#include<iostream>

using namespace std;

void Max\_Heap(int \*arr, int m, int n) {

int j, t;

t = arr[m];

j = 2 \* m;

while (j <= n) {

if (j < n && arr[j + 1] > arr[j]) {

j = j + 1;

}

if (t > arr[j])

break;

else {

arr[j / 2] = arr[j];

j = 2 \* j;

}

}

arr[j / 2] = t;

}

void Build\_heap(int \*arr, int n) {

for (int k = n / 2; k >= 1; k--) {

Max\_Heap(arr, k, n);

}

}

int main() {

int n;

cout << "\nEnter no. of students: ";

cin >> n;

int arr[30]; // safer size for heap (1-based indexing)

for (int i = 1; i <= n; i++) {

cout << "\nEnter marks of student " << i << " : ";

cin >> arr[i];

}

cout << "\nMarks of students: ";

for (int i = 1; i <= n; i++) {

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

}

Build\_heap(arr, n);

cout << "\nMax heap: ";

for (int i = 1; i <= n; i++) {

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

}

return 0;

}