

Unified Modeling Language Fundamentals

Objectives

- Discuss why we make models
- Introduce principles of object-orientation (OO)
 - Abstraction
 - Encapsulation
 - Modularity
 - Hierarchy
- Introduce fundamentals of modeling with the UML
 - Objects
 - Classes
 - Attributes
 - Operations
 - Relationships
- Learn and apply key UML diagrams
 - Communication diagram
 - Sequence diagram
 - Class diagram

Description

Unified Modeling Language Fundamentals teaches the software development team member most fundamental aspects of the Unified Modeling Language 2.0 (UML). The course begins with a discussion of why models are useful and an introduction to the object-oriented principles of abstraction, encapsulation, modularity, and hierarchy. Then the course provides an overview and examples of a unified modeling approach for business, requirements, and software models. The course continues with a discussion of semantics and notation of basic UML elements including objects, classes, packages, stereotypes, and comments. Attributes and operations of classes are discussed along with the most-often used relationships between classes (associations, dependencies, generalizations, and realizations). The course finishes with exercises in how to apply the most common UML behavioral and structural diagrams: communication diagrams, sequence diagrams, and class diagrams.

Course Outline (Modules and Topics)

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| <ul style="list-style-type: none"> • Object-Oriented Principles <ul style="list-style-type: none"> • Model • Abstraction • Encapsulation • Modularity • Hierarchy • Unified Modeling Overview <ul style="list-style-type: none"> • What is the Unified Modeling Language? • Applying UML for business modeling, requirements modeling, software modeling, data modeling • Objects and Classes <ul style="list-style-type: none"> • Object • Class • Package • Stereotype • Comment | <ul style="list-style-type: none"> • Attributes and Operations <ul style="list-style-type: none"> • Attribute • Operation • Relationships <ul style="list-style-type: none"> • Association • Dependency • Generalization • Realization • Interaction Diagrams <ul style="list-style-type: none"> • Communication diagram • Sequence diagram • Class Diagrams |
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Duration

1 day

Course

01-0805

Prerequisites

- Software development experience

Continuing education

- Use Case Modeling with UML
- Object-Oriented Analysis with UML

Classroom requirements

- None

In partnership with

Audience

- Business architect
- Business analyst
- System analyst
- Project manager
- Software architect
- Software designer
- Developer
- Test analyst

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