Problem 1092: Shortest Common Supersequence

Problem Information

Difficulty: Hard
Acceptance Rate: 61.62%
Paid Only: No
Tags: String, Dynamic Programming

Problem Description

Given two strings `str1` and `str2`, return _the shortest string that has both_`str1` _and_`str2` _as**subsequences**_. If there are multiple valid strings, return **any** of them.

A string `s` is a **subsequence** of string `t` if deleting some number of characters from `t` (possibly `0`) results in the string `s`.

Example 1:

Input: str1 = "abac", str2 = "cab" **Output:** "cabac" **Explanation:** str1 = "abac" is a subsequence of "cabac" because we can delete the first "c". str2 = "cab" is a subsequence of "cabac" because we can delete the last "ac". The answer provided is the shortest such string that satisfies these properties.

Example 2:

Input: str1 = "aaaaaaaa", str2 = "aaaaaaaa" **Output:** "aaaaaaaa"

Constraints:

* `1 <= str1.length, str2.length <= 1000` * `str1` and `str2` consist of lowercase English letters.

Code Snippets

C++:

```
class Solution {
public:
string shortestCommonSupersequence(string str1, string str2) {

}
};
```

Java:

```
class Solution {
public String shortestCommonSupersequence(String str1, String str2) {

}
}
```

Python3:

```
class Solution:
def shortestCommonSupersequence(self, str1: str, str2: str) -> str:
```