Concurrent Programming In Mac Os X And Ios Unleash Multicore Performance With Grand Central Dispatch Vandad Nahavandipoor

Concurrent Programming on WindowsConcurrent Programming in Mac OS X and IOSMore iPhone Cool ProjectsHands-On System Programming with GoPro Multithreading and Memory Management for iOS and OS XUNIX Systems ProgrammingOn Concurrent ProgrammingPatterns for Parallel ProgrammingPro TBBMac OSX Developer's GuideCocoa Programming for Mac OS XThe Ruby WayClassic Computer Science Problems in SwiftPro Multithreading and Memory Management for iOS and OS XFunctional Python ProgrammingDelphi High PerformanceCocoa Programming for Mac OS XDocumentation AbstractsLearning Concurrent Programming in ScalaProfessional Linux ProgrammingProgramming Concurrency on the JVMEncyclopedia of MicrocomputersProgramming Language PragmaticsConcurrent ProgrammingInside Mac OS X.The JR Programming LanguageBeginning iPhone 4 DevelopmentMastering Concurrency in PythoniOS 11 Swift Programming CookbookMastering macOS ProgrammingPython in PracticeMac OS X BibleProgramming Language PragmaticsOS X and iOS Kernel ProgrammingAdvanced Mac OS X ProgrammingStep Into XcodeOpenGL Programming on Mac OS XJava ReportMac OS X InternalsProgramming Erlang

Concurrent Programming on Windows

Explore the fundamentals of systems programming starting from kernel API and filesystem to network programming and process communications Key Features Learn how to write Unix and Linux system code in Golang v1.12 Perform inter-process communication using pipes, message queues, shared memory, and semaphores Explore modern Go features such as goroutines and channels that facilitate systems programming Book Description System software and applications were largely created using low-level languages such as C or C++. Go is a modern language that combines simplicity, concurrency, and performance, making it a good alternative for building system applications for Linux and macOS. This Go book introduces Unix and systems programming to help you understand the components the OS has to offer, ranging from the kernel API to the filesystem, and familiarize yourself with Go and its specifications. You'll also learn how to optimize input and output operations with files and streams of data, which are useful tools in building pseudo terminal applications. You'll gain insights into how processes communicate with each other, and learn about processes and daemon control using signals, pipes, and exit codes. This book will also enable you to understand how to use network communication using various protocols, including TCP and HTTP. As you advance, you'll focus on Go's best feature-concurrency helping you handle communication with channels and goroutines, other concurrency tools to synchronize shared resources, and the context package to write elegant applications. By the end of this book, you will have learned how to build concurrent system applications using Go What you will learn Explore concepts of system programming using Go and concurrency Gain insights into Golang's internals, memory models and allocation Familiarize yourself with the filesystem and IO streams in general Handle and control processes and daemons' lifetime via signals

and pipes Communicate with other applications effectively using a network Use various encoding formats to serialize complex data structures Become well-versed in concurrency with channels, goroutines, and sync Use concurrency patterns to build robust and performant system applications Who this book is for If you are a developer who wants to learn system programming with Go, this book is for you. Although no knowledge of Unix and Linux system programming is necessary, intermediate knowledge of Go will help you understand the concepts covered in the book

Concurrent Programming in Mac OS X and IOS

Offering complete coverage for developers on how to use OpenGL on the Mac platform, this helpful manual explains how to use OpenGL to create high-quality 3D graphics for a variety of applications and offers suggestions on how to integrate various other Mac-native APIs into OpenGL. Original. (Intermediate)

More iPhone Cool Projects

iOS 11, Swift 4, and Xcode 9 provide many new APIs for iOS developers. With this cookbook, you'll learn more than 170 proven solutions for tackling the latest features in iOS 11 and watchOS 4, including new ways to use Swift and Xcode to make your day-to-day app development life easier. This collection of code-rich recipes also gets you up to speed on continuous delivery and continuous integration systems. Ideal for intermediate and advanced iOS developers looking to work with the newest version of iOS, these recipes include reusable code on GitHub, so you can put them to work in your project right away. Among the topics covered in this book: New features in Swift 4 and Xcode 9 Tools for continuous delivery and continuous integration Snapshot testing and test automation Creating document-based applications Updated Map view and Core Location features iOS 11's Security and Password Autofill Data storage with Apple's Core Data Creating lively user interfaces with UI Dynamics Building iMessage applications and sticker packages Integrating Siri into your apps with Siri Kit Creating fascinating apps for Apple Watch

