

# 选择排序

时间复杂度:  $O(n^2)$  比冒泡排序快一些, 内迭代不用从0开始

时间复杂度:  $O(1)$

第*i*轮迭代选出最小值放在第*i*个值

```
public class SelectionSort {
    public int[] selectionSort(int[] A, int n) {
        if (A == null || n < 2) return null;
        int min_index = 0;
        for (int i = 0; i < n - 1; i++) {
            min_index = i;
            for (int j = i + 1; j < n; j++) { // 每一轮选取出最小值
                min_index = A[min_index] > A[j] ? j : min_index;
            }
            swap(A, i, min_index);
        }
        return A;
    }

    public void swap(int[] arr, int index1, int index2) {
        int tmp = arr[index1];
        arr[index1] = arr[index2];
        arr[index2] = tmp;
    }
}
```