

Object Oriented Design Heuristics

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Heuristics and Biases - Thomas Gilovich 2002-07-08

This book, first published in 2002, compiles psychologists' best attempts to answer important questions about intuitive judgment.

Metapattern - Pieter Wisse 2001

"To help readers build on familiar territory, Metapattern compares the metapattern approach with object-oriented analysis and modeling, offering metapattern alternatives that demonstrate its richness in providing context-oriented solutions. In addition, the author reviews major established design patterns in data modeling, analysis, and business process engineering, and shows how the metapattern provides a frame of reference for understanding, accommodating, and transcending these patterns. The author also provides powerful modeling heuristics that take into account plurality through the definition of context, and by doing so, bring consistency and uniformity to information systems."--BOOK JACKET.

Business Process Management Workshops - Arthur ter Hofstede 2008-02-29

moderation of the workshops, and the publication process.

Object-Oriented Technology. ECOOP '98 Workshop Reader - Serge Demeyer 2003-07-31

At the time of writing (mid-October 1998) we can look back at what has been a very successful ECOOP'98. Despite the time of the year - in the middle of what is traditionally regarded as a holiday period - ECOOP'98 was a record breaker in terms of number of participants. Over 700 persons found their way to the campus of the Brussels Free University to participate in a wide range of activities. This 3rd ECOOP workshop reader reports on many of these activities. It contains a careful selection of the input and a cautious summary of the outcome for the numerous discussions that happened during the workshops, demonstrations and posters. As such, this book serves as an excellent snapshot of the state of the art in the field of object oriented programming. About the diversity of the submissions A workshop reader is, by its very nature, quite diverse in the topics covered as well as in the form of its contributions. This reader is not an exception to this rule: as editors we have given the respective organizers much freedom in their choice of presentation because we feel form follows content. This explains the diversity in the types of reports as well as in their lay out.

Object-Oriented Design Knowledge: Principles, Heuristics and Best Practices - Garz s, Javier 2006-07-31

"The software engineering community has advanced greatly in recent years and we currently have numerous defined items of knowledge, such as standards, methodologies, methods, metrics, techniques, languages, patterns, knowledge related to processes, concepts, etc. The main objective of this book is to give a unified and global vision about Micro-Architectural Design Knowledge, analyzing the main techniques, experiences and methods"--Provided by publisher.

Object-oriented Software Engineering - Timothy Christian Lethbridge 2004

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.

Dependency Injection Principles, Practices, and Patterns - Mark Seemann 2019-03-06

Summary Dependency Injection Principles, Practices, and Patterns teaches you to use DI to reduce hard-

coded dependencies between application components. You'll start by learning what DI is and what types of applications will benefit from it. Then, you'll work through concrete scenarios using C# and the .NET framework to implement DI in your own projects. As you dive into the thoroughly-explained examples, you'll develop a foundation you can apply to any of the many DI libraries for .NET and .NET Core. Purchase of the print book includes a free eBook in PDF, Kindle, and ePub formats from Manning Publications. About the Technology Dependency Injection (DI) is a great way to reduce tight coupling between software components. Instead of hard-coding dependencies, such as specifying a database driver, you make those connections through a third party. Central to application frameworks like ASP.NET Core, DI enables you to better manage changes and other complexity in your software. About the Book Dependency Injection Principles, Practices, and Patterns is a revised and expanded edition of the bestselling classic Dependency Injection in .NET. It teaches you DI from the ground up, featuring relevant examples, patterns, and anti-patterns for creating loosely coupled, well-structured applications. The well-annotated code and diagrams use C# examples to illustrate principles that work flawlessly with modern object-oriented languages and DI libraries. What's Inside Refactoring existing code into loosely coupled code DI techniques that work with statically typed OO languages Integration with common .NET frameworks Updated examples illustrating DI in .NET Core About the Reader For intermediate OO developers. About the Authors Mark Seemann is a programmer, software architect, and speaker who has been working with software since 1995, including six years with Microsoft. Steven van Deursen is a seasoned .NET developer and architect, and the author and maintainer of the Simple Injector DI library. Table of Contents PART 1 Putting Dependency Injection on the map The basics of Dependency Injection: What, why, and how Writing tightly coupled code Writing loosely coupled code PART 2 Catalog DI patterns DI anti-patterns Code smells PART 3 Pure DI Application composition Object lifetime Interception Aspect-Oriented Programming by design Tool-based Aspect-Oriented Programming PART 4 DI Containers DI Container introduction The Autofac DI Container The Simple Injector DI Container The Microsoft.Extensions.DependencyInjection DI Container

