

# Modelling Service-Oriented Systems

## UML4SOA Lab

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## Aim

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The objective is to model a system capable to implement the management process of a student thesis from the announcement of a thesis topic by a tutor to the final assessment and student notification.

## Thesis management scenario of the eUniversity domain (1)

- In this scenario, a *tutor* provides a thesis topic that is announced on a *blackboard* regularly read by students.
- Once a *student* decides to pick up the topic, it is removed from the blackboard, and the student is registered at the *examination office* as working on this thesis topic.
- The student provides regular updates to the thesis management system, where the tutor is able to read the status.
- At the same time the exercise office may request the cancellation of the thesis if e.g. the deadline for thesis submission elapsed. Upon cancellation of the thesis processing, the thesis topic is freed and re-posted on the blackboard, and the student is informed of the abnormal cancellation.

## Thesis management scenario of the eUniversity domain (2)

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- Once the thesis is completed, an assessment of the thesis is requested by the examination office. This request is dispatched by the office to the authorized supervisor of the thesis.
- Finally, the student is notified once the assessment of the thesis is received.

## Step by step ...

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1. Identify the functionalities required from the system and define the corresponding capabilities
2. Determine which parties will be in charge of each capability by modelling the participants of the SOA system
3. Model some service contracts to show how the parties collaborate
4. Provide a service architecture overview model
5. Model the orchestration process
6. Model service and request points for one or two participants
7. Model service interfaces and the associated required and provided interfaces
8. Specify the protocol state machine for one selected interface