

SE-1108 Self Study-6

In this study, you are supposed to write several classes responsible for processing text files and implementing **FileProcessor** interface. The interface has a single method called

process(String filePath).

Implement the following classes:

- **InitialCounter**

A file processor that counts the words starting with each letter.

Reads the input file and writes the number of words starting with each letter to an output file.

The path of the output file is given in the constructor.

You will omit the letters of zero occurrences.

Example: If the input file contains only the sentence "*This is a sample input file for testing*" then the output file must be the following:

A:1

F:2

I:2

S:1

T:2

- **WordCounter**

A file processor that counts the key in the input file and prints out the number to the output file. The key and the path of the outputfile is given in the constructor.

Example: If the input file contains only the sentence "*This is a sample input file for testing*" and the key is "file" then the output file must be the following:

file:1

- **WordFilter**

A file processor that copies the content of the inputfile to the output file except the occurrences of the given key. All occurrences of the key must be removed in the output file.

The path of the output file will be the same as that of input file and the name of the output file is the name of the input file concatenated by "_filetered". The key is given in constructor

Example: If the input file contains only the sentence "*This is a sample input file for testing*" and the key is "file" then the content of the output file must be the following:

This is a sample input for testing

- **Capitalizer**

A file processor that copies the content of the inputfile to the output file capitalizing the initial letters of each word.

The path of the output file will be the same as that of input file and the name of the output file is the name of the input file concatenated by "_capitalized".

Example: If the input file contains only the sentence "*This is a sample input file for testing*" then the content of the output file must be the following:

This Is A Sample Input File For Testing

- **FilePipeline**

A file processor that contains a list of file processors representing the pipeline of those processors. When process(..) method is called with a given input file, it makes the inputfile processed with all processors in the list one by one.

Assume that the input text file will only contain letters of the alphabet and space(' ') character.

The process function of the interface does not throw any exception. So the classes above, must handle exceptions themselves and not throw out.

Write a Main class for testing your code. 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 create instances of all classes and call process methods of all file processors.