

Given a file that contains data as below:

foo, bar, moo
foo, bar
cho, goo
boo, roo

Ingest the file and:

1. Print all the unique strings in the file.
2. Given a line number, print the strings in that line. This has to be a constant time lookup.
3. Given a string, print the line number(s) where this string occurs.
4. Given a word, print the no of occurrences of the word. This has to be a constant time lookup.

Line numbers are 0 indexed.

Points to keep in mind:

1. Image that this is production code and do all the checks that you would do in production.
2. Do not worry about scalability, use the simplest solution that you think of.

Example:

For the below data:

foo, bar, moo
foo, gho
cho, goo

Unique strings are:

foo, bar, moo, gho, cho, goo

Given 0, strings in that line are:

foo, bar, moo

Given foo, line numbers are:

0, 1

Given foo, no of occurrences would be:

2