

Problem A: Allergies

I have a lot of allergies. I'm allergic to homework, housework, and hard work. I'm allergic to caring, sharing, and swearing. I'm allergic to thinking, drinking, and glasses clinking. And we haven't even begun with my food allergies!



Since I have so many allergies, it'd be helpful to condense them somehow when describing them to someone. Let's consider a universe with a certain number of foods. Each food is described by being free of a list of allergens. If a food is free of *all* my allergens, I can eat it, otherwise I can't.

Here's where my brilliant plan comes into motion. There might be a single allergen that I could claim to be allergic to that would produce the *exact same set* of foods that I could or couldn't eat. For example, suppose I was allergic to (G)luten, (M)ilk, and (E)ggs, and not allergic to (C)asein. The universe has 4 foods: one is ME free (free of Milk and Eggs), another is GE free, the third is GM free, and the last food is GMEC free. Imagine how ingenious I feel when I claim to be allergic to Casein! This single allergen perfectly describes my situation (and entertainingly, is a complete lie).

For a given set of things I'm allergic to, and a universe of foods, can you tell me whether there's a single allergen (which I may or may not be actually allergic to) that perfectly describes my set of allergies?

Input Specification:

The input begins with an integer T , the number of test cases. Each test case begins with a non-empty string of unique capital letters - if a capital letter is present in the string, I'm allergic to that ingredient. This is followed by an positive integer $F \leq 1000$, the number of foods. Each of the next F lines contains a single string in capital letters. A food string containing a given capital letter means that it's free of this allergen; no letters are repeated within a string.

Output Specification:

For each test case, output a single character if there is a single allergen I can claim to be allergic to that will produce the exact same set of foods I can and can't eat as my real allergies would. If there is no such item, print **No Solution** instead. You are guaranteed that there at most one item that I can claim to be allergic to.

Sample Input:

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1
GME
4
ME
GE
GM
GMEC
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Sample Output:

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C
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