Grokking the Coding Interview: Patterns for Coding Questions

5% completed

Problem Challenge 3

We'll cover the following ⌃

- Smallest Window containing Substring (hard)
- Try it yourself

Smallest Window containing Substring (hard)

Given a string and a pattern, find the **smallest substring** in the given string which has **all the characters of the given pattern**.

Example 1:

```
Input: String="aabdec", Pattern="abc"
Output: "abdec"
Explanation: The smallest substring having all characters of the pattern is "abde
c"
```

Example 2:

Input: String="abdbca", Pattern="abc"

Output: "bca"

Explanation: The smallest substring having all characters of the pattern is "bca"
.

Example 3:

Input: String="adcad", Pattern="abc"

Output: ""

Explanation: No substring in the given string has all characters of the pattern.

Try it yourself

Try solving this question here:

Grokking the Coding Interview: Patterns for Coding Questions

5% completed

Java	Python3	JS	C++

```java
4       // TODO: write your code here
5       int n = str.length(),m = pattern.length();
6       int min = Integer.MAX_VALUE, start = 0;
7       int ansStart = 0,allSet = 0;
8       HashMap<Character,Integer> map = new HashMap<>(
9       for(int i=0;i<m;i++){
10        char temp = pattern.charAt(i);
11        map.put(temp,map.getOrDefault(temp,0)+1);
12      }
13      for(int end =0;end<n;end++){
14        char temp1 = str.charAt(end);
15        if(map.containsKey(temp1)){
16          map.put(temp1,map.get(temp1)-1);
17          if(map.get(temp1)>=0)
18            allSet++;
19        }
20        while(allSet==m){
21          if(min>end-start+1){
22            min = end-start+1;
```

```
23          ansStart = start;
24        }
25        char temp2 = str.charAt(start);
26        start++;
27        if(map.containsKey(temp2)){
28          if(map.get(temp2)==0)
29            allSet--;
30          map.put(temp2,map.get(temp2)+1);
31        }
32      }
33    }
34    return min>n?"":str.substring(ansStart,ansStart
```

Test   Save *   Reset   ⛶

Show Results   Show Console   ✕

📋 3 of 3 Tests Passed

Result	Input	Expected Output	Actual Output	Reason
✓	findSubstring(aabdec, abc)	abdec	abdec	Succeeded
✓	findSubstring(abdbca, abc)	bca	bca	Succeeded
✓	findSubstring(adcad, abc)			Succeeded

4.107s

← Back   Next →

Solution Review: Problem Challenge 2   Solution Review: Problem Challenge 3

← **Back To Course Home**

5% completed, meet the <u>criteria</u> and claim your course certificate!

Claim Certificate

Grokking the Coding Interview: Patterns for Coding Questions

🛑 Report an Issue

❓ Ask a Question
(https://discuss.educative.io/tag/problem-challenge-3__pattern-sliding-window__grokking-the-coding-interview-patterns-for-coding-questions)

5% completed ⟳

🔍 Search Course