CS 1400 - Lab 9

Maximum Points: 10 pts.

Lab Topics

- Recursion, Wrapper Classes

Use the following Coding Guidelines:

1) Download the template files Lab9.java and Palindrome.java from Canvas and fill-in-the-blanks in the Palindrome.java file to create your Java program.
2) Give identifiers semantic meaning and make them easy to read (examples numStudents, grossPay, etc).
3) Keep identifiers to a reasonably short length.
4) Use uppercase for constants. Use upper camel case for classes. Use lower camel case for all other identifiers (variables, methods, objects).
5) Use tabs or spaces to indent code within blocks (code surrounded by braces). This includes classes, methods, and code associated with ifs, switches, and loops. Be consistent with the number of spaces or tabs that you use to indent.
6) Use white space to make your program more readable.
7) Use comments to explain how the parts of your program work.

Lab Problem: Building a palindrome checker

In Lab 9, your job is to write a class called Palindrome which includes a **recursive** static boolean method called isPalindrome that returns true if its String argument (str) is a palindrome, that is, a word/sentence that is the same when reversed **(case, punctuation, and spaces should be ignored)**. Examples of palindrome are "Deed.", "rotor", "No lemon, no melon". Hint: A word/sentence is a palindrome if the first and last letters match and the remainder is also a palindrome. The driver program Lab9.java should work correctly after you implement this class. Please, submit Lab9.java and Palindrome.java and don't change anything in the driver program. Use the methods `Character.isLetter(<your_variable>)` to check if a character is a letter or not and `String.substring(beginIndex, endIndex)` to get a Substring from a String.

Sample Output

Below is an example of what your output should roughly look like when this lab is completed. Text in RED represents user input.

```
Do you want to check if a word/sentence is a palindrome (yes/no)? yes
Inform a text: rotator
rotator is a palindrome

Do you want to check if a word/sentence is a palindrome (yes/no)? yes
Inform a text: Step on no pets
Step on no pets is a palindrome

Do you want to check if a word/sentence is a palindrome (yes/no)? yes
Inform a text: telnet
telnet is not a palindrome

Do you want to check if a word/sentence is a palindrome (yes/no)? no
Bye!
```