

INDEXER

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The overall Big O of this programming is not terribly large. To go through each token in a given file, the time it would take is $O(n)$, where n is the number of tokens.

The program then needs to add all of these tokens to the hashtable as a new entry, or an existing record. This, also, takes $O(n)$ time for every token encountered during the entire indexing.

Therefore, overall this program will take $O(n)$ time to complete it's job, where N is the number of tokens in ALL the files found during the course of the indexing. This may be further weighted down by Linked-list insertions, which stacks on ADDITIONAL $O(n)$ time for a Record to be inserted at the end of the list, but this is a worst-case scenario.

Hashtable lookup is $O(1)$, which is why I used it :)

This program utilizes UTHASH, created by Troy D. Hanson , to store it's tokens -- all credit where credit is due!