

Name: Talha khan (2303-009-KHI-DEG)

First non-repeating character

DESCRIPTION:

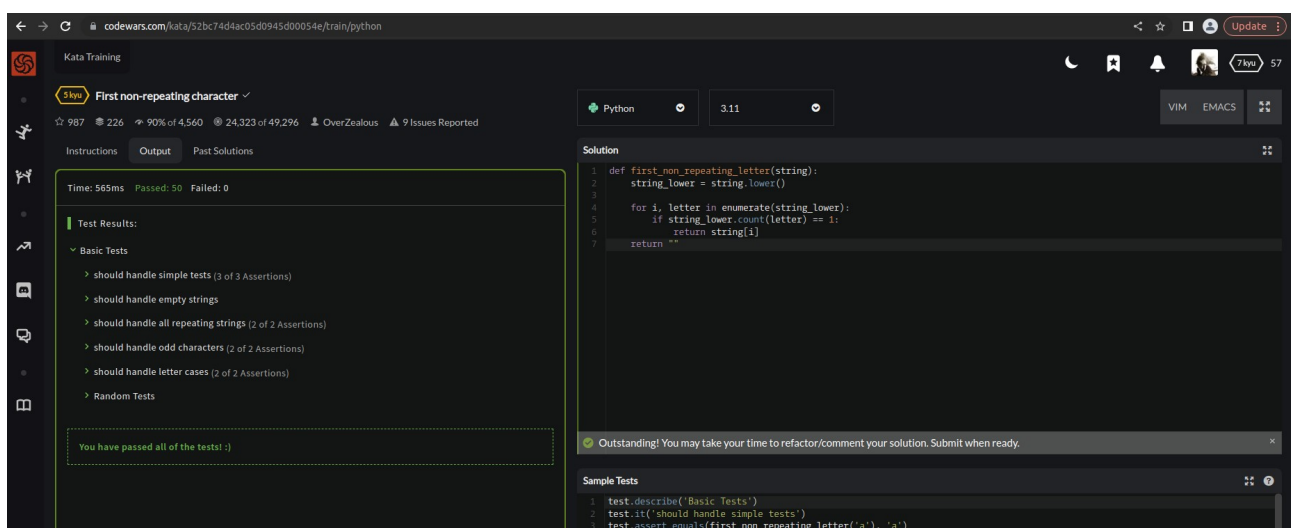
Write a function named `first_non_repeating_letter` that takes a string input, and returns the first character that is not repeated anywhere in the string.

For example, if given the input `'stress'`, the function should return `'t'`, since the letter *t* only occurs once in the string, and occurs first in the string.

As an added challenge, upper- and lowercase letters are considered the **same character**, but the function should return the correct case for the initial letter. For example, the input `'sTrESt'` should return `'T'`.

If a string contains *all repeating characters*, it should return an empty string (`""`) or `None` -- see sample tests.

SOLUTION:



The screenshot shows a coding interface for the 'First non-repeating character' problem. The problem description is on the left, and the solution code is on the right. The solution code is as follows:

```
def first_non_repeating_letter(string):
    string_lower = string.lower()
    for i, letter in enumerate(string_lower):
        if string_lower.count(letter) == 1:
            return string[i]
    return ""
```

The test results on the left show that all tests passed:

- Time: 565ms Passed: 50 Failed: 0
- Test Results: Basic Tests (3 of 3 Assertions), Random Tests (2 of 2 Assertions)
- You have passed all of the tests! :-)

The sample tests at the bottom are:

```
1 test.describe('Basic Tests')
2 test.it('should handle simple tests')
3 test.assert_equals(first_non_repeating_letter('a'), 'a')
```

EXPLANATION:

The function first converts the input string to lowercase and stores it in a new variable called `string_lower`. This allows the function to perform a case-insensitive search for non-repeating letters. Next, the function iterates through the characters of the input string using the `enumerate()` function to keep track of the index of each character. For each character, the function checks if its count in the lower cased string is equal to 1 using the `count()` method. If the count is 1, it means that the character is not repeated, so the function returns the original (case-sensitive) character from the input string using the `return` statement. If there are no non-repeating letters in the string, the function returns an empty string using the `return ""` statement.