



AGH UNIVERSITY OF SCIENCE AND TECHNOLOGY

Project documentation

Text Analysis and Correction Library

from the subject

Object-Oriented Programming Languages

Electronics & Telecommunications (Year 3)

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1. Project description

I have created a library project for text analysis and correction in C++.

The library is based on a single main class (with no derived classes).

The class is contained within a namespace corresponding to my initials, i.e. "mf".

The class contains one default constructor and one parametric constructor each.

The file we are working on in a given object can be set using a parametric constructor, and then potentially changed using *a setter*

To check which file we are working on, we can use the *"getFile" getter*.

Two "mains" *have been created*, one to demonstrate the library's basic use, and another to show its potential use in a simple terminal application.

A destructor is used to close a text file,

Additionally, I have created 3rd "main" (main3.cpp), which show that by using the "+=" operator, we can create a completely new text file and write, for example, a poem. Of course, to ensure it works, there must not already be a "3.txt" file in the folder.

2. Functionality

The library allows us to analyze a text file, for example:

- Displaying text in the terminal,
- Counting the number of lines,
- Counting the number of words,
- Counting the number of characters,
- Counting the number of letters,
- Checking what words are repeated and in what number

Additional functionalities:

- Removing unnecessary spaces (for example, when there is more than one space between words, this reduces to one space, or when there are spaces at the beginning or end of a line, it removes them)
- Appending consecutive lines of text using the += operator,
- With the above operator, we can also create a completely new text file and write the entire text from scratch,

- The file we are working on is set using a parametric constructor, but we can change the file we are working on in a given object using a setter,
- With the help of the getter we can check the file we are working on (which is assigned to the object),
- There is a logical function that we can use to check if the file has been opened correctly,

3. Comments

I include two sample texts in the draft. The first one (1.txt) is mainly to show that it counts repeats correctly. The second one (2.txt) is used in main2.cpp, it contains a large excess of spaces. The text is first analyzed, then the excess space is removed and at the end the line is added: "Now this text looks great!!!"

You can create additional files with the .txt extension and test them. The only requirement is that they must be in the project folder, and it is recommended not to use Polish characters.

After the change, if someone wants to paste the originals back, I put here to copy:

1.txt

it comes when it comes

I love it I like it I can do it all day! It is perfect!!

2.txt

Hey brother! Hey Melani! Hello everyone!

Fly Fly don't sleep