Workshop 3

Actor and goal modelling

Scenario modelling

Solution-oriented requirements modelling
Workshop objectives

• Examine and explore how to apply:
  • Goal modelling to capture actor dependencies and characterise system stateholders
  • Goal modelling to define system goals
  • Scenario modelling to explore system functions
  • Static (structure or data) modelling to explore solution oriented requirements
  • Behaviour modelling to explore behaviour of system objects
  • Functional modelling to explore interactions among system objects
Actor and their goal modelling

**Task 1:** Create the actor/stakeholder dependency model
- Illustrate how different actors/stakeholders defined in your specification interact and depend on each other. How do they help achieve each other goals?
  - This model should explain your actor/stakeholder interests and goals. Place this model in the section where you describe the actors/stakeholders (i.e., User characteristics)
  - The model must be consistent with respect to the overall specification
  - The model should be called according to the context, which will be represented in the model (it should not be called as “i* diagram” or “dependency model” or similar)

**Task 2:** Create another model where software intensive system is introduced
- Illustrate how software intensive system helps achieving actor/stakeholder goals
  - Place this model in the section where you describe Product perspective
  - The model must be consistent with respect to the overall specification
  - The model should be called according to the context, which will be represented in the model (it should not be called as “i* diagram” or “dependency model” or similar)

For both tasks use – i* modelling language.

Define only strategic dependency model (you do not need to define strategic rationale model)
Task 3: System goal modelling

• Narrow your scope (e.g., you could use prioritisation activity) by selecting the most important goal of the software intensive system
  • Refine the selected goal to the goal model(s)
  • Explain (1) why the system is built, (2) how the selected goal is achieved, (3) how else the selected goal could be achieved
  • Goal model should illustrate the system requirements and expectations

• Place this model in the section where you describe Product functions
• The model must be consistent with respect to the overall specification
• The model should be called according to the context, which will be represented in the model (it should not be called as “KAOS diagram” or similar)

Use – KAOS modelling language
Scenario Modelling

• **Task 4:** Create a use case diagram
  • *(Task links to solution of Tasks 2 and 3)*
  • What should your software intensive system do (what functions/features should it have) to satisfy dependencies (identified in Task 2 or identified in Task 3)?
  • Have you previously defined any functional requirements (e.g., features, groups of requirements) what satisfy the identified dependencies? Include these requirements in your **use case diagram**.

• **Task 5:** Define explicit scenarios on how your software intensive system interacts with its actors/stakeholders/users (and/or other components)
  • Fill in 2 use case templates for use cases defined in Task 4
Scenario Modelling

• **Task 4**: Create a use case diagram
  • *(Task links to solution of Tasks 2 and 3)*
  • What should your software intensive system do (what functions/features should it have) to satisfy dependencies (identified in Task 2 or identified in Task 3)?
  • Have you previously defined any functional requirements (e.g., features, groups of requirements) what satisfy the identified dependencies? Include these requirements in your use case diagram.

• **Task 5**: Define explicit scenarios on how your software intensive system interacts with its actors/ stakeholders/users (and/or other components)
  • Fill in 2 use case templates for use cases defined in Task 4

Apply **use case** graphical modelling language and **use case** templates

Place solutions to this task in the section where you describe **Product functions**.
The models must be consistent with respect to the overall specification.
The model(s) and filled templates should be called according to the context, which will be represented in the models, filled templates (it should **not** be called as “Use case diagram” or “Use case template” or similar).
Solution-oriented Requirements Modelling

• **Task 6: SCOPE** the problem you analyse and select/agree about the most important concerns in your requirements specification

  Your goal here should be to identify context for which you define the solution oriented requirements using static (data or structure), behavioral and functional perspectives

  The scope could include (select one!):
  
  (1) the glossary of the specification;
  (2) the most important use case and its filled textual template; or
  (3) the most important requirements

  In your specification – in Section on Specific requirements, include the new subsection where this scope is explicitly explained and rationale on why you define it is given
Solution-oriented Requirements Modelling

For the selected scope (in task 6):

- **Task 7**: create a class diagram
- **Task 8**: create a state models (2, for different objects of different classes)
- **Task 9**: create a sequence diagram

- Place these models in the newly defined subsection
- The models must be consistent with respect to the overall specification
- The models should be called according to the context, which will be represented in the model (they should not be called as “class diagram” or “sequence diagram” or “state diagram” or similar)
Submission of Requirements Specification

• **Deadline:** 22.**November**

• **Submit** using course Website:
  
  <https://courses.cs.ut.ee/2020/RE/fall/Main/Upload>

• It is enough if one team member is submitting

• File formal – **PDF** (or **zip** of **PDF**s if multiple files). Other formats will **not** be accepted as submission

• Late submission – minus **50%** of the evaluation (*no feedback for the late submissions*)