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1153. String Transforms Into Another String

Hard 684 256 Add to List Share

Given two strings `str1` and `str2` of the same length, determine whether you can transform `str1` into `str2` by doing **zero or more** *conversions*.

In one conversion you can convert **all** occurrences of one character in `str1` to **any** other lowercase English character.

Return `true` if and only if you can transform `str1` into `str2`.

Example 1:

```
Input: str1 = "aabcc", str2 = "ccdee"
Output: true
Explanation: Convert 'c' to 'e' then 'b' to 'd' then 'a' to 'c'. Note that the order of conversions matter.
```

Example 2:

```
Input: str1 = "leetcode", str2 = "codeleet"
Output: false
Explanation: There is no way to transform str1 to str2.
```

Constraints:

- `1 <= str1.length == str2.length <= 10^4`
- `str1` and `str2` contain only lowercase English letters.

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Hide Hint 1

Model the problem as a graph problem. Add an edge from one character to another if you need to convert between them.

Hide Hint 2

What if one character needs to be converted into more than one character?

Hide Hint 3

There would be no solution. Thus, every node can have at most one outgoing edge.

Hide Hint 4

How to process a linked list?

Hide Hint 5

How to process a cycle?

Hide Hint 6

What if there is a character with no outgoing edge? You can use it to break all cycles!

Java Autocomplete

```java
class Solution {
    public boolean canConvert(String str1, String str2) {

    }
}
```