#include <iostream>

using namespace std;

int counting[10000001];

int a[10000001];

void countingSort(int a[], int n) {

int k = INT\_MIN;

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

k = max(a[i], k);

}

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

counting[a[i]]++;

}

for (int i = 0; i <= k; i++) {

for (int j = 1; j <= counting[i]; j++) {

cout << i << " ";

}

}

}

int main() {

cout << "\nInput size of array: ";

int n; cin >> n;

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

cin >> a[i];

}

cout << "\nArray before arrange: ";

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

cout << a[i] << " ";

}

cout << "\nArray after arrange: ";

countingSort(a, n);

return 0;

}

