Methods

Lesson Objectives

- After completing this lesson, you should be able to:
  - Implement methods in Scala
  - Describe evaluation order of methods versus fields in Scala
  - Outline how infix notation works in Scala

What is a Method?

- A method describes behavior within a class
  - Are something that can be called to do work
  - Where transformations to internal state can take place
  - May take parameters as inputs, and may return a single value
  - Should specify their return type
    - More correctness
    - Faster compilation

A Simple Scala Method

```
scala> def hello = "Hello"
hello: String

scala> def echo(message: String): String = message
echo: (message: String)String
```

Why Methods Instead of Fields?

- Methods can look like fields
- Methods are evaluated at the time they are called
- Methods are re-evaluated every time they are called
- Fields are only evaluated at the time the class is constructed, and if immutable, only one time

Infix Notation

- Methods are called on an instance of a class
- Scala permits methods to be called with no “.” or parentheses, if the method takes only one argument
- This is flexible syntax that supports powerful DSLs
- For readability, you should not use this feature

Infix Method Calling

```
scala> "Martin Odersky".split(" ")
res0: Array[String] = Array(Martin, Odersky)

scala> "Martin Odersky" split " "
res1: Array[String] = Array(Martin, Odersky)
```

Typesafe

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Typesafe