

CSC110 Fall 2022 Assignment 3: Loops, Mutation, and Applications

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Part 1: Data Analysis with Toronto Health

Complete this part in the provided `a3_part1.py` file. Do **not** include your solutions in this file.

Part 2: Loops and Mutation Debugging Exercise

1. `test_star_wars` PASSED
`test_legally_blonde` FAILED
`test_transformers` FAILED
2. (a) The errors were as follows:
 - (i) On line 83 the `str.lower()` method does not mutate the string, instead it returns a new string. Thus it was important to assign the variable `text` to `str.lower(text)` to use it as such in the next line. In its current form, the function ignored keywords which had uppercase letters.
 - (ii) On line 99 the `"occurrences_so_far[word] = occurrences_so_far[word] + 1"` statement must be written just outside the innermost `if` statement. In its current form the function was not ignoring the multiple occurrences of keywords. That is, if a certain keyword occurred twice, its occurrence would still be stored as 1 in the current function structure.
3. The errors in the given program will fail only when:
 - (i) the keyword has an uppercase letter
 - (ii) a keyword is repeatedIn `review_star_wars.csv` no keyword has an uppercase and no keyword is repeated, thus errors in the code had no effect on this file and the test passed. In `review_legally_blonde.csv` some keywords have uppercase letters, so its test failed. In `review_transformers.csv` a keyword for repeated which caused its test to fail.

Part 3: Chaos, Fractals, Point Sequences

Complete this part in the provided `a3_part3.py` starter file. Do **not** include your solutions in this file.