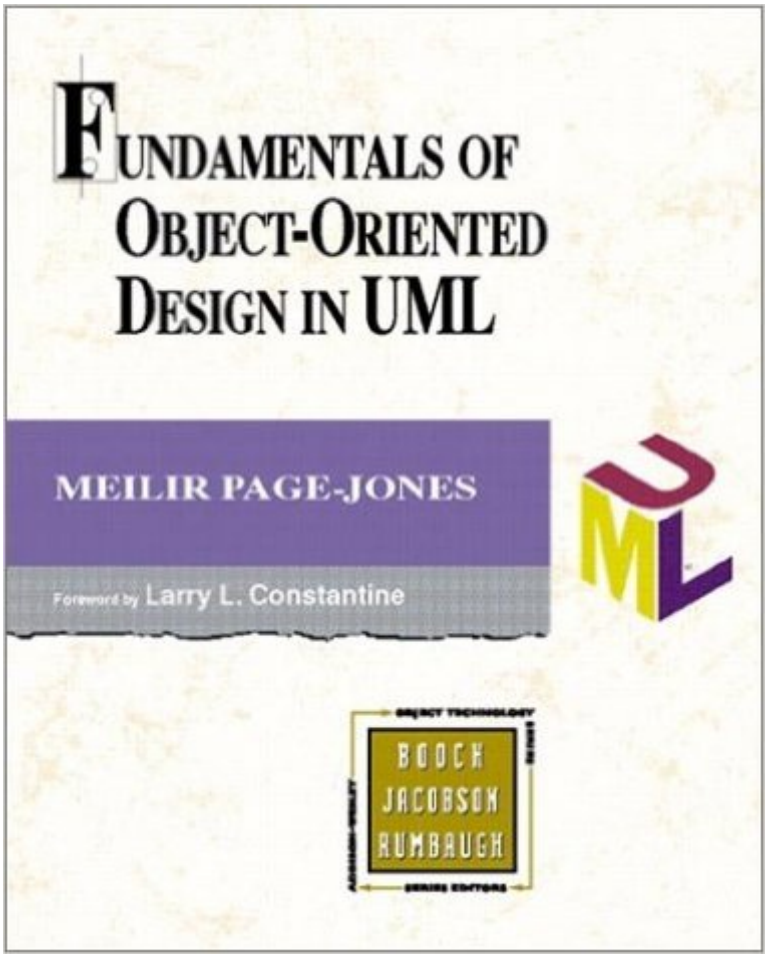
Fundamentals Of Object-Oriented Design In UML



Synopsis

Object technology is increasingly recognized as a valuable tool in application development, but what is not yet recognized is the importance of design in the construction of robust and adaptable object-oriented (OO) applications. With the recent introduction and widespread adoption of the Unified Modeling Language (UML), programmers are now equipped with a powerful tool for expressing software designs. Fundamentals of Object-Oriented Design in UML shows aspiring and experienced programmers alike how to apply design concepts, the UML, and the best practices in OO development to improve both their code and their success rates with object-based projects. In the first two chapters, best-selling author Meilir Page-Jones introduces novices to key concepts and terminology, demystifying the jargon, and providing a context in which to view object orientation. Part II is a practical and well-illustrated guide to UML notation and to building the most useful UML diagrams. Part III grapples with advanced topics in the testing and improvement of design quality, including connascence, level-2 encapsulation, and the use of state-space and behavior to assess class hierarchies. These design principl

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Customer Reviews

Who should read this book: Senior Programmers and Systems Analysts.This book can be very valuable anyone who builds Object-Oriented computer programs, and anyone building computer programs either is or soon will be using Object-Oriented tools. Although it focuses on the Unified Modeling Language, a standard for most Computer-Aided Software Engineering tools, I found the

real value of the book to be in the lucid explanations of principles of good software analysis and design, even more than in the nuts and bolts of UML. Dr. Page-Jones' style continues to combine well-researched information with down-to-earth pragmatism and a delightfully irreverent tone towards those who take this business (or themselves) way too seriously.Who am I? I am a computational physicist turned systems analyst, with almost 20 years experience developing complex codes for scientific modeling and analysis, now working on real-time defense systems. I have been technical lead and mere contributor, subcontractor and lead contractor. My passion is for tight modular designs that facilitate high-reliablility code.Part I, Introduction, gives excellent working definitions of the main concepts generally considered part of "Object Orientation" in a way that should be useful even to those beginning to use an OO language, and a historical perspective that helps explain why some issues are still messy.Part II gets into the "nuts and bolts" of UML itself, of necessity illustrating many key concepts along the way. Even if you never use a CASE tool, the ability to discuss design issues using accepted "standard" diagrams will help you think through the key issues, communicate your ideas more clearly, and ultimately develop better designs.

The major portion of my information technology career of fourteen years has been based in structured design and programming. I've spent the last few years programming in Visual Basic, which is object-based. I've also done a modicum of programming with object-oriented languages (C++ and Java). I jumped into OO programming before taking any design courses (sound familiar?) and eventually felt compelled to remedy the situation by reading a book on OOD. Meilir Page-Jones' book was not a disappointment. I believe that designers and programmers of all experience levels can benefit from reading his book. Newcomers will get the right introduction to OOD while experienced developers will be challenged to reexamine their approach to software construction. "Fundamentals of Object-Oriented Design" is composed of three parts. In part 1 the author provides an overview of Object-Oriented Design (OOD) by defining key terms and then providing a brief summary of the evolution of software development. This orientation prepares the reader for the rest of the discussions in the book. Part 2 is a summary of the most often used portions of UML syntax. It's not intended to be an exhaustive description. He leaves out those parts of the language that are used infrequently. Part 3 is a compendium of principles of object-oriented design.The salient benefits of the book are the clear, cogent arguments Mr. Page-Jones articulates in support of the principles he espouses, which are rooted in a very practical approach toward software development. Among other things, you can use most of the principles as bases for code reviews. He also peppers the discussions with entertaining anecdotes, realizing that this heavy stuff needs periodic comic

relief.

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