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# C Concurrency In Action Second Edition

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Learning Concurrency in Python  
C++ Common Knowledge  
Beginning C++ Programming  
Hands-On Concurrency with Rust  
Erlang and OTP in Action  
Concurrency in C# Cookbook  
More C++ Gems  
Programming with POSIX Threads  
Hands-on Rust  
Data Parallel C++  
C++17 STL Cookbook  
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Mastering C++ Multithreading  
Programming Erlang  
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Nim in Action  
Modern Multithreading  
C++ Concurrency in Action  
Rust in Action  
Designing Audio Effect Plugins in C++  
Concurrency in .NET

Functional Programming in C++  
Modern Java in Action  
A Tour of C++  
The Art of Concurrency  
Concurrent Programming in Java  
Mastering C# Concurrency  
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C++ Concurrency in Action  
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Rust for Rustaceans  
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Digital Audio Signal Processing Theory

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Learning  
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in Python  
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Education  
Summary Nim  
is a multi-

paradigm  
language that  
offers  
powerful  
customization  
options with  
the ability to  
compile to  
everything  
from C to  
JavaScript. In  
Nim in Action  
you'll learn

how Nim  
compares to  
other  
languages in  
style and  
performance,  
master its  
structure and  
syntax, and  
discover  
unique  
features.  
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the print book includes a free eBook in PDF, Kindle, and ePub formats from Manning Publications. About the Technology Nim is a multi-paradigm programming language that offers powerful customization options with the ability to compile to everything from C to JavaScript. It can be used in any project and illustrates that you don't have to sacrifice performance for expressiveness! About the

Book Nim in Action is your guide to application development in Nim. You'll learn how Nim compares to other languages in style and performance, master its structure and syntax, and discover unique features. By carefully walking through a Twitter clone and other real-world examples, you'll see just how Nim can be used every day while also learning how to tackle concurrency,

package finished applications, and interface with other languages. With the best practices and rich examples in this book, you'll be able to start using Nim today. What's Inside Language features and implementation Nimble package manager Asynchronous I/O Interfacing with C and JavaScript Metaprogramming About the Reader For developers comfortable with mainstream languages like

Java, Python, C++ or C#. About the Author Dominik Picheta is one of the principal developers of Nim and author of the Nimble package manager. Summary PART 1 -THE BASICS OF NIM Why Nim? Getting started PART 2 - NIM IN PRACTICE 3 Writing a chat application 4 A tour through the standard library 5 Package management 6 Parallelism 7 Building a Twitter clone	PART 3 - ADVANCED CONCEPTS 8 Interfacing with other languages 9 Metaprogramming <b>C++ Common Knowledge</b> Pragmatic Bookshelf A comprehensive guide to help aspiring and professional C++ developers elevate the performance of their apps by allowing them to run faster and consume fewer resources. Purchase of the print or	Kindle book includes a free eBook in PDF format. Key Features Updated to C++20 with completely revised code and more content on error handling, benchmarking , memory allocators, and concurrent programming Explore the latest C++20 features including ranges, and coroutines Utilize C++ constructs and techniques to carry out effective data structure optimization and memory
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management  
Book  
Description  
C++ High  
Performance,  
Second  
Edition guides  
you through  
optimizing the  
performance  
of your C++  
apps. This  
allows them to  
run faster and  
consume  
fewer  
resources on  
the device  
they're  
running on  
without  
compromising  
the readability  
of your  
codebase. The  
book begins  
by introducing  
the C++  
language and  
some of its  
modern  
concepts in

brief. Once  
you are  
familiar with  
the  
fundamentals,  
you will be  
ready to  
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identify, and  
eradicate  
bottlenecks in  
your C++  
codebase. By  
following this  
process, you  
will gradually  
improve your  
style of writing  
code. The  
book then  
explores data  
structure  
optimization,  
memory  
management,  
and how it can  
be used  
efficiently  
concerning  
CPU caches.  
After laying  
the

foundation,  
the book  
trains you to  
leverage  
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ranges, and  
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achieve faster  
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write readable  
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metaprogram  
ming,  
coroutines,  
reflection to  
reduce  
boilerplate  
code, proxy  
objects to  
perform  
optimizations  
under the  
hood,