Code Complete - Steve McConnell 2004-06-09

Widely considered one of the best practical guides to programming, Steve McConnell's original CODE COMPLETE has been helping developers write better software for more than a decade. Now this classic book has been fully updated and revised with leading-edge practices—and hundreds of new code samples—illustrating the art and science of software construction. Capturing the body of knowledge available from research, academia, and everyday commercial practice, McConnell synthesizes the most effective techniques and must-know principles into clear, pragmatic guidance. No matter what your experience level, development environment, or project size, this book will inform and stimulate your thinking—and help you build the highest quality code. Discover the timeless techniques and strategies that help you: Design for minimum complexity and maximum creativity Reap the benefits of collaborative development Apply defensive programming techniques to reduce and flush out errors Exploit opportunities to refactor—or evolve—code, and do it safely Use construction practices that are right-weight for your project Debug problems quickly and effectively Resolve critical construction issues early and correctly Build quality into the beginning, middle, and end of your project

Object-oriented Design Knowledge - Javier Garzás 2007

"The software engineering community has advanced greatly in recent years and we currently have

numerous defined items of knowledge, such as standards, methodologies, methods, metrics, techniques, languages, patterns, knowledge related to processes, concepts, etc. The main objective of this book is to give a unified and global vision about Micro-Architectural Design Knowledge, analyzing the main techniques, experiences and methods"--Provided by publisher.

Object-oriented Reengineering Patterns - Serge Demeyer 2009-10

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>

Designing Object-oriented Software - Rebecca Wirfs-Brock 1990

Software -- Software Engineering.

Object-Oriented Technology. ECOOP'99 Workshop Reader - Ana Moreira 2003-07-31

ECOOP'99 Workshops, Panels, and Posters Lisbon, Portugal, June 14-18, 1999 Proceedings

Object-Oriented Metrics in Practice - Michele Lanza 2007-05-16

Presents a novel metrics-based approach for detecting design problems in object-oriented software.

Introduces an important suite of detection strategies for the identification of different well-known design flaws as well as some rarely mentioned ones.

Object-oriented Design Heuristics - Arthur J. Riel 1996

Upon completion of an object-oriented design, you are faced with a troubling question: "Is it good, bad, or somewhere in between?" Seasoned experts often answer this question by subjecting the design to a subconscious list of guidelines based on their years of experience. Experienced developer Arthur J. Riel has captured this elusive, subconscious list, and in doing so, has provided a set of metrics that help determine the quality of object-oriented models. Object-Oriented Design Heuristics offers insight into object-oriented design improvement. The more than sixty guidelines presented in this book are language-independent and allow you to rate the integrity of a software design. The heuristics are not written as hard and fast rules; they are meant to serve as warning mechanisms which allow the flexibility of ignoring the heuristic as necessary. This tutorial-based approach, born out of the author's extensive experience developing software, teaching thousands of students, and critiquing designs in a variety of domains, allows you to apply the guidelines in a personalized manner. The heuristics cover important topics ranging from classes and objects (with emphasis on their relationships including association, uses, containment, and both single and multiple inheritance) to physical object-oriented design. You will gain an understanding of the synergy that exists between design heuristics and the popular concept of design patterns; heuristics can highlight a problem in one facet of a design while patterns can provide the solution. Programmers of all levels will find value in this book. The newcomer will discover a fast track to understanding the concepts of object-oriented programming. At the same time, experienced programmers seeking to strengthen their object-oriented development efforts will appreciate the insightful analysis. In short, with Object-Oriented Design Heuristics as your guide, you have the tools to become a better software developer. 020163385XB04062001

APPLYING UML & PATTERNS 3RD EDITION - Craig Larman 2015

Larman covers how to investigate requirements, create solutions and then translate designs into code, showing developers how to make practical use of the most significant recent developments. A summary of UML notation is included

Object-Oriented Information Systems - Zohra Bellahsene 2003-08-02

This book constitutes the refereed proceedings of the 8th International Conference on Object-Oriented Information Systems, OOIS 2002, held in Montpellier, France, in September 2002. The 34 revised full papers and 17 short papers presented were carefully reviewed and selected from 116 submissions. The papers are organized in topical sections on developing web services, object databases, XML and web, component and ontology, UML modeling, object modeling and information systems adaptation, e-business models and workflow, performance and method evaluation, programming and tests, software engineering metrics, web-based information systems, architecture and Corba, and roles and evolvable objects.

