

Data Structures And Other Objects Using Java

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[Grokking Algorithms](#) - Aditya Bhargava 2016-05-12

Summary Grokking Algorithms is a fully illustrated, friendly guide that teaches you how to apply common algorithms to the practical problems you face every day as a programmer. You'll start with sorting and searching and, as you build up your skills in thinking algorithmically, you'll tackle more complex concerns such as data compression and artificial intelligence. Each carefully presented example includes helpful diagrams and fully annotated code samples in Python. Learning about algorithms doesn't have to be boring! Get a sneak peek at the fun, illustrated, and friendly examples you'll find in Grokking Algorithms on Manning Publications' YouTube channel. Continue your journey into the world of algorithms with Algorithms in Motion, a practical, hands-on video course available exclusively at Manning.com (www.manning.com/livevideo/algorithms-in-motion). Purchase of the print book includes a free eBook in PDF, Kindle, and ePub formats from Manning Publications. About the Technology An algorithm is nothing more than a step-by-step procedure for solving a problem. The algorithms you'll use most often as a programmer have already been discovered, tested, and proven. If you want to understand them but refuse to slog through dense multipage proofs, this is the book for you. This fully illustrated and engaging guide makes it easy to learn how to use the most important algorithms effectively in your own programs. About the Book Grokking Algorithms is a friendly take on this core computer science topic. In it, you'll learn how to apply common algorithms to the practical programming problems you face every day. You'll start with tasks like sorting and searching. As you build up your skills, you'll tackle more complex problems like data compression and artificial intelligence. Each carefully presented example includes helpful diagrams and fully annotated code samples in Python. By the end of this book, you will have mastered widely applicable algorithms as well as how and when to use them. What's Inside Covers search, sort, and graph algorithms Over 400 pictures with detailed walkthroughs Performance trade-offs between algorithms Python-based code samples About the Reader This easy-to-read, picture-heavy introduction is suitable for self-taught programmers, engineers, or anyone who wants to brush up on algorithms. About the Author Aditya Bhargava is a Software Engineer with a dual background in Computer Science and Fine Arts. He blogs on programming at adit.io. Table of Contents Introduction to algorithms Selection sort Recursion Quicksort Hash tables Breadth-first search Dijkstra's algorithm Greedy algorithms Dynamic programming K-nearest neighbors

[Guide to Data Structures](#) - James T. Streib 2017-12-30

This accessible and engaging textbook/guide provides a concise introduction to data structures and associated algorithms. Emphasis is placed on the fundamentals of data structures, enabling the reader to quickly learn the key concepts, and providing a strong foundation for later studies of more complex topics. The coverage includes discussions on stacks, queues, lists, (using both arrays and links), sorting, and elementary binary trees, heaps, and hashing. This content is also a natural continuation from the material provided in the separate Springer title Guide to Java by the same authors. Topics and features: reviews the preliminary concepts, and introduces stacks and queues using arrays, along with a discussion of array-based lists; examines linked lists, the implementation of stacks and queues using references, binary trees, a range of varied sorting techniques, heaps, and hashing; presents both primitive and generic data types in each chapter, and makes use of contour diagrams to illustrate object-oriented concepts; includes chapter summaries, and asks the reader questions to help them interact with the material; contains numerous

examples and illustrations, and one or more complete program in every chapter; provides exercises at the end of each chapter, as well as solutions to selected exercises, and a glossary of important terms. This clearly-written work is an ideal classroom text for a second semester course in programming using the Java programming language, in preparation for a subsequent advanced course in data structures and algorithms. The book is also eminently suitable as a self-study guide in either academe or industry.

