

Copilot

Sure, I'd be happy to help you practice string manipulations in R! Here's a task for you:

Task: String Manipulation in R

Objective: Write a function in R that takes a character vector as input and performs the following operations:

1. **Concatenation:** Concatenate all the strings in the vector into a single string, separated by a space.
2. **Case Conversion:** Convert the entire concatenated string to uppercase.
3. **Substring Extraction:** Extract a substring from the 5th to the 15th character of the concatenated string.
4. **String Replacement:** Replace all occurrences of the letter "A" with the letter "X" in the extracted substring.
5. **Length Calculation:** Calculate the length of the final modified substring.

Example Input:

```
c("Hello", "world", "this", "is", "a", "test")
```

Expected Output:

1. Concatenated String: "Hello world this is a test"
2. Uppercase String: "HELLO WORLD THIS IS A TEST"
3. Extracted Substring: "O WORLD THI"
4. Modified Substring: "O WORLD THI"
5. Length of Modified Substring: 11

Instructions:

- Create a function named `string_manipulation` that takes a character vector as input.
- Implement the steps mentioned above within the function.
- Test your function with different inputs to ensure it works correctly.

Good luck with your practice! If you have any questions or need further assistance, feel free to ask. 😊