Advanced Object-Oriented Design

S.Ducasse, L. Fabresse, G. Polito, and P. Tesone

Going to the next level

- Object-oriented design to the roots
- Unique value
- From object designer experts

Why this mooc?

Following the success of the Pharo mooc (`http://mooc.pharo.org`)
I have already learned so much ! I have spent the last 20 years or so in software development and, following this Mooc, I realized I hadnt really grasped the essence of object oriented design. - Anonymous
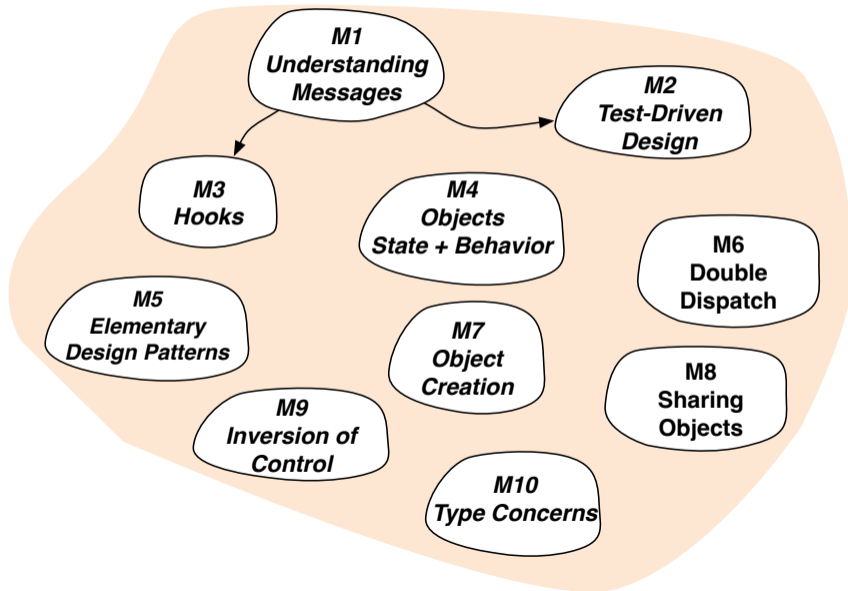
Objectives

- Revisit basic elements such as encapsulation, delegation
- Think about essential aspects of object-oriented design
- Learn key Design Patterns
- Analyze real case studies
- Things about Pharo code idioms

10 modules

Code examples from Pharo

Courtesy Pavel Krivanek

Why Pharo (http://www.pharo.org)?

- Pharo is pure and powerful object-oriented language
- With only objects, messages, and lambdas, Pharo helps us to focus on important ideas!
- Complement the excellent Pharo mooc (`http://mooc.pharo.org`)

Our definition of polymorphism

If it walks like a duck, swims like a duck, and quacks like a duck, then it probably is a duck.

We use the terms **polymorphic** or **polymorphism** in the sense of:

- exposing the same API,
- being substituable,
- an object can be replaced by another one because both present the same API (set of messages),
- polymorphic objects do not have to be subtypes

A unique mooc

- More than 60 years of experience in OO design and practices
- Concrete cases
- Knowledge actionable in many languages

Advanced Object-Oriented Design and Development with Pharo

A course by
S.Ducasse, L. Fabresse, G. Polito, and P. Tesone

2023