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# Object Oriented Software Engineering Ivar Jacobson

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Designing Object-oriented Software  
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Object-Oriented and Classical Software Engineering

Object-oriented Reengineering Patterns  
Object-oriented Software and Engineering

*Object Oriented Software Engineering* Downloaded from [dev.ocgnews.com](http://dev.ocgnews.com) by Ivar Jacobson guest

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**Designing Object-oriented Software** Addison-Wesley Professional

SEMAT (Software Engineering Methods and Theory) is an international initiative designed to identify a common ground, or universal standard, for software engineering. It is supported by some of the most distinguished contributors to the field. Creating a simple language to describe methods and practices, the SEMAT team expresses this common ground as a kernel-or framework-of elements essential to all software development. The Essence of Software Engineering introduces this kernel and shows how to apply it when developing software and improving a team's way of working. It is a book for software professionals, not methodologists. Its usefulness to development team members, who need to evaluate and choose the best practices for their work, goes well beyond the description or application of any single method. "Software is both a craft and a science, both a work of passion and a work of principle. Writing good software requires both wild flights of imagination and creativity, as well as the hard reality of engineering tradeoffs. This book is an attempt at describing that balance." —Robert Martin (unclebob) "The work of Ivar Jacobson and his colleagues, started as part of the SEMAT initiative, has taken a systematic approach to identifying a 'kernel' of software engineering principles and practices that have stood the test of time and recognition." —Bertrand Meyer "The software development industry needs and demands a core kernel and language for defining software development practices—practices that can be mixed and matched, brought on board from other organizations; practices that can be measured; practices that can be integrated; and practices that can be compared and contrasted for speed, quality, and price. This thoughtful book gives a good grounding in ways to think about the problem, and a language to address the need, and every software engineer should read it." —Richard Soley

**The Essence of Software Engineering** Pearson Education India

This ground-breaking book presents a complete methodology for adaptive programming in any object-oriented programming language. Lieberherr's adaptive method signals a new approach to object-oriented program design that goes beyond object encapsulation and hard-coded navigation paths to achieve more flexible interactions among objects. Programmers using this method work at a higher, schematic level of abstraction; graph notation represents the class structure and a "propagation pattern" language tells how to distribute meaningful methods - including navigation - across the structure. Using this method, programmers can easily adapt and modify programs as they evolve. This book can be used with any object-oriented programming environment, or with the Demeter Tools Version 5.5, a complete, professional software system for creating and maintaining adaptive programs.

*Documenting Software Architectures* Addison-Wesley Professional  
Venturing beyond C++ programming, this text shows how to engineer software products using object-oriented principles. It covers gathering requirements, specifying objects, object verification, defining relations between objects, translating object design into code, object testing, and software maintenance.  
*Adaptive Object-oriented Software* Addison-Wesley Professional  
Executable UML can help organizations implement working software systems. This book shows how UML can be used to execute code.

**Software Studies** Pearson Higher Ed

Introducing the reuse-driven software engineering business; Architectural style; Processes; Organizing a reuse business.

*Executable UML* Addison-Wesley Professional

Designed for an introductory software engineering course. This two-part book provides an introduction to software engineering fundamentals, covering both traditional and object-oriented techniques. It presents the underlying software engineering theory in Part I and follows it up with the practical life-cycle material in Part II.

*Learning UML 2.0* Addison-Wesley Professional

For nearly ten years, the Unified Modeling Language (UML) has been the industry standard for visualizing, specifying,

constructing, and documenting the artifacts of a software-intensive system. As the de facto standard modeling language, the UML facilitates communication and reduces confusion among project stakeholders. The recent standardization of UML 2.0 has further extended the language's scope and viability. Its inherent expressiveness allows users to model everything from enterprise information systems and distributed Web-based applications to real-time embedded systems. In this eagerly anticipated revision of the best-selling and definitive guide to the use of the UML, the creators of the language provide a tutorial to its core aspects in a two-color format designed to facilitate learning. Starting with an overview of the UML, the book explains the language gradually by introducing a few concepts and notations in each chapter. It also illustrates the application of the UML to complex modeling problems across a variety of application domains. The in-depth coverage and example-driven approach that made the first edition of The Unified Modeling Language User Guide an indispensable resource remain unchanged. However, content has been thoroughly updated to reflect changes to notation and usage required by UML 2.0. Highlights include: A new chapter on components and internal structure, including significant new capabilities for building encapsulated designs New details and updated coverage of provided and required interfaces, collaborations, and UML profiles Additions and changes to discussions of sequence diagrams, activity diagrams, and more Coverage of many other changes introduced by the UML 2.0 specification With this essential guide, you will quickly get up to speed on the latest features of the industry standard modeling language and be able to apply them to your next software project.