Hands-On System Programming with Go

Build fast, scalable, and high performing applications with Delphi Key Features Build efficient and concurrent applications in Delphi with focused examples Identify performance bottlenecks and apply the correct algorithm to increase the performance of applications. Delve into parallel programming and memory management to optimize your code Book Description Delphi is a cross-platform Integrated Development Environment (IDE) that supports rapid application development for Microsoft Windows, Apple Mac OS X, Google Android, iOS, and now Linux with RAD Studio 10.2. This book will be your guide to build efficient high performance applications with Delphi. The book begins by explaining how to find performance bottlenecks and apply the correct algorithm to fix them. It will teach you how to improve your algorithms before taking you through parallel programming. You'll then explore various tools to build highly concurrent applications. After that, you'll delve into improving the performance of your code

and master cross-platform RTL improvements. Finally, we'll go through memory management with Delphi and you'll see how to leverage several external libraries to write better performing programs. By the end of the book, you'll have the knowledge to create high performance applications with Delphi. What you will learn Find performance bottlenecks and easily mitigate them Discover different approaches to fix algorithms Understand parallel programming and work with various tools included with Delphi Master the RTL for code optimization Explore memory managers and their implementation Leverage external libraries to write better performing programs Who this book is for This book is for Delphi developers who would like to build high performance applications with Delphi. Prior knowledge of Delphi is assumed.

Pro Multithreading and Memory Management for iOS and OS X

JR is an extension of the Java programming language with additional concurrency mechanisms based on those in the SR (Synchronizing Resources) programming language. The JR implementation executes on UNIX-based systems (Linux, Mac OS X, and Solaris) and Windows-based systems. It is available free from the JR webpage. This book describes the JR programming language and illustrates how it can be used to write concurrent programs for a variety of applications. This text presents numerous small and large example programs. The source code for all programming examples and the given parts of all programming exercises are available on the JR webpage. Dr. Ronald A. Olsson and Dr. Aaron W. Keen, the authors of this text, are the designers and implementors of JR.

UNIX Systems Programming

This open access book is a modern guide for all C++ programmers to learn Threading Building Blocks (TBB). Written by TBB and parallel programming experts, this book reflects their collective decades of experience in developing and teaching parallel programming with TBB, offering their insights in an approachable manner. Throughout the book the authors present numerous examples and best practices to help you become an effective TBB programmer and leverage the power of parallel systems. Pro TBB starts with the basics, explaining parallel algorithms and C++'s built-in standard template library for parallelism. You'll learn the key concepts of managing memory, working with data structures and how to handle typical issues with synchronization. Later chapters apply these ideas to complex systems to explain performance tradeoffs, mapping common parallel patterns, controlling threads and overhead, and extending TBB to program heterogeneous systems or system-on-chips. What You'll Learn Use Threading Building Blocks to produce code that is portable, simple, scalable, and more understandableReview best practices for parallelizing computationally intensive tasks in your applications Integrate TBB with other threading packages Create scalable, high performance data-parallel programs Work with generic programming to write efficient algorithms Who This Book Is For C++ programmers learning to run applications on multicore systems, as well as C or C++ programmers without much experience with templates. No previous experience with parallel programming or multicore processors is required.

On Concurrent Programming

Winner of the 2014 Jolt Award for "Best Book" "Whether you are an experienced programmer or are starting your career, Python in Practice is full of valuable advice and example to help you improve your craft by thinking about problems from different perspectives, introducing tools, and detailing techniques to create more effective solutions." --Doug Hellmann, Senior Developer, DreamHost If you're an experienced Python programmer, Python in Practice will help you improve the quality, reliability, speed, maintainability, and usability of all your Python programs. Mark Summerfield focuses on four key themes: design patterns for coding elegance, faster processing through concurrency and compiled Python (Cython), high-level networking, and graphics. He identifies well-proven design patterns that are useful in Python, illuminates them with expert-quality code, and explains why some object-oriented design patterns are irrelevant to Python. He also explodes several counterproductive myths about Python programming--showing, for example, how Python can take full advantage of multicore hardware. All examples, including three complete case studies, have been tested with Python 3.3 (and, where possible, Python 3.2 and 3.1) and crafted to maintain compatibility with future Python 3.x versions. All code has been tested on Linux, and most code has also been tested on OS X and Windows. All code may be downloaded atwww.qtrac.eu/pipbook.html. Coverage includes Leveraging Python's most effective creational, structural, and behavioral design patterns Supporting concurrency with Python's multiprocessing, threading, and concurrent.futures modules Avoiding concurrency problems using thread-safe queues and futures rather than fragile locks Simplifying networking with high-level modules, including xmlrpclib and RPyC Accelerating Python code with Cython, C-based Python modules, profiling, and other techniques Creating modern-looking GUI applications with Tkinter Leveraging today's powerful graphics hardware via the OpenGL API using pyglet and PyOpenGL

Patterns for Parallel Programming

While there are several books on programming for Mac OS X, Advanced Mac OS X Programming: The Big Nerd Ranch Guide is the only one that contains explanations of how to leverage the powerful underlying technologies. This book gets down to the real nitty-gritty. The third edition is updated for Mac OS X 10.5 and 10.6 and covers new technologies like DTrace, Instruments, Grand Central Dispatch, blocks, and NSOperation.

