

Introduction to Java

Unit 5. Exercises: Strings

Assume that any blanks between characters consist of exactly one blank space.

1. How many string objects were instantiated? 2. What is the value of x?	<pre>String s = "Not now"; int x = s.length();</pre>
3. What is displayed?	<pre>String s1 = "JANUARY"; String s2 = s1.substring(2, 4); System.out.println(s2);</pre>
4. What is displayed?	<pre>String s1 = "MONDAY"; String s2 = s1.substring(3); System.out.println(s2);</pre>
5. What is the value of num?	<pre>String s = "car 4 sale"; int num = s.length();</pre>
6. What is displayed?	<pre>String str = "COMPUTER"; str = str.substring(2); str = str.substring(2); System.out.println(str);</pre>
7. What is displayed?	<pre>String str = "PAPER"; for (int n = 4; n >= 0; n--){ String x = str.substring(n, n+1); System.out.print(x); }</pre>
8. What is displayed?	<pre>String s2 = "MONITOR".substring(0, 1); System.out.println(s2);</pre>
9. What is displayed?	<pre>String s1 = "needle"; String s2 = s1.substring(2, 4); System.out.println(s2);</pre>
10. What is displayed?	<pre>String s1 = "haystack"; int pos = 5; String s2 = s1.substring(pos, pos + 1); System.out.println(s2);</pre>
11. If s is "barn", what does the method return? 12. If s is "paint", what does the method return? 13. If s is "z", what does the method return?	<pre>public String act(String s){ String x = ""; for (int k = 0; k < s.length(); k += 2) x += s.substring(k, k+1); return x; }</pre>

<p>14. If s is “fly”, what does the method return?</p> <p>15. If s is “w”, what does the method return?</p>	<pre>public String run(String s){ String x = ""; for (int k = s.length() - 1; k >= 0; k--) x += s.substring(k, k + 1); return x; }</pre>
<p>16. What is the value of x?</p>	<pre>String word = "never"; int x = word.indexOf("ever", 0);</pre>
<p>17. What is the value of x?</p>	<pre>String word = "bobby"; int x = word.indexOf("bob", 2);</pre>
<p>18. What is displayed?</p>	<pre>String s = "first last"; int n = s.indexOf(" ", 0); System.out.println(n);</pre> <div style="border: 1px solid black; padding: 2px; display: inline-block; margin-left: 10px;">one blank space</div>
<p>19. What is displayed?</p>	<pre>String s = "abra cadabra"; int n = s.indexOf("a", 0); System.out.println(n);</pre>
<p>20. What is displayed?</p>	<pre>String s = "abra cadabra"; int n = s.indexOf("a", 4); System.out.println(n);</pre>
<p>21. What is displayed?</p>	<pre>String s = "green plant"; int n = s.indexOf("e", 0); System.out.println(n);</pre>
<p>22. What is displayed?</p>	<pre>String s = "needle"; int n = "haystack".indexOf(s, 0); System.out.println(n);</pre>
<p>23. What is displayed?</p>	<pre>int n = "counter".indexOf("count", 1);</pre>
<p>24. If s is “never”, what does the method return?</p> <p>25. If s is “eels”, what does the method return?</p> <p>26. If s is “fruit”, what does the method return?</p>	<pre>public String ax(String s){ int k = s.indexOf("e", 0); if (k >= 0) return s.substring(k + 1); else return "bob"; }</pre>
<p>27. The code to the right compiles and runs. What is displayed?</p>	<pre>String s = "books"; int a = s.indexOf("Book", 0); int b = s.indexOf("book", 0); int c = s.indexOf("book", -1); int d = s.indexOf("book", 20); int e = s.indexOf("ok", 0); System.out.println(a+" "+b+" "+c+" "+d+" "+e);</pre>

<p>28. What is displayed?</p> <p>a) crazy b) CRAZY c) CrAzY</p>	<pre>String s = "CrAzY"; s = s.toLowerCase(); System.out.println(s);</pre>
<p>29. What is displayed?</p> <p>a) crazy b) CRAZY c) CrAzY</p>	<pre>String s = "CrAzY"; s.toUpperCase(); System.out.println(s);</pre>
<p>30. If str is HOUSE, what does the method return?</p> <p>a) HOUSE b) hOuSe c) HoUsE</p> <p>31. If str is Area 51, what does the method return?</p> <p>a) Area 51 b) ArEa 51 c) aReA 51 d) ArEa 5! e) aReA %1</p>	<pre>public String m2(String str){ String s = ""; for (int i = 0; i < str.length(); i++){ String s1 = str.substring(i,i+1); if (i % 2 == 0) s1 = s1.toLowerCase(); else s1 = s1.toUpperCase(); s += s1; } return s; }</pre>
<p>32. If s is "cheese", what does the method return?</p> <p>33. If s is "Mississippi", what does the method return?</p> <p>34. If s is "x", what does the method return?</p>	<pre>public int m6(String str){ int count = 0; for (int i = 0; i < str.length()-1; i++){ String s1 = str.substring(i, i+1); String s2 = str.substring(i+1, i+2); if (s1.equals(s2)) count++; } return count; }</pre>
<p>35. What is displayed?</p>	<pre>String str = "CHEESE"; for (int n = 0; n < str.length(); n++){ String ltr = str.substring(n, n+1); if (ltr == "E") System.out.print("X"); if (ltr.equals("E")) System.out.print("Y"); else System.out.print("Z"); }</pre>

36. If the user enters "DESKTOP" what is displayed?	<pre>import java.util.Scanner; public class General { public static void main(String [] args) { Scanner get = new Scanner(System.in); System.out.print("Enter something "); String s = get.nextLine(); System.out.println(s.substring(2, 4) + s.substring(0, 2)); } }</pre>
---	--

You know the AND operator (&&). You like the OR operator (||). Now get ready to love the NOT operator (!). NOT true equals false and NOT false equals true.

37. What is displayed?	<pre>boolean joe = true; joe = !joe; System.out.println(joe);</pre>
38. What is displayed?	<pre>String s1 = "NOT"; String s2 = "is great"; if (! s1.equals(s2)) System.out.println("A"); else System.out.println("B");</pre>
39. What is displayed?	<pre>System.out.println(6 > 7); System.out.println(! "hi".equals("bye"));</pre>
<p>40. What are two strings that will cause this method to return true?</p> <p>a _____</p> <p>b _____</p>	<pre>public boolean check(String a, String b){ if (! a.equals(b)) return true; else return false; }</pre>
<p>41. If s is "loops", what does the method return?</p> <p>42. If s is "cat", what does the method return?</p>	<pre>public String met(String s){ String temp = ""; for (int k = 0; k < s.length(); k++){ String ch = s.substring(k, k+1); if (!ch.equals("o")) temp += ch; } return temp; }</pre>
43. What is displayed?	<pre>boolean boo = true; for (int k = 1; k <= 6; k++){ if (boo) System.out.print(k + " "); boo = !boo; }</pre>