#include<bits/stdc++.h>

using namespace std;

#define fio ios\_base::sync\_with\_stdio(false);cin.tie(0);cout.tie(0);

int f2(int \*arr,int left,int right)

{

int mid = (left+right)/2;

swap(arr[left],arr[mid]);

int piv = arr[left];

int low = left+1;

int high = right;

while(low<=high)

{

while(arr[low]<piv) low++;

while(arr[high]>piv && low<=high) high--;

if(low>=high)break;

swap(arr[low],arr[high]);

}

swap(arr[left],arr[high]);

return high;

}

int in\_sort(int \*arr,int left,int right)

{

int tmp,i,j;

for(i = left+1 ; i<=right ; i++)

{

tmp = arr[i];

for(j = i-1 ; j>=left ; j--)

{

if(tmp>arr[j]) break;

arr[j+1] = arr[j];

}

arr[j+1] = tmp;

}

}

void f1(int \*arr , int left , int right)

{

if(left<right)

{

if((right-left)<=5) in\_sort(arr,left,right);

int piv\_pos = f2(arr,left,right);

f1(arr,left,piv\_pos-1);

f1(arr,piv\_pos+1,right);

}

}

int main()

{

fio;

int n,i;

cin>>n;

int arr[n];

for(i = 0 ; i<n ; i++) cin>>arr[i];

f1(arr,0,n-1);

for(i=0;i<n;i++)

{

cout<<arr[i]<<" ";

}

return 0;

}