

CS 170 Sample Proficiency Quiz 6

Use **DrJava** to write a function using **loops**. This quiz is worth 50 points and you will have 30 minutes to complete the problem. You may not access any notes (other than the Java Quick Reference I've supplied), files, or communicate with anyone in any way (including checking your email or looking up files on the Q: drive.)

When you have finished and submitted the quiz, check with me to make sure that I have received it.

Loop Functions

Write the function named **stringX()**. The function takes one parameter, a **String str**. Return a new version where all the **"x"** characters have been removed. Except an **"x"** at the very start or end of **str** should **not** be removed.

- **stringX("xxHxix")** returns **"xHix"**
- **stringX("abxxxxcd")** returns **"abcd"**
- **stringX("xabxxxxcdx")** returns **"xabc dx"**

This is graded 100% on correctness. Use the **Check** button to test.

Function Definition Syntax And for Loop Syntax

//int function with one String parameter

public static int countX(String str) // static is optional

{

int result = 0; //Function "output" variable

int len = str.length(); //Can use as the loop bound

// Processing (converting input into output)

for (int i = 0; i < len; i++) // for loop, visit every character

{

String chStr = str.substring(i, i + 1); // 1-char long String

if (chStr.equals("x")) // is the character an 'x'?

result++; // Yes; count it.

}

return result; // Return the result

}

Character class Classification Functions

char ch = str.charAt(i);

// ch is a char from the String str

if (Character.isDigit(ch)) ...

// true if ch is a digit

if (Character.isLetter(ch)) ...

// true if ch is a letter

if (Character.isUppercase(ch)) ...

// true if ch is an uppercase character

if (Character.isLowercase(ch)) ...

// true if ch is a lowercase character

if (Character.isWhitespace(ch)) ...

// true if ch is a tab, newline or space