**Aufgabe 12.02.2025**

1. What will the following code output? Why?

Ein Bild, das Text, Screenshot, Display, Software enthält.

KI-generierte Inhalte können fehlerhaft sein.

Explanation:

s1 == s2 is going to be true, because they share the same literal from the String Pool.

s1 == s3 is going to be true, because a concatenation of literals to one in pool is equal.

s2 == s4 is going to be false, because the new String Object is stored in heap not in pool.

s6 == s7 was firstly a pain in my brain until I went through to it, thou it was easy in the end :D  
Finally I consider it as being **false**, because both are built the same way with same content.  
Here the content from pool “Java ist toll” and “!” each are merged and then compared.  
**Although both equal in content they are build different objects parallelly, because they are merged by they reference variables and not as literals, those already exist.**  
(Seems like turns have tabled. I was wrong at my first guess with true.)  
If there was “Java ist toll!” in pool before they would be equal anyway.

Ein Bild, das Text, Screenshot, Schrift enthält.

KI-generierte Inhalte können fehlerhaft sein.

Answer and explanation:

c), because the String’s index for the v is 2 (from 0),

d) is false, 3 would be the second ‘a’.

a) and b) as well because String-Class may contain a CharSequence, but they are not accessible like an array of type char (char[]).

1. What does the indexOf method of the String class do? What happens if the method finds nothing? Provide examples and explain them.

Answer:   
It searches through a string, that the method is invoked on, to find the passed char (‘’) or charsequence (“”) and when first found (from zero on) it returns the index where it starts or lays in case of a single char. If there is no match, -1 will be returned instead.  
(This should be considered when you rely for next operation, so it shouldn’t be a nested invocation for itself but rather a try-catch-wrapped one.)

1. What is the output of the following code snippet, and why is that the case?

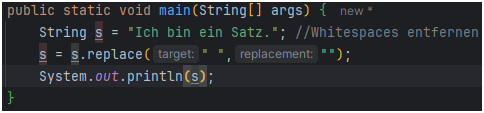


Unfortunately the result will be false, because contains() itself is case sensitive.  
To avoid this you can do it like: boolean result = s.lowerCase().contains(s2.lowercase)

1. **How can you remove spaces before and after a word in Java? Find a suitable method in the** String **class.**

In Java 8 there is the trim() method that cuts of whitespaces if the word is in a string alone.

If there is a sentence you need to use the replace method to replace “ “ with “”.



--- Ab hier Programmieraufgaben ---

1. W**rite a method** getEndergebnisAppend(String s, String s1) **that creates a** StringBuilder**, appends** s **and** s1 **together, and returns the result.**
2. Write a method appendMehrereStrings(String[] arr) that appends multiple string values from an array (String[] arr = {"Hallo", " ", "Welt", "!", " Wie", " geht's?"}) to a StringBuilder and prints the result.
3. **Write a method** getEndergebnisReverse(String s, String s2) **that joins both strings using a** StringBuilder **and then outputs the text in reverse. Example:** "Hello Welt!" **→** "!tleW olleH"
4. Write a method getEndergebnisInsert(String s, String s2) that creates the text "HalloWelt" and inserts a space between "Hallo" and "Welt".
5. **Write a method** reverseEveryWord **that takes a sentence as a parameter. Each letter in each word should be reversed, while the word order remains the same. Example:** "Hallo Welt" **becomes** "ollaH tleW"**.**