

# 7621 - LAB 14

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## Instructions

1. Access the auto-grader at <https://c200.luddy.indiana.edu>
2. Please write the code for the problems in python language
3. The code should be readable with variables named meaningfully
4. Plagiarism is unacceptable and we have ways to find it, so do not do it
5. Don't change the function signature (name of the function and number and types of arguments) provided in this file.
6. Once you pass all the tests on the auto grader, show your work to the teaching assistant

## Problem

### Question

Imagine you're playing a game where you pick a 'secret' number, and your friend tries to 'guess' it. When they guess, you give them clues. The first clue, called "bulls," is how many digits they got right in the right spot. The second clue, called "cows," is how many digits they got right but in the wrong spot. Your job is to take their 'secret' and 'guess' and give them the clue. The clue should be formatted as "xAyB", where x is the number of bulls and y is the number of cows.

### Test cases

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Input: secret = "22105", guess = "12324"

Output: "1A2B"

Explanation: At index 1, the digits are the same, so the number of bulls is 1. One occurrence of 2 and one occurrence of 1 are in the wrong spots, so the number of cows is 2.

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### Constraints

- 'secret' and 'guess' consist of digits only.
- Solve the question in  $O(n)$  time complexity using Hashing.

### Function signature

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```
def xAyB(secret: str, guess: str) -> str:
    pass
```

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