

A Concise And Practical Introduction To Programming Algorithms In Java Pdf Pdf

A Concise And Practical Introduction To Programming Algorithms In Java Pdf Pdf - Decoding a **concise and practical introduction to programming algorithms in java pdf pdf**: Revealing the Captivating Potential of Verbal Expression

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Guide to Java James T. Streib 2014-07-08 This book presents a focused and accessible primer on the fundamentals of Java programming, with extensive use of examples and hands-on exercises. Topics and features: provides an introduction to variables, input/output and arithmetic operations; describes objects and contour diagrams, explains selection structures, and demonstrates how iteration structures work; discusses object-oriented concepts such as overloading and classes methods, and introduces string variables and processing; illustrates arrays and array processing and examines recursion; explores inheritance and polymorphism and investigates elementary files; presents a primer on graphical input/output, discusses elementary exception processing, and presents the basics of Javadoc; includes exercises at the end of each chapter, with selected answers in an appendix and a glossary of key terms; provides additional supplementary information at an associated website.

TCP/IP Sockets in C Michael J. Donahoo 2001-11-14 For example code from the text, Winsock adaptations of text code, sample programming exercises and more, click on the grey "COMPANION SITE" button to the right. Note: This title was formerly known as Pocket Guide to TCP/IP Socket Programming in C. ISBN 1-55860-686-6. TCP/IP Sockets in C: Practical Guide for Programmers is a quick and affordable way to gain the knowledge and skills you need to develop sophisticated and powerful network-based programs using sockets. Written by two experienced networking instructors, this book provides a series of examples that demonstrate basic sockets techniques for clients and servers. Using plenty of real-world examples, this book is a complete beginner's guide to socket programming and a springboard to more advanced networking topics, including multimedia protocols. *Concise, no-nonsense explanations of issues often troublesome for beginners, including message construction and parsing. *Comprehensive example-based coverage of the most important TCP/IP techniques-including iterative and concurrent servers, timeouts, and asynchronous message processing. *Includes a detailed, easy-to-use reference to the system calls and auxiliary routines that comprise the sockets interface. *A companion Web site provides source code for all example programs in both C and WinSock versions, as well as guidance on running the code on various platforms.

Linear and Integer Programming Made Easy T. C. Hu 2016-05-03 This textbook provides concise coverage of the basics of linear and integer programming which, with megatrends toward optimization, machine learning, big data, etc., are becoming fundamental toolkits for data and information science and technology. The authors' approach is accessible to students from almost all fields of engineering, including operations research, statistics, machine learning, control system design, scheduling, formal verification and computer vision. The presentations enables the basis for numerous approaches to solving hard combinatorial optimization problems through randomization and approximation. Readers will learn to cast various problems that may arise in their research as optimization problems, understand the cases where the optimization problem will be linear, choose appropriate solution methods and interpret results appropriately.

C++ Language Program for Beginners Will Norton 2020-05-12 Are you looking forward to learning programming easily? Are you a beginner trying to learn C++ programming language? Are you an experienced programmer trying to learn C++? Are you interested in creating real world programming projects with C++? If you are asking any of these questions then we are glad to tell you that you are on the right path. The truth is... C++ is one of the most popular languages of this decade. It is often considered as a tough programming language to learn but it is actually an easy programming language if learned in the right way. C++ is an object oriented programming language that requires understanding of various complex topics such as Inheritance, Events, Classes and Polymorphism to name a few. To explain all of these concepts we need to use a book that is concise and simple. DOWNLOAD: C++ programming language for beginners - A practical guide to learn C++ programming, fundamentals and code You will learn: ● What is C++ and why is it important? ● Different versions available in C++ ● How to create your first C++ program? ● What are the different available operations in C++? ● What are variables, constants, manipulators? ● What are defined functions? ● A brief section about Arrays and Structures ● A chapter about input and output sequences ● Event driven programming ● Expressions in C++ The best thing about this book is its easy language. The writers have compiled with a lot of real world examples to help you interact with the material in an effective way. This book is both theoretical and project oriented. Would you like to know more? we are glad to say that this is the book that you are looking for. Scroll to the top of the page and select the buy now button **The Essence of Programming Using C++** Doug Bell 1996 Acknowledging recent changes within higher education, the Prentice Hall Essence of Computing series provides a concise, practical and uniform introduction to the core components of an undergraduate computer science degree.

NET Programming Pradeep Kumar Tapadiya 2002 Tapadiya takes a straightforward, hands-on approach to explain everything readers need to know from development to deployment and maintenance for this platform--all from a developer's perspective. Using C# as the primary language, and with plenty of code examples throughout, this book is an excellent way to learn.

