

2d. Strings

Martin Alfaro

PhD in Economics

INTRODUCTION

This section presents types for text representation, distinguishing between characters and strings. The coverage will be concise, as the website won't focus on string analysis. However, a minimal treatment is necessary, as string variables are important for tasks like specifying paths, displaying messages, and documenting functions.

CHARACTERS

The `Char` type is employed to represent individual characters. Characters are written by enclosing them in single quotes, as in `'x'` for the character `x`. Given Julia's support for Unicode characters, `Char` encompasses not only numbers and letters, but also a wide range of symbols.

```
# x equals the character 'a'
x = 'a'

# 'Char' allows for Unicode characters
x = 'β'
y = '𠮷'
```

Notice that characters must be enclosed in single quotes `' '` even for symbols like `𠮷`. Otherwise, Julia will interpret the expression as a variable.

```
# any character is allowed for defining a variable
𠮷 = 2      # 𠮷 represents a variable, just like if we had defined x = 2

y = 𠮷       # y equals 2, 𠮷's value at that moment (not 𠮷 itself)
z = '𠮷'     # z equals the character 𠮷 (entirely independent of the 𠮷 variable )
```

STRINGS

We'll rarely use the type `Char` directly. Instead, we'll work with the so-called type `String`. This is an ordered collection of characters, permitting the representation of text.

Strings can be defined through either double quotes `" "` or triple quotes `""" """`. The latter is particularly convenient for handling newlines, such as when the text has to span multiple lines.¹

```
x = "Hello, beautiful world"
x = """Hello, beautiful world"""
```

STRING INTERPOLATION

String interpolation lets you embed Julia code directly inside a string. The embedded expression is then evaluated and replaced in the string with its value.

To interpolate an expression, the string must be prefixed with the `$` symbol. If the expression contains spaces, it must be enclosed in curly braces, as in `$(())`. Both cases are exemplified below.

```
number_students = 10

output_text      = "There are $(number_students) students in the course"

julia> output_text
"There are 10 students in the course"
```

```
number_matches  = 50
goals_per_match = 2

output_text      = "Last year, Messi scored $(number_matches * goals_per_match) goals"

julia> output_text
"Last year, Messi scored 100 goals"
```

FOOTNOTES

¹. For more on the differences between double and triple quotes, see [here](#)