

Our Solution(s)

Run Code

Your Solutions

Run Code

Solution 1

```
1 // Copyright © 2020 AlgoExpert, LLC. All rights reserved.
2
3 // O(b + s) time | O(b + s) space - where b is the length of the big
4 // input string and s is the length of the small input string
5 function smallestSubstringContaining(bigString, smallString) {
6   const targetCharCounts = getCharCounts(smallString);
7   const substringBounds = getSubstringBounds(bigString, targetCharCounts);
8   return getStringFromBounds(bigString, substringBounds);
9 }
10
11 function getCharCounts(string) {
12   const charCounts = {};
13   for (const char of string) {
14     increaseCharCount(char, charCounts);
15   }
16   return charCounts;
17 }
18
19 function getSubstringBounds(string, targetCharCounts) {
20   let substringBounds = [0, Infinity];
21   const substringCharCounts = {};
22   const numUniqueChars = Object.keys(targetCharCounts).length;
23   let numUniqueCharsDone = 0;
24   let leftIdx = 0;
25   let rightIdx = 0;
26   // Move the rightIdx to the right in the string until you've counted
27   // all of the target characters enough times.
28   while (rightIdx < string.length) {
29     const rightChar = string[rightIdx];
30     if (!(rightChar in targetCharCounts)) {
31       rightIdx++;
32       continue;
33     }
```

Solution 1

Solution 2

Solution 3

```
1 function smallestSubstringContaining(bigString, smallString) {
2   // Write your code here.
3 }
4
5 // Do not edit the line below.
6 exports.smallestSubstringContaining = smallestSubstringContaining;
7
```

Our Tests

Custom Output

Submit Code

```
1 // Test Case 1: bigString = "adbc", smallString = "abc"
2 // Expected: "adbc"
3
4 // Test Case 2: bigString = "adbc", smallString = "ad"
5 // Expected: "ad"
6
7 // Test Case 3: bigString = "adbc", smallString = "adbc"
8 // Expected: "adbc"
```

```

10 # Print out the number of times the word "lightning" appears in the text
11
12 # Print out variable lightning
13
14 # Print out variable lightning
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16 # Print out variable lightning
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18 # Print out variable lightning
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99
100 # Print out variable lightning

```

Run or submit code when you're ready.