[Java 9 Data Structures and Algorithms](#) - Debasish Ray Chawdhuri 2017-04-28

Gain a deep understanding of the complexity of data structures and algorithms and discover the right way to write more efficient code About This Book This book provides complete coverage of reactive and functional data structures Based on the latest version of Java 9, this book illustrates the impact of new features on data structures Gain exposure to important concepts such as Big-O Notation and Dynamic Programming Who This Book Is For This book is for Java developers who want to learn about data structures and algorithms. Basic knowledge of Java is assumed. What You Will Learn Understand the fundamentals of algorithms, data structures, and measurement of complexity Find out what general purpose data structures are, including arrays, linked lists, double ended linked lists, and circular lists Get a grasp on the basics of abstract data types—stack, queue, and double ended queue See how to use recursive functions and immutability while understanding and in terms of recursion Handle reactive programming and its related data structures Use binary search, sorting, and efficient sorting—quicksort and merge sort Work with the important concept of trees and list all nodes of the tree, traversal of tree, search trees, and balanced search trees Apply advanced general purpose data structures, priority queue-based sorting, and random access immutable linked lists Gain a better understanding of the concept of graphs, directed and undirected graphs, undirected trees, and much more In Detail Java 9 Data Structures and Algorithms covers classical, functional, and reactive data structures, giving you the ability to understand computational complexity, solve problems, and write efficient code. This book is based on the Zero Bug Bounce milestone of Java 9. We start off with the basics of algorithms and data structures, helping you understand the fundamentals and measure complexity. From here, we introduce you to concepts such as arrays, linked lists, as well as abstract data types such as stacks and queues. Next, we'll take you through the basics of functional programming while making sure you get used to thinking recursively. We provide plenty of examples along the way to help you understand each concept. You will get the also get a clear picture of reactive programming, binary searches, sorting, search trees, undirected graphs, and a whole lot more! Style and approach This book will teach you about all the major algorithms in a step-by-step manner. Special notes on the Big-O Notation and its impact on algorithms will give you fresh insights.

[Data Structures and Algorithms in Java](#) - Michael T. Goodrich 2014-01-28

The design and analysis of efficient data structures has long been recognized as a key component of the Computer Science curriculum. Goodrich, Tomassia and Goldwasser's approach to this classic topic is based on the object-oriented paradigm as the framework of choice for the design of data structures. For each ADT presented in the text, the authors provide an associated Java interface. Concrete data structures realizing the ADTs are provided as Java classes implementing the interfaces. The Java code implementing fundamental data structures in this book is organized in a single Java package, `net.datastructures`. This package forms a coherent library of data structures and algorithms in Java specifically designed for educational purposes in a way that is complimentary with the Java Collections Framework.

Data Structures And Algorithms - Harry. H. Chaudhary. 2014-10-01

Features of Book - Essential Data Structures Skills -- Made Easy! All Code/Algo written in C Programming. || Learn with Fun strategy. Anyone can comfortably follow this book to Learn DSA Step By Step. Unique strategy- Concepts, Problems, Analysis, Questions, Solutions. Why This Book - This book gives a good start and complete introduction for data structures and algorithms for Beginner's. While reading this book it is fun and easy to read it. This book is best suitable for first time DSA readers, Covers all fast track topics of DSA for all Computer Science students and Professionals. Learn all Concept's Clearly with World Famous Programmer Harry Chaudhary. Main Objective - Data structures is concerned with the storage, representation and manipulation of data in a computer. In this book, we discuss some of the more versatile and popular data structures used to solve a variety of useful problems. Among the topics are linked lists, stacks, queues, trees, graphs, sorting and hashing. What Special - Data Structures & Algorithms Using C or C++ takes a gentle approach to the data structures course in C Providing an early, text gives students a firm grasp of key concepts and allows those experienced in another language to adjust easily. Flexible by design,. Finally, a solid foundation in building and using abstract data types is also provided. Using C, this book develops the concepts & theory of data structures and algorithm analysis in a gradual, step-by-step manner, proceeding from concrete examples to abstract principles. Standish covers a wide range of both traditional and contemporary software engineering topics. This is a handy guide of sorts for any computer science Students, This book is a solution bank for various problems related to data structures and algorithms. It can be used as a reference manual by Computer Science Engineering students. This Book also covers all aspects of CS, IT. Special Note: Digital Pdf Edition || Epub Edition is Available on Google Play & Books. less

Advanced Data Structures - Peter Brass 2019-05-16

Advanced Data Structures presents a comprehensive look at the ideas, analysis, and implementation details of data structures as a specialized topic in applied algorithms. Data structures are how data is stored within a computer, and how one can go about searching for data within. This text examines efficient ways to search and update sets of numbers, intervals, or strings by various data structures, such as search trees, structures for sets of intervals or piece-wise constant functions, orthogonal range search structures, heaps, union-find structures, dynamization and persistence of structures, structures for strings, and hash tables. This is the first volume to show data structures as a crucial algorithmic topic, rather than relegating them as trivial material used to illustrate object-oriented programming methodology, filling a void in the ever-increasing computer science market. Numerous code examples in C and more than 500 references make Advanced Data Structures an indispensable text. topic. Numerous code examples in C and more than 500 references make Advanced Data Structures an indispensable text.