Pro TBB

This book is broken into four primary sections addressing key topics that Linux programmers need to master: Linux nuts and bolts, the Linux kernel, the Linux desktop, and Linux for the Web Effective examples help get readers up to speed with building software on a Linux-based system while using the tools and utilities that contribute to streamlining the software development process Discusses using emulation and virtualization technologies for kernel development and application testing Includes useful insights aimed at helping readers understand how their applications code fits in with the rest of the software stack Examines cross-

compilation, dynamic device insertion and removal, key Linux projects (such as Project Utopia), and the internationalization capabilities present in the GNOME desktop

Mac OSX Developer's Guide

Now that multicore processors are coming to mobile devices, wouldn't it be great to take advantage of all those cores without having to manage threads? This concise book shows you how to use Apple's Grand Central Dispatch (GCD) to simplify programming on multicore iOS devices and Mac OS X. Managing your application's resources on more than one core isn't easy, but it's vital. Apps that use only one core in a multicore environment will slow to a crawl. If you know how to program with Cocoa or Cocoa Touch, this guide will get you started with GCD right away, with many examples to help you write high-performing multithreaded apps. Package your code as block objects and invoke them with GCD Understand dispatch queues—the pools of threads managed by GCD Use different methods for executing UI and non-UI tasks Create a group of tasks that GCD can run all at once Instruct GCD to execute tasks only once or after a delay Discover how to construct your own dispatch queues

Cocoa Programming for Mac OS X

More than ever, learning to program concurrency is critical to creating faster, responsive applications. Speedy and affordable multicore hardware is driving the demand for high-performing applications, and you can leverage the Java platform to bring these applications to life. Concurrency on the Java platform has evolved, from the synchronization model of JDK to software transactional memory (STM) and actor-based concurrency. This book is the first to show you all these concurrency styles so you can compare and choose what works best for your applications. You'll learn the benefits of each of these models, when and how to use them, and what their limitations are. Through hands-on exercises, you'll learn how to avoid shared mutable state and how to write good, elegant, explicit synchronization-free programs so you can create easy and safe concurrent applications. The techniques you learn in this book will take you from dreading concurrency to mastering and enjoying it. Best of all, you can work with Java or a JVM language of your choice - Clojure, JRuby, Groovy, or Scala - to reap the growing power of multicore hardware. If you are a Java programmer, you'd need JDK 1.5 or later and the Akka 1.0 library. In addition, if you program in Scala, Clojure, Groovy or JRuby you'd need the latest version of your preferred language. Groovy programmers will also need GPars.

The Ruby Way

Classic Computer Science Problems in Swift

Mathematics of Computing -- Parallelism.

Pro Multithreading and Memory Management for iOS and OS X

Mac OS X, Apple's newest operating system for the Macintosh platform, is profoundly different from its earlier versions because of its similarity to the UNIX operating system. For developers writing software for OS X this means adjusting to two new environments to create applications and to access the enhanced features of the new OS, Cocoa and Carbon. Cocoa is an object-oriented API in which all future OS X programs will be written. Carbon is a transitional technology allowing compatibility of applications written for earlier versions of the Mac OS with Mac OS X. Mac OS X Developer's Guide focuses equally on Cocoa and Carbon, guiding the reader through these technologies and showing how to write applications in both. It is the first book for Mac OS X developers written for those who are already working on applications, as well as new developers just getting started. It starts off describing the new OS and its development tools then focuses on specific programming issues, providing tips on making the transition from classic Mac OS code to Mac OS X. * A guide for developers already writing applications as well as new developers just getting started * Focuses equally on both Cocoa and Carbon environments * Provides tips on transitioning from writing code for classic Mac OS to OS X * References Apple online materials extensively, to keep developers up to speed on changes

