Pseudo String Class

Name___________

Description

In this quiz you will create your own class and write the methods in it. The project is Q2, the class you write is called Pseudo and it mimics some of the attributes of the String class. After you write the methods in the Pseudo class, you can test them by comparing the return values from methods in your class to the return values from the String class.

Instructions

This quiz is divided into multiple parts. Complete the parts in order. You may reference past quizzes but may not use any other resources (closed books, closed notes, closed internet).

Part A – Defining String Functions

NOTE:To implement the methods below, you cannot use the String methods index0f, toUpperCase, substring, or equals. All of the methods below must use the contents of the character array stored in the Pseudo class!

1. Declare a public static method called charAt that takes a char array parameter, and an index parameter and returns the character from the array at the index specified. You can assume that the index is valid, i.e. between 0 and String.length()-1.

2. Declare a public static method called indexOf that takes a char array parameter, character parameter and returns the index in the character array of the first occurrence of that character or -1 if the character is not found.

3. Declare a public static method called toUpperCase takes a char array parameter and returns a String with the contents of the character array converted to upper case. Do not change the contents of the character array!
Testing hints and tips

Add a main method with the usual signature that instantiates the Pseudo class and tests its methods as follows (the output from Pseudo should match the output from String):

```java
public static void main(String[] args) {
    // Verify class
    char[] test = {'1','2','3','4','5','6','7','8','9','0','
    ','C','c','m','p','u','t','e','r',' ','S','c','i','e','n','c','e',!
    '(','*','@','&','#',')','*'};
    System.out.println("Verifying Pseudo:");

    System.out.println("charAt(test,5) = \" + charAt(test,5));
    System.out.println("indexOf(test,'C') = \" + indexOf(test,'C'));
    System.out.println("toUpperCase(test) = \" + toUpperCase(test));

    // String equivalent (should match!)
    System.out.println("Comparing String:");
    String string = "1234567890 Computer Science !(*@&#)*";
    System.out.println("string = \" + string);
    System.out.println("string.charAt(5) = \" + string.charAt(5));
    System.out.println("string.indexOf('C') = \" + string.indexOf('C'));
    System.out.println("string.toUpperCase() = \" + string.toUpperCase());
}
```

Verifying Pseudo:
charAt(test,5) = 6
indexOf(test,'C') = 11
toUpperCase(test) = 1234567890 COMPUTER SCIENCE !(*@&#)*

Comparing String:
string = 1234567890 Computer Science !(*@&#)*
string.charAt(5) = 6
string.indexOf('C') = 11
string.toUpperCase() = 1234567890 COMPUTER SCIENCE !(*@&#)*