**Dictionary wordCount 109,582**

**Home project #3**

**Due to November 18, 11:59 pm. No late submissions are accepted!**

Your program code should start with a comment with your name in it.

Your program should be submitted ONLY through the Blackboard. You should submit only the source code (.cpp and header files).

The assignment is for the individual work only. You are responsible for every statement in your code.

In this assignment we implement our simplified versions of a spell checker.

You program accepts two command-line argument. The first argument is a name of plain-text file with a text to check. The second argument is a plain-text file with the list of correct words; this is the dictionary of your spell checker.

The program should create a text file where each line contains the wrong word from the checked text and the suggestions how to correct this word. It is possible to have no suggestions. The word is considered wrong if it is not in the dictionary.

Your program should start with creating a dictionary. In our program, dictionary is just a collection of all known correct words. Those words should be read from the dictionary file (the second command-line argument) and stored in some **container**.

I want you to measure the running time of the spell-checking itself for the given text and given dictionary files. Find them attached to this assignment. First, do it smart and try *std::unordered\_set* for the container. Then do it with the *std::set* for the sake of comparison. Place the results of the tests in a separate text-file (which you obviously should also submit).

The types of mistakes that your spell-checker should recognize are

* a single letter is missing somewhere in the word. So, if the word is “moter”, one of the suggested corrections should be “mother”.
* a single extra letter appears in the word. If the word is “cadse”, one of the suggested corrections should be “case”.
* a single letter is replaced by the other letter. For the same “moter” word, the list of corrections should include “meter” and “motor”.
* two neighboring letters swapped their positions. If the word is “nto”, one of the suggested corrections should be “not”.

Our spell-checker can correct only 1 mistake per word.

Good luck!