Functional Python Programming

Programming Language Pragmatics addresses the fundamental principles at work in the most important contemporary languages, highlights the critical relationship between language design and language implementation, and devotes special attention to issues of importance to the expert programmer. Thanks to its rigorous but accessible teaching style, you'll emerge better prepared to choose the best language for particular projects, to make more effective use of languages you already know, and to learn new languages quickly and completely. * Addresses the most recent developments in programming language design, spanning more than forty different languages, including Ada 95, C, C++, Fortran 95, Java, Lisp, Scheme, ML, Modula-3, Pascal, and Prolog. * Places a special emphasis on implementation issues how the techniques used by compilers and related tools influence language design, and vice versa. * Covers advanced topics in language design and implemenation, such as iterators, coroutines, templates (generics), separate compilation, I/O, type inference, and exception handling. * Reviews language-related topics in assembly-level architecture critical for understanding what a compiler does to a program. * Offers in-depth coverage of object-oriented programming, including multiple inheritance and dynamic method binding. * Devotes a special section to static and dynamic linking. * Includes a comprehensive chapter on concurrency, with detailed coverage of both shared-memory and message-passing languages and libraries. * Provides an accessible introduction to the formal foundations of compilation (automata theory), functional programming (lambda calculus), and logic programming (predicate calculus).

Delphi High Performance

Beginning iPhone 4 Development is here! The authors of the bestselling Beginning iPhone 3 Development are back, with the same excellent material completely updated for iOS 4 and written from the ground up using the latest version of Apple's Xcode 3. All source code has been updated to use the latest Xcode

templates and current APIs, and all-new screenshots show Xcode 3 in action. Beginning iPhone 4 Development is a complete course in iOS 4 apps development. You'll master techniques that work on iPhone, iPad, and iPod touch. We start with the basics, showing you how to download and install the tools you'll need, and how to create your first simple application. Next you'll learn to integrate all the interface elements iOS users have come to know and love, such as buttons, switches, pickers, toolbars, and sliders. You'll master a variety of design patterns, from the simplest single view to complex hierarchical drill-downs. The confusing art of table building will be demystified, and you'll learn techniques to save and retrieve your data using SQLite, iPhone's built-in database management system and Core Data, the standard for persistence that Apple brought to iOS with the release of SDK 3. And there's much more! You'll learn to draw using Quartz 2D and OpenGL ES, add multitouch gestural support (pinches and swipes) to your applications, and work with the camera, photo library, accelerometer, and built-in GPS. You'll discover the fine points of application preferences and learn how to localize your apps for multiple languages. You'll also learn how to use the new concurrency APIs included in iOS 4, and make robust multithreaded applications using Grand Central Dispatch. The iPhone 4 update to the best-selling and most recommended book for Cocoa touch developers Written in an accessible, easy-to-follow style Full of useful tips and techniques to help you become an iOS pro NOTE: For iPhone 4S or iOS 5 apps development, please instead check out the next edition of this book, Beginning iOS 5 Development - now available.

Cocoa Programming for Mac OS X

"The Encyclopedia of Microcomputers serves as the ideal companion reference to the popular Encyclopedia of Computer Science and Technology. Now in its 10th year of publication, this timely reference work details the broad spectrum of microcomputer technology, including microcomputer history; explains and illustrates the use of microcomputers throughout academe, business, government, and society in general; and assesses the future impact of this rapidly changing technology."

Documentation Abstracts

Accompanying CD-ROM contains "advanced/optional content, hundreds of working examples, an active search facility, and live links to manuals, tutorials, compilers, and interpreters on the World Wide Web."--Page 4 of cover.

Learning Concurrent Programming in Scala

If you want to develop efficient, smooth-running applications, controlling concurrency and memory are vital. Automatic Reference Counting is Apple's game-changing memory management system, new to Xcode 4.2. Pro Multithreading and Memory Management for iOS and OS X shows you how ARC works and how best to incorporate it into your applications. Grand Central Dispatch (GCD) and blocks are key to developing great apps, allowing you to control threads for maximum performance. If for you, multithreading is an unsolved mystery and ARC is unexplored territory, then this is the book you'll need to make these concepts clear

and send you on your way to becoming a master iOS and OS X developer. What are blocks? How are they used with GCD? Multithreading with GCD Managing objects with ARC

Professional Linux Programming

If you want to develop efficient, smooth-running applications, controlling concurrency and memory are vital. Automatic Reference Counting is Apple's game-changing memory management system, new to Xcode 4.2. Pro Multithreading and Memory Management for iOS and OS X shows you how ARC works and how best to incorporate it into your applications. Grand Central Dispatch (GCD) and blocks are key to developing great apps, allowing you to control threads for maximum performance. If for you, multithreading is an unsolved mystery and ARC is unexplored territory, then this is the book you'll need to make these concepts clear and send you on your way to becoming a master iOS and OS X developer. What are blocks? How are they used with GCD? Multithreading with GCD Managing objects with ARC What you'll learn How to use blocks How blocks work and how they are implemented Details about GCD How and when to use GCD To understand ARC technology and how to use it Who this book is for This book is for professional OS X and iOS application programmers. In particular, it's for those who want to develop highly responsive applications with concurrent programming. Table of Contents1. Life before Automatic Reference Counting 2. ARC Rules 3. ARC Implementation 4. Getting Started with Blocks 5. Blocks Implementation 6. Grand Central Dispatch 7. GCD Basics 8. GCD Implementation Appendix A. Example of ARC, Blocks and GCD Appendix B. References

