

Working with Strings in Java



String representation



This work is licensed under a [Creative Commons Attribution-ShareAlike 4.0 International License](https://creativecommons.org/licenses/by-sa/4.0/)
by Christine Alvarado, Mia Minnes, and Leo Porter, 2015.

By the end of this video you will be able to...

- Describe how Strings are represented in Java
- Perform basic operations with Strings in Java


$$\text{Flesch score} = 206.835 - 1.015 \left(\frac{\# \text{ words}}{\# \text{ sentences}} \right) - 84.6 \left(\frac{\# \text{ syllables}}{\# \text{ words}} \right)$$

Requires the ability to manipulate Strings!

String Basics

Strings are objects

```
String text = new String("Hello World!");
```

text 

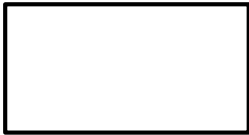
String Basics

Strings are objects

```
String text = new String("Hello World!");
```

The heap

text



"Hello World!"



String Basics

Strings are objects

```
String text = new String("Hello World!");
```

The heap

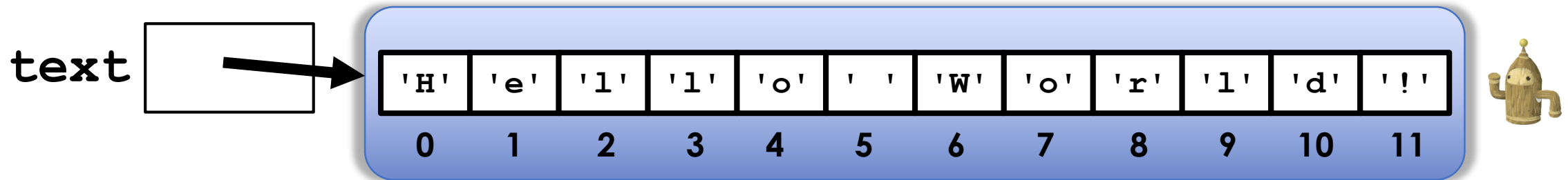


String Basics

Strings are represented as arrays of chars.

```
String text = new String("Hello World!");
```

The heap



String Basics

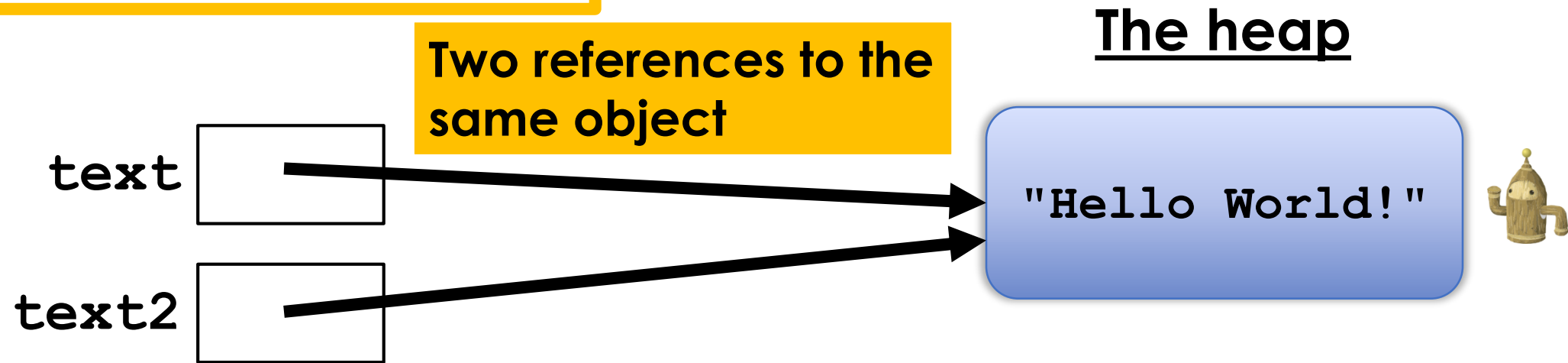
```
String text = new String("Hello World!");
```

