

String Methods

For each line of code with end of line comments, record what would be stored in the declared variable or be outputted on the screen.

```

3 public class StringMethods
4 {
5     public static void main(String[] args)
6     {
7         String s = "Internet", s2 = "net", s3 = " Internet ";
8
9         String s7 = s.substring(5);           // net
10        String s8 = s.substring(0, 5);         // Inter
11        String s9 = s.substring(2, 6);          // tern
12
13        int pos11 = s.indexOf('e');             // 3
14        int pos12 = s.indexOf('x');             // -1
15        int pos13 = s.indexOf('e', 4);          // 2
16        int pos14 = s.lastIndexOf('e');        // 6
17        int pos15 = s.lastIndexOf('e', 4);     // 2
18        int pos16 = s.lastIndexOf('e', 2);     // 4
19        int pos17 = s.indexOf(s2);             // 5
20        int pos18 = s.indexOf(s2, 6);          // -1
21        int pos19 = s.lastIndexOf(s2);         // 5
22        int pos20 = s.lastIndexOf(s2, 6);      // -1
23
24        boolean isSame22 = s.equals(s2);        // false
25        boolean isSame23 = s.equalsIgnoreCase("internet");// true
26        int result24 = s.compareTo("internet");// -52
27        int result25 = s2.compareTo(s);         // 37
28        int result26 = s.compareToIgnoreCase("internet");// 0
29
30        String s28 = s.toUpperCase();           // INTERNET
31        String s29 = s.replace('n', 'N');       // INTERNET
32        String s30 = s3.trim();                 // Internet
33        // no String method changes the String object for which they are
34        // called. They build and return a new string instead. For example,
35        // s3.replace('a','A') by itself is useless, because s3 remains unchanged.
36        // The technical term is "immutable," as in "Strings are immutable."
37
38        char ch = s.charAt(0);                  // I
39        boolean isSame36 = (ch == 'I');          // true
40        boolean isLetter37 = Character.isLetter(ch); // true
41        boolean isCap38 = Character.isUpperCase(ch); // true
42        char ch39 = Character.toLowerCase(ch);  // i
43        String s40 = ch39 + s.substring(1);     // iinternet
44        // three ways to visit each character of a string
45        for(int i = 0; i < s.length(); i++)
46            System.out.print(s.substring(i, i+1)+" "); // i n t e r n e t
47        for(int i = 0; i < s.length(); i++)
48            System.out.print(s.charAt(i)+" ");   // i n t e r n e t
49        char[] chArray = s.toCharArray();
50        for(int i = 0; i < chArray.length; i++)
51            System.out.print(chArray[i]+" ");   // i n t e r n e t
52        System.out.println();
53

```

```

54 // Strings can be split: String[] split(String separator)
55 // The method split() returns an array of substrings split around
56 // the specified separator, which is then removed
57 String[] abra = "ABRACADABRA".split("A");
58 for(String str : abra)
59     System.out.print(str+" "); // B L C D B R
60 System.out.println();
61 String[] abra2 = "ABRACADABRA".split("BR");
62 for(String str : abra2)
63     System.out.print(str+" "); // A A C A D A
64 System.out.println();
65 String[] abra3 = "A B R A C A D A B R A".split(" ");
66 for(String str : abra3)
67     System.out.println(str+" "); // A B R A C A D A B R A
68 //
69
70 /* String Methods #1
71 1. The string dateStr represents a date in the format "mm/dd/yyyy".
72 Write a code fragment that changes dateStr to the format "dd-mm-yy".
73 For example, "09/16/2008" becomes "16-09-08".
74 */
75
76 newDate = dateStr.replace('/', '-');
77
78
79
80 /* String Methods #2
81 2. Given a line of text, print each word on its own line, but don't
82 print the blank lines.
83 */
84 String[] x = str.split(" ");
85 for(String y : x) {
86     System.out.println(y);
87 }
88
89
90 /* String Methods #3
91 3. Given a line of text, remove all punctuation from that line.
92 One way is to replace each punctuation mark with "".
93 */
94 String str = "RT @TJCheer2015: Freshman & Sophomores: Interested in cheer at TJ?
Email: thomasjeffersoncheer@gmail.com";
95 String punct = ",./;:'\"?<>[{}]|`~!@#$%^&*()";
96
97 String x = str.replaceAll(punct, "");
98
99
100
101 /* String Methods #4
102 4. Given a line of text, remove all punctuation from that line.
103 One way is to keep all characters that are letters or a space.
104 */
105 String str2 = "a @galaxy far, far away --right there! on the (TJ planetarium)
ceiling. https://t.co/XfoqbyA9JY";
106 String letters = "ABCDEFGHIJKLMNOPQRSTUVWXYZabcdefghijklmnopqrstuvwxyz";
107 String cleaned = ""; char ch;
108 for(int i=0; i<str2.length; i++) {
109     ch = str2.charAt(i);
110     if (Character.isLetter(ch)) {
111         cleaned += ch;
112     }
113 }

```