*Object-oriented Software Engineering* Addison-Wesley

This collection of short expository, critical and speculative texts offers a field guide to the cultural, political, social and aesthetic impact of software. Experts from a range of disciplines each take a key topic in software and the understanding of software, such as algorithms and logical structures.

**The Road to the Unified Software Development Process**

Pearson Education

Systems Analysis & Design Fundamentals: A Business Process Redesign Approach uniquely integrates traditional and modern systems analysis with design methods and techniques. By using a business process redesign approach, author Ned Kock enables readers to understand, in a very applied and practical way, how information technologies can be used to significantly improve organizational quality and productivity.

*Design Patterns* Lulu.com

The Practical, Start-to-Finish Guide to Planning and Leading Iterative Software Projects Iterative processes have gained widespread acceptance because they help software developers reduce risk and cost, manage change, improve productivity, and deliver more effective, timely solutions. But conventional project management techniques don't work well in iterative projects, and newer iterative management techniques have been poorly documented. Managing Iterative Software Development Projects is the solution: a relentlessly practical guide to planning, organizing, estimating, staffing, and managing any iterative project, from start to finish. Leading iterative development experts Kurt Bittner and Ian Spence introduce a proven, scalable approach that improves both agility and control at the same time, satisfying the needs of developers, managers, and the business alike. Their techniques are easy to understand, and easy to use with any iterative methodology, from Rational Unified Process to Extreme Programming to the Microsoft Solutions Framework. Whatever your role—team leader, program manager, project manager, developer, sponsor, or user representative—this book will help you Understand the key drivers of success in iterative projects Leverage “time boxing” to define project lifecycles and measure results Use Unified Process phases to facilitate controlled iterative development Master core concepts of iterative project management, including layering and evolution Create project roadmaps, including release plans Discover key patterns of risk management, estimation, organization, and iteration planning Understand what must be controlled centrally, and what you can safely delegate Transition smoothly to iterative processes Scale iterative project management from the smallest to the largest projects Align software investments with the needs of the business Whether you are interested in software development using RUP, OpenUP, or other agile processes, this book will help you reduce the anxiety and cost associated with software

improvement by providing an easy, non-intrusive path toward improved results—without overwhelming you and your team.

### **Principles of Object-oriented Software Development**

Pearson Deutschland GmbH

Object-Oriented Reengineering Patterns collects and distills successful techniques in planning a reengineering project, reverse-engineering, problem detection, migration strategies and software redesign. This book is made available under the Creative Commons Attribution-ShareAlike 3.0 license. You can either download the PDF for free, or you can buy a softcover copy from lulu.com. Additional material is available from the book's web page at <http://scg.unibe.ch/oorp>

*Using UML* Addison-Wesley Professional

For courses in Software Engineering, Software Development, or Object-Oriented Design and Analysis at the Junior/Senior or Graduate level. This text can also be utilized in short technical courses or in short, intensive management courses. Shows students how to use both the principles of software engineering and the practices of various object-oriented tools, processes, and products. Using a step-by-step case study to illustrate the concepts and topics in each chapter, Bruegge and Dutoit emphasize learning object-oriented software engineer through practical experience: students can apply the techniques learned in class by implementing a real-world software project. The third edition addresses new trends, in particular agile project management (Chapter 14 Project Management) and agile methodologies (Chapter 16 Methodologies).

The Unified Software Development Process Brooks/Cole Software architecture—the conceptual glue that holds every phase of a project together for its many stakeholders—is widely recognized as a critical element in modern software development. Practitioners have increasingly discovered that close attention to a software system's architecture pays valuable dividends. Without an architecture that is appropriate for the problem being solved, a project will stumble along or, most likely, fail. Even with a superb architecture, if that architecture is not well understood or well communicated the project is unlikely to succeed. Documenting Software Architectures, Second Edition, provides the most complete and current guidance, independent of language or notation, on how to capture an architecture in a commonly understandable form. Drawing on their extensive experience, the

authors first help you decide what information to document, and then, with guidelines and examples (in various notations, including UML), show you how to express an architecture so that others can successfully build, use, and maintain a system from it. The book features rules for sound documentation, the goals and strategies of documentation, architectural views and styles, documentation for software interfaces and software behavior, and templates for capturing and organizing information to generate a coherent package. New and improved in this second edition: Coverage of architectural styles such as service-oriented architectures, multi-tier architectures, and data models Guidance for documentation in an Agile development environment Deeper treatment of documentation of rationale, reflecting best industrial practices Improved templates, reflecting years of use and feedback, and more documentation layout options A new, comprehensive example (available online), featuring documentation of a Web-based service-oriented system Reference guides for three important architecture documentation languages: UML, AADL, and SysML

*Object-oriented Software Engineering* Morgan & Claypool Publishers

With its clear introduction to the Unified Modeling Language (UML) 2.0, this tutorial offers a solid understanding of each topic, covering foundational concepts of object-orientation and an introduction to each of the UML diagram types.

