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Grokking the Coding Interview: Patterns for Coding Questions

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Problem Challenge 1
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Problem Challenge 4

We'll cover the following



- Words Concatenation (hard)
- Try it yourself

Words Concatenation (hard)

Given a string and a list of words, find all the starting indices of substrings in the given string that are a **concatenation of all the given words** exactly once **without any overlapping** of words. It is given that all words are of the same length.

Example 1:

Input: String="catfoxcat", Words=["cat", "fox"]

Output: [0, 3]

Explanation: The two substring containing both the words are "catfox" & "foxcat".

Example 2:

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Problem Challenge 1
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Input: String="catcatfoxfox", Words=["cat", "fox"]

Output: [3]

Explanation: The only substring containing both the words is "catfox".



Try it yourself

Try solving this question here:

Java

Python3

JS

C++

```
5 List<Integer> resultIndices = new ArrayList<Integer>();
6 // TODO: Write your code here
7 HashMap<String,Integer> map1 = new HashMap<>();
8 for(int i=0;i<words.length;i++)
9 {
10     map1.put(words[i],map1.getOrDefault(words[i],0));
11 }
12 int wordsCount = words.length, len = words[0].length();
13 int n = str.length();
14 for(int start = 0 ;start< n-wordsCount*len+1;start++)
15 {
16     HashMap<String,Integer> map2 = new HashMap<>();
17     for(int j=0;j<wordsCount;j++) {
18         int nextwordIndex = start+j*len;
19         String temp = str.substring(nextwordIndex,nextwordIndex+len);
20         if(!map1.containsKey(temp)) {
21             break;
22         }
23         map2.put(temp,map2.getOrDefault(temp,0)+1);
24         if(map2.get(temp)>map1.get(temp)){
25             break;
26         }
27         if(j+1==wordsCount){
28             resultIndices.add(start);
29         }
30     }
31 }
32 return resultIndices;
```



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35 }
34 }
35

Test

Save *

Reset

Show Results

Show Console

×

2 of 2 Tests Passed

Result	Input	Expected Output	Actual Output	Reason
✓	findWordConcatenation(catfoxcat, [cat, f	[0, 3]	[0, 3]	Succeeded
✓	findWordConcatenation(catcatfoxfox, [cat	[3]	[3]	Succeeded

2.431s

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Solution Review: Problem Challenge 3

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Solution Review: Problem Challenge 4

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Problem Challenge 1

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