

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 def smallestSubstringContaining(bigString, smallString):
6     targetCharCounts = getCharCounts(smallString)
7     substringBounds = getSubstringBounds(bigString, targetCharCounts)
8     return getStringFromBounds(bigString, substringBounds)
9
10
11 def getCharCounts(string):
12     charCounts = {}
13     for char in string:
14         increaseCharCount(char, charCounts)
15     return charCounts
16
17
18 def getSubstringBounds(string, targetCharCounts):
19     substringBounds = [0, float("inf")]
20     substringCharCounts = {}
21     numUniqueChars = len(targetCharCounts.keys())
22     numUniqueCharsDone = 0
23     leftIdx = 0
24     rightIdx = 0
25     # Move the rightIdx to the right in the string until you've counted
26     # all of the target characters enough times.
27     while rightIdx < len(string):
28         rightChar = string[rightIdx]
29         if rightChar not in targetCharCounts:
30             rightIdx += 1
31             continue
32         increaseCharCount(rightChar, substringCharCounts)
33         if substringCharCounts[rightChar] == targetCharCounts[rightChar]:
34             numUniqueCharsDone += 1
35             if numUniqueCharsDone == numUniqueChars:
36                 return [leftIdx, rightIdx]
37         rightIdx += 1
38     return [0, len(string)]
39
40 def increaseCharCount(char, charCounts):
41     if char in charCounts:
42         charCounts[char] += 1
43     else:
44         charCounts[char] = 1
```

Solution 1

Solution 2

Solution 3

```
1 def smallestSubstringContaining(bigString, smallString):
2     # Write your code here.
3     pass
4
```

Our Tests

Custom Output

Submit Code

```
1 def smallestSubstringContaining(bigString, smallString):
2     # Write your code here.
3     pass
4
```

```
1 def smallestSubstringContaining(bigString, smallString):
2     # Write your code here.
3     pass
4
```

