3)

Average case:

Performance Comparison of Bubble Sort and Quick Sort - Average Case
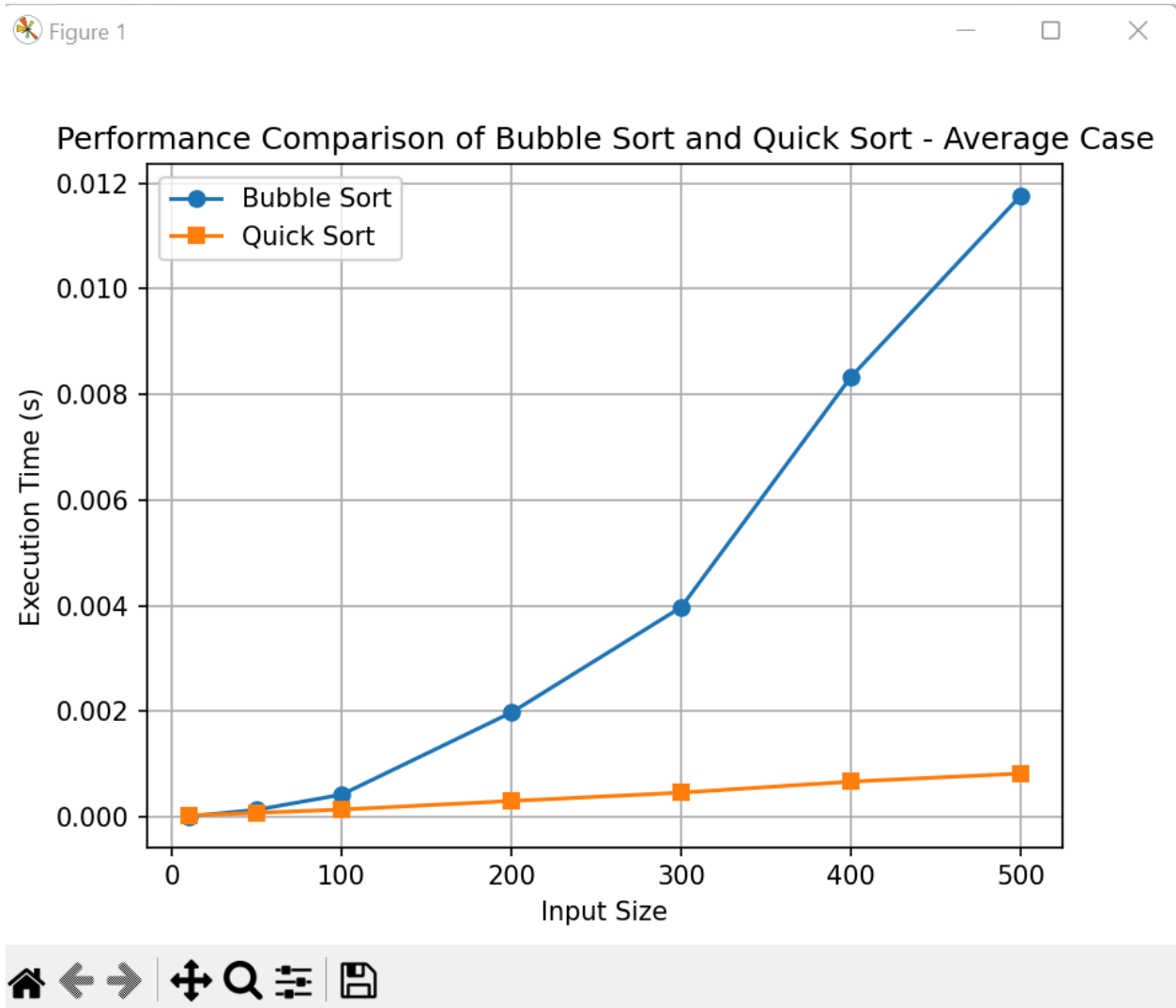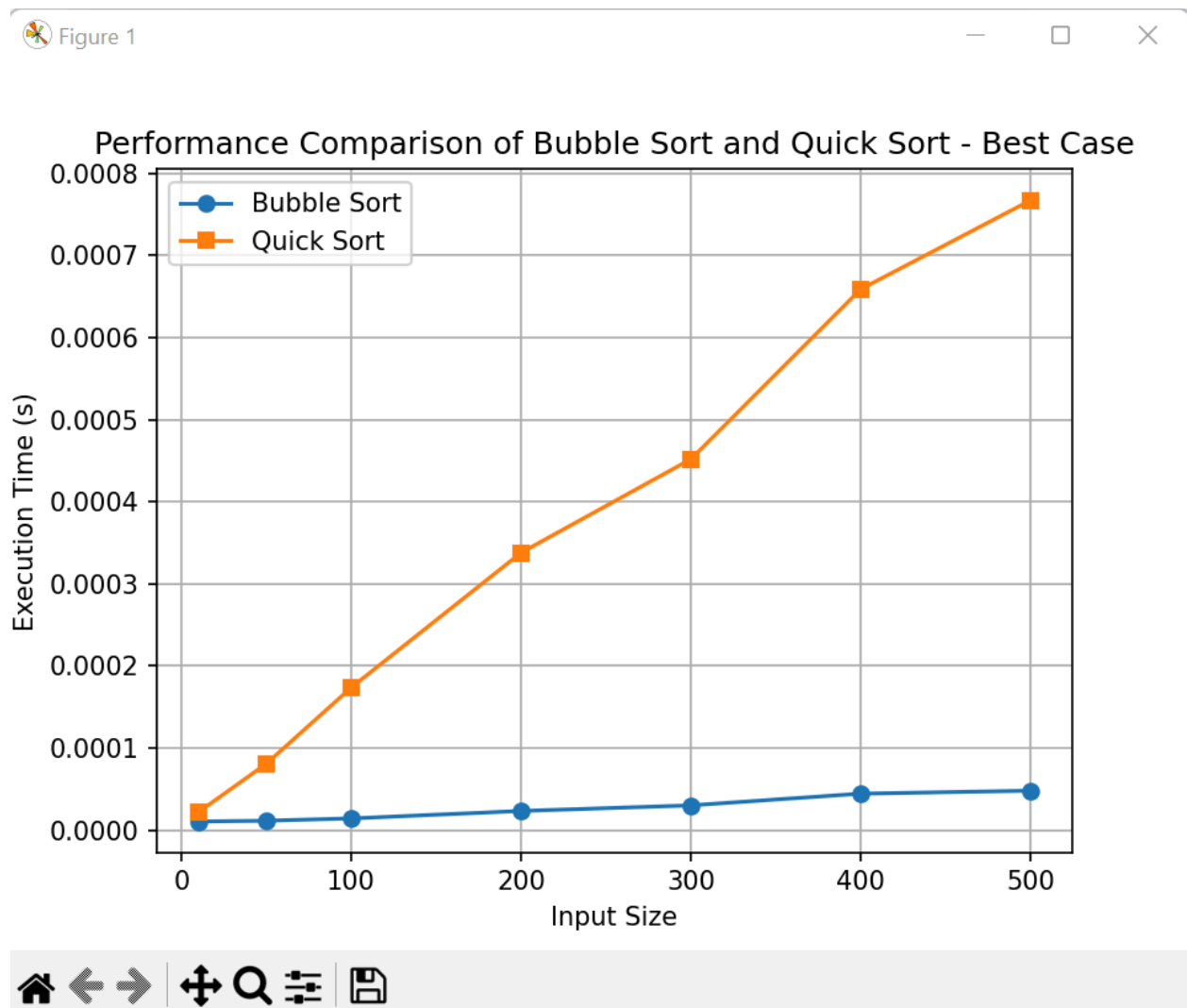
Best case:

Worst case:

Performance Comparison of Bubble Sort and Quick Sort - Worst Case
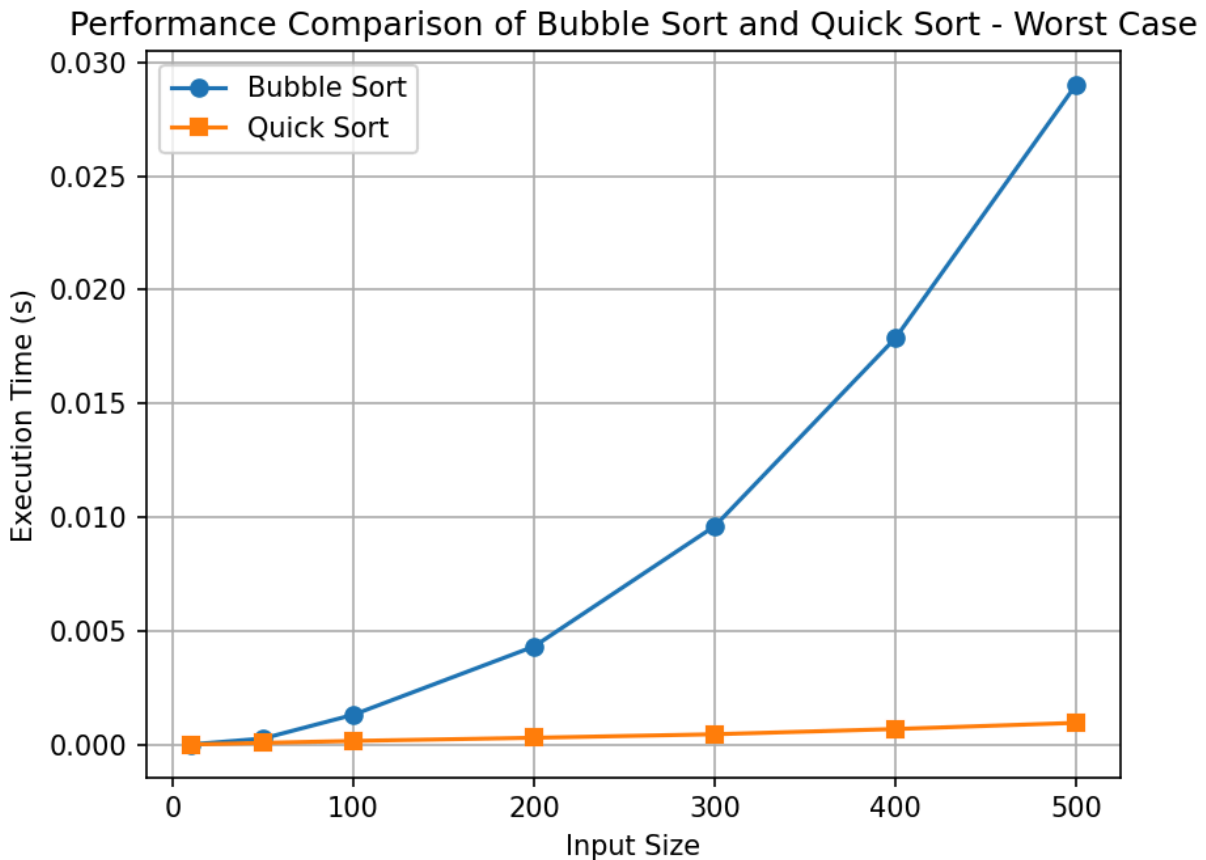
4)

Based on the plots of bubble sort and quicksort, a threshold of roughly 50 to 100 elements seems to be reasonable "small" input sizes. Below this threshold, the overhead of quicksort's segregation and recursion could potentially outweigh its benefits, and bubble sort could provide better performance. Above this threshold, the performance increase from quick sort appears more tangible, especially as input size becomes larger. The choice of threshold ultimately depends on the algorithm efficiency with implementation complexity and particular requirements.