Discussion of the Method - B. V. Koen 2003

Discussion of the Method is an ideal supplement for introductory and advanced courses in engineering, philosophy, and other disciplines, as well as a compelling read for general audiences."--BOOK JACKET.

Object-Oriented Design Heuristics - Arthur J. Riel 1996

Here is the first object-oriented development book to provide specific experience-based guidelines to help developers make the right design decisions. This book offers the next step for readers that know the basics of object-oriented development and now need to know if they are doing it right and making the right choices.

Learning Object-Oriented Programming, Design and TDD with Pharo - Stéphane Ducasse

Object-oriented System Development - Dennis De Champeaux 1993

With this book, software engineers, project managers, and tool builders will be able to better understand the role of analysis and design in the object-oriented (OO) software development process. This book presents a minimum set of notions and shows the reader how to use these notions for OO software construction. The emphasis is on development principles and implementation.

Pattern Hatching - John Vlissides 1998

Design patterns, which express relationships between recurring problems and proven solutions, have become immensely popular in the world of software development. More and more software developers are recognizing the supreme usefulness of design patterns and how they ease the design and delivery of software applications. This book builds upon the information presented in the seminal work in this field, Design Patterns: Elements of Reusable Object-Oriented Software, and gives software professionals the information they need to recognize and write their own patterns. Pattern Hatching, written by one of the co-authors of Design Patterns, truly helps the software professional apply one of the most popular concepts in software development.

Advanced Methods and Applications in Computational Intelligence - Ryszard Klempous 2013-07-20

This book offers an excellent presentation of intelligent engineering and informatics foundations for researchers in this field as well as many examples with industrial application. It contains extended versions of selected papers presented at the inaugural ACASE 2012 Conference dedicated to the Applications of Systems Engineering. This conference was held from the 6th to the 8th of February 2012, at the University of Technology, Sydney, Australia, organized by the University of Technology, Sydney (Australia), Wrocław University of Technology (Poland) and the University of Applied Sciences in Hagenberg (Austria). The book is organized into three main parts. Part I contains papers devoted to the heuristic approaches that are applicable in situations where the problem cannot be solved by exact methods, due to various characteristics or dimensionality problems. Part II covers essential issues of the network management, presents intelligent models of the next generation of networks and distributed systems as well as discusses applications of modern numerical methods in large intractable systems. Part III covers salient issues of complexity in intelligent system applications. This part also contains papers and articles which discuss concurrency issues that arise when multiple systems attempt to use the same radio space and the inter-connected system applications in the field of medical simulation and training.

Clean Code - Robert C. Martin 2009

Looks at the principles and clean code, includes case studies showcasing the practices of writing clean code, and contains a list of heuristics and "smells" accumulated from the process of writing clean code.

Practical Model-Based Systems Engineering - Jose L. Fernandez 2019-07-31

This comprehensive resource provides systems engineers and practitioners with the analytic, design and modeling tools of the Model-Based Systems Engineering (MBSE) methodology of Integrated Systems Engineering (ISE) and Pipelines of Processes in Object Oriented Architectures (PPOOA) methodology. This methodology integrates model based systems and software engineering approaches for the development of complex products, including aerospace, robotics and energy domains applications. Readers learn how to synthesize physical architectures using design heuristics and trade-off analysis. The book provides information about how to identify, classify and specify the system requirements of a new product or service. Using Systems Modeling Language (SysML) constructs, readers will be able to apply ISE & PPOOA methodology in the engineering activities of their own systems.

ECOOP 2008 - Object-Oriented Programming - Jan Vitek 2008-07-10

It is a pleasure to present the proceedings of the 22nd European Conference on Object-Oriented Programming (ECOOP 2008) held in Paphos, Cyprus. The conference continues to serve a broad object-oriented community with a technical program spanning theory and practice and a healthy mix of industrial and academic participants. This year a strong workshop and tutorial program complemented the main technical track. We had 13 workshops and 8 tutorials, as well as the co-located Dynamic Language Symposium (DLS). Finally, the program was rounded out with a keynote by Rachid Guerraoui and a banquet speech by James Noble. As in previous years, two Dahl-Nygaard awards were selected by AITO, and for the first time, the ECOOP Program Committee gave a best paper award.

