

Model Driven Engineering, VT2015

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Additional remarks for all assignment deliverables

- *State the authors of the deliverable (the group members)*
- *Correct language use, no grammar or spelling errors*
- *Reference and describe all figures/tables in the text*
- *Figures and graphs should be readable from a quality perspective*
- *Reference literature in your text where appropriate*
- *Define non-obvious acronyms*
- *The deliverable should be easily readable, understandable and complete*
- *Give arguments for your decisions (also using references)*
- *Show critical thinking*
- *Be prepared to get frustrated if something does not work as you think it should. Rise to the challenge!*

Assignment 4 – Model-to-Text Transformation

Hard deadline for Handin via PingPong: 18.2. 23:59 (CET)

Note: For this assignment, please download the updated version of Assignment 2's solution located on PingPong ('assignment4-metamodel.zip') as the old version causes problems with Acceleo!

In the previous two assignments, you developed a meta model for a manufacturing system and enriched it by OCL constraints. This allows a user to model manufacturing systems using the generated editor and validating these models. However, it is very cumbersome to understand a model based on the generated tree editor and would hardly be a good selling point for your system!

Based on the solution meta model of assignment 2, develop a Model-to-Text transformation which transforms any model conforming to the meta model into

a DOT representation. DOT¹ is a plain text language for describing graphs. These descriptions can then be used to generate graphs using tools like Graphviz².

It is suggested to start with an example manufacturing system model and develop the corresponding DOT code by hand. Then, try to derive the Model-to-Text templates for the general case. Note that even though we expect a transformation of the example model from assignment 2, your transformation should be able to handle every possible (valid) model which corresponds to the meta model!

Describe in text the approach for the generation, e.g., which DOT syntax elements correspond to which model elements, how the elements are connected, and how the elements will look in the generated graph. Also describe possible limitations of your approach, e.g. which model elements you omitted and why.

Your description should include a reference to where in the delivered ZIP-archive the templates for the Model-to-Text transformation can be found.

Even though you are free to use any suitable tool for generating the graphical representations from the generated DOT files, we do recommend Webgraphviz.

Deliverable

- Document (pdf) reporting about the results for assignment 4 as described above.
- Maximum 4 pages for the content from this assignment, 12 font size
- A ZIP-archive of all plugins you developed, including the code for the Model-to-Text.
- The graphical and text representations of your Model-to-Text transformation executed on the example model from assignment 2.
- You will be expected to demonstrate the transformation during the supervision.

¹ http://en.wikipedia.org/wiki/DOT_graph_description_language

² <http://www.graphviz.org/> or <http://www.webgraphviz.com/>