A Concise Introduction to Software Engineering Pankaj Jalote 2008-10-17 An introductory course on Software Engineering remains one of the hardest subjects to teach largely because of the wide range of topics the area en- passes. I have believed for some time that we often tend to teach too many concepts and topics in an introductory course resulting in shallow knowledge and little insight on application of these concepts. And Software Engineering is 7nally about application of concepts to eciently engineer good software solutions. Goals I believe that an introductory course on Software Engineering should focus on imparting to students the knowledge and skills that are needed to successfully execute a commercial project of a few person-months eort while employing proper practices and techniques. It is worth pointing out that a vast majority of the projects executed in the industry today fall in this scope—executed by a small team over a few months. I also believe that by carefully selecting the concepts and topics, we can, in the course of a semester, achieve this. This is the motivation of this book. The goal of this book is to introduce to the students a limited number of concepts and practices which will achieve the following two objectives: - Teach the student the skills needed to execute a smallish commercial project.

Practical Haskell Alejandro Serrano Mena 2019-04-27 Get a practical, hands-on introduction to the Haskell language, its libraries and environment, and to the functional programming paradigm that is fast growing in importance in the software industry. This book contains excellent coverage of the Haskell ecosystem and supporting tools, include Cabal and Stack for managing projects, HUnit and QuickCheck for software testing, the Spock framework for developing web applications, Persistent and Esqueleto for database access, and parallel and distributed programming libraries. You'll see how functional programming is gathering momentum, allowing you to express yourself in a more concise way, reducing boilerplate, and increasing the safety of your code. Haskell is an elegant and noise-free pure functional language with a long history, having a huge number of library contributors and an active community. This makes Haskell the best tool for both learning and applying functional programming, and Practical Haskell takes advantage of this to show off the language and what it can do. What You Will Learn Get started programming with Haskell Examine the different parts of the language Gain an overview of the most important libraries and tools in the Haskell ecosystem Apply functional patterns in real-world scenarios Understand monads and monad transformers Proficiently use laziness and resource management Who This Book Is For Experienced programmers who may be new to the Haskell programming language. However, some prior exposure to Haskell is recommended.

Introduction to HPC with MPI for Data Science Frank Nielsen 2016-02-03 This gentle introduction to High Performance Computing (HPC) for Data Science using the Message Passing Interface (MPI) standard has been designed as a first course for undergraduates on parallel programming on distributed memory models, and requires only basic programming notions. Divided into two parts the first part covers high performance computing using C++ with the Message Passing Interface (MPI) standard followed by a second part providing high-performance data analytics on computer clusters. In the first part, the fundamental notions of blocking versus non-blocking point-to-point communications, global communications (like broadcast or scatter) and collaborative computations (reduce), with Amdahl and Gustafson speed-up laws are described before addressing parallel sorting and parallel linear algebra on computer clusters. The common ring, torus and hypercube topologies of clusters are then explained and global communication procedures on these topologies are studied. This first part closes with the MapReduce (MR) model of computation well-suited to processing big data using the MPI framework. In the second part, the book focuses on high-performance data analytics. Flat and hierarchical clustering algorithms are introduced for data exploration along with how to program these algorithms on computer clusters, followed by machine learning classification, and an introduction to graph analytics. This part closes with a concise introduction to data core-sets that let big data problems be amenable to tiny data problems. Exercises are included at the end of each chapter in order for students to practice the concepts learned, and a final section contains an overall exam which allows them to evaluate how well they have assimilated the material covered in the book.

A C++ Primer for Engineers K. Ponnambalam 1997-01 A concise and practical introduction to C++ aimed primarily as a first programming course for engineers. It features a range of engineering problems and provides supportive tutorial examples (available on IBM diskette included free with this text). It is also suitable for computer science students, as it should appeal to those who prefer a hands-on approach. Class variants (pre- and post-conditions) are explained throughout the book. Solutions (C++ code and the five-step design methodology) to exercises are included on the accompanying diskette.

Java Michael Sikora 2003-01-07 If you're an experienced programmer, you already have a rock-solid foundation for learning Java. All you need is a resource that takes your experience into account and explains Java's key principles and techniques in an intelligent, efficient way. Java: Practical Guide for Programmers is precisely that resource. Here, you won't have to wade through hundreds of pages of overly simplistic material to learn the basics of Java programming. Instead, you get highly focused instruction in the core elements of Java 1.4, accompanied by carefully chosen examples and line-by-line analyses that are right to the point. You'll be astonished at how soon you can begin productive coding in Java, and how quickly your skills will progress. Written expressly for people who already know a procedural or object-oriented programming language. Takes a concise approach designed to make the most of the experience you already have. Covers the core elements of Java 1.4, including language syntax, OO features, collections, exception handling, input/output, threads, event handling, and Swing components. Filled with incisive coding examples and line-by-line analyses.

