import java.util.Scanner;

public class InsertionSort {

public static void main(String[] args) {

Scanner in = new Scanner(System.in);

System.out.print("Banyak data : ");

int N = in.nextInt();

int data[] = new int[N];

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

System.out.print("data ke-"+(i+1)+" : ");

data[i] = in.nextInt();

}

//Proses Insertion sort

for(int i=1; i<data.length; i++){

int key = data[i];

int j=i;

while(j >0 && data[j-1] > key){

data[j]=data[j-1];

j--;

}

data[j]=key;

// Untuk mencetak langkah-langkah pengurutan.

System.out.println("Langkah ke-" + i);

for (int k=0; k<data.length; k++)

System.out.print(" " + data[k] + " ");

System.out.println();

}

//Hasil Pengurutan

System.out.print("Data yang telah urut : ");

for(int i=0; i<data.length; i++){

System.out.print(data[i]+" ");

}

System.out.println();

}

}