

Due Oct 12 23:55

1. Write unit tests for your Counter class from assignment 3. Note the following behavior:

```
l a b l
a := Counter new.
a increase.
a increase.
b := Counter new.
a increase.
b increase.
a count. "returns 3"
b count. "returns 1"
Counter masterCount. "returns 4"
```

2. Write unit tests for you linked list class from assignment 3. You should clean up your code from assignment 3.

3a. Add a method to the Array class to return the average of all elements of the array. Assume all elements in the array are of the same type and are subclasses of Magnitude (that is understand <, >, <=, >=, =).

3b. Write a Sunit test(s) for your method in part a.

4. Add a method "between: firstCharacter and: secondCharacter" to the string class. In the method use select: to create a collection containing all the characters in the string that have an ascii value higher than firstCharacter and less than secondCharacter.

5. Add a method asUppercase to the String class. The method returns a new string created from the receiver by converting all the characters to uppercase. Use collect: to convert a string of alphabetic characters to all uppercase.

6. Add a method min to the String class. The method returns the character with the smallest ascii value in the receiver. Use inject:into: to find the character with the smallest ascii value in a string.

7. Words. Add a method called words to the String class. This method returns a collection of the words in a string. For this problem words are separated by one or more of the following characters: space, tab, carriage return, period (.), comma (,) , semicolon (;), question mark (?), single quote ('), double quote (") or the exclamation point (!). Provide Sunit test(s) for the method. (Hint see the method tokensBasedOn: or runsFailing:do:)

8. Write Smalltalk code that reads a file named 'start' and copies the contents to a file name 'end' and replaces each comma (\$,) with a period (\$.). So if start contains:

cat,mat

sat,bat,

rat

end will end up with:

cat.mat

sat.bat.

rat

Uses streams to parse the file rather than using a replace on a string.

How to Turn in your Assignment

Place all your code in a Package called Assignment 4 and submit it to your Store repository.