

Strings

Topics: 1. How to get a string 2. String interpolation 3. String concatenation

How to get a string

Enclose your characters in " " or "" ""!

```
[1] s1 = "I am a string."
```

```
"I am a string."
```

```
[2] s2 = """I am also a string. """
```

```
"I am also a string. "
```

There are a couple functional differences between strings enclosed in single and triple quotes.

One difference is that, in the latter case, you can use quotation marks within your string.

```
[3] "Here, we get an "error" because it's ambiguous where this string  
ends "
```

```
syntax: cannot juxtapose string literal
```

```
[4] """Look, Mom, no "errors"!!! """
```

```
"Look, Mom, no \"errors\"!!! "
```

Note that ' ' define a character, but NOT a string!

```
[5]    typeof('a')
```

Char

```
[6]    'We will get an error here'
```

syntax: invalid character literal

String interpolation

We can use the \$ sign to insert existing variables into a string and to evaluate expressions within a string.

Below is an example that contains some highly sensitive personal information.

```
[7]    name = "Jane"  
      num_fingers = 10  
      num_toes = 10
```

10

```
[8]    println("Hello, my name is $name.")  
      println("I have $num_fingers fingers and $num_toes toes.")  
      println("That is $(num_fingers + num_toes) digits in all!!")  
      # ## String concatenation
```

Hello, my name is Jane.
I have 10 fingers and 10 toes.
That is 20 digits in all!!

```
[9]    # Below are three ways we can concatenate strings! <br><br>  
      # The first way is to use the `string()` function. <br>  
      # `string()` converts non-string inputs to strings.  
      s3 = "How many cats ";  
      s4 = "is too many cats?";  
      🐱 = 10
```

10

```
string(s3, s4)
```

"How many cats is too many cats?"

```
string("I don't know, but ", 🐼, " is too few.")
```

"I don't know, but 10 is too few."

We can also use `*` for concatenation!

 $s_3 * s_4$

"How many cats is too many cats?"

Exercises

2.1

Create a string that says "hi" 1000 times, first with `repeat` and then with the exponentiation operator, which can call `*` under the hood. Assign it the variable `hi` below.

```
hi = repeat("hi", 1000)
```

[illegible]

[illegible]

2.2

Declare two variables

```
a = 3
b = 4
```

and use them to create two strings:

"3 + 4"
"7"

and store the results in c and d respectively

```
[29] a = 3
      b = 4
      c = "$a+$b"
      d = "$ (a+b)"
```

"7"

This cell has been deleted.

Undo

```
[31] @assert c == "3+4"  
      @assert d == "7"
```