THE NORWEGIAN UNIVERSITY
OF SCIENCE AND TECHNOLOGY
DEPARTMENT OF ENGINEERING DESIGN
AND MATERIALS

PROJECT WORK AUTUMN 2013
FOR
STUD.TECHN. TEODOR ANDRE ELSTAD AND
SIMEN HAUGERUD GRANLUND

INTEGRATING GENERAL-PURPOSE SOFTWARE DESIGN TOOLS INTO KBE DEVELOPMENT
Integrere generiske verktøyer for programvareutvikling i KBE utvikling.

Most software tools for KBE development is today based around special purpose Modeling frameworks like AML. While this approach has been very successful, there is still room for improvement. This project aims at investigating the possible benefits of utilizing generalpurpose software development tools as a part of KBE development. The following areas of interest will be studied, with KBE development at Aker Solution KBeDesign serving as a case study. Integration of general purpose software development tools into the AML modeling framework. Usage of general purpose software development tools for KBE development alongside the AML modeling framework. Usage of general purpose Software development as standalone tools for KBEdevelopment.

The assignment includes:

1. A literature study of software development tools and KBE technology.
2. A valuation of generic software development tools with respect to KBE development
3. Specification of a set of software tools well suited for implementing KBE applications
4. Evaluate how the specified tools could support implementation in the AML framework
5. If time allow, develop an AML prototype using the specified tools.

Students are required to submit an A3 page describing the planned work three weeks after project start both as a paper version and as a pdf-file. A template for this sheet is found on IPM's web-page, using the link http://www.ntnu.no/ipm/prosjekt.

Performing a risk assessment of the planned work is obligatory. Known main activities must be risk assessed before they start, and the form must be handed in within 3 weeks of receiving the problem text. The form must be signed by your supervisor. All projects are to be assessed, even theoretical and virtual. Risk assessment is a running activity, and must be carried out before starting any activity that might lead to injury to humans or damage to

materials/equipment or the external environment. Copies of signed risk assessments should also be included as an appendix of the finished project report.

No later than 1 week before the deadline of the final project report, an A3 page summarizing and illustrating results obtained in the project work, is required to be submitted (paper and pdf version).

The projects are presented orally by the students on 18 October. Participation during the presentation is compulsory for all project students.

Official deadline for the delivery of the report is 19 December (by 15:00).The report should be delivered in two paper copies and one electronic version via email to Jorunn.hvalby@ntnu.no.

When evaluating the project, we emphasize how clearly the problem is presented, the thoroughness of the report, and that the student gives an independent presentation of the topic using their own assessments.

The report must include the signed problem text, and be written as a scientific report with summary of important findings, conclusion, literature references, table of contents, etc. The preface should specify the modules (fordypningsemne) chosen within the student's specialization. Specific problems to be addressed in the project are to be stated in the beginning of the report and briefly discussed. The report should not exceed thirty pages including illustrations and sketches.

Additional tables, drawings, detailed sketches, photographs, etc. can be included in an appendix at the end of the thirty page report. References to the appendix must be specified. The report should be presented so that it can be fully understood without referencing the Appendix. Figures and tables must be presented with explanations. Literature references should be indicated by means of a number in brackets in the text, and each reference should be further specified at the end of the report in a reference list. References should be specified with name of author(s) and book, title and year of publication, and page number.

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