The proceedings include 27 papers selected from 138 submissions. The papers were reviewed in a single-blind process with three to five reviews per paper. Preliminary versions of the reviews were made available to the authors a week before the PC meeting to allow for short (500 words or less) author responses. The responses were discussed at the PC meeting and were instrumental in reaching decisions. The PC discussions followed Oscar Nierstrasz' Champion pattern. PC papers had five reviews and were held at a higher standard.

Heuristic and Optimization for Knowledge Discovery - Abbass, Hussein A. 2001-07-01

With the large amount of data stored by many organizations, capitalists have observed that this information is an intangible asset. Unfortunately, handling large databases is a very complex process and traditional learning techniques are expensive to use. Heuristic techniques provide much help in this arena, although little is known about heuristic techniques. Heuristic and Optimization for Knowledge Discovery addresses the foundation of this topic, as well as its practical uses, and aims to fill in the gap that exists in current literature.

Object Design - Rebecca Wirfs-Brock 2003

Object technology pioneer Wirfs-Brock teams with expert McKean to present a thoroughly updated, modern, and proven method for the design of software. The book is packed with practical design techniques that enable the practitioner to get the job done.

Essentials of Metaheuristics (Second Edition) - Sean Luke 2012-12-20

Interested in the Genetic Algorithm? Simulated Annealing? Ant Colony Optimization? *Essentials of Metaheuristics* covers these and other metaheuristics algorithms, and is intended for undergraduate students, programmers, and non-experts. The book covers a wide range of algorithms, representations, selection and modification operators, and related topics, and includes 71 figures and 135 algorithms great and small. Algorithms include: Gradient Ascent techniques, Hill-Climbing variants, Simulated Annealing, Tabu Search variants, Iterated Local Search, Evolution Strategies, the Genetic Algorithm, the Steady-State Genetic Algorithm, Differential Evolution, Particle Swarm Optimization, Genetic Programming variants, One- and Two-Population Competitive Coevolution, N-Population Cooperative Coevolution, Implicit Fitness Sharing, Deterministic Crowding, NSGA-II, SPEA2, GRASP, Ant Colony Optimization variants, Guided Local Search, LEM, PBIL, UMDA, cGA, BOA, SAMUEL, ZCS, XCS, and XCSF.

Object-oriented Design in Java - Stephen Gilbert 1998

Mitchell Waite Signature Series: Object-Oriented Design in Java takes a tutorial approach and teaches in a new way: by offering the Java code first and the design representations and explanations later. No other programming-level book on the market deals with design of Java software. There's nothing aimed at the in the trenches Java programmer. Nor can the Java programmer turn to general books on software design. These, with few exceptions, are abstract and academic, either incomprehensible or irrelevant from the perspective of the working programmer. This book targets the needs of Java application programmers, using an experience-based, hands-on approach.

Software Development and Professional Practice - John Dooley 2011-10-13

Software Development and Professional Practice reveals how to design and code great software. What factors do you take into account? What makes a good design? What methods and processes are out there for designing software? Is designing small programs different than designing large ones? How can you tell a good design from a bad one? You'll learn the principles of good software design, and how to turn those principles back into great code. Software Development and Professional Practice is also about code

construction—how to write great programs and make them work. What, you say? You've already written eight gazillion programs! Of course I know how to write code! Well, in this book you'll re-examine what you already do, and you'll investigate ways to improve. Using the Java language, you'll look deeply into coding standards, debugging, unit testing, modularity, and other characteristics of good programs. You'll also talk about reading code. How do you read code? What makes a program readable? Can good, readable code replace documentation? How much documentation do you really need? This book introduces you to software engineering—the application of engineering principles to the development of software. What are these engineering principles? First, all engineering efforts follow a defined process. So, you'll be spending a bit of time talking about how you run a software development project and the different phases of a project. Secondly, all engineering work has a basis in the application of science and mathematics to real-world problems. And so does software development! You'll therefore take the time to examine how to design and implement programs that solve specific problems. Finally, this book is also about human-computer interaction and user interface design issues. A poor user interface can ruin any desire to actually use a program; in this book, you'll figure out why and how to avoid those errors. Software Development and Professional Practice covers many of the topics described for the ACM Computing Curricula 2001 course C292c Software Development and Professional Practice. It is designed to be both a textbook and a manual for the working professional.

