## Lecture 4-string in java

1. What is the purpose of the length() method in Java's String class?

A) To return the number of characters in a String

B) To split a String into an array

C) To find the index of a character in a String

D) To convert a String to uppercase

Answer:

2. Which method converts a String into an array of characters?

A) charAt()

B) toCharArray()

C) split()

D) indexOf()

Answer:

3. What does the regex ^hello$ match?

A) Strings that start with "hello"

B) Strings that end with "hello"

C) Strings that are exactly "hello"

D) Any string containing "hello"

Answer:

4. What does the regex \bcat\b match?

A) The word "cat" as a standalone word

B) "cat" at the beginning of a word

C) "cat" at the end of a word

D) Any occurrence of "cat"

Answer:

5. In Java, what does the indexOf(String str) method do?

A) Splits a String into an array using the given delimiter

B) Finds the first occurrence of a substring within a String

C) Converts a String to lowercase

D) Replaces characters in a String

Answer:

6. What does the regex [a-zA-Z0-9] match?

A) Only lowercase letters

B) Only uppercase letters

C) Any letter or digit

D) Only digits

Answer:

7. What is returned by split(" +") when applied to "Can you hear me?Hello, hello?"?

A) An array containing words with extra spaces included

B) An array containing exactly 6 words without extra spaces

C) An array containing characters split by space

D) An error due to invalid regex

Answer:

8. Which quantifier matches zero or more occurrences of a character in regex?

A) +

B) \*

C) {min,max}

D) ?

Answer:

9. Which quantifier matches one or more occurrences of a character in regex?

A) +

B) \*

C) {min,max}

D) ?

Answer:

10. What does the regex [0-9]{3}[ -]?[0-9]{3}[ -]?[0-9]{4} match?

A) Any string with exactly 10 digits in sequence

B) Phone numbers with optional spaces or hyphens as separators (e.g., 1234567890, 123 456 7890, 123-456-7890)

C) Strings with three digits followed by spaces only

D) Strings with special characters only

Answer:

11. Which built-in character class matches any digit?

A) \D

B) \w

C) \d

D) \s

Answer:

12. How can you match the literal dot (.) character in regex?

A) Use just . directly in the pattern.

B) Use \. to escape it.

C) Use [.].

D) Both B and C are correct.

Answer:

13. Which quantifier matches between 2 and 4 occurrences of a pattern?

A) {2,4}

B) {2,}

C) {,4}

D) {4}

Answer:

14. What is the output of calling getTokens("[a-z]+") on "Splitting strings is fun!"?

Assume it extracts sequences of lowercase letters.

A) ["Splitting", "strings", "is", "fun"]

B) ["plitting", "strings", "is", "fun"]

C) ["strings", "is", "fun"]

D) ["splittingstringsisfun"]

Answer:

15. What does the regex (abc|def|ghi) match?

A) Only "abc"

B) Only "def"

C) Any one of "abc," "def," or "ghi"

D) All three combined in sequence.

Answer:

16. Which of the following lines of code correctly assign a String containing the text "My String" to the variable 'text'? ( ) (Select all correct options.)

A)  
String text = new String("My ");  
text += new String("String");

B)  
String s1 = "My String";  
String text = s1;

C)  
String text = "My ";  
String s2 = "String";  
text = text + s2;

D)  
String text = "My ";  
text.concat("String");

ANS:

17. Assume String variable d contains the text:

"lalalaaaa! lala, la!"

What array does the following call return?

D)getTokens("la+");

A) ["lalala", "lala", "la"]

B) ["la", "la", "la", "la", "la", "la"]

C) ["laaaaaa", "lala", "la"]

D) ["la", "la", "laaaa", "la", "la", "la"]

ANS:

18. Assume String variable d contains the text:

"lalalaaaa! lala, la!"

What array does the following call return?

D) getTokens("(la)+");

A) ["lalala", "lala", "la"]

B) ["la", "la", "la", "la", "la", "la"]

C) ["laaaaaa", "lala", "la"]

D) ["la", "la", "laaaa", "la", "la", "la"]

ANS:

19. Assume String variable s contains the text

"%one%%two%%%three%%%%"

Which of the following calls will return the String array as follows:

["%", "%%", "%%%", "%%%%"]

A) s.getTokens("%+");  
B) s.getTokens("[a-z]+");  
C) s.getTokens("one|two|three");  
D) s.getTokens("[one,two,three]");

ANS:

20. Assume String variable s contains the text

"%one%%two%%%three%%%%"

Which of the following calls will return the String array as follows:

["%", "%%", "%%%", "%%%%"]

A) s.split("%+");  
B) s.split("[a-z]+");  
C) s.split("one|two|three");  
D) s.split("[one,two,three]");

ANS:

21. Assume String variable d contains the text:  
"one (1), two (2), three (3)"

Which of the following calls to getTokens will return the list of Strings as follows:  
["one", "(1)", "two", "(2)", "three", "(3)"]

A) D)getTokens("[^, ]+")  
B) D)getTokens("[^,]+")  
C) D)getTokens("[a-z()0-9]+")  
D) D)getTokens("[a-z]+|[(][0-9]+[)]")

ANS: