndex];
 arr[pIndex] = temp;
 pIndex++;
 }
 }

 int temp = arr[e];
 arr[e] = arr[pIndex];
 arr[pIndex] = temp;

 return pIndex;
}

void QuickSort(int arr[], int s, int e)
{
 if(s<e)
 {
 int p = Partition(arr,s, e);
 QuickSort(arr, s, (p-1));  // recursive QS call for left partition
 QuickSort(arr, (p+1), e);  // recursive QS call for right partition
 }
}

int main()
{

 int size=0;
 cout<<"Enter Size of array: "<<endl;
 cin>>size;
 int myarray[size];

 cout<<"Enter "<<size<<" integers in any order: "<<endl;
 for(int i=0;i<size;i++)
 {
 cin>>myarray[i];
 }
 cout<<"Before Sorting"<<endl;
 for(int i=0;i<size;i++)
 {
 cout<<myarray[i]<<" ";
 }
 cout<<endl;

 QuickSort(myarray,0,(size-1));  // quick sort called

 cout<<"After Sorting"<<endl;
 for(int i=0;i<size;i++)
 {
 cout<<myarray[i]<<" ";
 }

 return 0;
}
```