The heap



String Basics

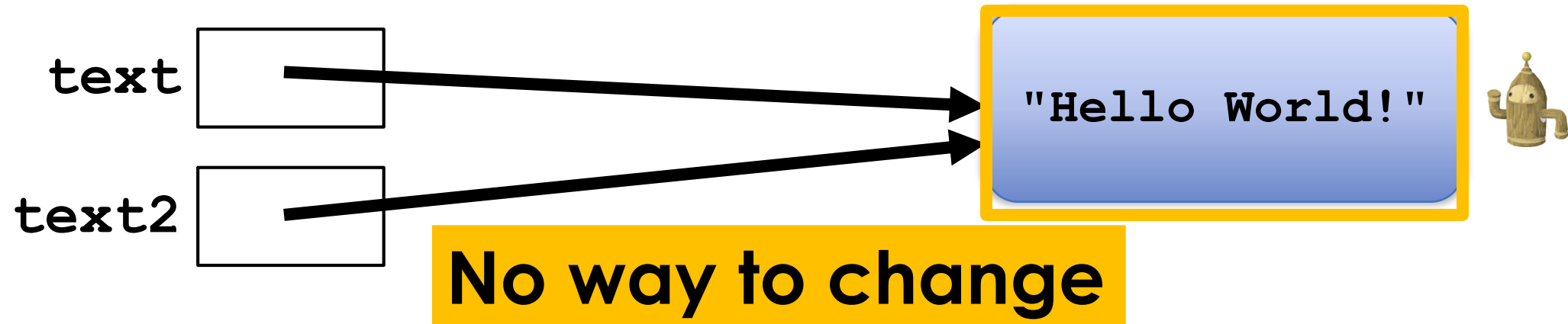
```
String text = new String("Hello World!");  
String text2 = text;
```



Strings are immutable

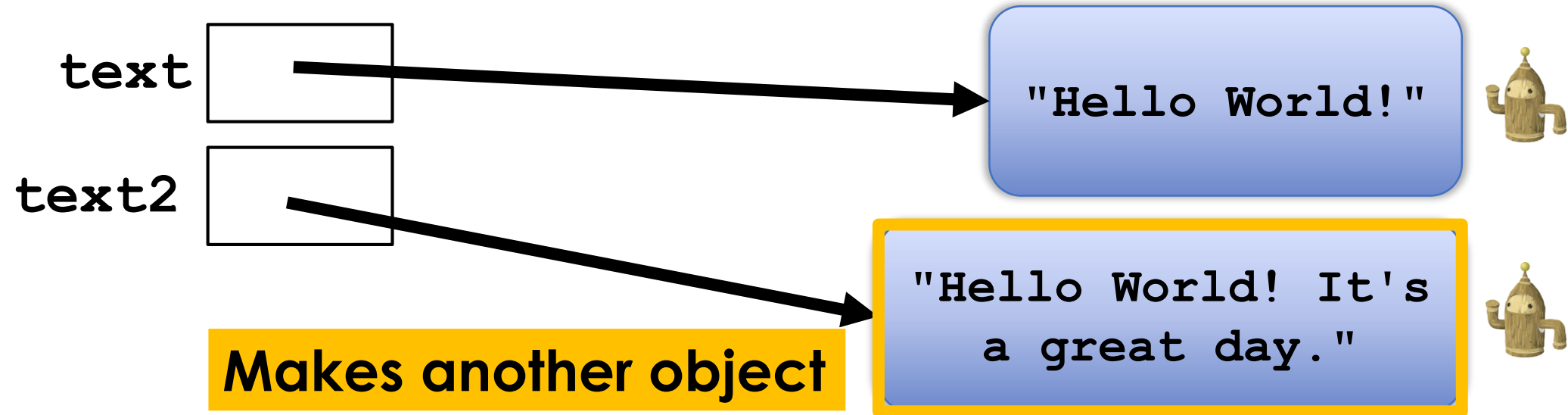
```
String text = new String("Hello World!");  
String text2 = text;
```

