OptXware Research & Development LLC

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Title: Domain-specific editor development with Eclipse

Target audience: Programmers, system designers

Duration: 3 days, 8 hours/day

Description

This course introduces domain-specific modeling language tool development with Eclipse. The audience will get an overview of domain-specific modeling language development in general, development best practices, and Eclipse's most important (relevant) tools. The course also offers a hands-on lab part that provides a good demonstrating example of a typical domain-specific modeling tool built on Eclipse technology.

Learning objectives

At the end of the course, students will be able to:

- Understand the basic concepts of domain-specific modeling tools in general
- Use Eclipse's tools (EMF and GMF) to create domain-specific modeling tools

Outline

Day 1: INTRODUCING domain-specific modeling tool development

1. Introduction, metamodeling basics
2. EMF and Ecore
3. Graphical modeling environment design patterns, GMF basics

Day 2: EMF and GMF basics

1. Basic metamodeling with EMF
2. Using ECore tools
3. GMF introduction, concepts
4. Creating a simple GMF-based modeling tool

Day 3: Hands-on-lab: Implementing a graphical modeling tool with EMF and GMF

1. Complex metamodeling tutorial
2. GMF customizations
3. Using GEF

Prerequisites

To complete this course, you need:

- A Pentium IV, 1 GB RAM computer with Java SDK 5.0 or later
- Eclipse 3.4
- Java knowledge