QUICK SORT

CODE:

```
#include <bits/stdc++.h>
using namespace std;

int partition(int arr[],int low,int high)
{
//choose the pivot

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 size;
   cout<<"Enter the number of elements: ";
   cin>>size;
   int arr[size];
   for (int i=0; i<size; i++){
      cout<<"Enter the element: ";
      cin>>arr[i];
   }
   // Function call
   quickSort(arr,0,size-1);
   //Print the sorted array
   cout<<"Sorted Array\n";
   for(int i=0;i<size;i++)
   {
       cout<<arr[i]<<" ";
   }
   return 0;
}
```

OUTPUT:

Output

```
/tmp/0oC5UD0aef.o
Enter the number of elements: 5
Enter the element: 56
Enter the element: 43
Enter the element: 15
Enter the element: 28
Enter the element: 30
Sorted Array
15 28 30 43 56
```