

Η κλάση String

Δημιουργία String

```
40 public static void main(String[] args) {  
41     // TODO code application logic here  
42     String test = "Hello world";  
43     System.out.println(test);  
44  
45     test = "first test";  
46     System.out.println(test);  
47  
48     test = new String("second test");  
49     System.out.println(test);  
50  
51     char[] helloArray = { 'h', 'e', 'l', 'l', 'o' };  
52     String helloStr = new String(helloArray);  
53     System.out.println(helloStr);  
54 }
```

Δημιουργία και ανάθεση τιμής

Ανάθεση τιμής

Δημιουργία με τη χρήση του new

Δημιουργία από
πίνακα χαρακτήρων

Output - Lecture04 (run) X



run:



Hello world



first test



second test

hello

Κλήση με τιμή και αναφορά

```
7 class LogMessage
8 {
9     String message = "";
10
11     LogMessage(String message )
12     {
13         this.message = message;
14     }
15
16     public void info()
17     {
18         System.out.println(message);
19     }
20 }
```

Output - Lecture04 (run)



Good day



Good day

nick



Changed Value

```
22 // @author Nick Z. Zacharis
23 //
24 public class StringExamples {
25
26     static void ChangeObjectValues(LogMessage v) {
27         v.message= "Changed Value";
28     }
29
30     static void CallByVal(String x) {
31         x = "String changed value";
32     }
33
34     public static void main(String[] args) {
35         String helloStr = "Good day";
36         System.out.println(helloStr);
37
38         CallByVal(helloStr);
39         System.out.println(helloStr);
40
41         LogMessage a = new LogMessage("nick");
42         a.info();
43         ChangeObjectValues(a);
44         a.info();
45     }
```

Ενδεικτικές μέθοδοι της κλάσης String

int	<u>compareTo</u> (<u>String</u> anotherString) Compares two strings lexicographically.
int	<u>compareToIgnoreCase</u> (<u>String</u> str) Compares two strings lexicographically, ignoring case differences.
int	<u>indexOf</u> (int ch) Returns the index within this string of the first occurrence of the specified character.
int	<u>indexOf</u> (int ch, int fromIndex) Returns the index within this string of the first occurrence of the specified character, starting the search at the specified index.
int	<u>lastIndexOf</u> (int ch) Returns the index within this string of the last occurrence of the specified character.
int	<u>lastIndexOf</u> (int ch, int fromIndex) Returns the index within this string of the last occurrence of the specified character, searching backward starting at the specified index.
int	<u>lastIndexOf</u> (<u>String</u> str) Returns the index within this string of the last occurrence of the specified substring.
int	<u>indexOf</u> (<u>String</u> str) Returns the index within this string of the first occurrence of the specified substring.
int	<u>indexOf</u> (<u>String</u> str, int fromIndex) Returns the index within this string of the first occurrence of the specified substring, starting at the specified index.

Ενδεικτικές μέθοδοι της κλάσης String

int	length() Returns the length of this string.
String[]	split(String regex) Splits this string around matches of the given regular expression .
boolean	endsWith(String suffix) Tests if this string ends with the specified suffix.
boolean	startsWith(String prefix)
boolean	startsWith(String prefix, int toffset) Tests if the substring of this string beginning at the specified index starts with the specified prefix.
char[]	toCharArray() Converts this string to a new character array.
String	substring(int beginIndex) Returns a new string that is a substring of this string.
String	substring(int beginIndex, int endIndex) Returns a new string that is a substring of this string.
String	trim() Returns a copy of the string, without leading and trailing whitespace.
String	toUpperCase() Converts all of the characters in this String to upper case using the rules of the default locale.
String	toLowerCase() Converts all of the characters in this String to lower case using the rules of the default locale.
char	charAt(int index) Returns the char value at the specified index.
boolean	equalsIgnoreCase(String anotherString) Compares this String to another String, ignoring case considerations.

Παραδείγματα

```
public static void main(String[] args) {  
    String message = "Good Day";  
    int len = message.length();  
    System.out.println( "The length is : " + len );  
    String [] parts = message.split(" ");  
    for(int i=0; i<parts.length; i++) {  
        System.out.println( i + " " + parts[i]);  
    }  
    System.out.println( message.charAt(6));  
    System.out.println( message.substring(2,4));  
    System.out.println( message.toUpperCase() );  
    System.out.println( message.toLowerCase());  
    System.out.println( message.endsWith("ay"));  
    System.out.println( message.startsWith("Go"));  
    System.out.println( message.indexOf("blue"));  
    System.out.println( message.indexOf("D"));  
    System.out.println( message.indexOf("a",5));  
}
```

```
The length is : 8  
0) Good  
1) Day  
a  
od  
GOOD DAY  
good day  
true|  
true  
-1  
5  
6
```

Η κλάση StringBuilder

(Ενδεικτικές μέθοδοι και κατασκευαστές)

StringBuilder(int initCapacity)	Creates an empty string builder with the specified initial capacity.
StringBuilder(String s)	Creates a string builder whose value is initialized by the specified string, plus an extra 16 empty elements trailing the string.
StringBuilder append(double d) StringBuilder append(int i)	The data is converted to a string before the append operation takes place.
StringBuilder reverse()	Reverses the sequence of characters in this string builder.
String	substring (int start, int end) Returns a new String that contains a subsequence of characters
StringBuilder	delete (int start, int end) Removes the characters in a substring of this sequence.
StringBuilder	insert (int offset, String str) Inserts the string into this character sequence.
int	lastIndexOf (String str) Returns the index within this string of the rightmost occurrence of the specified substring.

Παραδείγματα

```
public class ExampleStringBuilder
{
    static void change(StringBuilder s)
    {
        s.append(" Nick");
    }

    public static void main(String[] args)
    {
        StringBuilder test = new StringBuilder("Hello");
        change(test);
        System.out.println(test.toString());

        System.out.println(test.indexOf("Nick"));
        System.out.println(test.insert(5, " Mr."));
        System.out.println(test.delete(5, 9));
        System.out.println(test.substring(2, 4));
        System.out.println(test.length());
    }
}
```

Hello Nick

6

Hello Mr. Nick

Hello Nick

11

10

String – StringBuffer - StringBuilder

	String	StringBuffer	StringBuilder
Thread safe	ναι	ναι	όχι
Απόδοση	Γρήγορη	Αργή	Γρήγορη

Η κλάση StringBuffer έχει τις ίδιες μεθόδους με τη StringBuilder και είναι Thread Safe.

```
public static void main(String[] args)
```

```
{
```

```
    String s = new String("Hello");  
    System.out.println(s.replace('l', 'r'));  
    System.out.println(s);
```

Herro

Hello

```
    StringBuilder stb = new StringBuilder("Bad");  
    System.out.println(stb.replace(1, 2, "e"));  
    System.out.println(stb);
```

Bed

Bed

```
    StringBuffer stf = new StringBuffer("Bed");  
    System.out.println(stf.replace(1, 2, "a"));  
    System.out.println(stf);
```

Bad

Bad

```
}
```