Assignment 6
Requirements Modeling

Prof. Dr. Martin Glinz, Prof. Dr. Norbert Seyff

I. Task

Individual Tasks

• Read the mandatory items in the reading list
• Prepare a critique of each mandatory paper. For each paper, we will select a student to present her or his critique orally in class (3-5 minutes). Particular questions to be addressed are:
  o What is the main message of the paper?
  o What are the expected practical benefits?
  o What are the strengths and weaknesses of the paper?
  o What questions do you have about the paper? (prepare at least two questions)
  o What is your personal opinion about the paper? Do you agree or disagree with its findings?
• Be prepared to answer the questions given in Sect. III below in class

Group Tasks

• Prepare a 10-12 minutes presentation (plus 6-8 minutes of discussion) on the theme assigned to your course group (cf. Sect. IV) and choose two students from your group to present it.
  o At the beginning of your presentation, relate your topic to the session’s topic (as represented by the mandatory reading).
  o Browse/read additional papers and/or web pages where necessary.
  o Send your presentation to Norbert after the session to share it with others.

II. Reading List

Mandatory reading

Theme-specific reading
[Glinz et al. 2002], [Reinhard et al. 2008]: Modeling Systems with ADORA
Chapter 2 of [Pohl et al. 2005], [Schobbens 2007]: Requirements in Software Product Lines
Glinz [2010], [Wüest et al. 2012], [Wüest et al. 2015]: Lightweight and Flexible Requirements Modeling

III. Questions

• How are models used in Requirements Engineering?
• What are the differences between modeling and specifying?
• What are the basic principles of ADORA?
• What are the main differences between ADORA and UML?
• What are the characteristics of FlexiSketch?
IV. Themes for Presentation

A. Modeling Systems with ADORA
Present an overview of the key features of the ADORA modeling language. How are these features supported by the tool? What are the challenges related to the implementation of this tool? Why is it a challenge to navigate in ADORA models?

B. Requirements in Software Product Lines
Describe briefly what a Software Product line is and why in domain engineering, requirements consist of two sets of requirements, the commonality and the variability. Then discuss what a feature model is and how feature modeling is used to specify the variability of a product line. When describing feature diagrams, concentrate on FODA and EFD and keep the presentation of abstract syntax and formal semantics short.

C. Lightweight and Flexible Requirements Modeling
What are the characteristics of lightweight and flexible modeling? What are the advantages (and disadvantages) compared to traditional requirements modeling? Is there a meaningful co-existence?

References


