

Size of Shortest Common Supersequence

Given two strings X and Y of lengths m and n respectively, find the length of the smallest string which has both, X and Y as its sub-sequences.

Note: X and Y can have both uppercase and lowercase letters.

Example 1

Input:

X = abcd, Y = xy cd

Output: 6

Explanation: Shortest Common Supersequence would be abxy cd which is of length 6 and has both the strings as its subsequences.

Example 2

Input:

X = efgh, Y = jghi

Output: 6

Explanation: Shortest Common Supersequence would be ejfghi which is of length 6 and has both the strings as its subsequences.

Your Task:

Complete **shortestCommonSupersequence()** function that takes X, Y, m, and n as arguments and returns the length of the required string.

Expected Time Complexity: $O(\text{Length}(X) * \text{Length}(Y))$.

Expected Auxiliary Space: $O(\text{Length}(X) * \text{Length}(Y))$.

Constraints:

$1 \leq |X|, |Y| \leq 100$