Starting Out with Java: Early Objects PDF eBook, Global Edition - Tony Gaddis 2015-04-17

This text is intended for use in the Java programming course Tony Gaddis's accessible, step-by-step presentation helps beginning students understand the important details necessary to become skilled programmers at an introductory level. Gaddis motivates the study of both programming skills and the Java programming language by presenting all the details needed to understand the "how" and the "why"—but never losing sight of the fact that most beginners struggle with this material. His approach is both gradual and highly accessible, ensuring that students understand the logic behind developing high-quality programs. In Starting Out with Java: Early Objects, Gaddis looks at objects—the fundamentals of classes and methods—before covering procedural programming. As with all Gaddis texts, clear and easy-to-read code listings, concise and practical real-world examples, and an abundance of exercises appear in every chapter. Teaching and Learning Experience This program presents a better teaching and learning experience—for you and your students. Enhance Learning with the Gaddis Approach: Gaddis's accessible approach features clear and easy-to-read code listings, concise real-world examples, and exercises in every chapter. Keep Your Course Current: Content is refreshed to provide the most up-to-date information on new technologies for your course. Support Instructors and Students: Student and instructor resources are available to expand on the topics presented in the text.

Java, Java, Java - Ralph Morelli 2006

Functional and flexible, this guide takes an objects-first approach to Java programming and problem using

games and puzzles. Updated to cover Java version 1.5 features, such as generic types, enumerated types, and the Scanner class. Offers independent introductions to both a command-line interface and a graphical user interface (GUI). Features coverage of Unified Modeling Language (UML), the industry-standard, object-oriented design tool. Illustrates key aspects of Java with a collection of game and puzzle examples. Instructor and Student resources available online. For introductory computer programming students or professionals interested in learning Java.

Objects, Abstraction, Data Structures and Design - Elliot B. Koffman 2005-10-20

"It is a practical book with emphasis on real problems the programmers encounter daily." --Dr. Tim H. Lin, California State Polytechnic University, Pomona "My overall impressions of this book are excellent. This book emphasizes the three areas I want: advanced C++, data structures and the STL and is much stronger in these areas than other competing books." --Al Verbanec, Pennsylvania State University Think, Then Code When it comes to writing code, preparation is crucial to success. Before you can begin writing successful code, you need to first work through your options and analyze the expected performance of your design. That's why Elliot Koffman and Paul Wolfgang's *Objects, Abstraction, Data Structures, and Design: Using C++* encourages you to Think, Then Code, to help you make good decisions in those critical first steps in the software design process. The text helps you thoroughly understand basic data structures and algorithms, as well as essential design skills and principles. Approximately 20 case studies show you how to apply those skills and principles to real-world problems. Along the way, you'll gain an understanding of why different data structures are needed, the applications they are suited for, and the advantages and disadvantages of their possible implementations. Key Features * Object-oriented approach. * Data structures are presented in the context of software design principles. * 20 case studies reinforce good programming practice. * Problem-solving methodology used throughout... "Think, then code!" * Emphasis on the C++ Standard Library. * Effective pedagogy.

Introduction to Programming Using Java - David Eck 2009-09-01

A Practical Introduction to Data Structures and Algorithm Analysis - Clifford A. Shaffer 2001

This practical text contains fairly "traditional" coverage of data structures with a clear and complete use of algorithm analysis, and some emphasis on file processing techniques as relevant to modern programmers. It fully integrates OO programming with these topics, as part of the detailed presentation of OO programming itself. Chapter topics include lists, stacks, and queues; binary and general trees; graphs; file processing and external sorting; searching; indexing; and limits to computation. For programmers who need a good reference on data structures.

