

Time complexity:

We have 3 main functions in our code

Max index:

Time complexity of $O(1)$ since there are no loops

Reverse:

Time complexity of $O(i)$ as there is a loop but the only thing that matters is the index of the list

Reverse Sort:

Time complexity is $O(n^2)$ as there is a nested loop

Time complexity is $= O(1) + O(i) + O(n^2)$

We take the biggest of the above so the time complexity of the reverse sorting algorithm is $O(n^2)$

Output code:

```
PS D:\AP\Academic-prep\algorithms\reverse_sorting_python> python .\reverse_sorting.py
Original sequence: [4, 2, 1, 3]
Sorted sequence: [1, 2, 3, 4]
Time elapsed for sorting 1000 elements: 0.03300356864929199
All tests passed successfully!
```