

Selection Sort

- ▶ Time Complexity
 - ▶ Best: $O(n^2)$
 - ▶ Average: $O(n^2)$
 - ▶ Worst: $O(n^2)$
- ▶ Memory: 1
- ▶ Stable: No

SELECTION-SORT(A)

```
1: for  $i = 1$  to  $A.length - 1$  do  
2:    $k = i$   
3:   for  $j = i + 1$  to  $A.length$  do  
4:     if  $A[j] < A[k]$  then  
5:        $k = j$   
6:   if  $k \neq i$  then  
7:      $A[i] \leftrightarrow A[k]$ 
```