Data Structures and Algorithm Analysis in Java - Mark Allen Weiss 2014-09-24

Data Structures and Algorithm Analysis in Java is an advanced algorithms book that fits between traditional CS2 and Algorithms Analysis courses. In the old ACM Curriculum Guidelines, this course was known as CS7. It is also suitable for a first-year graduate course in algorithm analysis As the speed and power of computers increases, so does the need for effective programming and algorithm analysis. By approaching these skills in tandem, Mark Allen Weiss teaches readers to develop well-constructed, maximally efficient programs in Java. Weiss clearly explains topics from binary heaps to sorting to NP-completeness, and dedicates a full chapter to amortized analysis and advanced data structures and their implementation. Figures and examples illustrating successive stages of algorithms contribute to Weiss' careful, rigorous and in-depth analysis of each type of algorithm. A logical organization of topics and full access to source code complement the text's coverage.

Everyday Data Structures - William Smith 2017-03-14

A practical guide to learning data structures simply and easily About This Book This book is a very practical, friendly, and useful guide that will help you analyze problems and choose the right data structures for your solution Learn to recognize data patterns for determining which structures apply to a given problem Explore the unique rules or "gotchas" that will help you become an excellent programmer Who This Book Is For If you're self-taught programmers in any language who wants to gain a solid understanding of data structures and how to use them to solve real-world problems in your day-to-day development work, then this book is for you. What You Will Learn A rapid overview of data types,

applications for each type, best practices and high-level variations between platforms Review the most common data structures and build working examples in the languages used for mobile platform software development Understand advanced data structure concepts such as generic collections, searching and sorting algorithms, and recursion Learn to use Stacks (LIFO) and queues (FIFO) in your daily application Add/remove objects and nest arrays and dictionaries within another dictionary and understand why such architecture is often preferred or necessary Get acquainted with the tree structures such as heap, binary, and graphs, apply them to work Unleash the power of different sorting techniques such as bubble sort, quick sort, merge sort, insertion sort, and radix sort Perform searching operations on arrays, heaps, graphs, and binary trees in different languages In Detail If you want to learn different data structures and their real-world applications quickly through practical examples, then Everyday Data Structures is for you. This book can introduce you to new data structures and their potential applications through examples in languages common to mobile software development on the most popular platforms. The examples are presented with real-world concepts using language that everyone will understand. This book is logically divided into two parts; the first one covers the basic data structures that are built into most languages such as Objective-C, C#, Java, and Swift. It will cover detailed analysis of the common data structures such as arrays, lists, stacks, Queues, and heaps, typical applications, and specific concerns for each language. Each chapter will provide in-depth examples in several popular languages based on real-world applications. The second part will cover more advanced data structures such as generic collections, sorting, searching, and recursion and ways to use those structures in everyday applications. Style and approach This is a practical, result-focused guide, which is easy to follow, but also fast-paced and really satisfying with full of examples.

Data Structures and Algorithms in C++ - Michael T. Goodrich 2011-02-22

An updated, innovative approach to data structures and algorithms Written by an author team of experts in their fields, this authoritative guide demystifies even the most difficult mathematical concepts so that you can gain a clear understanding of data structures and algorithms in C++. The unparalleled author team incorporates the object-oriented design paradigm using C++ as the implementation language, while also providing intuition and analysis of fundamental algorithms. Offers a unique multimedia format for learning the fundamentals of data structures and algorithms Allows you to visualize key analytic concepts, learn about the most recent insights in the field, and do data structure design Provides clear approaches for developing programs Features a clear, easy-to-understand writing style that breaks down even the most difficult mathematical concepts Building on the success of the first edition, this new version offers you an innovative approach to fundamental data structures and algorithms.

Data Structures and Abstractions with Java - Frank M. Carrano 2007

Using the latest features of Java 5, this unique object-oriented presentation introduces readers to data structures via thirty, manageable chapters. KEY FeaturesTOPICS: Introduces each ADT in its own chapter, including examples or applications. Provides a variety of exercises and projects, plus additional self-assessment questions throughout. the text Includes generic data types as well as enumerations, for-each loops, the interface Iterable, the class Scanner, assert statements, and autoboxing and unboxing. Identifies important Java code as a Listing. Provides NNotes and Pprogramming Ttips in each chapter. For programmers and software engineers interested in learning more about data structures and abstractions.

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.

