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#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;
}

```

```

Microsoft Visual Studio Debug
Input size of array: 10
9 9 8 9 8 7 8 5 5 1

Array before arrange: 9 9 8 9 8 7 8 5 5 1
Array after arrange: 1 5 5 7 8 8 8 9 9 9
D:\workspace\C++\timkiem_sx\x64\Debug\sapxep.exe (process 18808) exited with code 0.
Press any key to close this window . . .

```