Extreme Programming Pocket Guide Chromatic 2003 Provides information on eXtreme programming, or XP, a software development methodology.

Practical Foundations for Programming Languages Robert Harper 2016-04-04 This text develops a comprehensive theory of programming languages based on type systems and structural operational semantics. Language concepts are precisely defined by their static and dynamic semantics, presenting the essential tools both intuitively and rigorously while relying on only elementary mathematics. These tools are used to analyze and prove properties of languages and provide the framework for combining and comparing language features. The broad range of concepts includes fundamental data types such as sums and products, polymorphic and abstract types, dynamic typing, dynamic dispatch, subtyping and refinement types, symbols and dynamic classification, parallelism and cost semantics, and concurrency and distribution. The methods are directly applicable to language implementation, to the development of logics for reasoning about programs, and to the formal verification language properties such as type safety. This thoroughly revised second edition includes exercises at the end of nearly every chapter and a new chapter on type refinements.

Game C++ Programming Kenwright 2020-06-12 Game C++ Programming A Practical Introduction presents a beginners approach to writing concise and clear programs for real-time gaming environments. We give simplified implementation examples to help the reader gain a solid understanding while mentioning pitfalls and tricks. The book explains basic principles all the way through to testing and coding, while illustrating and demonstrating examples to give the reader a solid grasp of the topic.The book follows a beginners approach, introducing principles and problems related to the different C++ concepts, including arrays, vectors, and pointers. All in all, the book presents a practical point of view with implementation details, limitations, engineering workarounds and common pitfalls. Master the basic maths and principles needed to write fast, robust and clear software programsCode real-time simulations, such as animated graphics and physics systemsUnderstand how to write code quickly and reliably that can be read by others easily and quickly Develop an understanding of programming C++ inaccuracies, numerical problems, approximations and how to deal with them

Expert Systems Peter S. Sell 1985 A concise practical introduction to the history, characteristics, structure, operation, and use of expert systems. Provides programmers with sufficient insight and guidance to enable them to construct an expert system shell using a favorite programming language. Shows how to develp and maintain expert systems, and how to tackle technical problems unique to the field. There's also advice on how to access new applications.

Python for Data Analysis Dylan Penny 2021-02-10 * 55% OFF for Bookstores! NOW Discounted Retail Price at \$ 32.95 Instead of \$ 42.95! LAST DAYS! * How many times have you thought about learning how to code but got discouraged as you didn't have any technical experience, the time to learn, or, simply, you didn't think you were intelligent enough? Then this book is perfect for your costumers will never stop to use this awesome guide! You don't need a costly computer science degree, a genius mind, and a 1000-page textbook to learn Python's basics for Data Analysis. This book, PYTHON FOR DATA ANALYSIS: A PRACTICAL GUIDE TO MANIPULATING, PROCESSING, CLEANING, AND CRUNCHING DATA SETS IN PYTHON. HOW TO EFFECTIVELY SOLVE A WIDE RANGE OF DATA ANALYSIS PROBLEMS, is a concise, step-by-step guide to Python for Data Analysis. Many books about Python's are theoretical and have little to no practical examples. This manual offers a plethora of simple illustrations and examples to underline core concepts and enhance your understanding. Loads of practice exercises are provided to make you learn fast, remember, and build a thorough understanding of the key concepts. Are you ready to find out more? Here's a short preview of what you will learn inside this book: Why Python for data analysis? Data analysis bases Python libraries and installation Python language basics, ipython and jupyter notebooks Built-in data structures, functions, and files Introduction to modeling libraries in Python ...And so much more! This book will offer you a comprehensive explanation of Python for data analysis while not overpowering you with loads of information. Compared to other books, the examples' outputs are given, so you don't need to wait. Buy it NOW and let your customers get addicted to this amazing book!