Object Thinking - David West 2004

Object Thinking blends historical perspective, experience, and visionary insight - exploring how developers can work less like the computers they program and more like problem solvers.

Code That Fits in Your Head - Mark Seemann 2021-09-30

The latest title in Addison Wesley's world-renowned Robert C. Martin Series on better software development, Code That Fits in Your Head offers indispensable practical advice for writing code at a sustainable pace, and controlling the complexity that causes too many software projects to spin out of control. Reflecting decades of experience consulting on software projects and helping development teams succeed, Mark Seemann shares proven practices and heuristics, supported by realistic advice. His guidance ranges from checklists to teamwork, encapsulation to decomposition, API design to unit testing and troubleshooting. Throughout, Seemann illuminates his insights with up-to-date code examples drawn from a start to finish sample project. Seemann's examples are written in C##, and designed to be clear and useful to every object-oriented enterprise developer, whether they use C#, Java, or another language. Code That Fits in Your Head is accompanied by the complete code base for this sample application, organized in a Git repository to facilitate further exploration of details that don't fit in the text.

Heuristic Search - Stefan Edelkamp 2011-05-31

Search has been vital to artificial intelligence from the very beginning as a core technique in problem solving. The authors present a thorough overview of heuristic search with a balance of discussion between theoretical analysis and efficient implementation and application to real-world problems. Current developments in search such as pattern databases and search with efficient use of external memory and parallel processing units on main boards and graphics cards are detailed. Heuristic search as a problem solving tool is demonstrated in applications for puzzle solving, game playing, constraint satisfaction and machine learning. While no previous familiarity with heuristic search is necessary the reader should have a basic knowledge of algorithms, data structures, and calculus. Real-world case studies and chapter ending exercises help to create a full and realized picture of how search fits into the world of artificial intelligence and the one around us. Provides real-world success stories and case studies for heuristic search algorithms. Includes many AI developments not yet covered in textbooks such as pattern databases, symbolic search, and parallel processing units.

The Art of Systems Architecting, Third Edition - Mark W. Maier 2009-01-06

If engineering is the art and science of technical problem solving, systems architecting happens when you don't yet know what the problem is. The third edition of a highly respected bestseller, The Art of Systems Architecting provides in-depth coverage of the least understood part of systems design: moving from a vague concept and limited resources to a satisfactory and feasible system concept and an executable program. The book provides a practical, heuristic approach to the "art" of systems architecting. It provides

methods for embracing, and then taming, the growing complexity of modern systems. New in the Third Edition: Five major case studies illustrating successful and unsuccessful practices Information on architecture frameworks as standards for architecture descriptions New methods for integrating business strategy and architecture and the role of architecture as the technical embodiment of strategy Integration of process guidance for organizing and managing architecture projects Updates to the rapidly changing fields of software and systems-of-systems architecture Organization of heuristics around a simple and practical process model A Practical Heuristic Approach to the Art of Systems Architecting Extensively rewritten to reflect the latest developments, the text explains how to create a system from scratch, presenting invention/design rules together with clear explanations of how to use them. The author supplies practical guidelines for avoiding common systematic failures while implementing new mandates. He uses a heuristics-based approach that provides an organized attack on very ill-structured engineering problems. Examining architecture as more than a set of diagrams and documents, but as a set of decisions that either drive a system to success or doom it to failure, the book provide methods for integrating business strategy with technical architectural decision making.

Techniques of Program Structure and Design - Edward Yourdon 1975

Provides a practical explanation of modular and structural programming principles and techniques applicable to all major languages.

[Design Patterns for Object-oriented Software Development](#) - Wolfgang Pree 1995

Software -- Software Engineering.