Java Methods, Second AP Edition - Maria Litvin 2010-12-15

Introduction to Java Programming and Data Structures, Comprehensive Version, Global Edition -

Y. Daniel Liang 2018-02-18

This text is intended for a 1-semester CS1 course sequence. The Brief Version contains the first 18 chapters of the Comprehensive Version. The first 13 chapters are appropriate for preparing the AP Computer Science exam. For courses in Java Programming. A fundamentals-first introduction to basic programming concepts and techniques Designed to support an introductory programming course, Introduction to Java Programming and Data Structures teaches concepts of problem-solving and object-orientated programming

using a fundamentals-first approach. Beginner programmers learn critical problem-solving techniques then move on to grasp the key concepts of object-oriented, GUI programming, advanced GUI and Web programming using JavaFX. This course approaches Java GUI programming using JavaFX, which has replaced Swing as the new GUI tool for developing cross-platform-rich Internet applications and is simpler to learn and use. The 11th edition has been completely revised to enhance clarity and presentation, and includes new and expanded content, examples, and exercises.

Data Structures and Problem Solving Using Java - Mark Allen Weiss 2013-08-29

For the second or third programming course. A practical and unique approach to data structures that separates interface from implementation. This book provides a practical introduction to data structures with an emphasis on abstract thinking and problem solving, as well as the use of Java. It does this through what remains a unique approach that clearly separates each data structure's interface (how to use a data structure) from its implementation (how to actually program that structure). Parts I (Tour of Java), II (Algorithms and Building Blocks), and III (Applications) lay the groundwork by discussing basic concepts and tools and providing some practical examples, while Part IV (Implementations) focuses on implementation of data structures. This forces the reader to think about the functionality of the data structures before the hash table is implemented. The full text downloaded to your computer With eBooks you can: search for key concepts, words and phrases make highlights and notes as you study share your notes with friends eBooks are downloaded to your computer and accessible either offline through the Bookshelf (available as a free download), available online and also via the iPad and Android apps. Upon purchase, you'll gain instant access to this eBook. Time limit The eBooks products do not have an expiry date. You will continue to access your digital ebook products whilst you have your Bookshelf installed.

Data Structures & Other Objects Using C++ - Michael Main 2011

Data Structures and Other Objects Using C++ takes a gentle approach to the data structures course in C++. Providing an early, self-contained review of object-oriented programming and C++, this text gives students a firm grasp of key concepts and allows those experienced in another language to adjust easily. Flexible by design, professors have the option of emphasizing object-oriented programming, covering recursion and sorting early, or accelerating the pace of the course. Finally, a solid foundation in building and using abstract data types is also provided, along with an assortment of advanced topics such as B-trees for project building and graphs.

Object-Oriented Data Structures Using Java - Nell Dale 2011-02-27

Continuing the success of the popular second edition, the updated and revised Object-Oriented Data Structures Using Java, Third Edition is sure to be an essential resource for students learning data structures using the Java programming language. It presents traditional data structures and object-oriented topics with an emphasis on problem-solving, theory, and software engineering principles. Beginning early and continuing throughout the text, the authors introduce and expand upon the use of many Java features including packages, interfaces, abstract classes, inheritance, and exceptions. Numerous case studies provide readers with real-world examples and demonstrate possible solutions to interesting problems. The authors' lucid writing style guides readers through the rigor of standard data structures and presents essential concepts from logical, applications, and implementation levels. Key concepts throughout the Third Edition have been clarified to increase student comprehension and retention, and end-of-chapter exercises have been updated and modified. New and Key Features to the Third Edition: -Includes the use of generics throughout the text, providing the dual benefits of allowing for a type safe use of data structures plus exposing students to modern approaches. -This text is among the first data structures textbooks to address the topic of concurrency and synchronization, which are growing in the importance as computer systems move to using more cores and threads to obtain additional performance with each new generation. Concurrency and synchronization are introduced in the new Section 5.7, where it begins with the basics of Java threads. -Provides numerous case studies and examples of the problem solving process. Each case study includes problem description, an analysis of the problem input and required output, and a discussion of the appropriate data structures to use. -Expanded chapter exercises allow you as the instructor to reinforce topics for your students using both theoretical and practical questions. -Chapters conclude with a chapter summary that highlights the most important topics of the chapter and ties together related topics.