C# 2.0 Michel de Champlain 2005-03-30 You don't need coddling; you don't need to be told what you already know. What you need is a book that uses your experience as a Java or C++ programmer to give you a leg up into the challenges and rewards of C#. And this Practical Guide is precisely what you're after. Written by a team that boasts extensive experience teaching C# to professionals, this book provides a practical, efficient explanation of the language itself, covering basic to advanced features and calling out all that's new in 2.0. Its instruction is always firmly situated within the context of the .NET framework and bolstered by code examples, key lessons in object-oriented programming, and installations of a realistic application programming tutorial. Concise and incisive, this is the best way to master the world's fastest-growing and most marketable programming language. Features: Provides a carefully focused explanation of every aspect of the C# language, including entire chapters on the unified type system, advanced types, collections, generics, reflection and attributes. Highlights all features new to the latest version of C# and organizes its presentation of C# according to the key principles of object-oriented programming and the .NET framework. Using end-of-chapter exercises, incrementally develops a cohesive application programming tutorial. Provides a carefully focused explanation of every aspect of the C# language, including entire chapters on the unified type system, advanced types, collections, generics, reflection and attributes. Highlights all features new to the latest version of C# and organizes its presentation of C# according to the key principles of object-oriented programming and the .NET framework. Using end-of-chapter exercises, incrementally develops a cohesive application programming tutorial.

Object-oriented programming D. P. Solomatine 2000

Agent-Based and Individual-Based Modeling Steven F. Railsback 2012 Agent-based modeling is a new technique for understanding how the dynamics of biological, social, and other complex systems arise from the characteristics and behaviors of the agents making up these systems. This innovative textbook gives students and scientists the skills to design, implement, and analyze agent-based models. It starts with the fundamentals of modeling and provides an introduction to NetLogo, an easy-to-use, free, and powerful software platform. Nine chapters then each introduce an important modeling concept and show how to implement it using NetLogo. The book goes on to present strategies for finding the right level of model complexity and developing theory for agent behavior, and for analyzing and learning from models. Agent-Based and Individual-Based Modeling features concise and accessible text, numerous examples, and exercises using small but scientific models. The emphasis throughout is on analysis--such as software testing, theory development, robustness analysis, and understanding full models--and on design issues like optimizing model structure and finding good parameter values. The first hands-on introduction to agent-based modeling, from conceptual design to computer implementation to parameterization and analysis Provides an introduction to NetLogo with nine chapters introducing an important modeling concept and showing how to implement it using NetLogo Filled with examples and exercises, with updates and supplementary materials at <http://www.railsback-grimm-abm-book.com/> Designed for students and researchers across the biological and social sciences Written by leading practitioners Leading universities that have adopted this book include: Amherst College Brigham Young University Carnegie Mellon University Cornell University Miami University Northwestern University Old Dominion University Portland State University Rhodes College Susquehanna University University College, Dublin University of Arizona University of British Columbia University of Michigan University of South Florida University of Texas at Austin University of Virginia

PHP 8 Programming Tips, Tricks and Best Practices Doug Bierer 2021-08-27 Discover effective techniques, workarounds, and expert guidance for avoiding situations where your application might break following PHP 8 migration Key FeaturesGet the hang of all the new features introduced in PHP 8Learn how to detect potential code breaks and keep your application code running smoothly in PHP 8Explore an exciting new trend - asynchronous PHP programming using Swoole and FibersBook Description Thanks to its ease of use, PHP is a highly popular programming language used on over 78% of all web servers connected to the Internet. PHP 8 Programming Tips, Tricks, and Best Practices will help you to get up-to-speed with PHP 8 quickly. The book is intended for any PHP developer who wants to become familiar with the cool new features available in PHP 8, and covers areas where developers might experience backward compatibility issues with their existing code after a PHP 8 update. The book thoroughly explores best practices, and highlights ways in which PHP 8 enforces these practices in a much more

rigorous fashion than its earlier versions. You'll start by exploring new PHP 8 features in the area of object-oriented programming (OOP), followed by enhancements at the procedural level. You'll then learn about potential backward compatible breaks and discover best practices for improving performance. The last chapter of the book gives you insights into PHP async, a revolutionary new way of programming, by providing detailed coverage and examples of asynchronous programming using the Swoole extension and Fibers. By the end of this PHP book, you'll not only have mastered the new features, but you'll also know exactly what to watch out for when migrating older PHP applications to PHP 8. What you will learnGain a comprehensive understanding of the new PHP 8 object-oriented featuresDiscover new PHP 8 procedural programming enhancementsUnderstand improvements in error handling in PHP 8Identify potential backward compatibility issuesAvoid traps due to changes in PHP extensionsFind out which features have been deprecated and/or removed in PHP 8Become well-versed with programming best practices enforced by PHP 8Who this book is for This book is for PHP developers at all levels who have experience in PHP 5 or above. If you're just getting started with PHP, you'll find the code examples useful for learning the language. Developers who have worked for a few months on one or more PHP projects will be able to apply the tips and techniques to the code at hand, while those with many years of PHP experience are sure to appreciate the concise coverage of new PHP 8 features.

