

1807. Evaluate the Bracket Pairs of a String

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You are given a string `s` that contains some bracket pairs, with each pair containing a **non-empty** key.

- For example, in the string `"(name)is(age)yearsold"`, there are **two** bracket pairs that contain the keys `"name"` and `"age"`.

You know the values of a wide range of keys. This is represented by a 2D string array `knowledge` where each `knowledge[i] = [keyi, valuei]` indicates that key `keyi` has a value of `valuei`.

You are tasked to evaluate **all** of the bracket pairs. When you evaluate a bracket pair that contains some key `keyi`, you will:

- Replace `keyi` and the bracket pair with the key's corresponding `valuei`.
- If you do not know the value of the key, you will replace `keyi` and the bracket pair with a question mark `"?"` (without the quotation marks).

Each key will appear at most once in your `knowledge`. There will not be any nested brackets in `s`.

Return the resulting string after evaluating **all** of the bracket pairs.

User Accepted:	3484
User Tried:	3749
Total Accepted:	3554
Total Submissions:	5135
Difficulty:	Medium

Example 1:

Input: `s = "(name)is(age)yearsold"`, `knowledge = [{"name","bob"}, {"age","two"}]`
Output: `"bobistwoyearsold"`
Explanation:
The key `"name"` has a value of `"bob"`, so replace `"(name)"` with `"bob"`.
The key `"age"` has a value of `"two"`, so replace `"(age)"` with `"two"`.

Example 2:

Input: `s = "hi(name)"`, `knowledge = [{"a","b"}]`
Output: `"hi?"`
Explanation: As you do not know the value of the key `"name"`, replace `"(name)"` with `"?"`.

Example 3:

Input: `s = "(a)(a)(a)aaa"`, `knowledge = [{"a","yes"}]`
Output: `"yesyesyesaaa"`
Explanation: The same key can appear multiple times.
The key `"a"` has a value of `"yes"`, so replace all occurrences of `"(a)"` with `"yes"`.
Notice that the `"a"`s not in a bracket pair are not evaluated.

Example 4:

Input: `s = "(a)(b)"`, `knowledge = [{"a","b"}, {"b","a"}]`
Output: `"ba"`

Constraints:

- `1 <= s.length <= 105`
- `0 <= knowledge.length <= 105`
- `knowledge[i].length == 2`
- `1 <= keyi.length, valuei.length <= 10`
- `s` consists of lowercase English letters and round brackets `'('` and `')'`.
- Every open bracket `'('` in `s` will have a corresponding close bracket `')'`.
- The key in each bracket pair of `s` will be non-empty.
- There will not be any nested bracket pairs in `s`.
- `keyi` and `valuei` consist of lowercase English letters.
- Each `keyi` in `knowledge` is unique.

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C++



```
1 class Solution {  
2 public:  
3     string evaluate(string s, vector<vector<string>>& knowledge) {  
4  
5     }  
6 };
```

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