Computer Science I
Find Text

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CSCI-141

Homework
09/25/2013

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1   Problem

We have text documents that we wish to analyze. We want to look at each line in a file and print out the lines that contain given character, while at the same time, counting the number of times that character is displayed.

Task and Examples

You will write Python code to count the number of times a letter appears in a file, and displays lines that contain that letter, as well as the count of that letter.

Suppose the file `some.txt` contains the following.

```
words make up other words
This is a line
words make sentences
I have MS word
```

Then we have the following interaction.

```
$ python3 letterCount.py
Enter character: w
Enter filename: some.txt
words make up other words
words make sentences
I have MS word
Total count of w is 4
```

Details

You will define the following functions. You may not use any Python functionality that we haven't discussed in class without permission.

- `def countLetterString(char, str)` - a function that takes a search character and an input string and uses **recursion** to return a natural number of times that character appears in the string.
- `def countLetterFile(char, textFileName)` - a function that takes a search character and the file name and uses a **for loop** to print the lines containing the letter and the count of the given letter in the file
- `def main()` - a function that reads in a character and a file name and uses `countLetterFile` to do the work.

Submission

You need to submit a file `letterCount.py`, containing the code detailed above that implements the functionality described above.