

Unknown Title



Description

Description



Note

Note



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Code

Code



Testcase

Testcase



Test Result

Test Result



Leet

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30. Substring with Concatenation of All Words

Hard



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You are given a string `s` and an array of strings `words`. All the strings of `words` are of **the same length**.

A **concatenated string** is a string that exactly contains all the strings of any permutation of `words` concatenated.

- For example, if `words = ["ab", "cd", "ef"]`, then `"abcdef"`, `"abefcd"`, `"cdabef"`, `"cdefab"`, `"efabcd"`, and `"efcdab"` are all concatenated strings. `"acdbef"` is not a concatenated string because it is not the concatenation of any permutation of `words`.

Return an array of *the starting indices* of all the concatenated substrings in `s`. You can return the answer in **any order**.

Example 1:

Input: `s = "barfoothefoobarman"`, `words = ["foo", "bar"]`

Output: `[0,9]`

Explanation:

The substring starting at 0 is `"barfoo"`. It is the concatenation of `["bar", "foo"]` which is a permutation of `words`.

The substring starting at 9 is `"foobar"`. It is the concatenation of `["foo", "bar"]` which is a permutation of `words`.

Example 2:

Input: `s = "wordgoodgoodgoodbestword"`, `words = ["word", "good", "best", "word"]`

Output: `[]`

Explanation:

There is no concatenated substring.

Example 3:

Input: `s = "barfoofoobarthefoobarman"`, `words = ["bar", "foo", "the"]`

Output: `[6,9,12]`

Explanation:

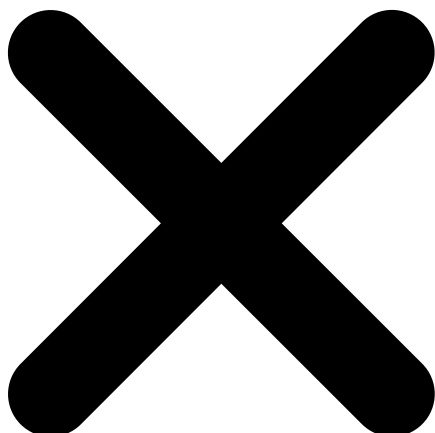
The substring starting at 6 is `"foobarthe"`. It is the concatenation of `["foo", "bar", "the"]`.

The substring starting at 9 is `"barthefoo"`. It is the concatenation of `["bar", "the", "foo"]`.

The substring starting at 12 is `"thefoobar"`. It is the concatenation of `["the", "foo", "bar"]`.

Constraints:

- $1 \leq s.length \leq 10^4$
- $1 \leq words.length \leq 5000$
- $1 \leq words[i].length \leq 30$
- `s` and `words[i]` consist of lowercase English letters.



Seen this question in a real interview before?

1/5

Yes

No

Accepted

637,776/1.9M

Acceptance Rate

33.5%



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Discussion (270)



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2. The problem discussion is for asking questions about the problem or for sharing tips - anything except for solutions.
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Daman



Feb 28, 2024

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"aa"

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aa

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Can LeetCode start adding the efficiency requirements to all the Description sections? It would make problem solving much less tedious

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Dany__Guty



Feb 12, 2023

This will save you: you need to increment the window one by one, there's no way to pass the testcases in increments in the window of $n = \text{words}[0].\text{size}()$

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leolin479

Dec 23, 2021

For the example case

Input: s = "wordgoodgoodgoodbestword", words = ["word", "good", "best", "word"]

Output: []

The standard answer was "output: [8]", which preventing my code to be submitted.

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darcylmx

Dec 30, 2019

Ignoring the key information(all the words are the SAME length) will cause exponential time complexity.

Otherwise, it is just linear time to check a match.

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Igor

Nov 27, 2023

Additional description point:

The words can overlap, like in this example from the test cases:

s =

"lingmindrabofoofoowwingdingbarrwingmonkeypoundcake"

words =

["foo", "barr", "wing", "ding", "wing"]

Please, add this to the description, it is not clear

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Yash-Dev-Solanki



Aug 16, 2023

There is a problem with the last testcase. The parameters seem to be missing.

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113 Online

1

2

3

4

5

```
class Solution {
```

```
    public List<Integer> findSubstring(String s, String[] words) {
```

```
    }
```

```
}
```



Saved

Ln 1, Col 1

s =

"barfoothefoobarman"

words =

["foo","bar"]

9

1

2

3

4

5

6

>

"barfoothefoobarman"

["foo", "bar"]

"wordgoodgoodgoodbestword"

["word", "good", "best", "word"]

"barfoofoobarthefoobarman"

["bar", "foo", "the"]

</>


Source



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