public class InsertionSort {

public static void insertionSort(int[] arr) {

int n = arr.length;

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

int key = arr[i];

int 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;

}

}

public static void printArray(int[] arr) {

int n = arr.length;

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

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

}

System.out.println();

}

public static void main(String[] args) {

int[] arr = {64, 34, 25, 12, 22, 11, 90};

System.out.println("Array before sorting:");

printArray(arr);

insertionSort(arr);

System.out.println("Array after sorting:");

printArray(arr);

}

}