Find All Possible Recipes from Given Supplies

Try to solve the Find All Possible Recipes from Given Supplies problem.

We'll cover the following

Statement

A list of recipes a chef can prepare from the supplied items is given. Ingredients required to prepare a recipe are mentioned in the `ingredients` list. The i_{th} recipe has the name $recipes_i$, and you can create it if you have all the needed ingredients from the $ingredients_i$ list. A recipe may be listed as an ingredient in a different recipe. For example, the input may specify that custard is an ingredient in a trifle recipe or that trifle is an ingredient in a custard recipe.

Identify which recipes a chef can prepare from the given ingredients from the `supplies` list.

> **Note:** It is also considered valid input for two recipes to list *each other* in their ingredients. For example, the input may specify that custard is an ingredient in a trifle recipe and *also* that trifle is an ingredient in a custard recipe. Of course, if those are the *only* two recipes provided in the input, the expected output is an empty list.

Constraints:

- $n ==$ `recipes.length` $==$ `ingredients.length`
- $1 \leq$ `n` ≤ 100
- $1 \leq$ `ingredients[i].length`, `supplies.length` ≤ 100
- $1 \leq$ `recipes[i].length`, `ingredients[i][j].length`, `supplies[k].length` ≤ 10
- `recipes[i]`, `ingredients[i][j]`, and `supplies[k]` consist only of lowercase English letters.
- All the combined values of `recipes` and `supplies` are unique.
- Each `ingredients[i]` doesn't contain any duplicate values.

Examples

Sample example 1

Input

`recipes` `["tea", "omelette"]`

`ingredients` `[["milk", "caffeine", "sugar"], ["salt", "egg", "pepper"]]`

`supplies` `["salt", "milk", "egg", "caffeine", "sugar"]`

Output

```
["tea"]
```

1 of 2

Understand the problem

Let's take a moment to make sure you've correctly understood the problem. The quiz below helps you check if you're solving the correct problem:

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1 What is the output if the following lists are given as input?

recipes = [“soup”, “spaghetti”]

ingredients = [[“meat”, “yogurt”, “sauce”], [“spaghetti”, “pasta”, “salt”, “sauce”]]

supplies = [“meat”, “spaghetti”, “pasta”, “yogurt”, “sauce”]

A) [“soup”, “spaghetti”]

B) [“spaghetti”]

C) [“soup”]

D) []

Submit Answer

Question 1 of 4
0 attempted

Reset Quiz

Figure it out!

We have a game for you to play. Rearrange the logical building blocks to develop a clearer understanding of how to solve this problem.

> **Note:** As an additional challenge, we have intentionally hidden the solution to this puzzle.

Drag and drop the cards to rearrange them in the correct sequence.

Calculate the count of the ingredients of each recipe. This is the count of the dependencies of each recipe.

Use the topological sort to decrease the dependency count of each recipe.

Scan through the list of recipes and add those to the result list whose dependency count is 0, that is, those for which all ingredients (whether as supplies, or as the results of other recipes) are available.

Start the topological sort with the list of supplies as the starting point.

Reset Submit

Try it yourself

Implement your solution in the following coding playground.

> **Note:** We have left the solution to this challenge as an exercise for you. You may try to translate the logic of the solved puzzle into a coded solution.

Java

usercode > FindAllRecipes.java

```
1  import java.util.*;
2
5          // Replace this placeholder code with your solution
6          List<String> allRecipes = new ArrayList<String>();
7          return allRecipes;
8      }
9  }
```

Powered by AI Submit

Test Cases Results

Case 1 | Case 2 | Case 3

Input #1

["bread","sandwich","burger"]

Input #2

[["yeast","flour"],["bread","meat"],["sandwich","meat","bread"]]

Input #3

["yeast","flour","meat"]

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Mark as Completed