|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| Array Size | Selection Sort (random array) | Selection Sort  (sorted array) | Insertion Sort  (random array) | Insertion Sort  (sorted array) | Bubble Sort  (random array) | Bubble Sort  (sorted array) |
| 10,000 | 99ms | 92ms | 21ms | 30ms | 1644 ms | 0ms |
| 20,000 | 370 ms | 375 ms | 67 ms | 122 ms | 4356 ms | 0ms |
| 40,000 | 775 ms | 756 ms | 222 ms | 447 ms | 19688 ms | 0ms |
| 80,000 | 2998 ms | 2977 ms | 903 ms | 1816 ms | 83726 ms | 0ms |

Bubble and insertion sorts worst case scenario is when an array is already sorted in the opposite   
direction that the bubble and insertion sort methods are going to sort them in. They have to literally swap  
every value in this case.   
On an average case (with random variables) they will run on typical times.

|  |  |  |
| --- | --- | --- |
| Array Size | Linear Search (unsuccessful) | Binary Search (unsuccessful) |
| 100,000 | 0ms | 0ms |
| 200,000 | 0ms | 1ms |
| 400,000 | 0ms | 0ms |
| 800,000 | 0ms | 0ms |
| 1,600,000 | 1ms | 0ms |