Python for Beginners Hated Bentetifia 2023-08-19 Whether you are a computer science student, a self-taught programmer passionate about programming, or simply curious about learning a new language, this book is designed to help you learn Python. Python is a popular programming language widely used in various fields. It is known for its simplicity and readability. It is ideal for beginners because its syntax is clear and concise, which makes it easy to understand and write code. With Python, you can do a wide variety of tasks, from web development to data analysis to application creation and more. Whether you want to strengthen your programming basics, prepare a project, or just practice your coding, this book is for you. It offers you a unique opportunity to learn in a practical and interactive way, by actively involving yourself in problem solving. This book uses a proven pedagogical approach adapted for programming beginners. Each theoretical concept is followed by concrete examples. A series of practice and programming problems is offered for each chapter. A skills test is offered at the end of each chapter through a quiz. Some chapters also come with additional practice labs that put several skills into action. With this book, you will: Explore Python data types Use basic operators Use decision and repetition structures Develop and use functions Read and write data files Use object-oriented programming Use Exception handling Develop graphical user interfaces We hope that this Python book will inspire you and help you progress in your learning journey. Get ready to dive into the exciting world of Python programming and discover everything you can accomplish with this versatile and powerful language.

C# 2.0 Michel de Champlain 2005 You dont need coddling; you dont need to be told what you already know. What you need is a book that uses your experience as a Java or C++ programmer to give you a leg up into the challenges and rewards of C#. And this Practical Guide is precisely what youre after. Written by a team that boasts extensive experience teaching C# to professionals, this book provides a practical, efficient explanation of the language itself, covering basic to advanced features and calling out all thats new in 2.0. Its instruction is always firmly situated within the context of the .NET framework and bolstered by code examples, key lessons in object-oriented programming, and installments of a realistic application programming tutorial. Concise and incisive, this is the best way to master the worlds fastest-growing and most marketable programming language. Features * Provides a carefully focused explanation of every aspect of the C# language, including entire chapters on the unified type system, advanced types, collections, generics, reflection and attributes. * Highlights all features new to the latest version of C# and organizes its presentation of C# according to the key principles of object-oriented programming and the .NET framework. * Using end-of-chapter exercises, incrementally develops a cohesive application programming tutorial. * Includes an easy-to-use appendix on the grammatical rules of C# and provides downloadable example code via the companion website. * Provides a carefully focused explanation of every aspect of the C# language, including entire chapters on the unified type system, advanced types, collections, generics, reflection and attributes. * Highlights all features new to the latest version of C# and organizes its presentation of C# according to the key principles of object-oriented programming and the .NET framework. * Using end-of-chapter exercises, incrementally develops a cohesive application programming tutorial. * Includes an easy-to-use appendix on the grammatical rules of C# and provides downloadable example code via the companion website.

Introductory Operations Research Harvir Singh Kasana 2013-03-14 Each concept is discussed from the basics and supported by sufficient mathematical background and worked examples. Suitable for individual or group learning, the book offers numerous end-of-chapter problems for study and review.

A Concise and Practical Introduction to Programming Algorithms in Java Frank Nielsen 2009-04-05 A Concise and Practical Introduction to Programming Algorithms in Java has two main goals. The first is for novice programmers to learn progressively the basic concepts underlying most imperative programming languages using Java. The second goal is to introduce new programmers to the very basic principles of thinking the algorithmic way and turning the algorithms into programs using the programming concepts of Java. The book is divided into two parts and includes: The fundamental notions of variables, expressions and assignments with type checking - Conditional and loop statements - Explanation of the concepts of functions with pass-by-value arguments and recursion - Fundamental sequential and bisection search techniques - Basic iterative and recursive sorting algorithms. Each chapter of the book concludes with a set of exercises to enable students to practice concepts covered.

A Concise Introduction to Programming in Python Mark J. Johnson 2011-12-21 Suitable for newcomers to computer science, A Concise Introduction to Programming in Python provides a succinct, yet complete, first course in computer science using the Python programming language. The book features: Short, modular chapters with brief and precise explanations, intended for one class period Early introduction of basic procedural constructs such as functions, selection, and repetition, allowing them to be used throughout the course Objects are introduced in the middle of the course, and class design comes toward the end Examples, exercises, and projects from a wide range of application domains, including biology, physics, images, sound, mathematics, games, and textual analysis No external libraries are required, simplifying the book's use in common lab spaces Each chapter introduces a main idea through a concrete example and a series of exercises. Designed to teach programming in a concise, yet comprehensive way, this book provides a timely introduction for students and anyone interested in learning Python. **Guide to Graphics Software Tools** Jim X. Chen 2008-12-17 The 2nd edition of this integrated guide explains and lists readily available graphics software tools and their applications, while also serving as a shortcut to graphics theory and programming. It grounds readers in fundamental concepts and helps them use visualization, modeling, simulation, and virtual reality to complement and improve their work.

