

CastorSocProjects

Google Summer of Code 2007 Project Descriptions - Preliminary

Castor JDO

Title	Improve Castor DDL Generator
Keywords	Java, SQL
Description	<p>At the moment DDL Generator is able to generate almost all SQL schema objects for various database engines into a file from Castor mapping. But there is still some space for improvements like:</p> <ul style="list-style-type: none">• Improve mapping to allow specification of additional information needed by ddlgen• Use Class- and FieldDescriptor's instead of directly accessing classes of org.exolab.castor.mapping.xml classes• Replace org.castor.ddlgen.Configuration by org.castor.util.Configuration• Replace PrintStream and StringBuffer by a Writer implementation• Execute script on database engine• Extract ordering strategies of DDL statements into an interface with 2 implementations• Add a advanced ordering strategy for DDL statements that takes relations into account• Merge multiple mappings to same table• Resolve collisions of name/many-key defintions at generation of n:m relation tables• Generate lookup table for HIGH-LOW keygenerator
Mentor(s)	Ralf Joachim (rjoachim AT codehaus DOT org) Werner Guttman (wguttmn AT codehaus DOT org)

Title	Implement new OQL query engine for Castor (Part 1)
Keywords	Java, OQL, ANTLR
Description	<p>The first part of the OQL query engine project contains 2 subtasks:</p> <ul style="list-style-type: none">• Create class hierarchy to define OQL queries programmatically also know as "query objects".• Analyze properties of a given example entity and transform it into "query objects". This approach is known as "query by example".
Mentor(s)	Ralf Joachim (rjoachim AT codehaus DOT org) Werner Guttman (wguttmn AT codehaus DOT org)

Title	Implement new OQL query engine for Castor (Part 2)
Keywords	Java, OQL, ANTLR
Description	<p>The second part of the OQL query engine project also contains 2 subtasks and depends on the first:</p> <ul style="list-style-type: none">• Parse queries with current CastorQL syntax using ANTLR and transform them into "query objects".• Parse queries with EJB QL syntax using ANTLR and transform them into "query objects".
Mentor(s)	Ralf Joachim (rjoachim AT codehaus DOT org) Werner Guttman (wguttmn AT codehaus DOT org)

JAXB2 Support in Castor XML

Adding JAXB 2.1 support to Castor is an already on-going task, and below packages can be seen as separate unit of works that can and shall be designed and developed individually.

Title	JAXB2 Support in Castor XML - Templating prototype
Keywords	Java, XML, XSD, JAXB2
Description	Prototype the use of templating (using e.g. Velocity or a similar template engine) within the XML code generator ;
Mentor(s)	Werner Guttman (wguttmn AT codehaus DOT org), Joachim Grüneis (jgruneis AT gmail DOT com)

Title	JAXB2 Support in Castor XML - Facilitate annotation processing
Keywords	Java, XML, XSD, JAXB2
Description	Integrate a framework/library to facilitate extraction and enlistment of (JAXB) annotations from domain objects (this should be coordinated with the functionality required for JPA above);
Mentor(s)	Werner Guttman (wguttmn AT codehaus DOT org), Joachim Grüneis (jgrueneis AT gmail DOT com)

Title	JAXB2 Support in Castor XML - JAXB annotations for JAXB code generator
Keywords	Java, XML, XSD, JAXB2
Description	Enhance XML code generator to facilitate generation of JAXB annotations for the domain classes generated.
Mentor(s)	Werner Guttman (wguttmn AT codehaus DOT org), Joachim Grüneis (jgrueneis AT gmail DOT com)

Title	JAXB2 Support in Castor XML - Support for JAXB bindings
Keywords	Java, XML, XSD, JAXB2
Description	Add support for JAXB bindings to XML code generator (processing, loading)
Mentor(s)	Werner Guttman (wguttmn AT codehaus DOT org), Joachim Grüneis (jgrueneis AT gmail DOT com)

Title	JAXB2 Support in Castor XML - XML schema generator
Keywords	Java, XML, XSD, JAXB2
Description	Add XML schema generator (starting from java domain classes, based upon annotations)
Mentor(s)	Werner Guttman (wguttmn AT codehaus DOT org), Joachim Grüneis (jgrueneis AT gmail DOT com)

Castor XML Refactoring

Title	Re-integrate Maven-specific Castor extensions
Keywords	Java, XML, XSD, JAXB2
Description	Transfer Maven-specific improvements to the XML code generator into the project
Mentor(s)	Werner Guttman (wguttmn AT codehaus DOT org), Joachim Grüneis (jgrueneis AT gmail DOT com)

Title	Split Out the Schema Object Model
Keywords	Java, XML, XSD
Description	Castor XML contains a Schema object model for reading in a XSD. This should have features added to be able to output a XSD, manipulate it, etc. Full Schema Infoset support might be an interesting thing to add as well.
Mentor(s)	Bruce Snyder (bruce DOT snyder AT gmail DOT org)