Opened: Thursday, 1 February 2024, 12:05 AM
Due: Thursday, 8 February 2024, 11:55 PM

Assignment Instructions

This assignment aims to assess your skills/knowledge on basics of String creation and various string handling functions. This is a scenario based practical assignment to create a text analysis tool, providing students with a hands-on opportunity to apply their programming skills in a real-world context. The assignment focuses on developing a program that performs various operations on text input, enhancing students' skills in handling strings, data analysis, and user interaction.

Scenario: You have been asked to create a text analysis tool that will perform various operations on a given text input. This tool will help users gain insights into the text data by performing character and word analysis.

Assignment Tasks:

1. **User Input:** Ask the user to input a paragraph or a lengthy text. Your program should read and store this input.

2. **Character Count:** Calculate and display the total number of characters in the input text.

3. **Word Count:** Calculate and display the total number of words in the input text. Assume that words are separated by spaces.

4. **Most Common Character:** Find and display the most common character in the text. In case of a tie, select any of the tied characters.

5. **Character Frequency:** Ask the user to input a character. Check and display the frequency of occurrences of this character in the text. Be case-insensitive (e.g., 'a' and 'A' should be considered the same character).

6. **Word Frequency:** Ask the user to input a word. Check and display the frequency of occurrences of this word in the text. Be case-insensitive.

7. **Unique Words:** Calculate and display the number of unique words in the text (case-insensitive).

Submission Instructions

- Read the rubric on how you are going to be graded before you start to work on this assignment.

- Remember to use appropriate variable names and follow best practices of coding. Please provide a screenshot of the outputs. Submit the assignment in MS Word or PDF file.

You will be assessed based on the following criteria:

1. Compilation – The code runs without any errors.

2. Input Validation – This ensures that the user's input meets certain criteria or constraints before it is processed further.

3. Logic and Computation - This handles the core functionality and processing of the questions.

4. Program flow and structure - It encompasses the overall structure and behavior of the program.

5. Submission of code and screenshots of the output.

6. Code style and readability - Refers to the way the code is written, organized, and presented. It focuses on making the code clear, easy to understand, and maintainable.

This assignment will be assessed by your instructor using the rubric below.

Submission status

Attempt number	This is attempt 1.
Submission status	Submitted for grading
Grading status	Graded
Time remaining	Assignment was submitted 16 hours 2 mins early
Last modified	Thursday, 8 February 2024, 7:52 AM
File submissions	📄 Unit 1 Assignment.pdf 8 February 2024, 7:48 AM
Submission comments	▶ Comments (0)

Grading criteria

Compilation	The program compiles without any errors or warnings. The necessary libraries and packages are imported correctly. *20 points*	The program compiles without any errors or warnings. The necessary libraries and packages are not imported correctly. *16 points*	The program has compilation error but includes the necessary libraries and packages. *10 points*	The program does not include the necessary library packages and has compilation errors. *0 points*
Input Validation	The program validates user inputs to ensure they are of the correct data type and within the specified range. *20 points*	The program code contains incorrect data type but has valid inputs. *16 points*	Both the inputs and the data types included are incorrect. *0 points*	
Logic and Computation	The program accurately performs the string operations. The result is displayed correct for all of the operations. *20 points*	The program performs all the operations. However, the outputs are partially correct. *16 points*	The program does not perform all the string operation. Also, all the results are not correct. *10 points*	None of the string operations have been performed correctly. Also, the results displayed are incorrect. *0 points*

Program Flow and Structure	The program follows a logical flow and is well-structured. Proper variable declaration and initialization are done. Meaningful variable names and appropriate data types are used. **20 points**	The program follows a logical flow and is structured. Variable names and data types used are not correct. **10 points**	Variables are not declared, no proper logical flow and inappropriate data types declared. **0 points**	
Output	The program displays the expected output to the user. The output is formatted appropriately for clarity and a screenshot is provided. **10 points**	The program does not give any output. Neither any screen shots have been shared **0 points**		
Code Style and Readability	The code follows consistent indentation and formatting conventions. The code is easy to read and understand. The program does not contain any unnecessary or redundant code. **10 points**	The code does not have proper indentation and formatting. **8 points**	Unnecessary code and no proper indentation are followed. **5 points**	Redundant code. **0 points**

Feedback

Grade	8.60 / 10.00
Graded on	Thursday, 8 February 2024, 8:23 PM
Graded by	Vikas Thada (Instructor)
Feedback comments	✚ Dear Godfrey You didn't use input validation. The output suggests that some portion of the logic didn't work out as required. More ...

Grade breakdown

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