Data Structures and Other Objects Using Java - Michael Main 2011-11

Data Structures and Other Objects Using Java is a gradual, "just-in-time" introduction to Data Structures for a CS2 course. Each chapter provides a review of the key aspects of object-oriented programming and a syntax review, giving students the foundation for understanding significant programming concepts. With this framework they are able to accomplish writing functional data structures by using a five-step method for working with data types; understanding the data type abstractly, writing a specification, using the data type, designing and implementing the data type, and analyzing the implementation. Students learn to think analytically about the efficiency and efficacy of design while gaining exposure to useful Java classes libraries.

Data Structures and Problem Solving Using Java - Mark Allen Weiss 2002

Uses Java to teach data structures and algorithms from the perspective of abstract thinking and problem solving.

Designing Data Structures in Java - Albert A. Brouillette 2013-01-01

"Designing Data Structures in Java" provides a solid foundation for anyone seeking to understand the how and the why of programming data structures. Intended for the reader with an introductory Java background, this book aims to meet the needs of students enrolled in a typical "Data Structures and Algorithms with Java" (CS2) course. Starting with a description of the software development process, the book takes a problem-solving approach to programming, and shows how data structures form the building blocks of well-designed and cleanly-implemented programs. Topics include: Problem solving, Abstraction, Java objects and references, Arrays, Abstract Data Types, Ordered lists, Sorting, Algorithm evaluation, Binary searches, Stacks, Queues, Linked Lists, Double-ended lists, Recursion, Doubly-linked lists, Binary Search Trees, Traversals, Heaps, and more. Mr. Brouillette's 25+ years of experience as a software engineer and educator allow him to bring a unique and refreshing perspective to the topic of data structures which is rigorous, accessible and practical. Material is presented in a 'top down' approach, beginning with explanations of why different data structures are used, continuing with clearly illustrated concepts of how the structures work, and ending with clear, neat Java code examples. Succinct graphics provide visual representations of the ideas, and verbal explanations supplement the documented code. Each chapter ends with a Chapter Checklist summary page which distills and highlights the most important ideas from the chapter. The book is intended as a step by step explanation and exploration of the how and why of using Data Structures in modern computer program development. Even though the Java language is used in the explanation and implementation of the various structures, the concepts are applicable to other languages which the reader may encounter in the future. The topics included have been sequenced to build upon each other, always with the perspective of the beginning programming student in mind. There are discussions of software engineering concepts and goals, and motivations for learning different data structures. This text brings the beginning Java student from novice programmer to the next level of programming maturity.

Data Structures and Other Objects Using Java - Michael Main 2003

This book takes a gentle approach to the data structures course in Java. It offers an early, self-contained review of object-oriented programming and Java to give students a firm grasp of key concepts, and allows those experienced in other languages to adjust easily. The book also offers a flexibility which allows professors such options as emphasizing object-oriented programming, covering recursion and sorting early or accelerating the pace of the course. This title meets the needs of professors searching for a book to balance the introduction of object-oriented programming and data structures with Java. The new edition has been updated to cover Java 1.3 and includes new appendices with more reference material on such topics as Java collections. It also features increased coverage of object-oriented programming and inheritance. New exercises on radix sort and shell sort have also been added.

Data Structures - Elliot B. Koffman 2016

Fundamentals of OOP and Data Structures in Java - Richard Wiener 2000-06-05

A book for an undergraduate course on data structures which integrates the concepts of object-oriented programming and GUI programming.

Data Structures and Algorithm Analysis in Java, Third Edition - Clifford A. Shaffer 2012-09-06

Comprehensive treatment focuses on creation of efficient data structures and algorithms and selection or design of data structure best suited to specific problems. This edition uses Java as the programming language.

Data Structures and Algorithms Using Java - William McAllister 2009

Data Structures & Theory of Computation

Java Programming - D. S. Malik 2011

Designed for a first Computer Science (CS1) Java course, JAVA PROGRAMMING: FROM PROBLEM ANALYSIS TO PROGRAM DESIGN, 5e, International Edition will motivate your students while building a cornerstone for the Computer Science curriculum. With a focus on your students' learning, this text approaches programming using the latest version of Java, and includes updated programming exercises and programs. The engaging and clear-cut writing style will help your students learn key concepts through concise explanations and practice in this complex and powerful language.

Open Data Structures - Pat Morin 2013

Introduction -- Array-based lists -- Linked lists -- Skiplists -- Hash tables -- Binary trees -- Random binary search trees -- Scapegoat trees -- Red-black trees -- Heaps -- Sorting algorithms -- Graphs -- Data structures for integers -- External memory searching.

