

Lab 1: Count words in files

Summary

You will create a single python code file named "count_words.py" that takes a list of files as input, and count all the words in the list of files, printing out the list of words with their counts.

You should have the following constants & functions:

STOP_WORDS =

```
['a', 'an', 'and', 'are', 'as', 'be', 'by', 'for', 'if', 'in', 'is', 'it', 'of', 'or', 'py', 'rst', 'that', 'the', 'to', 'with',]
```

```
def count_words(file_name): # take a file and output the word list with the counts for that file as a tuple (or list). This may look like: [['foo', 22], ['bar', 13], ...]
```

```
def main(): # main function: get the files from input (or *args). Iterate through the files counting words in each file, then combine results from each
```

```
if __name__ == '__main__':  
    main()
```

Requirements

- You should have a test file that tests both your count_words function and your main loop.
- You must log relevant information from your working code into a log file: "count_words.log"
- You must compute the total time it takes to count all the words in all the files, and output that clearly to the log file.
- You must follow the style guide (document is in Teams) with the following exceptions:
 - naming: Single letter variable or function names are NOT allowed.
 - All names must be meaningful and descriptive. Instead of "for x in list:" you may use "for loop_control in list" or something more meaningful.
 - You may use tabs instead of spaces, and your indentation is encouraged to be tab or 4 spaces instead of 2 spaces.

Submission

- Your python file (count_words.py)
- Your test file (test_CW.py)
- A log file that shows the output of your test run and any log statements from the code