End-User Reconfiguration of Applications using Adaptive Object-Models

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FEUP

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The problem

- Many software projects exist in an ever-changing environment
- Requirements change to reflect changes in the enviroment, the industry, the client and end-users
- Modifying a system is costly
- A stagnant project dies, so a big effort must be made to ensure its continuity

(A possible) solution

- A generic system that is flexible enough to introduce changes without too much effort
- These systems take longer to develop
  - Developers must foresee many use-cases that may never be used
  - Higher costs for preparing a system for unlikely scenarios

(A better) solution

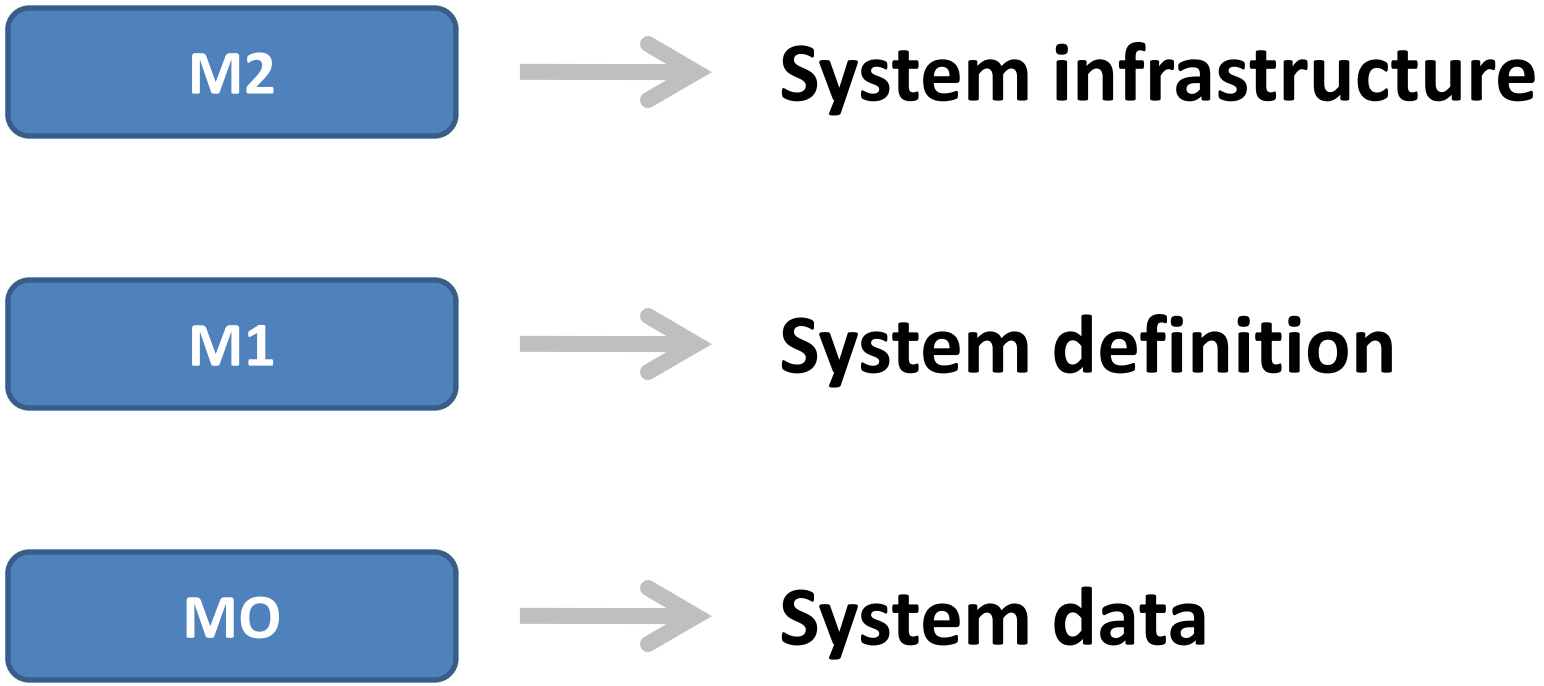
- An architural design pattern prepared for these scenarios

AOM

AOM

- Meta-architecture design pattern
- A system can be configured by a domain expert using a DSL
- Allows for changes to a system's architecture in runtime

AOM Architecture



Oghma

- AOM framework
- Developed to answer the problems posed by the aforementioned systems
- Allows for the easy creation of highly-customizable, dynamic information systems

Case-study: escolinhas.pt

- How to give better tools to teachers?
  - Let them build the tools they need!
- A specific architecture is required to allow end-users to model their own systems
- AOM and Oghma provide this missing functionality
- Will allow teachers to create their own tests, quizzes and other learning tools

Past & Future Work

- AOM study
  - AOM architecture and inherent design patterns
- Oghma framework study
- Application
  - Including a possible implementation of an AOM system in Ruby
- Dissertation reports