- **EASY**
- **Max Score: 30 Points**
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Insertion Sort

Implement insertion sort.

Input Format

The first line contains one space separated integer N denoting the number of elements.

The Second line contains N space separated integers denoting the elements of the array.

You need to complete `insertionSort` function which contains `a` array of size `n` and print the final sorted array in this function only.

Output Format

Print the array in sorted fashion in sorted fashion.

Example 1

Input

```
6
 7 6 8 5 4 9
```

Output

```
4 5 6 7 8 9
```

Explanation

Printed sorted array.

Example 2

Input

```
5
 11 5 12 6 13
```

Output

```
5 6 11 12 13
```

Explanation

Printed sorted array.

Constraints

```
0 <= nums.length <= 10^4
```

```
-10^9 <= nums[i] <= 10^9
```

My code

```java
// in java
import java.util.*;

public class Main {
    public static void main(String[] args) {
        Scanner sc = new Scanner(System.in);
        int n= sc.nextInt();
        int array[] = new int[n];

        for(int i=0; i<n; i++){
            array[i]= sc.nextInt();
        }

        insertionSort(array,n);
    }
     static void insertionSort(int arr[], int n)
    {
    //Write your code here
        for(int i=0;i<n-1;i++)
            {
                    if(arr[i+1]<arr[i])
                    {
                            int j=i+1;
                            while( j>0 && arr[j]<arr[j-1]  )
                                {
                                        int t=arr[j];
                                        arr[j]=arr[j-1];
                                        arr[j-1]=t;
                                        j--;
```

```java
                }
            }
        }
        for(int i=0;i<n;i++)
            System.out.print(arr[i]+" ");
    }
}
```