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# Scala training: Error handling and data modeling

TRAINING IN ENGLISH

1 day (7 hours)

## Presentation

All programs fail for a variety of reasons.

In this course, we'll be working on how to model these errors so that we can quickly find out what went wrong. We'll also focus on the ergonomics and readability of the code.

This is a hands-on course. Expect to implement many lines of code and tests throughout the day. By the end of this course, you'll be well equipped to detect and correct errors in Scala.

You'll discover how to use Option, Either or Validation, but you'll also learn how to create a data model and follow an error correction strategy.

## Objectives

- Understand the difference between Option, Either and Validation and know when to use them
- Design a precise data model that reduces runtime errors
- Experiment with different error hierarchy strategies
- Discover variance and how it helps type inference in Scala

## Target audience

Developers.

## Prerequisites

Experience with Scala.

## Our Scala Training Program: Error Handling and Data Modeling

### Option

- Implement functions that return an Option when they fail
- Experiment with the limits of this solution (test, precise error message)

### Either

- Replace Option with Either in previous exercises
- Try different error types: String, Enum
- Discover variance and its impact on type inference

### Validation

- Accumulate several errors using the Validation type

### Data modeling

- Implement several Order class functions (checkout, submit, delivery)
- Discover potential error scenarios
- Experiment with different error encodings
- Redesign the Order class to minimize errors

## Companies concerned

This course is aimed at companies, large or small, wishing to train their teams in a new, advanced computer technology.

## Teaching methods

Practical course: 60% Practical, 40% Theory. Training material distributed in digital format to all participants.

## Organization

The course alternates theoretical input from the trainer, supported by examples, with brainstorming sessions and group work.

## Validation

At the end of the session, a multiple-choice questionnaire verifies the correct acquisition of skills.

## Sanction

A certificate will be issued to each trainee who completes the course.