Grokking the Coding Interview: Patterns for Coding Questions

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Problem Challenge 1

We'll cover the following ⌃

- Permutation in a String (hard)
- Try it yourself

Permutation in a String (hard)

Given a string and a pattern, find out if the **string contains any permutation of the pattern**.

Permutation is defined as the re-arranging of the characters of the string. For example, "abc" has the following six permutations:

1. abc
2. acb
3. bac
4. bca
5. cab
6. cba

If a string has 'n' distinct characters, it will have $n!$ permutations.

Example 1:

```
Input: String="oidbcaf", Pattern="abc"
Output: true
Explanation: The string contains "bca" which is a permutation of the given pattern.
```

Example 2:

```
Input: String="odicf", Pattern="dc"
Output: false
Explanation: No permutation of the pattern is present in the given string as a substring.
```

Example 3:

```
Input: String="bcdxabcdy", Pattern="bcdyabcdx"
Output: true
Explanation: Both the string and the pattern are a permutation of each other.
```

Example 4:

```
Input: String="aaacb", Pattern="abc"
Output: true
Explanation: The string contains "acb" which is a permutation of the given pattern.
```

Try it yourself

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Try solving this question here:

| Java | Python3 | JS | C++ |

```java
11        }
12      }
13      return true;
14    }
15    public static boolean findPermutation(String str,
16      // TODO: Write your code here
17      int n = pattern.length();
18      int m = str.length();
19      int[] c1 = new int[26];
20      int[] c2 = new int[26];
21      int start = 0;
22      for(int i=0;i<n;i++)
23      {
24        c1[pattern.charAt(i)-'a']++;
25      }
26
27      for(int i=0;i<m;i++)
28      {
29        c2[str.charAt(i)-'a']++;
30        if(i>=n-1)
31        {
32          if(compare(c1,c2))
33          {
34            return true;
35          }
36          c2[str.charAt(start)-'a']--;
37          start++;
38        }
39      }
40      return false;
41    }
```
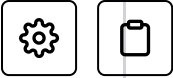
Test

Save *

Reset

Show Results   Show Console

Result	Input	Expected Output	Actual Output	Reason
✓	findPermutation(oidbcaf, abc)	true	true	Succeeded
✓	findPermutation(odicf, dc)	false	false	Succeeded
✓	findPermutation(bcdxabcdy, bcdyabcdx)	true	true	Succeeded
✓	findPermutation(aaacb, abc)	true	true	Succeeded

2.846s

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Solution Review: Problem Challenge 1

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Longest Subarray with Ones

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