OOIS 2001 - Xingxu Wang 2012-12-06

Welcome to OOIS'01 and Calgary! This is the 7th International Conference on Object-Oriented Information Systems (OOIS) that focus on Object-Oriented and Web-Based Frameworks for Information Systems. In the last few years we've seen significant new development in this field, from one-off design technologies to reusable frameworks, and from web applications to bioinformatic systems. We perceive that information processing is one of the most important activities of human beings. Object-orientation and frameworks have been the main-stream technologies for design and implementation of large-scale and complex information systems. Recent research advances and industrial innovations in information systems modeling and Internet applications have explored the new trends in shifting information system vendors from component and system developers to services providers. Users of information systems are increasingly demanding higher performance, mobility, and personalization in order to realize the dream to access and obtain necessary information anywhere and anytime. The new development requires the investigation of new architectures, frameworks, processes, and inter-connectivity of information systems at society, organization, team, and personal levels. The OOIS'01 Proceedings has put together a program of 53 papers from leading researchers and practitioners in the field of object technology and information systems.

[Functional and Object Oriented Analysis and Design: An Integrated Methodology](#) - Shoval, Peretz 2006-07-31

Summary: "The main objective of this book is to teach both students and practitioners of information systems, software engineering, computer science and related areas to analyze and design information systems using the FOOM methodology. FOOM combines the object-oriented approach and the functional (process-oriented) approach"--Provided by publisher.

Object Design Style Guide - Matthias Noback 2019-12-23

"Demystifies object-oriented programming, and lays out how to use it to design truly secure and performant applications." —Charles Soetan, Plum.io Key Features Dozens of techniques for writing object-oriented code that's easy to read, reuse, and maintain Write code that other programmers will instantly understand Design rules for constructing objects, changing and exposing state, and more Examples written in an instantly familiar pseudocode that's easy to apply to Java, Python, C#, and any object-oriented language Purchase of the print book includes a free eBook in PDF, Kindle, and ePub formats from Manning Publications. About The Book Well-written object-oriented code is easy to read, modify, and debug. Elevate your coding style by mastering the universal best practices for object design presented in this book. These clearly presented rules, which apply to any OO language, maximize the clarity and durability of your codebase and increase productivity for you and your team. In *Object Design Style Guide*, veteran developer Matthias Noback lays out design rules for constructing objects, defining methods, and much more. All examples use instantly familiar pseudocode, so you can follow along in the language you prefer. You'll go case by case through important scenarios and challenges for object design and then walk through a simple web application that demonstrates how different types of objects can work together effectively. What You Will Learn Universal design rules for a wide range of objects Best practices for testing objects A catalog of common object types Changing and exposing state Test your object design skills with exercises This Book Is Written For For readers familiar with an object-oriented language and basic application architecture. About the Author Matthias Noback is a professional web developer with nearly two decades of experience. He runs his own web development, training, and consultancy company called "Noback's Office." Table of Contents: 1 | Programming with objects: A primer 2 | Creating services 3 | Creating other objects 4 | Manipulating objects 5 | Using objects 6 | Retrieving information 7 | Performing tasks 8 | Dividing responsibilities 9 | Changing the behavior of services 10 | A field guide to objects 11 | Epilogue

Growing Object-Oriented Software, Guided by Tests - Steve Freeman 2009-10-12

Test-Driven Development (TDD) is now an established technique for delivering better software faster. TDD is based on a simple idea: Write tests for your code before you write the code itself. However, this "simple" idea takes skill and judgment to do well. Now there's a practical guide to TDD that takes you beyond the basic concepts. Drawing on a decade of experience building real-world systems, two TDD pioneers show how to let tests guide your development and "grow" software that is coherent, reliable, and maintainable. Steve Freeman and Nat Pryce describe the processes they use, the design principles they strive to achieve, and some of the tools that help them get the job done. Through an extended worked example, you'll learn how TDD works at multiple levels, using tests to drive the features and the object-oriented structure of the code, and using Mock Objects to discover and then describe relationships between objects. Along the way, the book systematically addresses challenges that development teams encounter with TDD—from integrating TDD into your processes to testing your most difficult features. Coverage includes Implementing TDD effectively: getting started, and maintaining your momentum throughout the project Creating cleaner, more expressive, more sustainable code Using tests to stay relentlessly focused on sustaining quality Understanding how TDD, Mock Objects, and Object-Oriented Design come together in the context of a real software development project Using Mock Objects to guide object-oriented designs Succeeding where TDD is difficult: managing complex test data, and testing persistence and concurrency