

Problem 299: Bulls and Cows

Problem Information

Difficulty: Medium

Acceptance Rate: 51.92%

Paid Only: No

Tags: Hash Table, String, Counting

Problem Description

You are playing the **[Bulls and Cows](https://en.wikipedia.org/wiki/Bulls_and_Cows)** game with your friend.

You write down a secret number and ask your friend to guess what the number is. When your friend makes a guess, you provide a hint with the following info:

* The number of "bulls", which are digits in the guess that are in the correct position.
* The number of "cows", which are digits in the guess that are in your secret number but are located in the wrong position. Specifically, the non-bull digits in the guess that could be rearranged such that they become bulls.

Given the secret number `secret` and your friend's guess `guess`, return _the hint for your friend 's guess_.

The hint should be formatted as `" $xAyB$ "`, where `x` is the number of bulls and `y` is the number of cows. Note that both `secret` and `guess` may contain duplicate digits.

Example 1:

Input: secret = "1807", guess = "7810" **Output:** "1A3B" **Explanation:** Bulls are connected with a '|' and cows are underlined: "1807" | _7_ 8 _10_"

Example 2:

Input: secret = "1123", guess = "0111" **Output:** "1A1B" **Explanation:** Bulls are connected with a '|' and cows are underlined: "1123" "1123" | or | "01 _1_ 1" "011 _1_" Note

that only one of the two unmatched 1s is counted as a cow since the non-bull digits can only be rearranged to allow one 1 to be a bull.

****Constraints:****

* `1 <= secret.length, guess.length <= 1000` * `secret.length == guess.length` * `secret` and `guess` consist of digits only.

Code Snippets

C++:

```
class Solution {
public:
    string getHint(string secret, string guess) {
        }
};
```

Java:

```
class Solution {
    public String getHint(String secret, String guess) {
        }
}
```

Python3:

```
class Solution:
    def getHint(self, secret: str, guess: str) -> str:
```