

Our Solution(s)

Run Code

Your Solutions

Run Code

```

1 // Copyright © 2020 AlgoExpert, LLC. All rights reserved.
2
3 // O(nm) time | O(nm) space
4 function longestCommonSubsequence(str1, str2) {
5   const lengths = [];
6   for (let i = 0; i < str2.length + 1; i++) {
7     lengths.push(new Array(str1.length + 1).fill(0));
8   }
9   for (let i = 1; i < str2.length + 1; i++) {
10    for (let j = 1; j < str1.length + 1; j++) {
11      if (str2[i - 1] === str1[j - 1]) {
12        lengths[i][j] = lengths[i - 1][j - 1] + 1;
13      } else {
14        lengths[i][j] = Math.max(lengths[i - 1][j], lengths[i][j - 1]);
15      }
16    }
17  }
18  return buildSequence(lengths, str1);
19 }
20
21 function buildSequence(lengths, string) {
22   const sequence = [];
23   let i = lengths.length - 1;
24   let j = lengths[0].length - 1;
25   while (i !== 0 && j !== 0) {
26     if (lengths[i][j] === lengths[i - 1][j]) {
27       i--;
28     } else if (lengths[i][j] === lengths[i][j - 1]) {
29       j--;
30     } else {
31       sequence.unshift(string[j - 1]);
32       i--;
33       j--;
34     }
35   }
36   return sequence;
37 }

```

```
Solution 1    Solution 2    Solution 3

1  function longestCommonSubsequence(str1, str2) {
2    // Write your code here.
3  }
4
5  // Do not edit the line below.
6  exports.longestCommonSubsequence = longestCommonSubsequence;
7
```

Our Tests

Custom Output

Submit Code

```
10 # Test Case 40 - Success (2/2)
11 # Test Case 40: Input: [1, 2, 3, 4, 5], [1, 2, 3, 4, 5]
12 # Expected Output: [1, 2, 3, 4, 5]
13 # Test Case 40: Success (2/2)
14 # Test Case 41 - Success (2/2)
15 # Test Case 41: Input: [1, 2, 3, 4, 5], [1, 2, 3, 4, 5]
16 # Expected Output: [1, 2, 3, 4, 5]
17 # Test Case 41: Success (2/2)
18 # Test Case 42 - Success (2/2)
19 # Test Case 42: Input: [1, 2, 3, 4, 5], [1, 2, 3, 4, 5]
20 # Expected Output: [1, 2, 3, 4, 5]
21 # Test Case 42: Success (2/2)
22 # Test Case 43 - Success (2/2)
23 # Test Case 43: Input: [1, 2, 3, 4, 5], [1, 2, 3, 4, 5]
24 # Expected Output: [1, 2, 3, 4, 5]
25 # Test Case 43: Success (2/2)
```

Run or submit code when you're ready.