Jump Start CoffeeScript Earle Castledine 2012 A practical and concise introduction to CoffeeScript, a programming language that compiles into JavaScript and that makes working with JavaScript easier. The book lays out the basics of the language, its syntax, and the interesting features that set it apart from JavaScript. It should satisfy anyone with an intermediate level of understanding of JavaScript who needs a conceptual and practical introduction to CoffeeScript. The book is based around a practical project, leading you through the building of a simple HTML-based 2D game, and explaining the language's philosophy, syntax, and features step-by-step along the way. You'll be able to see results on-screen from the very beginning, starting with a simple JavaScript drawing function transformed into CoffeeScript. The game's code is based on well- understood principles and prior art, using common, simple programming patterns that are easy to grasp while also demonstrating CoffeeScript's expressiveness. This is a fun and fast-paced book that rewards you for each completed step with interesting game features. You will finish the book with the sense of accomplishment that comes from building something fun, as well as having gained a solid understanding of CoffeeScript and an interest in exploring its more advanced features.

TCP/IP Sockets in C# David Makofske 2004-05-25 *TCP/IP sockets in C# is an excellent book for anyone interested in writing network applications using Microsoft .Net frameworks. It is a unique combination of well written concise text and rich carefully selected set of working examples. For the beginner of network programming, it's a good starting book; on the other hand professionals could also take advantage of excellent handy sample code snippets and material on topics like message parsing and asynchronous programming." Adarsh Khare, SDT, .Net Frameworks Team, Microsoft Corporation The popularity of the C# language and the .NET framework is ever rising due to its ease of use, the extensive class libraries available in the .NET Framework, and the ubiquity of the Microsoft Windows operating system, to name a few advantages. TCP/IP Sockets in C# focuses on the Sockets API, the de facto standard for writing network applications in any programming language. Starting with simple client and server programs that use TCP/IP (the Internet protocol suite), students and practitioners quickly learn the basics and move on to firsthand experience with advanced topics including non-blocking sockets, multiplexing, threads, asynchronous programming, and multicasting. Key network programming concepts such as framing, performance and deadlocks are illustrated through hands-on examples. Using a detailed yet clear, concise approach, this book includes numerous code examples and focused discussions to provide a solid understanding of programming TCP/IP sockets in C#. Features *Tutorial-based instruction in key sockets programming techniques complemented by numerous code examples throughout *Discussion moves quickly into the C# Sockets API definition and code examples, desirable for those who want to get up-to-speed quickly *Important coverage of "under the hood" details that developers will find useful when creating and using a socket or a higher level TCP class that utilizes sockets *Includes end-of-chapter exercises to facilitate learning, as well as sample code available for download at the book's companion web site

Ship It! Jared R. Richardson 2005 Short of hauling it from their garages to the curb with their SUVs, most folks do not have a clue about getting their new-born product on the street. Experienced practitioners Richardson and Gwaltney give inside information on the practicalities of managing a development project, whether from the aforesaid garage or from the largest cube farm in th.

Modern Programming Languages Adam Brooks Webber 2003 Typical undergraduate CS/CE majors have a practical orientation; they study computing because they like programming and are good at it. This book has strong appeal to this core student group. There is more than enough material for a semester-long course. The challenge for a course in programming language concepts is to help practical

A Practical Introduction to the Simulation of Molecular Systems Martin J. Field 2007-07-19 Molecular simulation is a powerful tool in materials science, physics, chemistry and biomolecular fields. This updated edition provides a

pragmatic introduction to a wide range of techniques for the simulation of molecular systems at the atomic level. The first part concentrates on methods for calculating the potential energy of a molecular system, with new chapters on quantum chemical, molecular mechanical and hybrid potential techniques. The second part describes methods examining conformational, dynamical and thermodynamical properties of systems, covering techniques including geometry-optimization, normal-mode analysis, molecular dynamics, and Monte Carlo simulation. Using Python, the second edition includes numerous examples and program modules for each simulation technique, allowing the reader to perform the calculations and appreciate the inherent difficulties involved in each. This is a valuable resource for researchers and graduate students wanting to know how to use atomic-scale molecular simulations. Supplementary material, including the program library and technical information, available through www.cambridge.org/9780521852524.

