

PromptScratchpadOur Solution(s)Video Explanation

Run Code

Solution 1Solution 2

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