The heap



String append

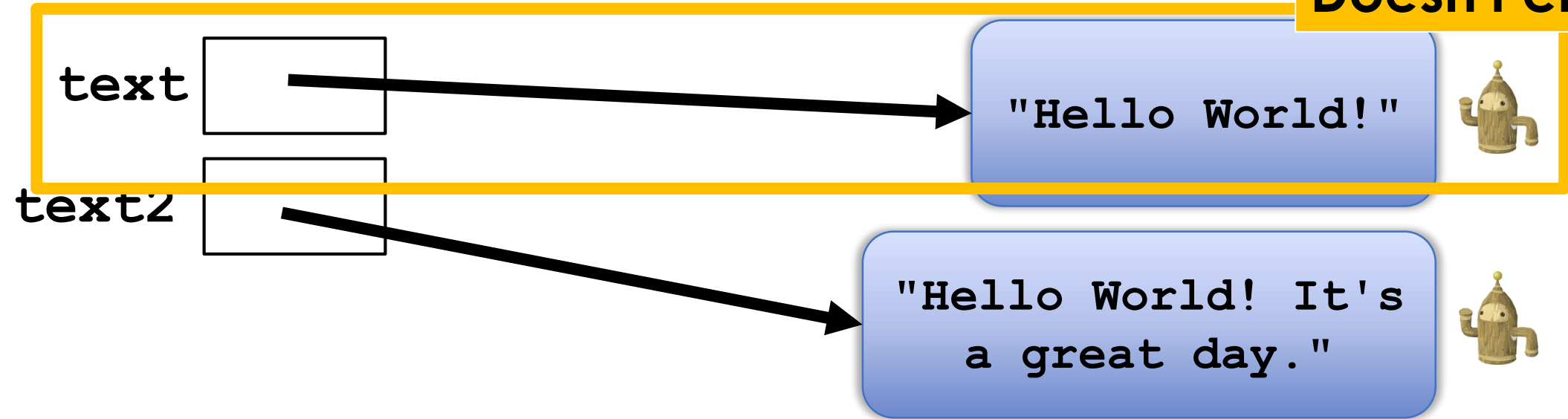
```
String text = new String("Hello World!");  
String text2 = text.append(" It's a great day.");
```



+ operator also does append

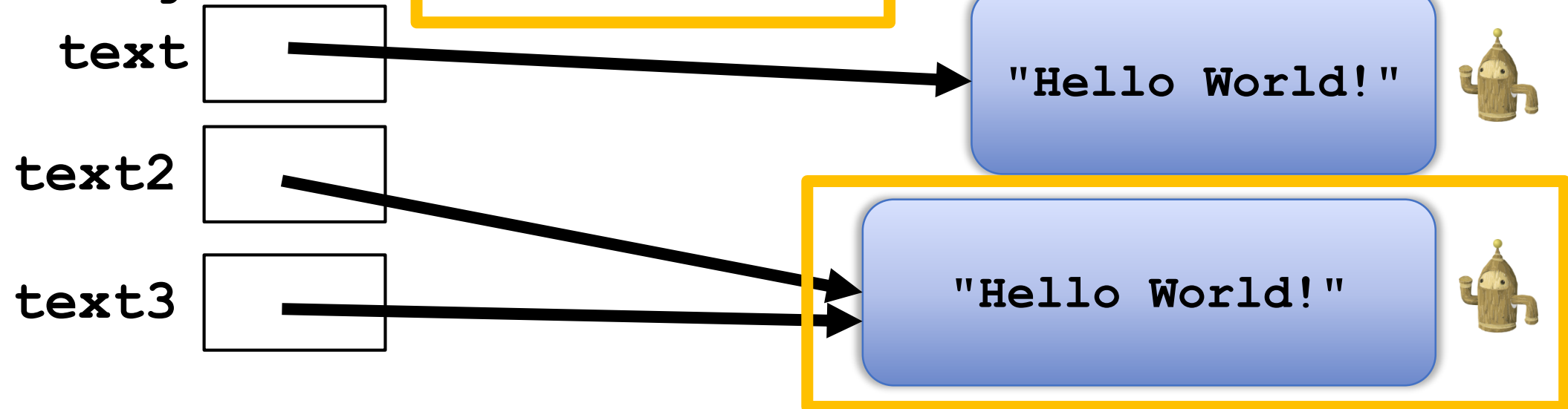
```
String text = new String("Hello World!");  
String text2 = text + " It's a great day.";
```

