

Algorithm

Selection Sort

Visual Walkthrough





Selection Sort

- ♦ **In-place** comparison sort.
- ♦ **Divides** the list into two portions: sorted and unsorted.
- ♦ **Selects** the minimum element from the unsorted portion and moves it to the end of the sorted portion.
- ♦ **Inefficient** for large inputs.





Selection Sort





Selection Sort

[10, 8, 3, 6]



Sort

[3, 6, 8, 10]



Selection Sort

[10, 8, 3, 6]



Selection Sort

[10, 8, 3, 6]



Selection Sort

[10, 8, 3, 6]

min: 10



Selection Sort

[10, 8, 3, 6]

min: 8



Selection Sort

[10, 8, 3, 6]

min: 3



Selection Sort

[3, 8, 10, 6]



Selection Sort

[3, 8, 10, 6]

min: 8



Selection Sort

[3, 8, 10, 6]

min: 6



Selection Sort

[3, 6, 10, 8]



Selection Sort

[3, 6, 10, 8]

min: 10



Selection Sort

[3, 6, 10, 8]

min: 8



Selection Sort

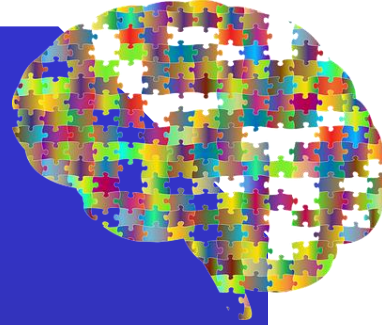
[3, 6, 8, 10]



Selection Sort

[3, 6, 8, 10]

Algorithm





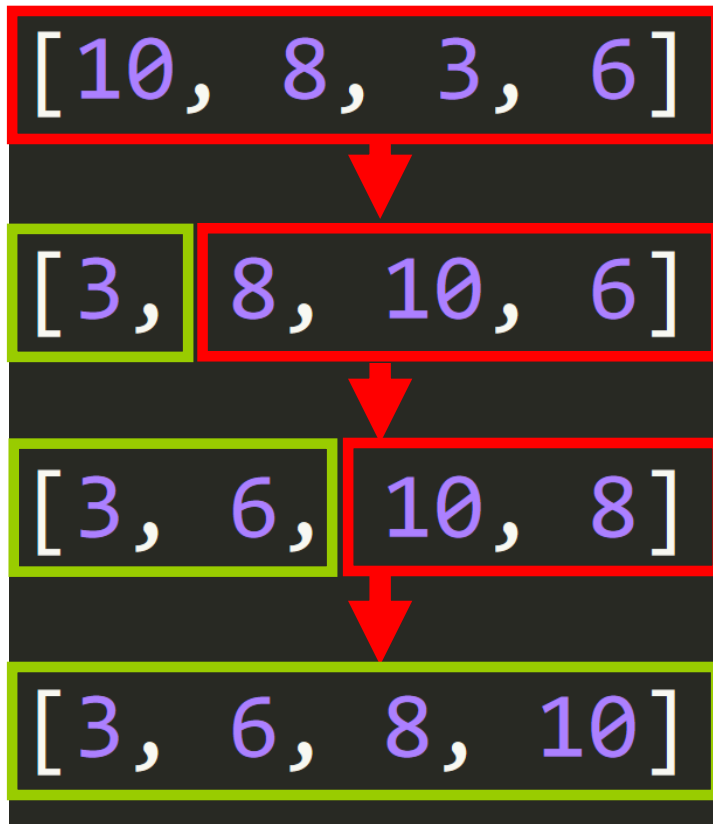
Selection Sort

- ♦ **Find** the **min** element in the unsorted portion of the list and add it to the end of the sorted portion of the list.
- ♦ **Restrict** your search to the unsorted portion of the list.





Selection Sort





Time to Code!

