**Exercise 7 Technical Design Document**

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**Program Description:**

This program uses a regular expression to identify the sentences in a given paragraph. Then, it displays the total sentences found and prints those sentences to the screen.

**Functions used in the Program (listed in the order they’re called in):**

1. **Function Name:** analyze\_paragraph(paragraph)

**Description:** This function uses a regular expression to identify the sentences in the user’s paragraph. It stores those sentences in a list, then prints the total sentences.

**Parameters:** paragraph = the user’s paragraph

**Variables:**

1. pattern = the regular expression that separates the paragraph into its sentences
2. sentences\_list = the list that stores the individual sentences found

**Logical Steps:**

1. re.findall uses the defined regular expression on the user’s paragraph, and stores the sentences in a variable (sentences\_list). Flags are used to make sure that any newlines can match conditions.
2. The length of sentences\_list is printed – how many sentences were in the paragraph

**Returns:** sentences\_list

1. **Function Name:** print\_sentences(sentences\_list)

**Description:** This function uses a for loop to print the sentences stored in the given list.

**Parameters:** sentences\_list = the list that holds the individual sentences in the user’s paragraph

**Variables:** None

**Logical Steps:**

1. For loop iterates over every sentence in sentences\_list
   1. For every sentence, that sentence is printed in a formatted way

**Returns:** Nothing

1. **Function Name:** main()

**Description:** This function takes the user input and calls the two logical functions in the program.

**Parameters:** None

**Variables:**

1. Paragraph = stores the input of the user’s paragraph
2. sentences\_list = stores the returned list from the analyze\_paragraph function

**Logical Steps:**

1. Prints a prompt for the user to enter their paragraph, storing it in a variable
2. Passes the paragraph to the analyze\_paragraph function
3. Passes the result of the first function to the function named print\_sentences

**Returns:** Nothing

**Program Logical Steps:**

1. Import the regular expression package, re.
2. Call main
   1. Store the user’s paragraph
   2. Call analyze\_paragraph
   3. Call print\_sentences

**Link to Repository:** <https://github.com/VBelous1/COP2373/tree/master/Week%209>

**Output Screenshot:**

**A screen shot of a computer

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