Programming Concurrency on the JVM

Mac OS X was released in March 2001, but many components, such as Mach and BSD, are considerably older. Understanding the design, implementation, and workings of Mac OS X requires examination of several technologies that differ in their age, origins, philosophies, and roles. Mac OS X Internals: A Systems Approach is the first book that dissects the internals of the system, presenting a detailed picture that grows incrementally as you read. For example, you will learn the roles of the firmware, the bootloader, the Mach and BSD kernel components (including the process, virtual memory, IPC, and file system layers), the object-oriented I/O Kit driver framework, user libraries, and other core pieces of software. You will learn how these pieces connect and work internally, where they originated, and how they evolved. The book also covers several key areas of the Intel-based Macintosh computers. A solid understanding of system internals is immensely useful in design, development, and debugging for programmers of various skill levels. System programmers can use the book as a reference and to construct a better picture of how the core system works. Application programmers can gain a deeper understanding of how their applications interact with the system. System administrators and power users can use the book to harness the power of the rich environment offered by Mac OS X. Finally, members of the Windows, Linux, BSD, and other Unix communities will find the book valuable in comparing and contrasting Mac OS X with their respective systems. Mac OS X Internals focuses on the technical aspects of OS X and is so full of extremely useful information and programming examples that it will definitely become a mandatory tool for every

Mac OS X programmer.

Encyclopedia of Microcomputers

"When you begin using multi-threading throughout an application, the importance of clean architecture and design is critical. . . . This places an emphasis on understanding not only the platform's capabilities but also emerging best practices. Joe does a great job interspersing best practices alongside theory throughout his book." – From the Foreword by Craig Mundie, Chief Research and Strategy Officer, Microsoft Corporation Author Joe Duffy has risen to the challenge of explaining how to write software that takes full advantage of concurrency and hardware parallelism. In Concurrent Programming on Windows, he explains how to design, implement, and maintain large-scale concurrent programs, primarily using C# and C++ for Windows. Duffy aims to give application, system, and library developers the tools and techniques needed to write efficient, safe code for multicore processors. This is important not only for the kinds of problems where concurrency is inherent and easily exploitable—such as server applications, compute-intensive image manipulation, financial analysis, simulations, and AI algorithms—but also for problems that can be speeded up using parallelism but require more effort—such as math libraries, sort routines, report generation, XML manipulation, and stream processing algorithms. Concurrent Programming on Windows has four major sections: The first introduces concurrency at a high level, followed by a section that focuses on the fundamental platform features, inner workings, and API details. Next, there is a section that describes common patterns, best practices, algorithms, and data structures that emerge while writing concurrent software. The final section covers many of the common system-wide architectural and process concerns of concurrent programming. This is the only book you'll need in order to learn the best practices and common patterns for programming with concurrency on Windows and .NET.

Programming Language Pragmatics

Apple's Swift language is the de-facto standard for iOS and Mac development, and it's rapidly becoming a great choice for any general-purpose programming task. Classic Computer Science Problems in Swift invites readers to invest their energy in some foundational techniques that have been proven to stand the test of time. Along the way they'll learn intermediate and advanced features of the Swift programming language, a worthwhile skill in its own right. Purchase of the print book includes a free eBook in PDF, Kindle, and ePub formats from Manning Publications.

Concurrent Programming

Immerse yourself in the world of Python concurrency and tackle the most complex concurrent programming problems Key Features Explore the core syntaxes, language features and modern patterns of concurrency in Python Understand how to use concurrency to keep data consistent and applications responsive Utilize application scaffolding to design highly-scalable programs Book Description Python is one of the most popular programming languages, with numerous libraries and

frameworks that facilitate high-performance computing. Concurrency and parallelism in Python are essential when it comes to multiprocessing and multithreading; they behave differently, but their common aim is to reduce the execution time. This book serves as a comprehensive introduction to various advanced concepts in concurrent engineering and programming. Mastering Concurrency in Python starts by introducing the concepts and principles in concurrency, right from Amdahl's Law to multithreading programming, followed by elucidating multiprocessing programming, web scraping, and asynchronous I/O, together with common problems that engineers and programmers face in concurrent programming. Next, the book covers a number of advanced concepts in Python concurrency and how they interact with the Python ecosystem, including the Global Interpreter Lock (GIL). Finally, you'll learn how to solve real-world concurrency problems through examples. By the end of the book, you will have gained extensive theoretical knowledge of concurrency and the ways in which concurrency is supported by the Python language What you will learn Explore the concepts of concurrency in programming Explore the core syntax and features that enable concurrency in Python Understand the correct way to implement concurrency Abstract methods to keep the data consistent in your program Analyze problems commonly faced in concurrent programming Use application scaffolding to design highly-scalable programs Who this book is for This book is for developers who wish to build high-performance applications and learn about signle-core, multicore programming or distributed concurrency. Some experience with Python programming language is assumed.

