**Requirements Document for CS 5103 Course Project: Software Engineering Practice: Second Requirement Change replacement of all occurrences of a given word (word is passed in a text file) to a given replacement word.**

1. **Introduction**

The word replacement project is to allow replacement of all occurrences of a given word to a given replacement word. Note that the replacement happens only when the given pattern word matches with a whole word. For example, for text “ab cd ef”, replace “a” with “b” will result in no change, while replace “ab” with “cd” will result in “cd cd ef”. The text string is passed to the program in a text file. The program is written in Python to replace all the occurrences of a given word in a text file with the replacement word. The program accepts the input from user(console) for the old and new word (the word to be replaced and the word to replace with respectively) and open and reads the text file. Then the program replaces all occurrences of the old word in the file with a new word. The words are recognized and delimited by spaces only. A space or empty word(empty string characters) also considered as replacement word and replaces any actual word(not spaces/empty) with spaces.

1. **Out of scope functional requirements:**

A period (.) or, (comma) are not delimiters. This program does not correct spelling mistakes. It assumes users pass the strings words and sentences with meaning also this program will not correct grammatical errors. The lower case and upper case are treated as different words. The original word count, line count and character count are not considered as part of this phase.

1. **Other requirements:**

This program is developed in Python programming language using a VS code editor and is pushed to the GitHub for source control.

1. **Functional requirements:**
   1. The empty string should print a message saying that the string (text file) is empty.
   2. The old word (is a given word to be replaced in the text file) shouldn’t be spaces, then then print that the space couldn’t be a word.
   3. Any old word should be replaced with an empty space as well considering new word to be space.
   4. Any given word not found in the text file should print an error message saying that the word is not found.
   5. The word could be just a single letter also (‘a’) and when replaced just the ‘a’ Should be replaced all occurrences of it but not when it is a part of another word (eg: “123a” or “ab” Should not be replaced, only ‘a’ should be replaced)
   6. The word could be just a period (‘.’) and when replaced just the ‘.’ Should be replaced all occurrences of it but not when it is a part of another word (eg: “123.” Should not be replaced only ‘.’ should be replaced)
   7. The word could be just any special character like (eg: ‘$’) and when replaced just the ‘$’ Should be replaced all occurrences of it but not when it is a part of another word (eg: “123$” Should not be replaced only ‘.’ should be replaced)
   8. The word could be just all special characters (eg: @#$%) and when replaced all occurrences of it should be replaced.
   9. The word could be just one digit number (eg: 1) and when replaced just the ‘1’ and all occurrences of it Should be replaced.
   10. The word could be any digit number (eg: 1345) and when replaced all occurrences of it Should be replaced.
   11. The word could be an alphanumeric word with special characters and when replaced all occurrences of it Should be replaced.
   12. When the file has just one single word and the word needs to be replaced should be done.
   13. The string with many occurrences of a word should replace all occurrences of the word with the given word.
   14. A word of any length (really big words, note: length of size that python permits) should be replaced correctly.
   15. A replacement word could be a string also (eg: “our second requirement” is a word) but the given word to be replaced is always a word that has continuous characters without spaces (eg: “our second’ is not one word while “oursecond12” is considered a word)