Programming Assignment Unit 1

Department of Computer Science, UoPeople

CS 1103-01 - AY2025-T2 Programming Assignment Unit 1

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Explanation of the Program:

1. **User Input:** The program asks the user to input a paragraph or text using `Scanner`.
2. **Character Count:** The method `getCharacterCount()` removes spaces using `replaceAll("\\s", "")` and returns the length of the resulting string.
3. **Word Count:** The method `getWordCount()` splits the text using regular expressions to detect spaces (`\\s+`), and counts the resulting words.
4. **Most Common Character:** The method `getMostCommonCharacter()` converts the text to lowercase, counts the occurrences of each character using a `Map`, and finds the character with the maximum frequency.
5. **Character Frequency:** The method `getCharacterFrequency()` searches for the occurrences of a specific character in the text (case-insensitive).
6. **Word Frequency:** The method `getWordFrequency()` checks how many times a word appears in the text by splitting the text into words and comparing each word (case-insensitive).
7. **Unique Words Count:** The method `getUniqueWordsCount()` converts the text to lowercase, splits it into words, and stores them in a `Set` to eliminate duplicates. The size of the set gives the count of unique words.

Test Output