//merge Sort

public class Main

{

public static int arr[]={3,1,2,4,1,5,2,6,4};

public static int count=0;

public static void swap(int i,int j){

int temp=arr[i];

arr[i]=arr[j];

arr[j]=temp;

}

public static int partition(int low,int high){

int pivot=arr[low];

int i=low;

int j=high;

while(i<j){

while(arr[i]<=pivot&&i<=high-1) i++;

while(arr[j]>pivot&&j>=low+1) j--;

if(i<j) swap(i,j);

}

swap(low,j);

return j;

}

public static void qSort(int low,int high){

if(low<high){

int p=partition(low,high);

qSort(low,p-1);

count+=1;

qSort(p+1,high);

count+=1;

}

}

public static void main(String[] args) {

for(int i=0;i<arr.length;i++)

System.out.print(arr[i]);

qSort(0,arr.length-1);

System.out.println("");

for(int i=0;i<arr.length;i++)

System.out.print(arr[i]);

System.out.println(" ");

System.out.println(count);

}

}