#include <stdio.h>

// Function for insertion sort

void insertionSort(int arr[], int n) {

int i, key, j;

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

key = arr[i];

j = i - 1;

// Move elements greater than key one position ahead

while (j >= 0 && arr[j] > key) {

arr[j + 1] = arr[j];

j = j - 1;

}

arr[j + 1] = key;

}

}

// Function to display array

void display(int arr[], int n) {

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

printf("%d ", arr[i]);

}

printf("\n");

}

int main() {

int n;

printf("Enter number of elements: ");

scanf("%d", &n);

int arr[n];

printf("Enter %d numbers: ", n);

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

scanf("%d", &arr[i]);

}

printf("\nOriginal array: ");

display(arr, n);

insertionSort(arr, n);

printf("Sorted array (Insertion Sort): ");

display(arr, n);

return 0;

}