

# ***Project assignment***





# Project Assignment

- Design a modelling language for simplified Object-Oriented target platforms
- The language exploits separation of concerns by means of two different metamodels
  - one for the structure of the program
  - one for the behaviour of the program
- The structure contains (at least) classes, their attributes and methods
- The behaviour should allow (at least) assignments, a conditional expression, and an iteration construct (while, for, etc)



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  - To define one language (metamodel) for the structure
  - To define one language (metamodel) for the behaviour
  - (Optional) To define a M2M transformation in QVTo that from two input models (structure model and behaviour model) generates an intermediate model (conforming to a metamodel, different from the previous two, that you should define as well)



# Project Assignment

- Your goals are:
  - To define one language (metamodel) for the *structure*
  - To define one language (metamodel) for the *behaviour*
  - (Optional) To define a M2M transformation in QVTo that from two input models (structure model and behaviour model) generates an intermediate model (conforming to a metamodel, different from the previous two, that you should define as well)
  - To define an *M2T transformation* in Xtend that from two input models (structure model and behaviour model) generate code in a selected target programming language (e.g. Java, C++)



# Project Assignment

- You can take inspiration from existing metamodels for structural and behavioural modelling (cite appropriately in the report)
- The complexity/expressiveness of the modelling languages is your choice
- All the concepts included in the languages (metamodels) have to be taken care of by the M2T transformation



# Project report

- The project report should contain
  - A description of the metamodels with their intended use
  - A description of the transformation(s)
  - The case study implemented by the group
  - A description of the steps for running the project
  - Limitations and possible future extensions





# Project submission and discussion

- You will be organized in groups (you will get them by e-mail by Wednesday)
- Nominate a group leader that will send me e-mail for notification to
  - [antonio.cicchetti@mdh.se](mailto:antonio.cicchetti@mdh.se)
- Zip your plugins (metamodels, transformations, models, ..) and your project report and send the .zip to
  - [antonio.cicchetti@mdh.se](mailto:antonio.cicchetti@mdh.se)
- **Deadline: 31 May**
- **Groups will present their project work on 2 June (9.15-12.00)**