



Object-Oriented Architecture with UML

Length: Three days

Level: Intermediate

DESCRIPTION

This course presents a use case-driven approach to the development of software architecture. It addresses architectural considerations that influence the organization and the key mechanisms of a software system and their presentation as architectural views using the UML.

OBJECTIVES

Upon completion of the course, participants will be able to:

- Identify actors and their goals
 - Define the scope of a system under development
 - Read and interpret the artifacts of requirements, including a use case model
 - Explain the basic principles of object orientation
 - Explain the relationship between a class and an object
 - Apply the concepts of abstraction, encapsulation, inheritance and polymorphism.
 - Describe the artifacts used to specify the architecture, and their effect on the produced design
 - Identify key abstractions from a use case, model them as classes and distribute use-case behavior as responsibilities
 - Define the organization and the key mechanisms of a system
 - Present architectural artifacts as views using the UML
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TOPICS

- Basic concepts
 - Fundamentals of object orientation
 - Overview of requirements and use cases
 - Overview of analysis and design activities
 - Define a candidate architecture
 - Define the organization of subsystems
 - Identify key abstractions
 - Identify analysis mechanisms
 - Identify use-case realizations
 - Analyze behavior
 - Identify classes from use-case behavior
 - Apply UML analysis stereotypes
 - Model dynamic and static aspects of use-case realizations
 - Refine the architecture
 - Identify design elements
 - Identify design mechanisms
 - Describe the run-time architecture (concurrency)
 - Describe distribution
 - Persistency
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AUDIENCE

- Software Architects
 - Software Developers
 - Application Specialists
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PREREQUISITES

- Good understanding of the software development cycle