#include <iostream>

#include <cstdlib>

#include <ctime>

using namespace std;

#define MAX 10

void merge(int arr[], int temp[], int left, int mid, int right) {

int i, j, k;

i = left;

j = mid;

k = left;

while (i <= mid - 1 && j <= right) {

if (arr[i] <= arr[j])

temp[k++] = arr[i++];

else

temp[k++] = arr[j++];

}

while (i <= mid - 1)

temp[k++] = arr[i++];

while (j <= right)

temp[k++] = arr[j++];

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

arr[i] = temp[i];

}

void mergeSort(int arr[], int temp[], int left, int right) {

int mid;

if (left < right) {

mid = (left + right) / 2;

mergeSort(arr, temp, left, mid);

mergeSort(arr, temp, mid + 1, right);

merge(arr, temp, left, mid + 1, right);

}

}

int main() {

int arr[MAX];

int temp[MAX];

srand(time(NULL));

cout << "Data sebelum terurut: ";

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

arr[i] = rand() % 100;

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

}

cout << endl;

mergeSort(arr, temp, 0, MAX - 1);

cout << "Data setelah terurut: ";

for (int i = 0; i < MAX; i++)

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

cout << endl;

return 0;

}