The Object of Data Abstraction and Structures Using Java - David D. Riley 2003

The Object of Data Abstraction and Structures Using Java is the perfect book for your data structures course. It presents traditional data structures topics with a distinct object-oriented flavor that offers students useful approaches for data structure design and implementation.

Data Structures & Other Objects Using Java - Michael Main 1999

In this book, author Michael Main takes a gentle approach to the data structures course in Java. The text offers an early, self-contained review of object-oriented programming and Java to give students a firm grasp of key concepts, and allows students with a variety of backgrounds to adjust easily to the course. This book offers a flexibility that gives professors such options as emphasizing object-oriented programming, covering recursion and sorting early or accelerating the pace of the course. Main's book meets the needs of professors searching for a text that balances object-oriented programming and data structures with Java.

Java Data Objects - David Jordan 2003-04-22

Introduces Java Data Objects and its capabilities, explains how to make classes persistent, how to configure JDO, how to make queries, how to perform transactions, and its use in Web applications and J2EE environments.

Think Data Structures - Allen Downey 2017-07-07

If you're a student studying computer science or a software developer preparing for technical interviews, this practical book will help you learn and review some of the most important ideas in software engineering—data structures and algorithms—in a way that's clearer, more concise, and more engaging than other materials. By emphasizing practical knowledge and skills over theory, author Allen Downey shows you how to use data structures to implement efficient algorithms, and then analyze and measure their performance. You'll explore the important classes in the Java collections framework (JCF), how they're implemented, and how they're expected to perform. Each chapter presents hands-on exercises supported by test code online. Use data structures such as lists and maps, and understand how they work Build an application that reads Wikipedia pages, parses the contents, and navigates the resulting data tree Analyze code to predict how fast it will run and how much memory it will require Write classes that implement the Map interface, using a hash table and binary search tree Build a simple web search engine with a crawler, an indexer that stores web page contents, and a retriever that returns user query results Other books by Allen Downey include Think Java, Think Python, Think Stats, and Think Bayes.

Data Structures and Other Objects Using Java - Michael Main 2006

Takes a gentle approach to learning data structures using the Java programming language. Providing an early, self-contained review of object-oriented programming and Java, this text gives readers a firm grasp of key concepts and allows those experienced in another language to adjust easily. It has a solid foundation in building and using abstract data types, along with an assortment of advanced topics such as B-trees for

project building and graph. It incorporates Java 5.0 including the use of scanner class and generic data types (generics). MARKET: This book is if for anyone interested in learning how to write effective data structures using the Java language.

Data Structures and Algorithms in Python - Michael T. Goodrich 2013-03-08

Based on the authors' market leading data structures books in Java and C++, this textbook offers a comprehensive, definitive introduction to data structures in Python by authoritative authors. Data Structures and Algorithms in Python is the first authoritative object-oriented book available for the Python data structures course. Designed to provide a comprehensive introduction to data structures and algorithms, including their design, analysis, and implementation, the text will maintain the same general structure as Data Structures and Algorithms in Java and Data Structures and Algorithms in C++.

Starting Out with Java - Tony Gaddis 2015-05-29

NOTE: You are purchasing a standalone product; MyProgrammingLab® does not come packaged with this content. If you would like to purchase both the physical text and MyProgrammingLab search for 0134059875 / 9780134059877 Starting Out with Java: From Control Structures through Objects plus MyProgrammingLab with Pearson eText -- Access Card Package, 6/e Package consists of: 0133957055 / 9780133957051 Starting Out with Java: From Control Structures through Objects, 6/e 0133885569 / 9780133885569 0133957608 / 9780133957600 MyProgrammingLab with Pearson eText -- Access Card -- for Starting Out with Java: From Control Structures through Objects, 6/e MyProgrammingLab should only be purchased when required by an instructor. For courses in computer programming in Java Starting Out with Java: From Control Structures through Objects provides a brief yet detailed introduction to programming in the Java language. Starting out with the fundamentals of data types and other basic elements, readers quickly progress to more advanced programming topics and skills. By moving from control structures to objects, readers gain a comprehensive understanding of the Java language and its applications. As with all Gaddis texts, the Sixth Edition is clear, easy to read, and friendly in tone. The text teaches by example throughout, giving readers a chance to apply their learnings by beginning to code with Java. Also available with MyProgrammingLab MyProgrammingLab is an online homework, tutorial, and assessment program designed to work with this text to engage students and improve results. Within its structured environment, students practice what they learn, test their understanding, and pursue a personalized study plan that helps them better absorb course material and understand difficult concepts. MyProgrammingLab allows you to engage your students in the course material before, during, and after class with a variety of activities and assessments.

