

Covers through Version 2.0 OMG UML Standard



# UML DISTILLED THIRD EDITION

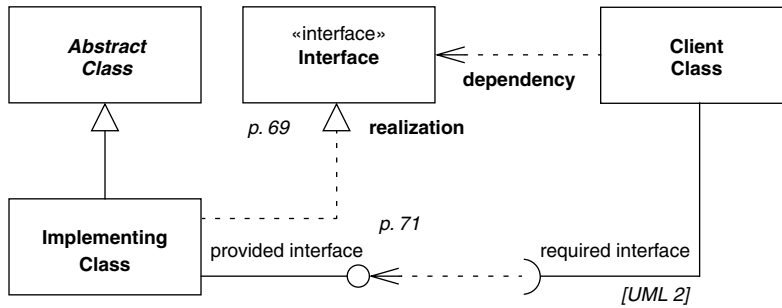
A BRIEF GUIDE TO THE STANDARD  
OBJECT MODELING LANGUAGE

**MARTIN FOWLER**

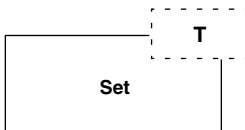
Forewords by Cris Kobryn, Grady Booch,  
Ivar Jacobson, and Jim Rumbaugh



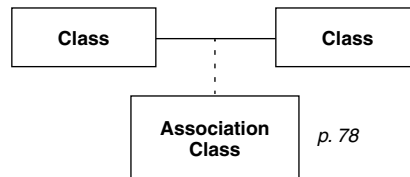
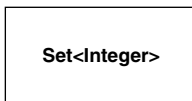
## Class Diagram



## template class *p. 81*

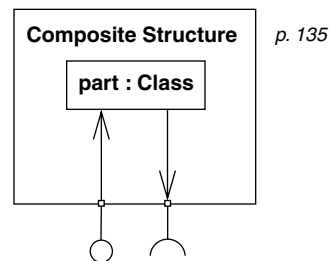


## bound element



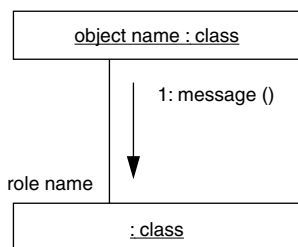
*p. 78*

*p. 139*

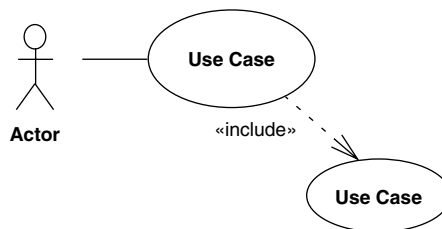


*p. 135*

## Communication Diagram *p. 131*



## Use Case Diagram *p. 99*



# **UML Distilled: A Brief Guide to the Standard Object Modeling Language**

## **Table of Contents**

Cover

Title Page

Copyright Page

Contents

List of Figures

Foreword to the Third Edition

Foreword to the First Edition

Preface

Why Bother with the UML?

Structure of the Book

Changes for the Third Edition

Acknowledgments

Chapter 1: Introduction

What Is the UML?

Ways of Using the UML

How We Got to the UML

Notations and Meta-Models

UML Diagrams

What Is Legal UML?

The Meaning of UML

UML Is Not Enough

# **Table of Contents**

Where to Start with the UML

Where to Find Out More

## **Chapter 2: Development Process**

Iterative and Waterfall Processes

Predictive and Adaptive Planning

Agile Processes

Rational Unified Process

Fitting a Process to a Project

Fitting the UML into a Process

Requirements Analysis

Design

Documentation

Understanding Legacy Code

Choosing a Development Process

Where to Find Out More

## **Chapter 3: Class Diagrams: The Essentials**

Properties

Attributes

Associations

Multiplicity

Programming Interpretation of Properties

Bidirectional Associations

Operations

Generalization

Notes and Comments

Dependency

Constraint Rules

# **Table of Contents**

When to Use Class Diagrams

Where to Find Out More

## **Chapter 4: Sequence Diagrams**

Creating and Deleting Participants

Loops, Conditionals, and the Like

Synchronous and Asynchronous Calls

When to Use Sequence Diagrams

## **Chapter 5: Class Diagrams: Advanced Concepts**

Keywords

Responsibilities

Static Operations and Attributes

Aggregation and Composition

Derived Properties

Interfaces and Abstract Classes

Read-Only and Frozen

Reference Objects and Value Objects

Qualified Associations

Classification and Generalization

Multiple and Dynamic Classification

Association Class

Template (Parameterized) Class

Enumerations

Active Class

Visibility

Messages

## **Chapter 6: Object Diagrams**

When to Use Object Diagrams

# **Table of Contents**

## **Chapter 7: Package Diagrams**

Packages and Dependencies

Package Aspects

Implementing Packages

When to Use Package Diagrams

Where to Find Out More

## **Chapter 8: Deployment Diagrams**

When to Use Deployment Diagrams

## **Chapter 9: Use Cases**

Content of a Use Case

Use Case Diagrams

Levels of Use Cases

Use Cases and Features (or Stories)

When to Use Use Cases

Where to Find Out More

## **Chapter 10: State Machine Diagrams**

Internal Activities

Activity States

Superstates

Concurrent States

Implementing State Diagrams

When to Use State Diagrams

Where to Find Out More

## **Chapter 11: Activity Diagrams**

Decomposing an Action

Partitions

Signals

# **Table of Contents**

Tokens

Flows and Edges

Pins and Transformations

Expansion Regions

Flow Final

Join Specifications

And Theres More

When to Use Activity Diagrams

Where to Find Out More

## **Chapter 12: Communication Diagrams**

When to Use Communication Diagrams

## **Chapter 13: Composite Structures**

When to Use Composite Structures

## **Chapter 14: Component Diagrams**

When to Use Component Diagrams

## **Chapter 15: Collaborations**

When to Use Collaborations

## **Chapter 16: Interaction Overview Diagrams**

When to Use Interaction Overview Diagrams

## **Chapter 17: Timing Diagrams**

When to Use Timing Diagrams

## **Appendix: Changes between UML Versions**

Revisions to the UML

Changes in UML Distilled

Changes from UML 1.0 to 1.1

Type and Implementation Class

Complete and Incomplete Discriminator Constraints

# **Table of Contents**

Composition

Immutability and Frozen

Returns on Sequence Diagrams

Use of the Term Role

Changes from UML 1.2 (and 1.1) to 1.3 (and 1.5)

Use Cases

Activity Diagrams

Changes from UML 1.3 to 1.4

Changes from UML 1.4. to 1.5

From UML 1.x to UML 2.0

Class Diagrams: The Essentials (Chapter 3)

Sequence Diagrams (Chapter 4)

Class Diagrams: Concepts (Chapter 5)

State Machine Diagrams (Chapter 10)

Activity Diagrams (Chapter 11)

Bibliography

Index