Programming Exercise 07

Technical Design Document

Winson Ma

Program Description:

Takes a paragraph as input, splits it into individual sentences, and displays each sentence along with the total sentence count. Uses regular expression to split the paragraphs and then count the sentences and display them.

Function: split\_sentences(paragraph)

* **Description:**
* Splits a paragraph into individual sentence using a regular expression
* **Parameters:**
* Paragraph (str): Paragraph to split
* **Variables:**
* Sentence\_pattern (str): Regular expression pattern to identify sentence boundaries.
* Sentences (list): List of strings, where each string is a sentence.
* **Logical Steps:**

1. Defines a regular expression pattern to split sentences. Ensuing that sentences are split at periods, question marks, or exclamation points.
2. Uses re.split() to split the paragraph into sentences.
3. Removes leading whitespace from each sentences or filters out empty sentences.
4. Returns

* **Returns:**
* List: each string in a sentence.

Function: count\_and\_display\_sentence(paragraph)

* **Description:**
* Counts and displays individual sentences.
* **Parameters:**
* Paragraph (str): Paragraph to process.
* **Variables:**
* Sentences (list): A list of sentences obtained from split\_sentences.
* Sentences\_count (int): Number of sentences in the paragraph.
* **Logical Steps:**

1. Calls split\_sentences to get the list of sentences
2. Calculates the number of sentences using len().
3. Prints the sentence count.
4. Iterates through the list of sentences and prints each sentence.

Function: Main()

* Description:
* Gets paragraph input from user and calls count\_and\_display\_sentences.
* Variables:
* Paragraph (str): Paragraph input by user.
* Logical Steps:

1. Prompts user to enter a paragraph.
2. Calls count\_and\_display\_sentences to process the paragraph.

GitHub: <https://github.com/FamiliarotherW/COP2373-Assignment-07>

