Lab 6
SPR 2022
Recursion

Solutions limited in scope to:		
● Recursion	● String	● JUnit

Submission Rules:

1. Submissions must be zipped into a **handin.zip** file. A template file (Recursion.java) is provided with the assignment. Fill the methods in the template file. Do not change the method definition.

2. You must use standard input and standard output for ALL your problems. It means that if the input is needed the input should be entered from the keyboard while the output will be displayed on the screen.

3. The output of your solutions must be formatted exactly as the sample output to receive full credit for that submission.

4. Compile & test your solutions before submitting them. Programs that do not compile will receive 0 points.

5. This lab is worth a max total of 40 points.

6. Submission:

   ● You have unlimited submission attempts until the deadline passes

   ● You'll receive your lab grade immediately after submitting

7. Use the helpdesk if you need assistance with the assignment and start early. Read through the documentation provided to understand the requirements of the code.

8. Due Date: **October 16, 11:59 PM**. Submit the assignment to **autolab and gitlab**.

9. You need to submit the **Recursion.java** file only. The rest of the files are only there to help you complete the assignment. Use the Tester file to check your work before you submit it to autolab.

IMPORTANT: The grade you received for autolab will not be your final grade. All the problems given to you must be solved using recursion. If you decide to use an iterative approach (for loop and while loop) or inbuilt methods, you will not receive credit for those points although they will pass the tester file in autolab.

Problem 1: Reverse (10 points)
Reverse the given string. There will be no special conditions. You simply need to reverse the given string using recursion.

Problem 2: isPalindrome (15 points)
This method checks whether the given string is a palindrome or not. A palindrome is a word, number, phrase, or other sequences of characters that read the same backward as forward, such as madam or racecar. An empty string is considered to be a palindrome. Check the tester file for examples.

Problem 3: length (15 points)
This method returns the length of the string. Make sure not to use the inbuilt method to solve this. Doing so will give you 0 points.