FOUNDATIONS OF FUNCTIONAL PROGRAMMING IN SCALA

Instructor

Backend developer for 10+ years

Author of Monocle

Run meetups and in-house Scala training

1. Practical concepts of functional programming

1. Practical concepts of functional programming

Why FP matters to you, your colleagues and your business?

2. Become a Scala expert

Prerequisites

Basic understanding of the Scala syntax

Exercises with answers and tests

```scala
object ParametricFunctionExercises {

  ////////////////////
  // Exercise 1: Pair
  ////////////////////

  val names: Pair[String] = Pair("John", "Elisabeth")
  val ages: Pair[Int]     = Pair(32, 46)

  case class Pair[A](first: A, second: A) {
    // 1a. Implement `swap` which exchanges `first` and `second`
    // such as Pair("John", "Doe").swap == Pair("Doe", "John")
    def swap: Pair[A] =
      ???

```

```scala
object ParametricFunctionAnswers {

  ////////////////////
  // Exercise 1: Pair
  ////////////////////

  val names: Pair[String] = Pair("John", "Elisabeth")
  val ages: Pair[Int]     = Pair(32, 46)

  case class Pair[A](first: A, second: A) {
    def swap: Pair[A] =
      Pair(second, first)

    def map[To](update: A => To): Pair[To] =
      Pair(update(first), update(second))
```

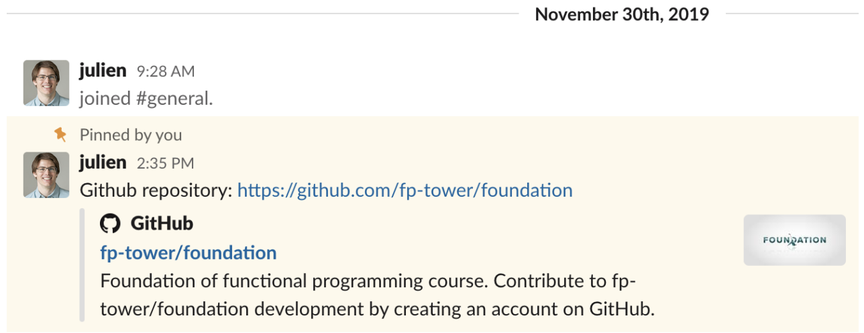
```
[info] - Predicate isValidUser
[info] - JsonDecoder UserId
[info] - JsonDecoder UserId int.toString
[info] - JsonDecoder LocalDate
[info] - JsonDecoder LocalDate random
[info] - JsonDecoder Option
[info] ScalaTest
[info] Run completed in 518 milliseconds.
[info] Total number of tests run: 18
[info] Suites: completed 1, aborted 0
[info] Tests: succeeded 18, failed 0, canceled 0, ignored 0, pending 0
[info] All tests passed.
[info] Passed: Total 18, Failed 0, Errors 0, Passed 18
[success] Total time: 1 s, completed 8 May 2020, 17:57:58
[IJ]sbt:foundation>
```

Personal learning experience

Exercises explained and solved in videos

Personal learning experience

Online community ready to answer your questions



Chapter 1: Functions

1. Value functions
2. Generic functions
3. Case study: Big data
4. Functional subset

Chapter 2: Actions

1. How to perform actions in a testable way?
2. Implement toy IO
3. Introduction to concurrency

WELCOME TO FOUNDATIONS

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