Replace Words

Try to solve the Replace Words problem.

We'll cover the following

Statement

In this problem, we are considering the words that are composed of a prefix and a postfix. For example, if we append a postfix “happy” to a prefix “un”, it forms the word “unhappy”. Similarly, “disagree” is formed from a prefix, “dis” followed by a postfix, “agree”.

You’re given a dictionary, `dictionary`, consisting of prefixes, and a sentence, `sentence`, which has words separated by spaces only. Your task is to replace the words in `sentence` with their prefixes given in `dictionary` (if found) and return the modified sentence.

A couple of points to keep in mind:

- If a word in the sentence matches more than one prefix in the dictionary, replace it with the prefix that has the shortest length. For example, if we have the sentence “iphone is amazing”, and the dictionary {“i”, “ip”, “hone”}, then the word “iphone” has two prefixes in the dictionary “i” and “ip”, but we will replace it with the one that is shorter among the two, that is, “i”.
- If there is no root word against any word in the sentence, leave it unchanged.

Constraints:

- $1 \leq$ `dictionary.length` ≤ 1000
- $1 \leq$ `dictionary[i].length` ≤ 100
- `dictionary[i]` consists of only lowercase letters.
- $1 \leq$ `sentence.length` $\leq 10^3$
- The number of words in `sentence` is in the range $[1, 100]$.
- The length of each word in `sentence` is in the range $[1, 100]$.
- Two consecutive words in `sentence` should be separated by exactly one space.
- All words in `sentence` are lowercase.
- For a word in `sentence`, the length of a prefix can be $[1, 100]$, and the length of a postfix can be $[0, 100]$.

Examples

Sample example 1

Input

```
"the quick brown fox jumps over the lazy dog"
```

Dictionary

```
{"qui", "brow", "bro", "jum", "j", "lazy", "d", "do"}
```

Output

```
"the qui bro fox j over the lazy d"
```

1. "quick" matched with "qui", so we replaced it with "qui".
2. "brown" matched with both "bro" and "brow", but we replaced it with the shortest prefix. Similarly, "jumps" and "dog" get replaced with "j" and "d" respectively.
3. "lazy" is replaced by the prefix "lazy". Please note that in this case the length of postfix is zero.
4. All other words remain unchanged as there is not matching prefix in the dictionary.

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:

1

Choose the correct output given the following inputs.

sentence = "when life gives you lemons make lemonade"
dictionary = {"li", "gi", "lem", "m", "l"}

A) "when li gi you lem make l"

B) "when l gi you lem m lem"

C) "when l gi you l make l"

D) "when l gi you l m l"

