

Selection Sort

Selection sort is a sorting algorithm that sorts an array by repeatedly finding the minimum element and putting them in ascending order.

Advantages of Selection Sort Algorithm

- 1.Simple and easy to understand.
- 2.Works well with small datasets.

Disadvantages of the Selection Sort Algorithm

- 1.Selection sort has a time complexity of $O(n^2)$ in the worst and average case.
- 2.Does not work well on large datasets.
- 3.Does not preserve the relative order of items with equal keys which means it is not stable.

✓ Selection Sort in Ascending order

```
import array
from array import *
def selection(array):
    n=len(array)
    for i in range(n-1):
        current_min=i
        for x in range(i+1,n):
            if array[current_min]>array[x]:
                actual_min=x
            array[i],array[actual_min]=array[actual_min],array[i]
    print(array)
```

```
a=array('i',[8,5,2,6,3,1])
selection(a)
```

```
↵ array('i', [1, 2, 3, 5, 6, 8])
```

✓ Selection Sort in Descending order

```
import array
from array import *
def selection(array):
    n=len(array)
    for i in range(n-1):
        current_min=i
        for x in range(i+1,n):
            if array[current_min]<array[x]:
                actual_min=x
            array[i],array[actual_min]=array[actual_min],array[i]
    print(array)
```

```
a=array('i',[8,5,2,6,3,1])
selection(a)
```

```
↵ array('i', [8, 6, 5, 3, 2, 1])
```

Start coding or [generate](#) with AI.