模版·归并排序

```java
public class MergeSort{
    public static void mergeSort(int[] arr,int low,int high){
        if(low<high){
            int mid=low+(high-low)/2;
            mergeSort(arr,low,mid);
            mergeSort(arr,mid+1,high);
            merge(arr,low,mid,high);
        }
    }

    private static void merge(int[] arr,int low,int mid,int high){
        int[] temp=new int[high-low+1];
        int i=low;
        int j=mid+1;
        int k=0;

        while(i<=mid&&j<=high){
            if(arr[i]<=arr[j]){
                temp[k++]=arr[i++];
            }else{
                temp[k++]=arr[j++];
            }
        }

        while(i<=mid){
            temp[k++]=arr[i++];
        }

        while(j<=high){
            temp[k++]=arr[j++];
```

```java
        }

        for(int m=0;m<temp.length;m++){
            arr[low+m]=temp[m];
        }
    }
    public static void main(String[] args){
        int[] arr={5,2,4,1,3};
        mergeSort(arr,0,arr.length-1);
        System.out.println(Arrays.toString(arr));
    }
}
```