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/**
 *
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3)

list0.txt through list3.txt are used in exactTriplicates

Run time analysis:

$4x(N \rightarrow \text{string}[N]) (O(N)) \rightarrow 4x(\text{string}[N]) (O(4N)) \rightarrow \text{string}[4N] \rightarrow \text{sort}(4N)(O(N \log(N))) \rightarrow$
 Linear comparison($O(n)$) = Sum of $O(n)$ notations = $O(N \log(N))$

4)

1. In our experiments we approximated $N \cdot \log N + S \cdot \log N = N \cdot S$ resulting in the expression $S = (N \log N) / (N - \log N)$ for $n = 10^6$ giving us a S value of 16.12, giving a theoretical limit for all $S > 16.12$, you can assume sorting then binary searching is faster than using linear on an unsorted set.
2. Yes, the results will differ as a different seed is used each time, generating different random numbers. We can get more accurate results by simply increasing N will yield a more reliable result, increasing the probability of sorting then performing a binary search being faster than using a linear search on the unsorted set.