Doesn't change



Interned Strings: One object

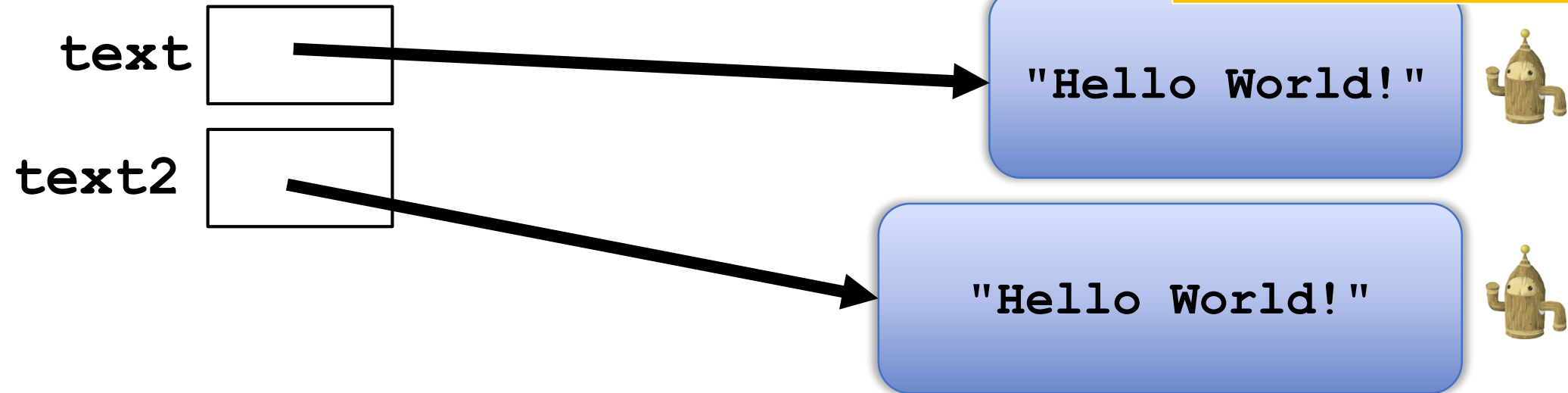
```
String text = new String("Hello World!");  
String text2 = "Hello World!";  
String text3 = "Hello World!";
```



.equals vs ==

```
String text = new String("Hello World!");  
String text2 = new String("Hello World!");  
text.equals(text2) // Evaluates to true  
text == text2 // Evaluates to false
```

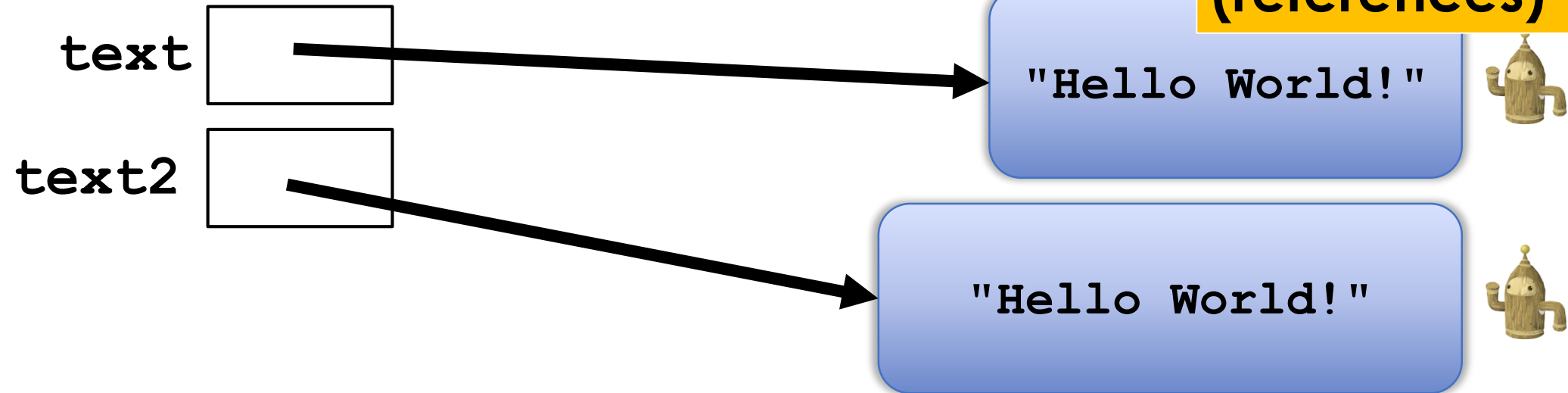
.equals compares characters



.equals vs ==

```
String text = new String("Hello World!");  
String text2 = new String("Hello World!");  
text.equals(text2) // Evaluates to true  
text == text2 // Evaluates to false
```

**== compares
variable values
(references)**



Strings can do lots of things!

<https://docs.oracle.com/javase/8/docs/api/java/lang/String.html>