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Program Development In Java By Barbara Liskov

E Durkheim



Program Development In Java By Barbara Liskov:

Program Development in Java Barbara Liskov, John Guttag, 2000-06-06 Written by a world renowned expert on programming methodology and the winner of the 2008 Turing Award this book shows how to build production quality programs programs that are reliable easy to maintain and quick to modify Its emphasis is on modular program construction how to get the modules right and how to organize a program as a collection of modules The book presents a methodology effective for either an individual programmer who may be writing a small program or a single module in a larger one or a software engineer who may be part of a team developing a complex program comprised of many modules Both audiences will acquire a solid foundation for object oriented program design and component based software development from this methodology Because each module in a program corresponds to an abstraction such as a collection of documents or a routine to search the collection for documents of interest the book first explains the kinds of abstractions most useful to programmers procedures iteration abstractions and most critically data abstractions Indeed the author treats data abstraction as the central paradigm in object oriented program design and implementation The author also shows with numerous examples how to develop informal specifications that define these abstractions specifications that describe what the modules do and then discusses how to implement the modules so that they do what they are supposed to do with acceptable performance Other topics discussed include Encapsulation and the need for an implementation to provide the behavior defined by the specification Tradeoffs between simplicity and performance Techniques to help readers of code understand and reason about it focusing on such properties as rep invariants and abstraction functions Type hierarchy and its use in defining families of related data abstractions Debugging testing and requirements analysis Program design as a top down iterative process and design patterns The Java programming language is used for the book s examples However the techniques presented are language independent and an introduction to key Java concepts is included for programmers who may not be familiar with the language

Program Development in Java: Abstraction, Specification, and Object-Oriented Design B. Liskov, Guttag, 2000

Program Development in Java B. Liskov, John Guttag, 2001 Liskov engineering Massachusetts Institute of Technology and Guttag computer science and engineering also at MIT present a component based methodology for software program development The book focuses on modular program construction how to get the modules right and how to organize a program as a collection of modules It explains the key types of abstractions demonstrates how to develop specifications that define these abstractions and illustrates how to implement them using numerous examples An introduction to key Java concepts is included Annotation copyrighted by Book News Inc Portland OR

Formal Methods for Components and Objects Frank S. de Boer, Marcello M. Bonsangue, Susanne Graf, Willem-Paul de Roever, 2006-09-30 This book presents 19 revised invited keynote lectures and revised tutorial lectures given at the 4th International Symposium on Formal Methods for Components and Objects FMCO 2005 Amsterdam November 2005 The book provides a unique

combination of ideas on software engineering and formal methods that reflect the current interest in the application or development of formal methods for large scale software systems such as component based systems and object systems

Verification of Object-Oriented Software. The KeY Approach Bernhard Beckert,Reiner Hähnle,Peter H.

Schmitt,2007-04-21 The ultimate goal of program verification is not the theory behind the tools or the tools themselves but the application of the theory and tools in the software engineering process Our society relies on the correctness of a vast and growing amount of software Improving the software engineering process is an important long term goal with many steps Two of those steps are the KeY tool and this KeY book

Programming Language Pragmatics Michael L. Scott,2006

Accompanying CD ROM contains advanced optional content hundreds of working examples an active search facility and live links to manuals tutorials compilers and interpreters on the World Wide Web Page 4 of cover *Dr. Dobb's Journal* ,2001

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

Workshops Panels and Posters Lisbon Portugal June 14 18 1999 Proceedings **ECOOP 2004 - Object-Oriented**

Programming Martin Odersky,2004-11-24 ECOOP is the premier forum in Europe for bringing together practitioners searchers and students to share their ideas and experiences in a broad range of disciplines woven with the common thread of object technology It is a collage of events including outstanding invited speakers carefully refereed technical papers practitioner reports reflecting real world experience panels topic focused workshops demonstrations and an interactive posters session The 18th ECOOP 2004 conference held during June 14 18 2004 in Oslo Norway represented another year of continued success in object oriented programming both as a topic of academic study and as a vehicle for industrial software development Object oriented technology has come of age it is now the commonly established method for most software projects However an expanding field of applications and new technological challenges provide a strong demand for research in foundations design and programming methods as well as implementation techniques There is also an increasing interest in the integration of object orientation with other software development techniques We anticipate therefore that object oriented programming will be a fruitful subject of research for many years to come This year

the program committee received 132 submissions of which 25 were accepted for publication after a thorough reviewing process

