**Technical Design Document: MarquesePendergrass\_ProgrammingExercise\_7.py**

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**Program Description:**

Program reads a paragraph that the user enters and splits it into sentences using regular expressions.

**Functions used in the Program:**

1. **Function Name:** sentences\_separator(text)

**Description:** Separates a paragraph into individual sentences using a regular expression pattern with look-ahead for punctuation and capitalization.

**Parameters:** text (str) – the paragraph entered by the user.

**Variables:**

1. pat – pattern used to detect sentence boundaries.

2. text – stores the contents of the paragraph the user entered.

**Logical Steps:**

1. Define a regex pattern that matches sentences.

2. Use re.findall to capture all matches based on the pattern.

3. Return the list of matched sentences.

Returns: list – sentences extracted from the paragraph.

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

**Description:** Handles program execution including user input collection, calling the sentence-separation function, and displaying results.

**Parameters:** None

**Variables:**

1. lines – stores user input lines until a blank line is entered.

2. paragraph – contains the combined user input text.

3. sentences – list of sentences returned by the separator function.

**Logical Steps:**

1. Prompt user to enter a paragraph.

2. Collect input line by line until a blank line.

3. Combine all entered lines into a single paragraph string.

4. Pass paragraph to sentences\_separator to get sentences.

5. Print each sentence and the total number of sentences.

**Returns:** None

**Link to repository: https://github.com/Tpender4/COP2373/tree/main/ProgrammingExercise7**

**Output Screenshot:**

**A screenshot of a computer

AI-generated content may be incorrect.**