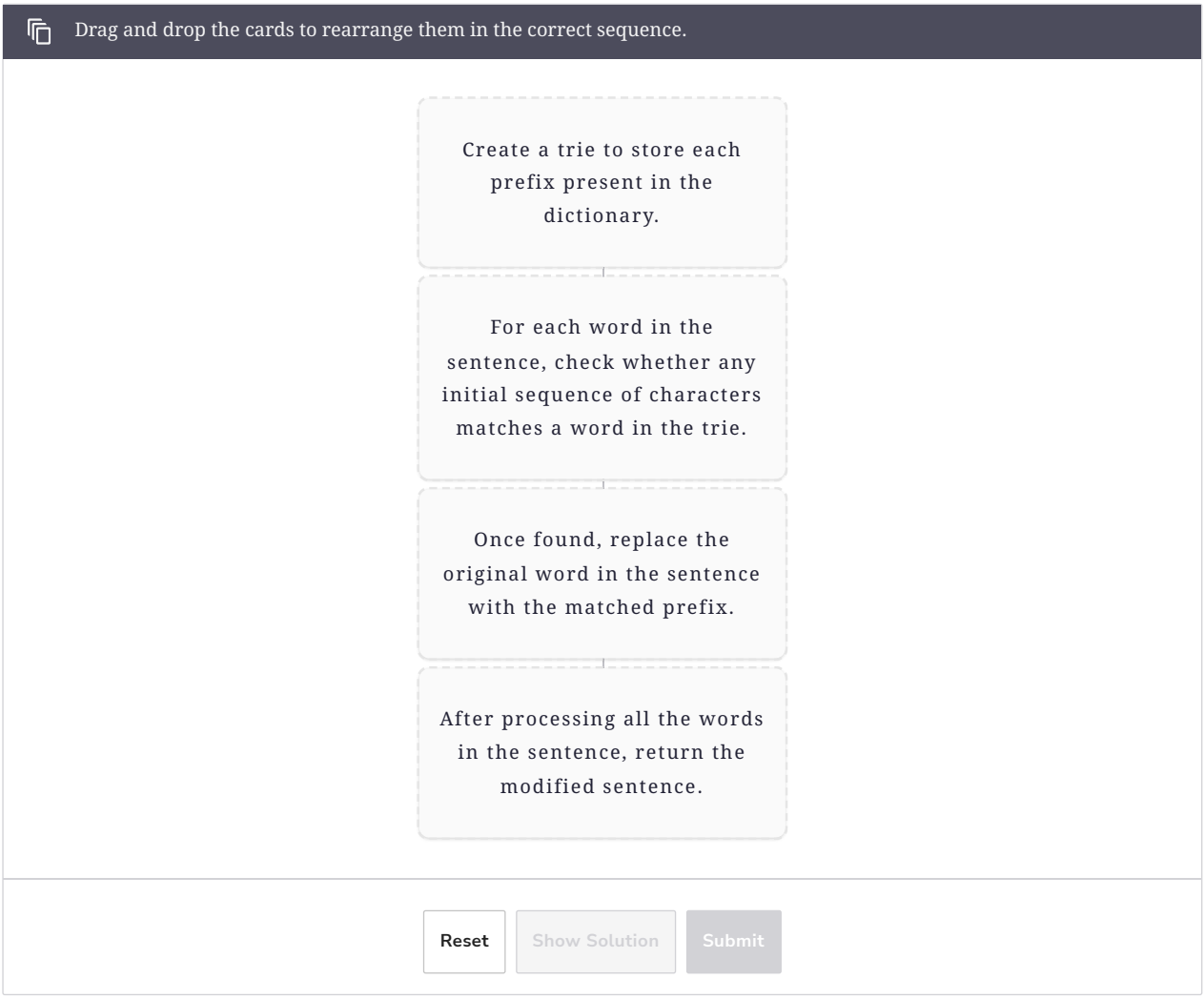
Submit Answer

Question 1 of 3
0 attempted

Reset Quiz

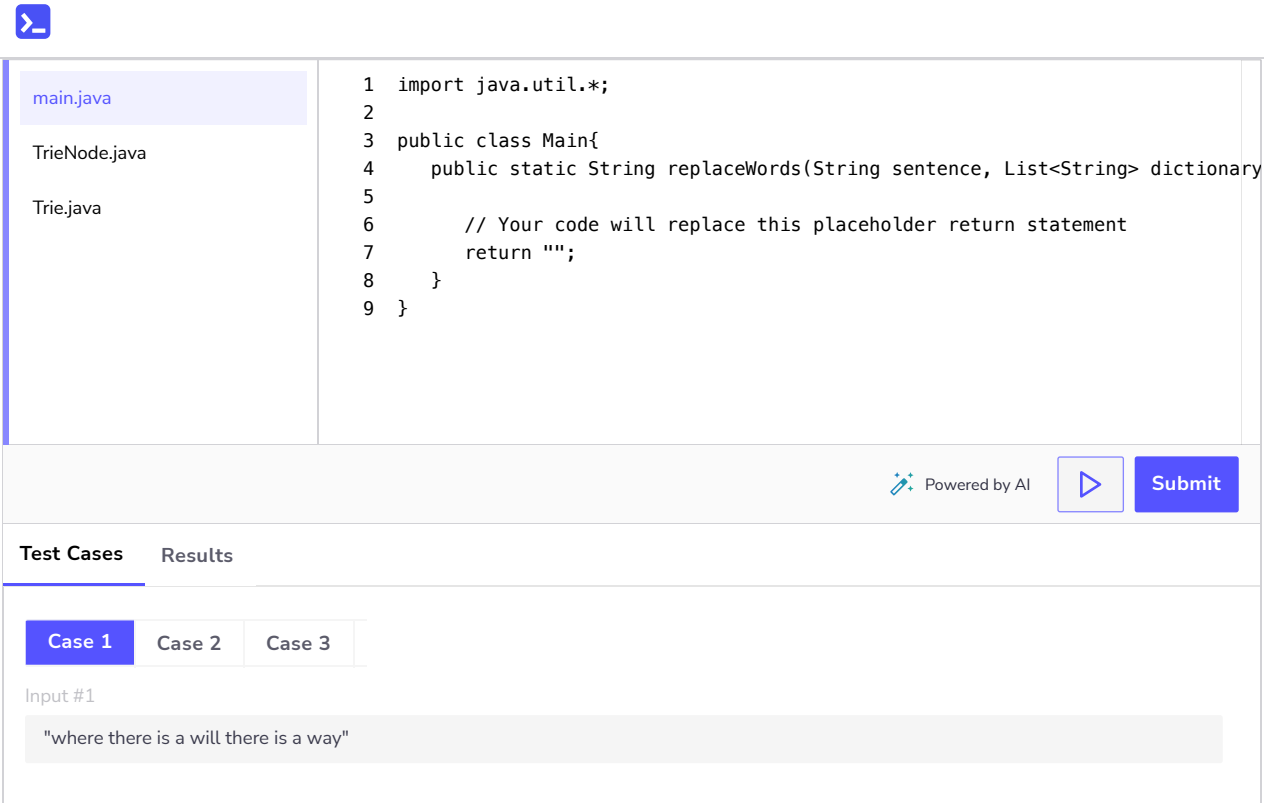
Figure it out!

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



Try it yourself

Implement your solution in `main.java` in the following coding playground. You'll need the provided supporting code to implement your solution. We have also provided a useful code template that you may build on to solve this problem.



Input #2

["wi","wa","w"]

Replace Words

Back

Solution: Search Sugg...

Next

Solution: Replace Wor...

Mark as Completed