

Session-7 String Operation Methods

Thursday, July 7, 2022 4:38 PM

What is String & How to Create String

Strings are sequence of char values or collection of characters. In Java, strings are treated as an object.

```
char[] ch = {'h', 'e', 'l', 'l', 'o'};
String s = new String(ch);
```

is same as:

```
String s = "hello";
```

→ 1st Method

→ 2nd Method

String Manipulation Methods

Java String class provides a lot of methods to perform operations on strings

	Method	Purpose
1	<u>char charAt(int index)</u> <i>String s = "Hello";</i> <i>0 1 2 3 4</i> <i>s.charAt(4);</i>	<u>returns char value for particular index</u>
2	<u>int length()</u> <i>s.length() = 5</i>	<u>returns string length</u>
3	<u>String toLowerCase()</u> <i>s.toLowerCase()</i> <i>hello ✓</i>	<u>returns string in lowercase</u>
4	<u>String toUpperCase()</u> <i>→ HELLO</i>	<u>returns string in uppercase</u>

```

1 package java_file;
2
3 public class String1 {
4
5     public static void main(String[] args) {
6
7         String s = "Chinu";
8         System.out.println(s.charAt(3));    // to find the particular position
9         System.out.println(s.length());    // find the length of the string
10        System.out.println(s.toLowerCase()); // to convert in the lower case
11        System.out.println(s.toUpperCase()); // to convert in the upper case
12
13    }
14 }
15
16 }
17

```

Console × Problems × Debug Shell × Coverage × TestNG

<terminated> String1 [Java Application] C:\Program Files\Java\jdk-17.0.2\bin\javaw.exe (20-Aug-2022, 11:57:31 pm - 11:57:31 pm) [pid: 29840]

```

n
5
chinu
CHINU

```

String Manipulation Methods

	Method	Purpose
5	String <u>replace</u> (char oldChar, char newChar) <i>String s = "Hello Java Python";</i> <i>Java Python</i>	replaces old character with new character value in string
6	int <u>indexOf</u> (char ch) <i>Hello Java</i> <i>= 6</i>	returns <u>index of specified character</u>
7	String <u>substring</u> (int startIndex) = <i>ello Java</i> <i>3</i>	returns <u>substring for given start index</u>
8	boolean <u>isEmpty</u> ()	checks if string is empty

```

1 package java_file;
2
3 public class String1 {
4
5     public static void main(String[] args) {
6
7         String s = "Chinu";
8         // System.out.println(s.charAt(3)); // to find the particular position
9         // System.out.println(s.length()); // find the length of the string
10        // System.out.println(s.toLowerCase()); // to convert in the lower case
11        // System.out.println(s.toUpperCase()); // to convert in the upper case
12
13        System.out.println(s.replace('i','a')); // to replace the character in the string
14        System.out.println(s.replace("inu","akash")); // to replace the string in the java
15        System.out.println(s.indexOf('i')); // index of particular character
16        System.out.println(s.substring(2)); // print from that position
17        System.out.println(s.isEmpty()); // empty or not
18
19    }
20 }
21
22 }
23 }
24

```

Console: String1 [Java Application] C:\Program Files\Java\jdk-17.0.2\bin\javaw.exe (21-Aug-2022, 12:17:16 am - 12:17:16 am) [pid: 32072]

Chinu
Chakash
2
inu
false

String Manipulation Methods

	Method	Purpose
9	String <u>substring</u> (int startIndex, int endIndex) <i>Start Index starts from 0</i>	Returns a new string that is a substring of this string.

0 1 2 3 4

0 1 2 3 4

HELLO

1 2 3 4 5

End Index starts from 1

(0, 4) = HELLO

Start = 0 1 2 3 4 5 6

0 1 2 3 4 5 6 7

WELCOME

1 2 3 4 5 6 7

(3, 7) = COME

```

package session7;

public class StringOperation2 {

    public static void main(String[] args) {
        // TODO Auto-generated method stub

        String s = "WELCOME"; //Start index ( W=0,E=1,L=2, C=3,O=4,M=5,E=6)
        //End index(W=1,E=2,L=3, C=4,O=5,M=6,E=7)

        //substring "COME"
        System.out.println(s.substring(3, 7));

        //substring "WEL"
        System.out.println(s.substring(0, 3));

        String a = "DO YOU KNOW"; //START INDEX =3, End index=6
        System.out.println(a.substring(3, 6));
    }
}

```

Console x

<terminated> StringOperation2 [Java Application] C:\Program Files\Java\jdk-17.0.1\bin\javaw.exe (Nov 8, 2021, 10:51:16 AM - 10:51:17 AM)

COME
WEL
YOU

	Method	Purpose
10	<p><i>String s = "welcome";</i></p> <p><u>boolean contains(CharSequence t)</u></p> <p><i>True/false T) = s.contains("come");</i></p>	<u>checks if string contains the specified character sequence</u>
11	String trim()	omits leading and trailing white spaces
12	boolean startsWith(String str)	checks if the string starts with the specified substring
13	boolean startsWith(String str, int startIndex)	checks if the string starts with the specified substring starting from the specified index

9	boolean endsWith(String substring)	checks if the string ends with the specified substring
10	<p>1) boolean equals(Object anotherObject)</p> <p>2) boolean equalsIgnoreCase(String anotherString)</p>	checks the equality of string with object
11	<p>Java Concatenation (+) Or</p> <p>String Concat ()</p>	Use to join/concatenate strings

