**Technical Design Document Template**

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**Program Description**

Collect user input for paragraph text, split input into sentences using regular expressions, and display sentences to user.

**Constant(s)**

1. **Name**  REGEX\_SENTENCE

**Type** Regular expression Pattern

**Description** Regular expression Pattern to match sentences. Modified from book\_code\_7.4.py.  
  
Allows:  
 Matches sentences that start with a number (0-9) or an uppercase letter (A-Z).  
 Captures everything until a period (.), exclamation (!), or question mark (?).  
 Ensures that the next character is either an uppercase letter, a number, or the end of the string.  
 Uses DOTALL and MULTILINE flags to handle multiline input properly.

**Function(s)**

1. **Name**  main

**Description** Entry function for when code is invoked directly.  
  
Retrieve paragraph from user input, split input into sentences. and  
display results.

**Parameter(s)**

| Name | Type | Description |
| --- | --- | --- |
|  |  |  |

**Logic**

* 1. Retrieve paragraph from user input.
  2. Split input into sentences.
  3. Display results.

**Return(s)**

|  | Type | Description |
| --- | --- | --- |
|  |  |  |

1. **Name**  get\_sentences

**Description** Extracts sentences from paragraph using REGEX\_SENTENCE.

**Parameter(s)**

| Name | Type | Description |
| --- | --- | --- |
| paragraph | str | The paragraph text to get sentences from. |

**Logic**

1. See description.

**Return(s)**

|  | Type | Description |
| --- | --- | --- |
|  | List[str] | A list of sentences found in paragraph. |

1. **Name**  display\_sentences

**Description** Display each sentences in sentences, as well as sentence count.

**Parameter(s)**

| Name | Type | Description |
| --- | --- | --- |
| sentences | List[str] | A list of sentences. |

**Logic**

1. See description.

**Return(s)**

|  | Type | Description |
| --- | --- | --- |
|  |  |  |

**Logic**

1. main()
2. get\_sentences()
3. display\_sentences()

**Link**

<https://github.com/JosephDSullivan/COP2373/blob/main/src/chapter07/jsulli40_chapter07_assignment07.py>