*Object-oriented Software Engineering* Pearson Education Object Solutions is a direct outgrowth of Grady Booch's experience with object-oriented project in development around the world. This book focuses on the development process and is the perfect resource for developers and managers who want to implement object technologies for the first time or refine their existing object-oriented development practice. The book is divided into two major sections. The first four chapters describe in detail the process of object-oriented development in terms of inputs, outputs, products, activities, and milestones. The remaining ten chapters provide practical advice on key issues including management, planning, reuse, and quality assurance. Drawing upon his knowledge of strategies used in both successful and unsuccessful projects, Grady Booch offers pragmatic advice for applying object-technologies and controlling projects effectively.

Object-Oriented Software Engineering Using UML, Patterns, and Java MIT Press

Use case analysis is a methodology for defining the outward features of a software system from the user's point of view. *Applying Use Cases, Second Edition*, offers a clear and practical introduction to this cutting-edge software development technique. Using numerous realistic examples and a detailed case study, you are guided through the application of use case analysis in the development of software systems. This new edition has been updated and expanded to reflect the Unified Modeling Language (UML) version 1.3. It also includes more complex and precise examples, descriptions of the pros and cons of various use case documentation techniques, and discussions on how other modeling approaches relate to use cases. *Applying Use Cases, Second Edition*, walks you through the software development process, demonstrating how use cases apply to project inception, requirements and risk analysis, system architecture, scheduling, review and testing, and documentation. Key topics include: Identifying use cases and describing actors Writing the flow of events, including basic and alternative paths Reviewing use cases for completeness and correctness Diagramming use cases with activity diagrams and sequence diagrams Incorporating user interface description and data description documents Testing architectural patterns and designs with use cases Applying use cases to project planning, prototyping, and estimating Identifying and diagramming analysis classes from use cases Applying use cases to user guides, test cases, and training material An entire section of the book is devoted to identifying common mistakes and describing their solutions. Also featured is a handy collection

of documentation templates and an abbreviated guide to UML notation. You will come away from this book with a solid understanding of use cases, along with the skills you need to put use case analysis to work.

Object-oriented Software Engineering Manning Publications Company

Provides information on analyzing, designing, and writing object-oriented software.

*The Unified Modeling Language Reference Manual* Prentice Hall This book covers the essential knowledge and skills needed by a student who is specializing in software engineering. Readers will learn principles of object orientation, software development, software modeling, software design, requirements analysis, and testing. The use of the Unified Modelling Language to develop software is taught in depth. Many concepts are illustrated using complete examples, with code written in Java.

**Head First Object-Oriented Analysis and Design** McGraw-Hill College

Provides complete coverage of the Ada language and Ada programming in general by recognized authorities in Ada software engineering. Demonstrates the power and performance of Ada in the management of large-scale object-oriented systems, and shows how to use Ada features such as generics, packages, and tasking.

**Developing Object-oriented Software** Pearson Higher Ed

"If you are a serious user of UML, there is no other book quite like this one. I have been involved with the UML specification process for some time, but I still found myself learning things while reading through this book-especially on the changes and new capabilities that have come with UML." -Ed Seidewitz, Chief

Architect, IntelliData Technologies Corporation The latest version of the Unified Modeling Language-UML 2.0-has increased its capabilities as the standard notation for modeling software-intensive systems. Like most standards documents, however, the official UML specification is difficult to read and navigate. In addition, UML 2.0 is far more complex than previous versions, making a thorough reference book more essential than ever. In this significantly updated and expanded edition of the definitive reference to the standard, James Rumbaugh, Ivar Jacobson, and Grady Booch-the UML's creators-clearly and completely describe UML concepts, including major revisions to sequence diagrams, activity models, state machines, components, internal structure of classes and components, and profiles. Whether you are capturing requirements, developing software architectures, designing implementations, or trying to understand existing systems, this is the book for you. Highlights include: Alphabetical dictionary of articles covering every UML concept Integrated summary of UML concepts by diagram type Two-color diagrams with extensive annotations in blue Thorough coverage of both semantics and notation, separated in each article for easy reference Further explanations of concepts whose meaning or purpose is obscure in the original specifications Discussion sections offering usage advice and additional insight into tricky concepts Notation summary, with references to individual articles An enhanced online index available on the book's web site allowing readers to quickly and easily search the entire text for specific topics The result is an indispensable resource for anyone who needs to understand the inner workings of the industry standard modeling language.