#include <stdio.h>

int main() {

int arr[100], n, i, j, key;

// Input: number of elements

printf("Enter the number of elements: ");

scanf("%d", &n);

// Input: array elements

printf("Enter %d elements:\n", n);

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

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

}

// Insertion Sort algorithm

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--;

}

arr[j + 1] = key;

}

// Output: sorted array

printf("Sorted array using Insertion Sort:\n");

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

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

}

printf("\n");

return 0;

}