

Alien Dictionary

Try to solve the Alien Dictionary problem.

We'll cover the following

- Statement
- Examples
- Understand the problem
- Figure it out!
- Try it yourself

Statement

In this challenge, you are given a list of words written in an alien language, where the words are sorted lexicographically by the rules of this language. Surprisingly, the aliens also use English lowercase letters, but possibly in a different order.

Given a list of words written in the alien language, you have to return a string of unique letters sorted in the lexicographical order of the alien language as derived from the list of words.

If there's no solution, that is, no valid lexicographical ordering, you can return an empty string.

Note: The lexicographic order of a given language is defined by the order in which the letters of its alphabet appear. In English, the letter “n” appears before the letter “r” in the alphabet. As a result, in two words that are the same up to the point where one features “n” and the other features “r,” the former is considered the lexicographically smaller word of the two. For this reason, “ban” is considered lexicographically smaller than “bar.”

Similarly, if an input contains words followed by their prefix, such as “educated” and then “educate,” these cases will never result in a valid alphabet because in a valid alphabet, prefixes are always first.

Constraints:

- $1 \leq \text{words.length} \leq 100$
- $1 \leq \text{words[i].length} \leq 20$
- All characters in `words[i]` are English lowercase letters.

Examples

Understand the problem



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

Alien Dictionary

1

What is the output if the following list of words is given as input?

Select all that apply.

["wrt", "wrf", "er", "ett", "rftt"]

☐ A) "wrfet"

☐ B) "wreft"

☐ C) "wertf"

☐ D) "wfert"

Submit Answer

<


Question 1 of 4
0 attempted

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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.

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

Build the graph from the input using adjacency lists.

Remove the sources, i.e. vertices with indegree = 0 from the graph and add them to a results array.

Decrement the indegree of the sources children by 1.

?

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Repeat until all nodes are visited.

Reset

Show Solution

Submit



Implement your solution in the following coding playground:

Java

usercode > main.java

```
1 import java.util.*;
2
3 public class Main{
4     public static String alienOrder(List<String> words) {
5
6         // Write your code here
7
8         return "";
9     }
10 }
```

Powered by AI

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Test Cases

Results

Case 1Case 2Case 3

Input #1

["xro","xma","per","prt","oxh","olv"]

Alien Dictionary

← Back

Next →

Solution: Compilation ...

Solution: Alien Diction...

☒ Mark as Completed

