Problem 2047: Number of Valid Words in a Sentence

Problem Information

Difficulty: Easy
Acceptance Rate: 30.55%
Paid Only: No
Tags: String

Problem Description

A sentence consists of lowercase letters (`'a'` to `'z'`), digits (`'0'` to `'9'`), hyphens (`'-'`), punctuation marks (`'!'`, `'.'`, and `','`), and spaces (`' '`) only. Each sentence can be broken down into **one or more tokens** separated by one or more spaces `' '`.

A token is a valid word if **all three** of the following are true:

* It only contains lowercase letters, hyphens, and/or punctuation (**no** digits). * There is **at most one** hyphen `'-'`. If present, it **must** be surrounded by lowercase characters (`"a-b"` is valid, but `"-ab"` and `"ab-"` are not valid). * There is **at most one** punctuation mark. If present, it **must** be at the **end** of the token (`"ab,"`, `"cd!"`, and `"."` are valid, but `"a!b"` and `"c.,"` are not valid).

Examples of valid words include `"a-b."`, `"afad"`, `"ba-c"`, `"a!"`, and `"!"`.

Given a string `sentence`, return _the**number** of valid words in _`sentence`.

Example 1:

Input: sentence = "_cat_ _and_ _dog_ " **Output:** 3 **Explanation:** The valid words in the sentence are "cat", "and", and "dog".

Example 2:

Input: sentence = "!this 1-s b8d!" **Output:** 0 **Explanation:** There are no valid words in the sentence. "!this" is invalid because it starts with a punctuation mark. "1-s" and "b8d" are

invalid because they contain digits.

Example 3:

Input: sentence = "_alice_ _and_ _bob_ _are_ _playing_ stone-game10" **Output:** 5 **Explanation:** The valid words in the sentence are "alice", "and", "bob", "are", and "playing". "stone-game10" is invalid because it contains digits.

Constraints:

* `1 <= sentence.length <= 1000` * `sentence` only contains lowercase English letters, digits, `' '`, `'-'`, `'!'`, `'.'`, and `','`. * There will be at least `1` token.

Code Snippets

C++:

```
class Solution {
public:
int countValidWords(string sentence) {

}
};
```

Java:

```
class Solution {
public int countValidWords(String sentence) {

}
}
```

Python3:

```
class Solution:
def countValidWords(self, sentence: str) -> int:
```