Inside Mac OS X.

Learn the art of building intricate, modern, scalable, and concurrent applications using Scala About This Book Make the most of Scala by understanding its philosophy and harnessing the power of multicores Get acquainted with cutting-edge technologies in the field of concurrency, through practical, real-world applications Get this step-by-step guide packed with pragmatic examples Who This Book Is For If you are a Scala programmer with no prior knowledge about concurrent programming, or seeking to broaden your existing knowledge about concurrency, this book is for you. Basic knowledge of the Scala programming language will be helpful. Also if you have a solid knowledge in another programming language, such as Java, you should find this book easily accessible. What You Will Learn Get to grips with the fundamentals of concurrent programming on modern multiprocessor systems Build high-performance concurrent systems from simple, low-level concurrency primitives Express asynchrony in concurrent computations with futures and promises Seamlessly accelerate sequential programs by using data-parallel collections Design safe, scalable, and easy-to-comprehend in-memory transactional data models Transparently create distributed applications that scale across multiple machines Integrate different concurrency frameworks together in large applications Develop and implement scalable and easy-to-understand concurrent applications in Scala 2.12 In Detail Scala is a modern, multiparadigm programming language designed to express common programming patterns in a concise, elegant, and type-safe way. Scala smoothly integrates the features of object-oriented and functional languages. In this second edition, you will find updated coverage of the Scala 2.12 platform. The Scala 2.12 series targets Java 8 and requires it for execution. The

book starts by introducing you to the foundations of concurrent programming on the JVM, outlining the basics of the Java Memory Model, and then shows some of the classic building blocks of concurrency, such as the atomic variables, thread pools, and concurrent data structures, along with the caveats of traditional concurrency. The book then walks you through different high-level concurrency abstractions, each tailored toward a specific class of programming tasks, while touching on the latest advancements of async programming capabilities of Scala. It also covers some useful patterns and idioms to use with the techniques described. Finally, the book presents an overview of when to use which concurrency library and demonstrates how they all work together, and then presents new exciting approaches to building concurrent and distributed systems. Style and approach The book provides a step-by-step introduction to concurrent programming. It focuses on easy-to-understand examples that are pragmatic and applicable to real-world applications. Different topics are approached in a bottom-up fashion, gradually going from the simplest foundations to the most advanced features.

The JR Programming Language

This book is for developers who want to use Python to write programs that lean heavily on functional programming design patterns. You should be comfortable with Python programming, but no knowledge of functional programming paradigms is needed.

Beginning iPhone 4 Development

The Parallel Programming Guide for Every Software Developer From grids and clusters to next-generation game consoles, parallel computing is going mainstream. Innovations such as Hyper-Threading Technology, HyperTransport Technology, and multicore microprocessors from IBM, Intel, and Sun are accelerating the movement's growth. Only one thing is missing: programmers with the skills to meet the soaring demand for parallel software. That's where Patterns for Parallel Programming comes in. It's the first parallel programming guide written specifically to serve working software developers, not just computer scientists. The authors introduce a complete, highly accessible pattern language that will help any experienced developer "think parallel"-and start writing effective parallel code almost immediately. Instead of formal theory, they deliver proven solutions to the challenges faced by parallel programmers, and pragmatic guidance for using today's parallel APIs in the real world. Coverage includes: Understanding the parallel computing landscape and the challenges faced by parallel developers Finding the concurrency in a software design problem and decomposing it into concurrent tasks Managing the use of data across tasks Creating an algorithm structure that effectively exploits the concurrency you've identified Connecting your algorithmic structures to the APIs needed to implement them Specific software constructs for implementing parallel programs Working with today's leading parallel programming environments: OpenMP, MPI, and Java Patterns have helped thousands of programmers master object-oriented development and other complex programming technologies. With this book, you will learn that they're the best way to master parallel programming too.