Data Structures Using C++ - D. S. Malik 2009-07-31

Now in its second edition, D.S. Malik brings his proven approach to C++ programming to the CS2 course. Clearly written with the student in mind, this text focuses on Data Structures and includes advanced topics in C++ such as Linked Lists and the Standard Template Library (STL). The text features abundant visual diagrams, examples, and extended Programming Examples, all of which serve to illuminate difficult concepts. Complete programming code and clear display of syntax, explanation, and example are used throughout the text, and each chapter concludes with a robust exercise set. Important Notice: Media content referenced within the product description or the product text may not be available in the ebook

version.

Fundamentals of Computer Programming with C# - Svetlin Nakov 2013-09-01

The free book "Fundamentals of Computer Programming with C#" is a comprehensive computer programming tutorial that teaches programming, logical thinking, data structures and algorithms, problem solving and high quality code with lots of examples in C#. It starts with the first steps in programming and software development like variables, data types, conditional statements, loops and arrays and continues with other basic topics like methods, numeral systems, strings and string processing, exceptions, classes and objects. After the basics this fundamental programming book enters into more advanced programming topics like recursion, data structures (lists, trees, hash-tables and graphs), high-quality code, unit testing and refactoring, object-oriented principles (inheritance, abstraction, encapsulation and polymorphism) and their implementation the C# language. It also covers fundamental topics that each good developer should know like algorithm design, complexity of algorithms and problem solving. The book uses C# language and Visual Studio to illustrate the programming concepts and explains some C# / .NET specific technologies like lambda expressions, extension methods and LINQ. The book is written by a team of developers lead by Svetlin Nakov who has 20+ years practical software development experience. It teaches the major programming concepts and way of thinking needed to become a good software engineer and the C# language in the meantime. It is a great start for anyone who wants to become a skillful software engineer. The books does not teach technologies like databases, mobile and web development, but shows the true way to master the basics of programming regardless of the languages, technologies and tools. It is good for beginners and intermediate developers who want to put a solid base for a successful career in the software engineering industry. The book is accompanied by free video lessons, presentation slides and mind maps, as well as hundreds of exercises and live examples. Download the free C# programming book, videos, presentations and other resources from <http://introprogramming.info>. Title: Fundamentals of Computer Programming with C# (The Bulgarian C# Programming Book) ISBN: 9789544007737 ISBN-13: 978-954-400-773-7 (9789544007737) ISBN-10: 954-400-773-3 (9544007733) Author: Svetlin Nakov & Co. Pages: 1132 Language: English Published: Sofia, 2013 Publisher: Faber Publishing, Bulgaria Web site: <http://www.introprogramming.info> License: CC-Attribution-Share-Alike Tags: free, programming, book, computer programming, programming fundamentals, ebook, book programming, C#, CSharp, C# book, tutorial, C# tutorial; programming concepts, programming fundamentals, compiler, Visual Studio, .NET, .NET Framework, data types, variables, expressions, statements, console, conditional statements, control-flow logic, loops, arrays, numeral systems, methods, strings, text processing, StringBuilder, exceptions, exception handling, stack trace, streams, files, text files, linear data structures, list, linked list, stack, queue, tree, balanced tree, graph, depth-first search, DFS, breadth-first search, BFS, dictionaries, hash tables, associative arrays, sets, algorithms, sorting algorithm, searching algorithms, recursion, combinatorial algorithms, algorithm complexity, OOP, object-oriented programming, classes, objects, constructors, fields, properties, static members, abstraction, interfaces, encapsulation, inheritance, virtual methods, polymorphism, cohesion, coupling, enumerations, generics, namespaces, UML, design patterns, extension methods, anonymous types, lambda expressions, LINQ, code quality, high-quality code, high-quality classes, high-quality methods, code formatting, self-documenting code, code refactoring, problem solving, problem solving methodology, 9789544007737, 9544007733