// Insertion Sort: C++ program

#include <bits/stdc++.h>

using namespace std;

// Function to sort an array using: insertion sort

void insertionSort(int arr[], int arr\_size)

{

    int i, key, j;

    for (i = 1; i < arr\_size; i++)

    {

        key = arr[i];

        j = i - 1;

        // Move elements of arr[0..i-1],

        // that are greater than key, to one

        // position ahead of their

        // current position

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

        {

            arr[j + 1] = arr[j];

            j = j - 1;

        }

        arr[j + 1] = key;

    }

}

// Fuction to display array

void printArray(int arr[], int arr\_size)

{

    int i;

    for (i = 0; i < arr\_size; i++)

        cout << arr[i] << " ";

    cout << endl;

}

int main()

{

    system("cls");

    int arr[] = { 12, 11, 13, 5, 6 };

    int n = sizeof(arr) / sizeof(arr[0]);

    cout<<"The Original array:"<< endl;

    printArray(arr, n);

    cout<<"The order array after apply insertion approach:"<< endl;

    insertionSort(arr, n);

    printArray(arr, n);

    return 0;

}