Mastering Concurrency in Python

Provides step-by-step instructions for learning Cocoa, discussing such topics as Objective-C, memory management, key-value coding, NSArrayController, archiving, user defaults, and keyboard events.

iOS 11 Swift Programming Cookbook

Mastering macOS Programming

bull; Learn UNIX essentials with a concentration on communication, concurrency, and multithreading techniques bull; Full of ideas on how to design and implement good software along with unique projects throughout bull; Excellent companion to Stevens' Advanced UNIX System Programming

Python in Practice

Mac OS X Bible

Provides information on using Xcode to build applications with Macintosh languages and technology.

Programming Language Pragmatics

A multi-user game, web site, cloud application, or networked database can have thousands of users all interacting at the same time. You need a powerful, industrial-strength tool to handle the really hard problems inherent in parallel, concurrent environments. You need Erlang. In this second edition of the bestselling Programming Erlang, you'll learn how to write parallel programs that scale effortlessly on multicore systems. Using Erlang, you'll be surprised at how easy it becomes to deal with parallel problems, and how much faster and more efficiently your programs run. That's because Erlang uses sets of parallel processes-not a single sequential process, as found in most programming languages. Joe Armstrong, creator of Erlang, introduces this powerful language in small steps, giving you a complete overview of Erlang and how to use it in common scenarios. You'll start with sequential programming, move to parallel programming and handling errors in parallel programs, and learn to work confidently with distributed programming and the standard Erlang/Open Telecom Platform (OTP) frameworks. You need no previous knowledge of functional or parallel programming. The chapters are packed with hands-on, real-world tutorial examples and insider tips and advice, and finish with exercises for both beginning and advanced users. The second edition has been extensively rewritten. New to this edition are seven chapters covering the latest Erlang features: maps, the type system and the Dialyzer, WebSockets, programming idioms, and a new stand-alone execution environment. You'll write programs that dynamically detect and correct errors, and that can be upgraded without stopping the system. There's also coverage of rebar (the de facto Erlang build system), and information on how to share and use Erlang

projects on github, illustrated with examples from cowboy and bitcask. Erlang will change your view of the world, and of how you program. What You Need The Erlang/OTP system. Download it from erlang.org.

OS X and iOS Kernel Programming

OS X and iOS Kernel Programming combines essential operating system and kernel architecture knowledge with a highly practical approach that will help you write effective kernel-level code. You'll learn fundamental concepts such as memory management and thread synchronization, as well as the I/O Kit framework. You'll also learn how to write your own kernel-level extensions, such as device drivers for USB and Thunderbolt devices, including networking, storage and audio drivers. OS X and iOS Kernel Programming provides an incisive and complete introduction to the XNU kernel, which runs iPhones, iPads, iPods, and Mac OS X servers and clients. Then, you'll expand your horizons to examine Mac OS X and iOS system architecture. Understanding Apple's operating systems will allow you to write efficient device drivers, such as those covered in the book, using I/O Kit. With OS X and iOS Kernel Programming, you'll: Discover classical kernel architecture topics such as memory management and thread synchronization Become well-versed in the intricacies of the kernel development process by applying kernel debugging and profiling tools Learn how to deploy your kernel-level projects and how to successfully package them Write code that interacts with hardware devices Examine easy to understand example code that can also be used in your own projects Create network filters Whether you're a hobbyist, student, or professional engineer, turn to OS X andiOS Kernel Programming and find the knowledge you need to start developing

Advanced Mac OS X Programming

Everyone is developing iPhone applications, and it's clear why. The iPhone is the coolest mobile device available, and the App Store makes it simple to get an application out into the unstoppable iPhone app market. With hundreds of thousands of app developers entering the game, it's crucial to learn from those who have actually succeeded. This book shows you how some of the most innovative and creative iPhone application developers have developed cool, best-selling apps. Not only does every successful application have a story, but behind every great app is excellent code. In this book, you'll see the code and learn how to use it to make your own cool applications. You'll learn everything from importing 3D art assets into your iPhone game to using Cocos2d for iPhone and iPad. This book shares the secrets of the coolest iPhone apps being built today by the best iPhone developers—invaluable knowledge for anyone who wants to create the app that everyone is talking about.

Step Into Xcode

Demonstrates the operating system's basic features, including Internet access, file management, configuring the desktop, installing peripherals, and working with applications.

OpenGL Programming on Mac OS X

Here, one of the leading figures in the field provides a comprehensive survey of the subject, beginning with prepositional logic and concluding with concurrent programming. It is based on graduate courses taught at Cornell University and is designed for use as a graduate text. Professor Schneier emphasises the use of formal methods and assertional reasoning using notation and paradigms drawn from programming to drive the exposition, while exercises at the end of each chapter extend and illustrate the main themes covered. As a result, all those interested in studying concurrent computing will find this an invaluable approach to the subject.