Every paper received at least 4 reviews Papers were evaluated based on relevance significance clarity originality and correctness

The topics covered include programming concepts program analysis software engineering aspects and components

middleware verification systems and implementation techniques These were complemented by two invited talks from Matthias Felleisen and Tom Henzinger Their titles and abstracts are also included in these proceedings *End-user Program Analysis*

Bor-Yuh Evan Chang,2008 [Object-oriented Programming Featuring Graphical Applications in Java](#) Michael Jay

Laszlo,2002 The goal of this book is to explore the principle ideas of object oriented programming using the Java

programming language It begins teaching the object oriented power of Java by relying on textual commands instead of

emphasizing the AWT or Swing libraries providing the reader with a simple generic introduction to the OO concepts using Java without the language details getting in the way of the concept presentation The author provides a thorough introduction to the three fundamental concepts of object oriented programming Encapsulation Inheritance and Polymorphism The presentation of OO theory is augmented by interleaved examples that illustrate these concepts Most of these program examples are 2 D graphics programs that provide an intuitive context for the issues that must be addressed when learning OOP Additionally since graphics programming is one of the strengths of the Java development environment the examples produce interesting and unexpected images that engage and motivate the reader It contains a concise introduction to using Design Patterns particularly the Template Method Iterator and Composite design patterns which relate to the graphics examples in the book and uses UML class diagrams to show the static structure of systems and sequence diagrams to show object interactions This book is appropriate for readers who are new to object oriented but have experience with a non object oriented language and for programmers who want to learn the graphical elements and capabilities of Java *Advanced Programming for the Java 2 Platform* Calvin Austin, Monica Pawlan, 2000 Choice Outstanding Academic Title 2008 The uniqueness of shape as a perceptual property lies in the fact that it is both complex and structured Shapes are perceived veridically as they really are in the physical world regardless of the orientation from which they are viewed The constancy of the shape percept is the sine qua non of shape perception you are not actually studying shape if constancy cannot be achieved with the stimulus you are using Shape is the only perceptual attribute of an object that allows unambiguous identification In this first book devoted exclusively to the perception of shape by humans and machines Zygmunt Pizlo describes how we perceive shapes and how to design machines that can see shapes as we do He reviews the long history of the subject allowing the reader to understand why it has taken so long to understand shape perception and offers a new theory of shape Until recently shape was treated in combination with such other perceptual properties as depth motion speed and color This resulted in apparently contradictory findings which made a coherent theoretical treatment of shape impossible Pizlo argues that once shape is understood to be unique among visual attributes and the perceptual mechanisms underlying shape are seen to be different from other perceptual mechanisms the research on shape becomes coherent and experimental findings no longer seem to contradict each other A single theory of shape perception is thus possible and Pizlo offers a theoretical treatment that explains how a three dimensional shape percept is produced from a two dimensional retinal image assuming only that the image has been organized into two dimensional shapes Pizlo focuses on discussion of the main concepts telling the story of shape without interruption Appendixes provide the basic mathematical and computational information necessary for a technical understanding of the argument References point the way to more in depth reading in geometry and computational vision **Essentials of the Java Programming Language** Monica Pawlan, 2000 If you are interested in learning the Java programming language but hesitate to dive into overly dense

theoretical resources Essentials of the Java Programming Language is the perfect starting point This accessible hands on tutorial employs a learn by doing approach to introduce you to the basics It starts with a simple program then develops it bit by bit adding new features and explaining important concepts with each subsequent lesson This simple program grows into a general electronic commerce application that illustrates many of the Java 2 platforms most important elements You will learn such Java programming language essentials as The difference between applications applets and servlets JavaServer Pages Building a user interface that accepts user input Reading and writing data to files and databases Network communications including RMI and sockets Collections Serialization Packages and JAR file format Internationalization Security fundamentals including cryptographic software Essentials of the Java Programming Language ends with an explanation of object oriented programming concepts made far more understandable and relevant as a result of the *Model Checking Software* ,2005

Reliable Software Technologies, Ada-Europe ... ,2003 **American Book Publishing Record** ,2000-07

Software Engineering Shari Lawrence Pfleeger, Joanne M. Atlee, 2010 Featuring an associated Web page and consistently combining theory with real world practical applications this text includes thought provoking questions about legal and ethical issues in software engineering FME... ,2002 *Book Review Index* ,2003 Vols 8 10 of the 1965 1984 master cumulation constitute a title index Object-oriented Technology ,1999

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