Programming Robots with ROS Morgan Quigley 2015-11-16 Chapter 3. Topics; Publishing to a Topic; Checking That Everything Works as Expected; Subscribing to a Topic; Checking That Everything Works as Expected; Latched Topics; Defining Your Own Message Types; Defining a New Message; Using Your New Message; When Should You Make a New Message Type?; Mixing Publishers and Subscribers; Summary; Chapter 4. Services; Defining a Service; Implementing a Service; Checking That Everything Works as Expected; Other Ways of Returning Values from a Service; Using a Service; Checking That Everything Works as Expected; Other Ways to Call Services; Summary.

Parallel Computational Technologies Leonid Sokolinsky 2021-07-08 This book constitutes refereed proceedings of the 15th International Conference on Parallel Computational Technologies, PCT 2021, held in March-April 2021.

Due to the COVID-19 pandemic the conference was held online. The 22 revised full papers presented were carefully reviewed and selected from 89 submissions. The papers are organized in topical sections on high performance architectures, tools and technologies; parallel numerical algorithms; supercomputer simulation.

Matlab Stormy Attaway 2013-06-03 MatLab, Third Edition is the only book that gives a full introduction to programming in MATLAB combined with an explanation of the software's powerful functions, enabling engineers to fully exploit its extensive capabilities in solving engineering problems. The book provides a systematic, step-by-step approach, building on concepts throughout the text, facilitating easier learning. Sections on common pitfalls and programming guidelines direct students towards best practice. The book is organized into 14 chapters, starting with programming concepts such as variables, assignments, input/output, and selection statements; moves onto loops; and then solves problems using both the 'programming concept' and the 'power of MATLAB' side-by-side. In-depth coverage is given to input/output, a topic that is fundamental to many engineering applications. Vectorized Code has been made into its own chapter, in order to emphasize the importance of using MATLAB efficiently. There are also expanded examples on low-level file input functions, Graphical User Interfaces, and use of MATLAB Version R2012b; modified and new end-of-chapter exercises; improved labeling of plots; and improved standards for variable names and documentation. This book will be a valuable resource for engineers learning to program and model in MATLAB, as well as for undergraduates in engineering and science taking a course that uses (or recommends) MATLAB. Presents programming concepts and MATLAB built-in functions side-by-side Systematic, step-by-step approach, building on concepts throughout the book, facilitating easier learning Sections on common pitfalls and programming guidelines direct students towards best practice

Concise Guide to Databases Peter Lake 2013-11-22 This easy-to-read textbook/reference presents a comprehensive introduction to databases, opening with a concise history of databases and of data as an organisational asset. As relational database management systems are no longer the only database solution, the book takes a wider view of database technology, encompassing big data, NoSQL, object and object-relational and in-memory databases. The text also examines the issues of scalability, availability, performance and security encountered when building and running a database in the real world. Topics and features: presents review and discussion questions at the end of each chapter, in addition to skill-building, hands-on exercises; introduces the fundamental concepts and technologies in database systems, placing these in an historic context; describes the challenges faced by database professionals; reviews the use of a variety of database types in business environments; discusses areas for further research within this fast-moving domain.

Learn Python Programming Fabrizio Romano 2021-10-29 Get up and running with Python 3.9 through concise tutorials and practical projects in this fully updated third edition. Purchase of the print or Kindle book includes a free eBook in PDF format. Key FeaturesExtensively revised with richer examples, Python 3.9 syntax, and new chapters on APIs and packaging and distributing Python codeDiscover how to think like a Python programmerLearn the fundamentals of Python through real-world projects in API development, GUI programming, and data scienceBook Description Learn Python Programming, Third Edition is both a theoretical and practical introduction to Python, an extremely flexible and powerful programming language that can be applied to many disciplines. This book will make learning Python easy and give you a thorough understanding of the language. You'll learn how to write programs, build modern APIs, and work with data by using renowned Python data science libraries. This revised edition covers the latest updates on API management, packaging applications, and testing. There is also broader coverage of context managers and an updated data science chapter. The book empowers you to take ownership of writing your software and become independent in fetching the resources you need. You will have a clear idea of where to go and how to build on what you have learned from the book. Through examples, the book explores a wide range of applications and concludes by building real-world Python projects based on the concepts you have learned. What you will learnGet Python up and running on Windows, Mac, and LinuxWrite elegant, reusable, and efficient code in any situationAvoid common pitfalls like duplication, complicated design, and over-engineeringUnderstand when to use the functional or object-oriented approach to programmingBuild a simple API with FastAPI and program GUI applications with TkinterGet an initial overview of more complex topics such as data persistence and cryptographyFetch, clean, and manipulate data, making efficient use of Python's built-in data structuresWho this book is for This book is for everyone who wants to learn Python from scratch, as well as experienced programmers looking for a reference book. Prior knowledge of basic programming concepts will help you follow along, but it's not a prerequisite.