Java Report

Provides step-by-step instructions for learning Cocoa, discussing such topics as Objective-C, controls, helper objects, archiving, Nib files and NSWindowController, and creating interface builder palettes.

Mac OS X Internals

Take your macOS Sierra to the next level using the latest tools, designs, and best coding practices while developing with Swift 3.0 About This Book Learn to harness the power of macOS with the elegance of the Swift programming language Become highly competent in building apps on the macOS platform Get the most in-depth guide with a hands-on approach on the latest version of macOS Who This Book Is For This book is for developers who have some experience with macOS and want to take their skills to next level by unlocking the full potential of latest version of macOS with Swift 3 to build impressive applications. Basic knowledge of Swift will be beneficial but is not required. What You Will Learn Combine beautiful design with robust code for the very best user experience Bring the best coding practices to the new macOS Sierra See what's new in Swift 3.0 and how best to leverage the Swift language Master Apple's tools, including Xcode, Interface Builder, and Instruments Use Unix and other common command-line tools to increase productivity Explore the essential Cocoa frameworks, including networking, animation, audio, and video In Detail macOS continues to lead the way in desktop operating systems, with its tight integration across the Apple ecosystem of platforms and devices. With this book, you will get an in-depth knowledge of working on macOS, enabling you to unleash the full potential of the latest version using Swift 3 to build applications. This book will help you broaden your horizons by taking your programming skills to next level. The initial chapters will show you all about the environment that surrounds a developer at the start of a project. It introduces you to the new features that Swift 3 and Xcode 8 offers and also covers the common design patterns that you need to know for planning anything more than trivial projects. You will then learn the advanced Swift programming concepts, including memory management, generics, protocol orientated and functional programming and with this knowledge you will be able to tackle the next several chapters that deal with Apple's own Cocoa frameworks. It also covers AppKit, Foundation, and Core Data in detail which is a part of the Cocoa umbrella framework. The rest of the book will cover the challenges posed by asynchronous

programming, error handling, debugging, and many other areas that are an indispensable part of producing software in a professional environment. By the end of this book, you will be well acquainted with Swift, Cocoa, and AppKit, as well as a plethora of other essential tools, and you will be ready to tackle much more complex and advanced software projects. Style and approach This comprehensive guide takes a hands-on practical approach incorporating a visually-rich format rather than a text heavy format. The focus is on teaching the core concepts through a series of small projects and standalone examples so you gain expertise with various aspects of macOS application development.

Programming Erlang

For more than a decade, Ruby developers have turned to The Ruby Way for reliable "how-to" guidance on effective Ruby programming. Now, Hal Fulton and André Arko have thoroughly updated this classic guide to cover new language enhancements and developers' experiences through Ruby 2.1. The new edition illuminates Ruby 2.1 through 400+ examples, each answering the question: "How do I do this in Ruby?" For each example, they present both a task description and realistic technical constraints. Next, they walk step-by-step through presenting one good solution, offering detailed explanations to promote deeper understanding. Conveniently organized by topic, The Ruby Way, Third Edition makes it easier than ever to find the specific solution you want—and to write better code by reflecting Ruby's unique philosophy and spirit. Coverage includes Ruby 2.1 overview: terminology, philosophy, and basic principles Best practices for strings and regular expressions Efficiently internationalizing your code Performing calculations (including trigonometry, calculus, statistics, and time/date calculations) Working with "Rubyesque" objects such as symbols and ranges Using arrays, hashes, stacks, queues, trees, graphs, and other data structures Efficiently storing data with YAML, JSON, and SQLite3 Leveraging object-oriented and dynamic features, from multiple constructors to program inspection Building GUIs with Shoes 4, Ruby/Tk, Ruby/GTK3, QtRuby, and other toolkits Improving thread performance by understanding Ruby's synchronization methods and avoiding its pitfalls Automating system administration with Ruby Data formats: JSON, XML, RSS, Atom, RMagick, PDF, and more Testing and debugging with RSpec, Minitest, Cucumber, byebug, and pry Measuring Ruby program performance Packaging and distributing code, and managing dependencies with Bundler Network programming: clients, time servers, POP, SMTP, IMAP, Open-URI Web applications: HTTP servers, Rails, Sinatra, HTML generation, and more Writing distributed Ruby software with drb Choosing modern development tools that maximize your productivity All source code for this book may be downloaded at www.rubyhacker.com. informit.com/aw informit.com/ruby rubyhacker.com/therubyway therubyway.io

ROMANCE ACTION & ADVENTURE MYSTERY & THRILLER BIOGRAPHIES & HISTORY CHILDREN'S YOUNG ADULT FANTASY HISTORICAL FICTION HORROR LITERARY FICTION NON-FICTION SCIENCE FICTION