

PromptScratchpadOur Solution(s)Video Explanation

Run Code

Solution 1Solution 2

```
1 // Copyright © 2020 AlgoExpert, LLC. All rights reserved.
2
3 // O(2^(n + m)) time | O(n + m) space - where n is the length
4 // of the first string and m is the length of the second string
5 function interweavingStrings(one, two, three) {
6   if (three.length !== one.length + two.length) {
7     return false;
8   }
9
10  return areInterwoven(one, two, three, 0, 0);
11 }
12
13 function areInterwoven(one, two, three, i, j) {
14   const k = i + j;
15   if (k === three.length) return true;
16
17   if (i < one.length && one[i] === three[k]) {
18     if (areInterwoven(one, two, three, i + 1, j)) return true;
19   }
20
21   if (j < two.length && two[j] === three[k]) {
22     return areInterwoven(one, two, three, i, j + 1);
23   }
24
25   return false;
26 }
27
28 exports.interweavingStrings = interweavingStrings;
29
```