Applying UML 2.0 with MagicDraw

5 - day course
Training course overview

Applying UML 2.0 with MagicDraw is a condensed 5-day course covering major UML 2.0 notation and usage of MagicDraw UML for complete modeling from requirements analysis to design and implementation stages.

The course

- Contains lectures and hands-on practice on using MagicDraw UML for application development using UML 2.0 diagrams from requirements to implementation;
- Shows how to create and relate analysis and design models;
- Shows how to facilitate development by powerful tool features: model generation and transformation, code generation and reverse engineering, model analysis and visualization, and teamwork support;
- Covers complete modeling lifecycle.

This comprehensive MagicDraw course will help your team quickly improve UML modeling skills and maximize their usage of MagicDraw UML.

Testimonials

“Course used our own project as case study and this was very effective. Darius and the team were very good at understanding our issues and showing how UML and MagicDraw can help us. Very impressive, friendly and helpful instructor.”

Colin Manning, Lead Engineer, ts.com

“Very pleased with course of MagicDraw. It clarified which diagrams to use for requirements analysis & best practices. Darius explained everything very well and it was all most useful.”

Tricia Goldstone, System Analyst, ts.com
### DAY 3

**Designing Object Interactions**
- Modeling Interactions with UML
- Sequence Diagram Notation
- Modeling Scenarios
- Finding Out New Classes and Methods
- Communication Diagram Notation
- Best Practices

**Modeling State Transitions**
- State Diagram Notation
- Illustrating State Machines
- Defining State Transition Events
- Modeling User Interface Navigation Schemas
- Best Practices

**Specifying Class Details**
- Grouping Classes Into Packages
- Composition vs. Aggregation
- Detailed Attribute Specification
- Detailed Method Specification
- Modeling Inheritance Hierarchies
- Interfaces and Implementation
- Choosing Level of Visible Details
- Best Practices

**Modeling Composite Structures**
- Composite Structure Diagram Notation
- Identifying Parts and Their Relationships
- Modeling Ports
- Modeling Connections
- Best Practices

### DAY 4

**Defining Implementation Architecture**
- Component Diagram Notation
- Identifying Components
- Defining Provided/Required Interfaces
- Deployment Diagram Notation
- Defining Hardware Nodes and Links
- Specifying Artifacts Manifesting Components
- Modeling Artifact Deployments
- Best Practices

**Designing Platform-Specific Models (PSM)**
- MDA Concepts
- From Platform-Independent to Platform-Specific Models
- Database Modeling
- XML Schema Modeling
- Transformations
- Best Practices

**Code Generation and Reverse Engineering**
- Code Engineering in MagicDraw
- From UML to Code: Code Generation
- From Code to UML: Reverse Engineering
- Roundtrip Engineering
- Integration with Eclipse IDE
- Best Practices

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Maximize your MagicDraw potential by learning to:

- Get insights into content of the latest UML specification
- Learn the major MagicDraw concepts instantly
- Get the most effective tips for using MagicDraw
- Revisit the object-oriented principles for creating better designs
- Explore applying UML for modeling sample software system
- Bridge the gaps between analysis, design, and implementation
- Specify the requirements focused on the end user roles and their goals
- Prepare the use case descriptions and generate a complete requirements document from model
- Model accurate specification of the business workflows
- Define the logical sequence of actions for use cases
- Prepare a visual dictionary of the domain concepts and their interrelationships
- Drive your architecture by applying robustness analysis for identifying major components within system layers
- Assign class responsibilities by modeling how objects collaborate in use case scenarios
- Find out new classes and methods providing necessary behavior
- Control the behavior of important business objects by specifying their states and triggers for the transition between them
- Group classes into the logical packages to create comprehensible model
- Apply advanced relationships between classes
- Define detailed specifications of the attributes and operations
- Choose appropriate level of details for class symbols in diagrams
- Explicitly model the inner structure of systems and their interfaces to the outside world
- Define the structural elements of the collaboration patterns
- Decompose the system into components with the defined contracts
- Specify how physical artifacts manifest the components
- Define distributed hardware environments and deployment of the artifacts
- Derive relational database structure from the class model
- Derive XML Schema from the class model
- Apply automated transformations to get platform-specific models from platform-independent models
- Speed up development by generating source code from UML models
Instructor

Darius Šilingas, Ph.D.
Training Department Leader
Darius has been working with No Magic from 1998. He has worked as Java developer in multiple international projects. Currently, Darius is a MagicDraw analyst and training group leader. Darius has developed a modeling case study MagicLibrary and leaded multiple MagicDraw training courses worldwide. He also taught commercial courses on Requirements Management with UML, Software Design with UML, and Java/J2EE Programming. Darius received PhD from Vytautas Magnus University, where he teaches courses Software Development Methodology and Software Engineering. Darius participates actively in various conferences and presents talks on UML and other software development topics. He holds the following professional certificates:
- Microsoft Certified Professional
- Sun Certified Programmer for the Java 2 Platform 1.4
- OMG-Certified UML Professional Fundamental
- OMG-Certified UML Professional Intermediate

No Magic, Inc.
Texas
7304 Alma Drive, Suite 600
Plano, TX 75025
Phone: +1 214 291 9100
Fax: +1 214 291 9099
www.nomagic.com

No Magic European Sales Office
UAB “Baltijos programine iranga”
Savanoriu pr. 363
LT-49425, Kaunas, Lithuania
Phone: +370 37 324032
Fax: +370 37 320670
http://www.bpi.lt/en

No Magic Asian Development Center
No Magic Asia Ltd.
Rama IX Road, Bangkapi, Huaykwang
Bangkok 10310, Thailand
Phone: +66-2-7170250
Fax: +66-2-7170251
http://www.nomagicasia.com