Oblig 3 – "System Architecture Models for a realization of the Concierge System"

Group assignment

Submission date: **May 10, 2013** (at 23:59:59 CET)
Submit to: **arneb@ifi.uio.no** or **arne.j.berre@sintef.no**
Submit your document **as 'INF5120 – Oblig 3 – Group name**

Make sure that your document is a good explanation of what you have done and learnt – so that it can be useful learning material both for yourself and for others

Overview:

This assignment is extending the business architecture models and specifications developed in Oblig 1 by creating a model-based System architecture and realization / implementation basis for a Web version of the Concierge System (i.e. a Smart phone based realization is not necessary to model).

Description:

The starting point for the specification is the Business architecture models from Oblig 1. From this we will only focus on a minimal subset of the use cases for implementing (1) *the presentation of event alternatives* and (2) *the booking of an event*. The goal now is to show a minimum subset of the various models end to end, and not to have a very comprehensive and full model. Provide a description of the following models, and a corresponding basis for a realization in your chosen platform (see below). A possible optional demo can be shown in the class on May 13th.

- Information model – UML class diagram related to the information/persistence of the system
- Process model – Behavioural model, i.e. in BPMN (or other behavioural diagram)
- Service model – UML service model with interfaces, in SoaML for the services in the system
- User Interface model – UI dialogue model – related to the UI architecture of the platform (i.e. in WebRatio one can use WebML/ (IFML), or related description.
- Overall System architecture model – shown as a UML 2.0 composite structure port-connector model
- Any resulting realization descriptions and demo snapshots.

Include a discussion on how these system architecture models relate to the models/specifications from Oblig 1, and an evaluation of how well the modeling environment and platform was suitable to express and support what you wanted.

Choice of target platforms:

Each group can select one platform from the following 3 alternatives:

- Alternative 1: Use NoMagic MagicDraw Cameo Enterprise Architecture – with Java JEE 6 – http://www.nomagic.com/ and http://docs.oracle.com/javaee/6/tutorial/doc/ Option: Use of ModelPro for Java Glassfish/Code generation from SoaML.
- Alternative 2: Use of "Cordys Enterprise Cloud" – model based platform in the Cloud http://www.cordys.com/
- Alternative 3: Use of WebRatio model based platform – http://www.webratio.com/portal/content/en/download

Necessary license files and access rights will be provided based on request from various groups, depending on which platform alternative they choose to use. *Note that all students will be provided with licenses for NoMagic MagicDraw Cameo Enterprise Architecture.* The latter can be used for describing initial system architecture diagrams.

Supporting material:

More information for creating the Process model – Behavioural model can be found on the BPMN website at http://www.bpmn.org/. A travel booking example is shown on page 27 of the BPMN 2.0 document example available at http://www.omg.org/cgi-bin/doc?dtc/10-06-02.pdf

Additional information for each target platform is being provided below:

Alternative 1: Use NoMagic MagicDraw Cameo Enterprise Architecture – with JEE 6

Java JEE 6 - http://www.nomagic.com/ and http://docs.oracle.com/javaee/6/tutorial/doc /
Note that MagicDraw also have an option for User Interface Modeling (see video number 5).
For code generation from models, see video number 8, Code Generation.

ModelPro for Java Glassfish/Code generation from SoaML is an option to use for code generation.
www.modeldriven.org/
http://portal.modeldriven.org/content/modelpro-download

Alternative 2: Use of Cordys cloud based platform

"Cordys Enterprise Cloud" – model based platform in the Cloud
http://www.cordys.com/

Join the Cordys Community by free registration here:
http://community.cordys.com/

You will find learning material under menu "Learn" – look at Cordys BOP 4.1 Fundamentals,

and Developing User Interfaces etc... Cordys is Business Process focus oriented, so it is best to start with a Business Process view on the application. We have a separate web address for Cloud based access to a running Cordys cloud instance that we can use for our experimental development. We will provide user/pwd for those who will use this.

The Cordys instance we will be running also have a test installation of VDML models for integrated Business Model Innovation – ala Integrated Osterwalder models.

Alternative 3: Use of WebRatio model based platform

Use of WebRatio model based platform
http://www.webratio.com/portal/content/en/download

Slides on WebML: http://www.slideshare.net/mbrambil/webml-and-webratio (you can get the PPT file by clicking on SAVE)

Slides on large-scale experiences with webml: http://www.slideshare.net/mbrambil/industrial-and-academic-experiences-with-a-user-interaction-modeling-language-webml-and-webratio (you can get the PPT file by clicking on SAVE)

Exercises and other teaching materials: (slides are older than the above)
http://www.webml.org/webml/page33.do?UserCtxParam=0&GroupCtxParam=0&ctx1=EN

The book on webml: http://www.amazon.com/Designing-Data-Intensive-Applications-Kaufmann-Management/dp/1558608435/ref=sr_1_1?ie=UTF8&qid=1366556545&sr=8-1&keywords=designing+data+intensive+web+applications

Audio-video lessons on webml (oldish but still reasonable)
http://dbgroup.como.polimi.it/brambilla/webml

Download of webratio:
http://www.webratio.com/portal/content/en/download
(You need the personal edition trial version) Alternatively, you can ask an academic license for you and your students:
http://www.webratio.com/portal/content/en/academic-program

Wiki with issues organized by topic:
http://wiki.webratio.com/index.php/Main_Page

Forum for questions:
http://forum.webratio.com

New open source ifml editor:
http://www.webratio.com/portal/content/en/ifml-editor