

The background is a solid blue gradient, transitioning from a darker teal at the top to a lighter blue at the bottom. Overlaid on this are several abstract network diagrams. These consist of small circular nodes connected by thin, light-colored lines. Some nodes are larger than others, and the connections form various geometric shapes like triangles and polygons, creating a complex web-like structure across the entire image.

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

```
4
5 object ParametricFunctionExercises {
6
7   ////////////////
8   // Exercise 1: Pair
9   ////////////////
10
11   val names: Pair[String] = Pair("John", "Elisabeth")
12   val ages: Pair[Int]     = Pair(32, 46)
13
14   case class Pair[A](first: A, second: A) {
15     // 1a. Implement `swap` which exchanges `first` and `second`
16     // such as Pair("John", "Doe").swap == Pair("Doe", "John")
17     def swap: Pair[A] =
18       ???
19   }
```

```
5
6 object ParametricFunctionAnswers {
7
8   ////////////////
9   // Exercise 1: Pair
10  ////////////////
11
12  val names: Pair[String] = Pair("John", "Elisabeth")
13  val ages: Pair[Int]     = Pair(32, 46)
14
15  case class Pair[A](first: A, second: A) {
16    def swap: Pair[A] =
17      Pair(second, first)
18
19    def map[To](update: A => To): Pair[To] =
20      Pair(update(first), update(second))
21  }
```

```
[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

November 30th, 2019



julien 9:28 AM
joined #general.



Pinned by you



julien 2:35 PM

Github repository: <https://github.com/fp-tower/foundation>



GitHub

[fp-tower/foundation](https://github.com/fp-tower/foundation)

Foundation of functional programming course. Contribute to fp-tower/foundation development by creating an account on GitHub.

FOUNDATION

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

The background of the slide is a dark blue gradient with a complex network of light blue lines and dots. The dots, representing nodes, are of varying sizes and are connected by thin, light blue lines, creating a web-like structure that spans the entire background. The lines and dots are more densely packed in some areas, particularly towards the top and bottom edges, while other areas are more sparse.

WELCOME TO FOUNDATIONS

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