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Description

Solution

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433. Minimum Genetic Mutation

Medium

851

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A gene string can be represented by an 8-character long string, with choices from 'A', 'C', 'G', and 'T'.

Suppose we need to investigate a mutation from a gene string `start` to a gene string `end` where one mutation is defined as one single character changed in the gene string.

- For example, "AACCGGTT" --> "AACCGGTA" is one mutation.

There is also a gene bank `bank` that records all the valid gene mutations. A gene must be in `bank` to make it a valid gene string.

Given the two gene strings `start` and `end` and the gene bank `bank`, return *the minimum number of mutations needed to mutate from `start` to `end`*. If there is no such a mutation, return `-1`.

Note that the starting point is assumed to be valid, so it might not be included in the bank.

Example 1:

Input: start = "AACCGGTT", end = "AACCGGTA", bank = ["AACCGGTA"]
Output: 1

Example 2:

Input: start = "AACCGGTT", end = "AAACGGTA", bank = ["AACCGGTA", "AACCGCTA", "AAACGGTA"]
Output: 2

Example 3:

Input: start = "AAAAACCC", end = "AACCCCCC", bank = ["AAAACCCC", "AAACCCCC", "AACCCCCC"]
Output: 3

Constraints:

- start.length == 8
- end.length == 8
- 0 <= bank.length <= 10
- bank[i].length == 8
- start, end, and bank[i] consist of only the characters ['A', 'C', 'G', 'T'].

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No

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class Solution {
 public int minMutation(String start, String end, String[] bank) {
 }
 }
}

Problems

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Console

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https://leetcode.com/problems/minimum-genetic-mutation/

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