

n-connected

A non empty String is said to be n-connected if it contains n consecutive characters that are the same. For example, the number "ABCDEF" is 1-connected, "AABCDEF" is a 2-connected and "AABBBBCDEF" is a 3-connected. The minimum n value for a n-connected String is 1.

- You may assume all Strings in this problem will be non empty and contain only UPPER case letters!

In this problem you will implement two static methods in `nConnected` class.

The first method is the `int getNConnected(String str)` which return the n-Connected value of the parameter `str`. You may assume `str != null`.

The following code shows the results of the `getNConnected` method.

The following code	Returns
<code>nConnected.getNConnected("ABCDEF");</code>	1
<code>nConnected.getNConnected("AABCDEF");</code>	2
<code>nConnected.getNConnected("AABBBBCDBBEF")</code>	3
<code>nConnected.getNConnected("AAABCCCCDCCCEF");</code>	4

The second method is the `String rotateKItems(String str, int k)`. This method will find the smallest String with the largest n-connected String that can be formed by any number of iterations of removing the first `k` elements of the parameter `str` and concatenating those `k` elements to the end of the String. For example, `rotateKItems("TEST", 3)` will search the following Strings: "TEST", "TTES", "STTE", and "ESTT". The next String in the sequence is "TEST" which started the sequence. "TTES", "STTE", and "ESTT" all have an n-connected value of 2, therefore "ESTT" is returned since `"ESTT".compareTo("TTES") < 0` and `"ESTT".compareTo("STTE") < 0`.

The following code shows the results of the `getNConnected` method.

The following code	Returns
<code>nConnected.rotateKItems("TEST", 3);</code>	"ESTT"
<code>nConnected.rotateKItems("TEST", 2);</code>	"STTE"
<code>nConnected.rotateKItems("RABBBBCDEF", 2);</code>	"ABBBBCDEFR"
<code>nConnected.rotateKItems("EAFBEE", 2));</code>	"EEEEAFB"