Circular Sentence

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Platform	LeetCode
difficulty	Easy
# Serial	2490
tags	String Manipulation
language	C++
solved on	@02/11/2024
link	https://leetcode.com/problems/circular-sentence/description/
Completion	☑

Intuition

The problem requires checking whether a given sentence forms a circular sentence, meaning the first letter of each word matches the last letter of the previous word, and the first and last characters of the whole sentence also match.

Approach

1. Check if the first and last characters of the sentence match. If not, return `false`.
2. Traverse the sentence, and whenever a space is encountered (indicating the end of a word), check if the last letter of the previous word matches the first letter of the next word. If any mismatch is found, return `false`.
3. If the loop completes without issues, return `true`.

Complexity

Time Complexity:

- **O(n)**, where `n` is the length of the input string. This is because we need to iterate through the string once to check each space and ensure the conditions hold.

Space Complexity:

- **O(1)**, as the solution uses a constant amount of space.

Code

```
class Solution {
public:
    bool isCircularSentence(string sentence) {
        int n = sentence.size();
        if (sentence[0] != sentence[n - 1]) return false;
        for (int i = 0; i < n; i++) {
            if (sentence[i] == ' ') {
                if (sentence[i - 1] != sentence[i + 1]) return false;
            }
        }
        return true;
```

```
    }
};
```