

## 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) ["laaaaa", "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: