

```

#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;
}

```