

PromptScratchpadOur Solution(s)Video Explanation

Run Code

Solution 1Solution 2Solution 3

```
1 // Copyright © 2020 AlgoExpert, LLC. All rights reserved.
2
3 // O(b^2 + ns) time | O(b^2 + n) space
4 function multiStringSearch(bigString, smallStrings) {
5   const modifiedSuffixTrie = new ModifiedSuffixTrie(bigString);
6   return smallStrings.map(string => modifiedSuffixTrie.contains(string));
7 }
8
9 class ModifiedSuffixTrie {
10   constructor(string) {
11     this.root = {};
12     this.populateModifiedSuffixTrieFrom(string);
13   }
14
15   populateModifiedSuffixTrieFrom(string) {
16     for (let i = 0; i < string.length; i++) {
17       this.insertSubstringStartingAt(i, string);
18     }
19   }
20
21   insertSubstringStartingAt(i, string) {
22     let node = this.root;
23     for (let j = i; j < string.length; j++) {
24       const letter = string[j];
25       if (!(letter in node)) node[letter] = {};
26       node = node[letter];
27     }
28   }
29
30   contains(string) {
31     let node = this.root;
32     for (const letter of string) {
33       if (!(letter in node)) return false;
34       node = node[letter];
35     }
36     return true;
37   }
38 }
39
40 exports.multiStringSearch = multiStringSearch;
41
```