

Replace Words

Try to solve the Replace Words problem.

We'll cover the following ^

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

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:

- $1 \leq \text{dictionary.length} \leq 1000$
- $1 \leq \text{dictionary}[i].\text{length} \leq 100$
- `dictionary[i]` consists of only lowercase letters.
- $1 \leq \text{sentence.length} \leq 10^3$
- 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.

1 of 3



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.





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

Create a trie to store each prefix present in the dictionary.

For each word in the sentence, check whether any initial sequence of characters matches a word in the trie.

Once found, replace the original word in the sentence with the matched prefix.

After processing all the words in the sentence, return the modified sentence.

Reset

Show Solution

Submit

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.



main.java

TrieNode.java

Trie.java

```
1 import java.util.*;
2
3 public class Main{
4     public static String replaceWords(String sentence, List<String> dictionary)
5
6         // Your code will replace this placeholder return statement
7         return "";
8     }
9 }
```

Powered by AI



Submit

Test Cases

Results

Case 1

Case 2

Case 3

Input #1

"where there is a will there is a way"



Input #2

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

Replace Words

← Back

Next →

Solution: Search Sugg...

Solution: Replace Wor...

☒ Mark as
Completed

