

SE-1106 HOMEWORK-3

In this homework, you must write a **FileProcessor** class that processes a text file. Your class should have the following methods:

- `countWordsByLetter(String inputFileName, String outputFileName)` : Reads the input file and writes the number of words starting from each letter to the given output file. You will omit the letters of zero occurrences.
Example: If the input file contains only the the sentence *"This is a sample input file for testing"* then the function must print out to the out file the following:
A:1
F:2
I:2
S:1
T:2
- `countWords(String inputFileName)`: returns the number of words in the given file.
- `countWord(String inputFileName, String key)`: Searches for the given key in the given input file and returns the number of occurrences of the key in the file.
- `filterOut(String inputFileName, String outputFileName,String key)`: Copies the content of the input file to the output file except the occurrences of the given key. All occurrences of the key must be removed in the output file.
- `filter(String inputFile, String outputFileName, int minWordLength)`: Copies the content of the input file to the output file except the words whose length is smaller than minWordLength.

Implement **FileProcessorException** class to represent all exceptions that can be thrown from the methods of the **FileProcessor**.

All methods of the **FileProcessor** class must only throw **FileProcessorException** instance when any exception is generated. All exceptions generated inside the methods must be caught inside and thrown as a **FileProcessorException** object.

Write a **Main** class for testing your class. Create a text file **"sample.txt"** and fill the with an arbitrary text data. Use this file as your input file. Write a main function and call all methods of **FileProcessor** class.

Note : You can check *PhoneBookApplication* case study for simple text file processing and exceptions.