

# 模版·计数排序

```
public class CountingSort{
    public static int[] countingSort(int[] array){
        int max=array[0];
        int min=array[0];
        for(int i=1;i<array.length;i++){
            if(array[i]>max){
                max=array[i];
            }
            if(array[i]<min){
                min=array[i];
            }
        }

        int[] count=new int[max-min+1];
        for(int i=0;i<array.length;i++){
            count[array[i]-min]++;
        }

        for(int i=1;i<=max-min;i++){
            count[i]+=count[i-1];
        }

        int[] sortedArray=new int[array.length];
        for(int i=0;i<array.length;i++){
            sortedArray[count[array[i]-min]-1]=array[i];
            count[array[i]-min]--;
        }

        return sortedArray;
    }
}
```

```
public static void main(String[] args){
    int[] array={5,2,4,6,1,3};
    int[] sortedArray= countingSort(array);

    System.out.println("排序前: ");
    for(int i=0;i<array.length;i++){
        System.out.print(array[i]+"");
    }

    System.out.println("\n排序后: ");
    for(int i=0;i<sortedArray.length;i++){
        System.out.print(sortedArray[i]+"");
    }
}
```