The Theory and Practice of Modeling Language Design

Duration	1 day
Audience:	Software architects, software developers, programmers, language designers
Pre-requisites:	Participants should be familiar with the basic principles of software engineering and have some experience with object-oriented programming. Knowledge of one modeling language such as UML is desirable.
Brief Description:	This course teaches the theory and pragmatics of designing a high-level modeling language that can be used in design and development of software systems. Special emphasis is placed on designing domain-specific languages.

Description:

The design of modeling languages is still much more of an art than a science. However, given the complexity of modern software, there is an increasing need to design custom languages for different domains. This course provides a summary of some important lessons learned and experiences gained in the design of some of the currently most widely used modeling languages, in particular the industry standard UML and MOF languages. The objective is to provide attendees with an understanding of the state of the practice and state of the theory of modeling language design. Various key concepts involved are defined, current common methods of language design are explored, and heuristic guidelines provided.

Target Audience

Software architects, software developers, programmers, language designers

Course Level

Expert

Course Pre-requisites

Participants should be familiar with the basic principles of software engineering and have some experience with object-oriented programming. Knowledge of one modeling language such as UML is desirable.

Course Objectives

Providing attendees with the necessary skills to design high-level domain-specific computer languages.

Course Outline:

- On computer languages and models
- Perspectives on modeling language design
- MDA and OMG Standard Languages

- The OMG profile mechanism for DSMLs