

PromptScratchpadOur Solution(s)Video Explanation

Run Code

Solution 1Solution 2Solution 3

```
1 # Copyright © 2020 AlgoExpert, LLC. All rights reserved.
2
3 # O(ns + bs) time | O(ns) space
4 def multiStringSearch(bigString, smallStrings):
5     trie = Trie()
6     for string in smallStrings:
7         trie.insert(string)
8     containedStrings = {}
9     for i in range(len(bigString)):
10         findSmallStringsIn(bigString, i, trie, containedStrings)
11     return [string in containedStrings for string in smallStrings]
12
13
14 def findSmallStringsIn(string, startIdx, trie, containedStrings):
15     currentNode = trie.root
16     for i in range(startIdx, len(string)):
17         currentChar = string[i]
18         if currentChar not in currentNode:
19             break
20         currentNode = currentNode[currentChar]
21         if trie.endSymbol in currentNode:
22             containedStrings[currentNode[trie.endSymbol]] = True
23
24
25 class Trie:
26     def __init__(self):
27         self.root = {}
28         self.endSymbol = "*"
29
30     def insert(self, string):
31         current = self.root
32         for i in range(len(string)):
33             if string[i] not in current:
34                 current[string[i]] = {}
35             current = current[string[i]]
36         current[self.endSymbol] = string
37
```