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| **COURSE** | ADVANCE JAVA PROGRAMMING |
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| **PROBLEM TITLE** | MINIMUM INDEX SUM OF TWO LISTS. (LEETCODE:599) |

**Problem:**

Given two arrays of strings list1 and list2, find the common strings with the least index sum. A common string is a string that appeared in both list1 and list2. A common string with the least index sum is a common string such that if it appeared at list1[i] and list2[j] then i + j should be the minimum value among all the other common strings. Return all the common strings with the least index sum. Return the answer in any order.

**Constraints:**

1. 1 <= list1.length, list2.length <= 1000
2. 1 <= list1[i].length, list2[i].length <= 30
3. list1[i] and list2[i] consist of spaces ' ' and English letters.
4. All the strings of list 1 are unique.
5. All the strings of list 2 are unique.
6. There is at least a common string between list1 and list2.

**Example1:**

Input: list1 = ["Shogun", "Tapioca Express", "Burger King", "KFC"], list2 = ["Piatti", "The Grill at Torrey Pines", "Hungry Hunter Steakhouse", "Shogun"]

Output: ["Shogun"]

Explanation: The only common string is "Shogun".

**Example2:**

Input: list1 = ["Shogun", "Tapioca Express", "Burger King", "KFC"], list2 = ["KFC", "Shogun", "Burger King"]

Output: ["Shogun"]

Explanation: The common string with the least index sum is "Shogun" with index sum = (0 + 1) = 1.

**Example3:**

Input: list1 = ["happy", "sad", "good"], list2 = ["sad", "happy", "good"]

Output: ["sad", "happy"]

Explanation: There are three common strings: "happy" with index sum = (0 + 1) = 1. "sad" with index sum = (1 + 0) = 1. "good" with index sum = (2 + 2) = 4. The strings with the least index sum are "sad" and "happy".

**Program:**

import java.util.\*;

class Main{

public static String[] minimumsumindex(String[] list1, String[] list2) {

int k = Integer.MAX\_VALUE;

List<String> a = new ArrayList<String>();

List<Integer> b = new ArrayList<Integer>();

List<String> result = new ArrayList<String>();

for(int i = 0;i<list1.length;i++){

for(int j = 0;j<list2.length;j++){

String m = list1[i];

String n = list2[j];

if(m.equals(n)){

if(i+j<=k){

k=i+j;

a.add(m);

b.add(k);

}

}

}

}

for(int i = 0;i<b.size();i++){

if(b.get(i)==k){

result.add(a.get(i));

}

}

return result.toArray(new String[0]);

}

public static void main(String[] args) {

Scanner sc = new Scanner(System.in);

System.out.println("Enter Strings for list1: ");

String[] list1 = sc.nextLine().split(" ");

System.out.println("Enter Strings for list2: ");

String[] list2 = sc.nextLine().split(" ");

String[] list3 = minimumsumindex(list1,list2);

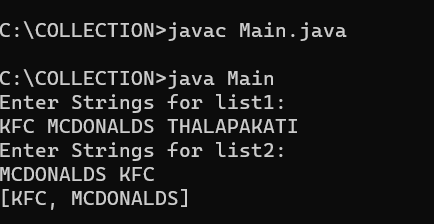
List<String> list4 = Arrays.asList(list3);

System.out.println(list4);

}

}

**OUTPUT:**

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