**Requirements Document for frequency of each unique word in a string (passed from the text file) and for line count and character count in the file**

1. **Introduction**

The word count project is to find the occurrences of each unique word in a given string. The string is passed to a program in a text file. The program reads files and considers spaces, newline characters and the tabs as delimiters to split the sentences into words. The words are then stored in a list, the list is iterated over to find each word occurrences. Also, we find the total number of characters in the given string. Additionally, we report the number of lines. This program counts the spaces between characters also as characters, it includes the spaces and tab space as well in its character count. This program considers the blank line with all spaces also as a line. The program considers and implements the new requirements in addition to the existing requirements.

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

Aperiod (.) 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.

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. **Requirements For the word count:**
      1. The empty string should give an empty list with no words.
      2. The string with all blank spaces should give word count 0
      3. The string with just one period (i.e ‘.’) should give correct output as . as a word
      4. The string with one word must give one word as output in list.
      5. The string with one space between each word should give correct output.
      6. The string with double space between each word should give correct output.
      7. The string with many lines should identify the newline character and give correct word count.
      8. The string with a tab between each word should omit the tab, consider it as delimiter.
      9. The string with large size should pass too.
      10. The string should give correct word count.
      11. String with special characters in its words should consider characters as characters and print separate words.
      12. Strings with alphanumeric words are considered as unique words such as word12.
   2. **Requirements For the character count:**
      1. The empty string should give the total number of characters as 0.
      2. The string with all blank spaces should give correct character count as many as the number of spaces
      3. The string with just one period (i.e ‘.’) should give correct output also
      4. String with just numbers should consider numbers also as characters
      5. String with just all special characters is also considered as characters
      6. The string with one word must give the count of characters correctly.
      7. The string with one space between each word should give correct output considering the spaces also as characters.
      8. The string with double space between each word should give correct output considering double spaces as characters
      9. The string with many lines should identify the newline character and give correct character count
      10. The string with a tab between each word should give the correct character count considering the tab as spaces.
      11. The string with large size should pass too
      12. String with special characters in its words should consider special characters also in it’s total count characters
      13. String with alphanumeric words are considered as characters as well
      14. String with First line leading spaces should consider spaces and count them as characters
   3. **Requirements For the line count:**
      1. The empty string should give the total line count as 0.
      2. The string with one line and all blank spaces in it should give correct line count as 1 i.e consider the blank line also as a line
      3. The string with just one period (i.e ‘.’) should give correct output also
      4. String with just numbers should consider numbers in line1 should give output as 1 line
      5. String with just all special characters in a line should give count as 1.
      6. The string with one word must give the count of lines as 1
      7. The string with one space between each word in a line should give correct output as line count 1.
      8. The string with double space between each word in a line should give correct output as line count 1
      9. The string with many lines should identify the newline character and give correct line count
      10. The string with a tab between each word in a line should in a line should give the correct line count as 1
      11. The string with large size should pass too
      12. The string with first line as blank and characters in second line should give count as 2.
      13. The string with characters in first line and Second line blank should give count as 2
      14. The string with First and third line as blank and characters in second line should give count as 3
      15. String with just One character in a line should give count as 1
      16. String with First line leading spaces and characters in first line should give count as 1