

Lab Assignment 01

2022 – 2023 Spring, CMPE 114 - 211 Fundamentals of Programming II

Question 02**Submission**

You need to implement the question and upload your Java source file (StringManips.java) into the available LMS submission.

The following program illustrates the use of some of the methods in the String class. Study the program to see what it is doing.

```
// *****  
// StringManips.java  
// Test several methods for manipulating String objects  
// *****  
import java.util.Scanner;  
public class StringManips {  
    public static void main (String[] args) {  
        String phrase = new String ("This is a String test.");  
        int phraseLength; // number of characters in the phrase String  
        int middleIndex; // index of the middle character in the String  
        String firstHalf; // first half of the phrase String  
        String secondHalf; // second half of the phrase String  
        String switchedPhrase; //a new phrase with original halves switched  
        // compute the length and middle index of the phrase  
        phraseLength = phrase.length();  
        middleIndex = phraseLength / 2;  
        // get the substring for each half of the phrase  
        firstHalf = phrase.substring(0,middleIndex);  
        secondHalf = phrase.substring(middleIndex, phraseLength);  
        // concatenate the firstHalf at the end of the secondHalf  
        switchedPhrase = secondHalf.concat(firstHalf);  
        // print information about the phrase
```

```

System.out.println();
System.out.println ("Original phrase: " + phrase);
System.out.println ("Length of the phrase: " + phraseLength +
" characters");
System.out.println ("Index of the middle: " + middleIndex);
System.out.println ("Character at the middle index: " +
phrase.charAt(middleIndex));
System.out.println ("Switched phrase: " + switchedPhrase);
System.out.println();
}}

```

The file *StringManips.java* contains this program. Save the file to your directory and compile and run it.

Study the output and make sure you understand the relationship between the code and what is printed.

Now modify the file as follows:

1. Declare a String variable named *newPhrase*. Concatenate the last three characters of the *firstHalf* and first three characters of the *secondHalf*. Assign the result to *newPhrase*. Print the *newPhrase*.
2. Convert all lowercase letters in *firstHalf* to uppercase and convert all uppercase letters in *secondHalf* to lowercase and concatenate them in a new string variable. Then, print the new string.
3. Declare two new variables *city* and *country* of type String. Read the values from the user. Print them in the following format converting country to uppercase and city to lowercase.

TURKIYEankaraTURKIYE

Sample Case:

```

Original phrase: This is a String test.
Length of the phrase: 22 characters
Index of the middle: 11
Character at the middle index: t
Switched phrase: tring test.This is a S

```

```

a Stri
THIS IS A String test.
Please enter a city:
adana
Please enter a country:
turkey
TURKEYadanaTURKEY

```