



# FOUNDATIONS

of functional programming in Scala

# Instructor

Backend developer for 10+ years

Author of Monocle 

Run meetups and in-house Scala training

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# Practical concepts of functional programming

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

Become a Scala expert



# Become a Scala expert



Become a Scala expert



# Prerequisites

Basic understanding of the Scala syntax



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Basic understanding of the Scala syntax

# Answers and tests

```
7
8 object GenericFunctionExercises {
9
10 ///////////////////////////////////////////////////
11 // Exercise 1: Pair
12 ///////////////////////////////////////////////////
13
14 val names: Pair[String] = Pair("John", "Elisabeth")
15 val ages: Pair[Int]      = Pair(32, 46)
16
17 case class Pair[A](first: A, second: A) {
18 // 1a. Implement `swap` which exchanges `first` and `second`
19 // such as Pair("John", "Doe").swap == Pair("Doe", "John")
20 def swap: Pair[A] =
21   ???
22 }
```

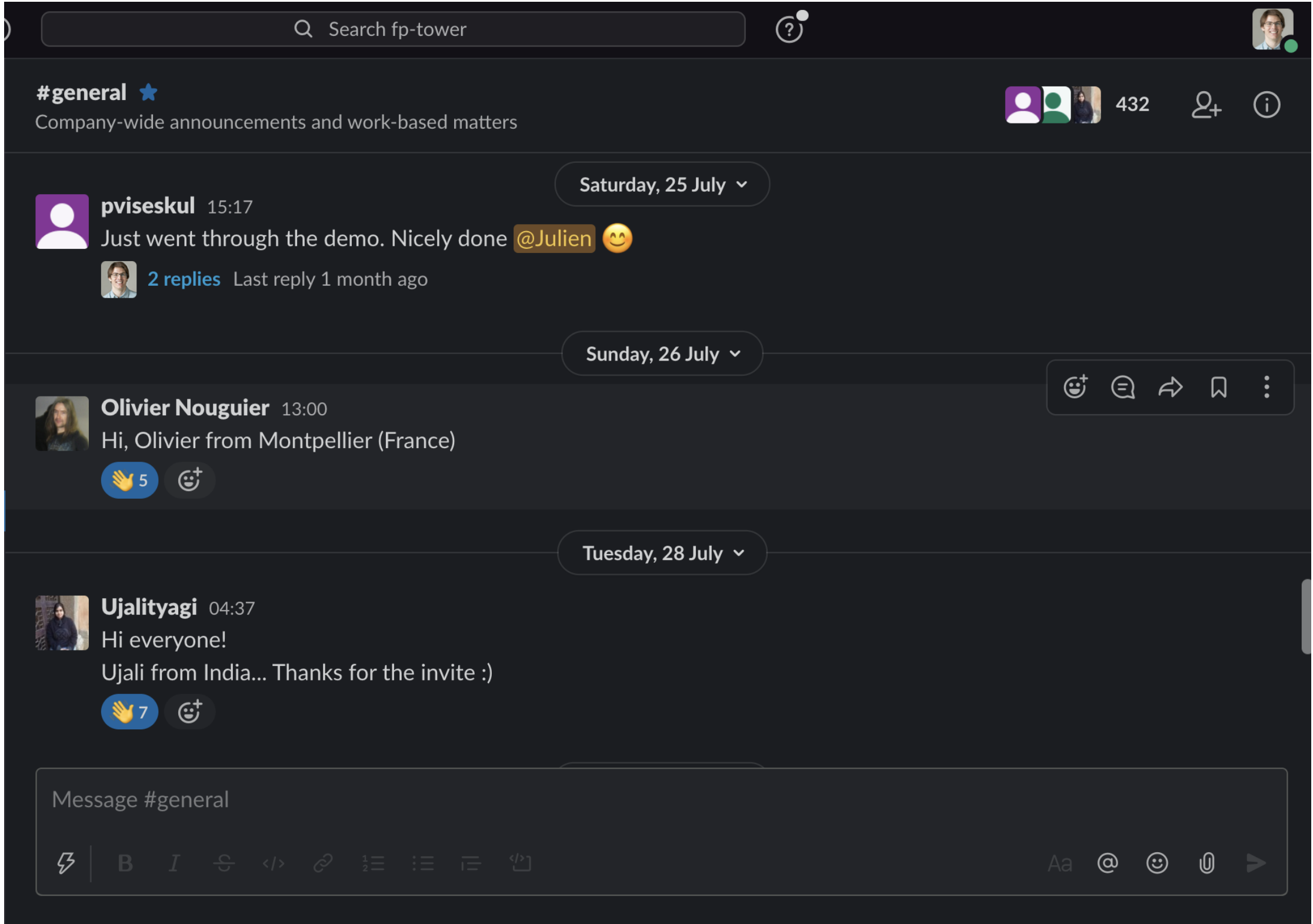
```
7
8 object GenericFunctionAnswers {
9
10 ///////////////////////////////////////////////////
11 // Exercise 1: Pair
12 ///////////////////////////////////////////////////
13
14 val names: Pair[String] = Pair("John", "Elisabeth")
15 val ages: Pair[Int]      = Pair(32, 46)
16
17 case class Pair[A](first: A, second: A) {
18
19
20 def swap: Pair[A] =
21   Pair(second, first)
22 }
```

```
[info] ScalaTest
[info] Run completed in 280 milliseconds.
[info] Total number of tests run: 67
[info] Suites: completed 5, aborted 0
[info] Tests: succeeded 67, failed 0, canceled 0, ignored 0, pending 0
[info] All tests passed.
[info] Passed: Total 67, Failed 0, Errors 0, Passed 67
[success] Total time: 1 s, completed 27 Aug 2020, 16:10:38
sbt:foundation>
```

# Refactoring, syntax and IDE tips, testing strategies

INSERT exercise video sample

# Online community



# Plan

1. Value functions
2. Generic functions
3. Parallel data processing
4. What's functional programming
5. Actions
6. Error handling



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