

Programming Assignment 4-5

Write a Java method `sum` that does the following: As input, you are given a `String` consisting only of the characters '0' and '1', arranged in sorted order. Your method `sum` must output the sum of the values in the `String`.

An essential constraint that must be observed: For `Strings` having 8 or more characters, your method *must not examine more than one half of the characters in the input string*. To verify that your method succeeds in meeting this requirement, maintain a variable `count` that is incremented every time a character in the `String` is read.

Example: Input string is "00111111". Output is 6. And the `sum` method examines 4 or fewer of the characters in the `String`.

Name your class `StringSum` and your method `sum`. Create several tests to verify correctness of your method. Each test should print out not only the computed sum but also the value stored in the `count` variable after your sum has been computed.