Prompt   Scratchpad   Our Solution(s)   Video Explanation   Run Code

Solution 1   Solution 2

```csharp
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public class Program {
  // O(2^(n + m)) time | O(n + m) space - where n is the length
  // of the first string and m is the length of the second string
  public static bool Interweavingstrings(string one, string two, string three) {
    if (three.Length != one.Length + two.Length) {
      return false;
    }

    return areInterwoven(one, two, three, 0, 0);
  }

  public static bool areInterwoven(string one, string two, string three, int i, int j) {
    int k = i + j;
    if (k == three.Length) return true;

    if (i < one.Length && one[i] == three[k]) {
      if (areInterwoven(one, two, three, i + 1, j)) return true;
    }

    if (j < two.Length && two[j] == three[k]) {
      return areInterwoven(one, two, three, i, j + 1);
    }

    return false;
  }
}
```