Introduction to Octave Sandeep Nagar 2017-11-25 Familiarize yourself with Octave using this concise, practical tutorial that is focused on writing code to learn concepts. Starting from the basics, this book covers array-based computing, plotting, and working with files in Octave, which can run MATLAB files without modification. Introduction to Octave is useful for industry engineers, researchers, and students who are looking for open-source solutions for numerical computation. In this book you will learn by doing, avoiding technical jargon, which makes the concepts easy to learn. First you'll see how to run basic calculations, absorbing technical complexities incrementally as you progress toward advanced topics. Throughout, the language is kept simple to ensure that readers at all levels can grasp the concepts. What You'll Learn Apply sample code to your engineering or science problems Work with Octave arrays, functions, and loops Use Octave's plotting functions for data visualization Solve numerical computing and computational engineering problems with Octave Who This Book Is For Engineers, scientists, researchers, and students who are new to Octave. Some prior programming experience would be helpful but not required.

Multicast Sockets David Makofske 2002-11-21 Multicast Sockets: Practical Guide for Programmers is a hands-on, application-centric approach to multicasting (as opposed to a network-centric one) that is filled with examples, ideas, and experimentation. Each example builds on the last to introduce multicast concepts, frameworks, and APIs in an engaging manner that does not burden the reader with lots of theory and jargon. The book is an introduction to multicasting but assumes that the reader has a background in network programming and is proficient in C or Java. After reading the book, you will have a firm grasp on how to write a multicast program. Author team of instructor and application programmer is reflected in this rich instructional and practical approach to the subject material Only book available that provides a clear, concise, application-centric approach to programming multicast applications and covers several languages—C, Java, and C# on the .NET platform Covers important topics like service models, testing reachability, and addressing Includes numerous examples and exercises for programmers and students to test what they have learned

Beginning Rust Programming Ric Messier 2021-03-09 Quickly learn the ropes with the Rust programming language using this practical, step-by-step guide In Beginning Rust Programming, accomplished programmer and author Ric Messier delivers a highly practical, real-world guide to coding with Rust. Avoiding dry, theoretical content and “Hello, world”-type tutorials of questionable utility, the book dives immediately into functional Rust programming that takes advantage of the language's blazing speed and memory efficiency. Designed from the ground up to give you a running start to using the multiparadigm system programming language, this book will teach you to: Solve real-world computer science problems of practical importance Use Rust's rich type system and ownership model to guarantee memory-safety and thread-safety Integrate Rust with other programming languages and use it for embedded devices Perfect for programmers with some experience in other languages, like C or C++, Beginning Rust Programming is also a great pick for students new to programming and seeking a user-friendly and robust language with which to start their coding career.

Concise Guide to Object-Oriented Programming Kingsley Sage 2019-04-23 This engaging textbook provides an accessible introduction to coding and the world of Object-Oriented (OO) programming, using Java as the illustrative programming language. Emphasis is placed on what is most helpful for the first-time coder, in order to develop and understand their knowledge and skills in a way that is relevant and practical. The examples presented in the text demonstrate how skills in OO programming can be used to create applications and programs that have real-world value in daily life. Topics and features: presents an overview of programming and coding, a brief history of programming languages, and a concise introduction to programming in Java using BlueJ; discusses classes and objects, reviews various Java library objects and packages, and introduces the idea of the Application Programming Interface (API); highlights how OO design forms an essential role in producing a useful solution to a problem, and the importance of the concept of class polymorphism; examines what to do when code encounters an error condition, describing the exception handling mechanism and practical measures in defensive coding; investigates the work of arrays and collections, with a particular focus on fixed length arrays, the ArrayList, HashMap and HashSet; describes the basics of building a Graphical User Interface (GUI) using Swing, and the concept of a design pattern; outlines two complete applications, from conceptual design to implementation, illustrating the content covered by the rest of the book; provides code for all examples and projects at an associated website. This concise guide is ideal for the novice approaching OO programming for the first time, whether they are a student of computer science embarking on a one-semester course in this area, or someone learning for the purpose of professional development or self-improvement. The text does not require any prior knowledge of coding, software engineering, OO, or mathematics.