CSC143 Weekly Problems 9 and 10

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Variable Man by Philip K. Dick - 6296 unique words

The Second Variety by Philip K. Dick - 4217 unique words

Each share 2471 words in common.

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| --- | --- | --- | --- |
| Trial Number | Compares | Compares To | Elapsed Time |
| 1 | Variable Man (HashSet) | Second Variety (HashSet) | 7ms |
| 2 | Variable Man (HashSet) | Second Variety (TreeSet) | 7ms |
| 3 | Variable Man (TreeSet) | Second Variety (HashSet) | 3ms |
| 4 | Variable Man (TreeSet) | Second Variety (TreeSet) | 3ms |
| 5 | Second Variety (HashSet) | Variable Man (HashSet) | 1ms |
| 6 | Second Variety (HashSet) | Variable Man (TreeSet) | 3ms |
| 7 | Second Variety (TreeSet) | Variable Man (HashSet) | 2ms |
| 8 | Second Variety (TreeSet) | Variable Man (TreeSet) | 2ms |

SUMMARY:

Since the number of unique words resulting from each of these searches should remain constant, each trial whose results are detailed in the table above should be expected to run for an approximately equal length of time when comparing similar Set object types. However, it is apparent that when comparing HashSet to HashSet and TreeSet to TreeSet, the object through which we are iterating makes a noticeable difference in elapsed time.

CONCLUSION:

These results suggest that HashSets offer faster results for iteration and that iterating through the smaller of the two objects being compared should be considered best practice for optimizing code execution time.