Homework 3
CENG431 – Building Software Systems

In this homework you are expected to implement and design a "***Text Editing Application***" in Java according to the given scenario.

You should fulfill the concepts of;

- Composite Design Pattern
- SOLID principles

Suppose you are developing a text editing application which is composed of components that are also responsible of editing a text. Components will:

1. Take text input from user and save it into a file
2. Perform automatic text correction of a given text
3. Count number of paragraph, line, word, and characters of a given text
4. Search, list, and count the words containing inputted characters (like CTRL+F command) in a given text. For example, when the user enters "ck" characters, the output will be "back, slack" words in the given text.

Text could be given both through user input from console or through a file. For automatic correction, you can use the jar file attached or open the link given below, download and update the project to use it. The given jar file is a changed version of the project in the given link. If you want to change the project and use it, make sure it also follows object-oriented programming principles.

https://github.com/mattlevan/AutoCorrect/blob/master/AutoCorrect.java

Implement necessary classes and an App class that demonstrates all implemented functionality.

Assignment Rules

1. Cheating is not allowed. If any cheating has been detected, they will be graded with 0 and there will be no further discussion on this.
2. You are expected to submit your homework in groups. Therefore, only one of you will be sufficient to submit your homework.
3. Make sure you export your homework as Eclipse projects. You can use other IDEs as well, however, you must test if it supported by Eclipse.
4. If you are using an external library, make sure that ".jar" library is in your project after you exported it. Unfortunately, from our previous experiences we have encountered homework submissions that uses libraries from their "**Desktop**".
5. Please submit your homework through CMS.
6. Please export your Java Project as the given format with your assigned.
   Example:

   G02_CENG431_HW2.zip. (Your group IDs will be announced on CMS).

7. Please be informed that your submissions may be anonymously used in software testing and maintenance research studies. Your names and student IDs will be replaced with non-

identifying strings. If you do not want your submissions to be used in research studies, please inform the instructor (Dr. Tuglular) via e-mail.