Readme for Search:

My algorithm involved writing an inverted-index into memory where I stored it as a double linked-list, then calling a logical OR and logical AND on a users query depending on what they input using what was stored in memory as a basis.

For search there were a few parts to the assignment to analyze for runtime.

My first part was writing into memory the inverted-index file. For this, call the number of words in the file F and I check to see if each word is equal to <list> or </list> and if they don't, have it insert into memory which takes a runtime of O(F).

Next was the so function which I perform a logical OR on the lists of all the terms a user inputs and return the resulting list. For this, if the number of words is called N and the number of files is called K, the runtime is O(NK) because I have to search through each word and each list of files to figure out what to insert in my algorithm.

The next function was sa where I perform a logical AND on terms a user inputs and output the resulting list. The runtime of this is identical to the so function so it is O(NK).