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Question Description

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1. You are given two strings.

2. You have to print all longest common subsequences in lexographical order.

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package Strings;

import java.util.ArrayList;

import java.util.Scanner;

public class Pep\_JavaIP\_3Strings\_101PrintAllLongestCommonSubSequencesinLexicoOrder {

static int[][] dp = null;

static int lcslen;

static ArrayList<String> arr = new ArrayList();

public static int lcs(String s1, String s2, int len1, int len2, int i, int j) {

}

public static void printAll(String s1, String s2, int len1, int len2, char[] data, int indx1, int indx2,

int currlcs) {

char[] str1 = s1.toCharArray();

char[] str2 = s2.toCharArray();

if (currlcs == lcslen) {

data[currlcs] = '\0';

String s=new String(data);

arr.add(s);

return;

}

}

public static void prinlAllLCSSorted(String str1, String str2) {

int len1 = str1.length(), len2 = str2.length();

for (int i = 0; i < len1; i++) {

for (int j = 0; j < len2; j++) {

dp[i][j] = -1;

}

}

lcslen = lcs(str1, str2, len1, len2, 0, 0);

int max = Math.max(len1, len2);

char data[] = new char[max];

printAll(str1, str2, len1, len2, data, 0, 0, 0);

}

public static void main(String[] args) {

// TODO Auto-generated method stub

Scanner scn = new Scanner(System.in);

String str = scn.next();

String str2 = scn.next();

dp = new int[str.length()][str2.length()];

prinlAllLCSSorted(str, str2);

for(String str1: arr) {

System.out.println(str1);

}

}

}

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Test cases:

abcd

abdc

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abc

abd

abcabcaa

acbacba

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ababa

abaca

abcba

acaba

acaca

acbaa

acbca

abcabcaa

acbacbaa

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ababaa

abacaa

abcbaa

acabaa

acacaa

acbcaa

Source: https://www.geeksforgeeks.org/print-longest-common-sub-sequences-lexicographical-order/

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