Exercise 3: Strings

These exercises will require you to look up some String class methods from the java API. The sheer size of Java and the fact that is always growing makes it impossible for a programmer to know every single method. Use the following link to find the information you need: http://docs.oracle.com/javase/7/docs/api/java/lang/String.html

(Hint: a possible solution is to use *indexof, length, substring, compareTo*)

1. Design a program that asks the user for a sentence and outputs the number characters it contains.

2. Designs program that asks the user for a sentence. The program will then make all the characters lowercase except for the first one.

3. Design a program that asks for two strings and outputs a number. The number should be positive if one string is greater (alpha) than the other, negative for the other way, and zero if they are equal.

4. Design a program that asks the user for a sentence made of five words and then outputs each word in the sentence on a new line.

Challenge

Design a program that can be used to retrieve secret messages from a sentence. The messages are encoded as follows:

- the first letter of every word in a string make up the message.

- example: **S**ome **o**ranges **m**ay **e**at **s**our **e**lephants. **C**ars **r**arely **e**at **t**hings.

Message: Some secret

- assume strings are 10 words long.

You program should accept input as a single string and output the message as a single string.