concurrent programming, and lock-free data structures. The book concludes with an overview of parallel algorithms. By the end of this book, you will have the ability to use every tool as needed to boost the efficiency of your C++ projects. What you will learn Write specialized data structures for performance-critical code Use modern metaprogramming techniques to

reduce runtime calculations Achieve efficient memory management using custom memory allocators Reduce boilerplate code using reflection techniques Reap the benefits of lock-free concurrent programming Gain insights into subtle optimizations used by standard library algorithms Compose algorithms using ranges library Develop the

ability to apply metaprogramming aspects such as constexpr, constraints, and concepts Implement lazy generators and asynchronous tasks using C++20 coroutines Who this book is for If you're a C++ developer looking to improve the efficiency of your code or just keen to upgrade your skills to the next level, this book is for you. Beginning C++

Programming  
Packt  
Publishing Ltd  
Templates are  
among the  
most powerful  
features of  
C++, but they  
remain  
misunderstood and  
underutilized,  
even as the  
C++ language  
and  
development  
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have  
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show why,  
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how to use  
modern  
templates to  
build software  
that's cleaner,

faster, more  
efficient, and  
easier to  
maintain. Now  
extensively  
updated for  
the C++11,  
C++14, and  
C++17  
standards, this  
new edition  
presents  
state-of-the-  
art techniques  
for a wider  
spectrum of  
applications.  
The authors  
provide  
authoritative  
explanations  
of all new  
language  
features that  
either improve  
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them,  
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literals. They  
also deeply  
delve into  
fundamental  
language  
concepts (like  
value  
categories)  
and fully cover  
all standard  
type traits.  
The book  
starts with an  
insightful  
tutorial on  
basic concepts  
and relevant  
language  
features. The  
remainder of  
the book  
serves as a  
comprehensiv

e reference, focusing first on language details and then on coding techniques, advanced applications, and sophisticated idioms. Throughout, examples clearly illustrate abstract concepts and demonstrate best practices for exploiting all that C++ templates can do. Understand exactly how templates behave, and avoid common pitfalls Use templates to write more

efficient, flexible, and maintainable software Master today's most effective idioms and techniques Reuse source code without compromising performance or safety Benefit from utilities for generic programming in the C++ Standard Library Preview the upcoming concepts feature The companion website, [tmplbook.com](http://tmplbook.com), contains sample code and additional updates. *Hands-On*

*Concurrency with Rust* "O'Reilly Media, Inc." Software -- Operating Systems. *Erlang and OTP in Action* "O'Reilly Media, Inc." What Every Professional C++ Programmer Needs to Know—Pared to Its Essentials So It Can Be Efficiently and Accurately Absorbed C++ is a large, complex language, and learning it is never entirely easy. But some concepts and techniques



must be thoroughly mastered if programmers are ever to do professional-quality work. This book cuts through the technical details to reveal what is commonly understood to be absolutely essential. In one slim volume, Steve Dewhurst distills what he and other experienced managers, trainers, and authors have found to be the most critical knowledge required for successful C++

programming. It doesn't matter where or when you first learned C++. Before you take another step, use this book as your guide to make sure you've got it right! This book is for you if You're no "dummy," and you need to get quickly up to speed in intermediate to advanced C++ You've had some experience in C++ programming, but reading intermediate and advanced C++ books is slow-going You've had an

introductory C++ course, but you've found that you still can't follow your colleagues when they're describing their C++ designs and code You're an experienced C or Java programmer, but you don't yet have the experience to develop nuanced C++ code and designs You're a C++ expert, and you're looking for an alternative to answering the same questions from your less-

experienced colleagues over and over again C++ Common Knowledge covers essential but commonly misunderstood topics in C++ programming and design while filtering out needless complexity in the discussion of each topic. What remains is a clear distillation of the essentials required for production C++ programming, presented in the author's trademark incisive, engaging

style.  
Concurrency in C# Cookbook  
 Addison-Wesley  
 Get to grips with modern software demands by learning the effective uses of Rust's powerful memory safety. Key Features  
 Learn and improve the sequential performance characteristics of your software  
 Understand the use of operating system processes in a high-scale concurrent system  
 Learn

of the various coordination methods available in the Standard library Book Description  
 Most programming languages can really complicate things, especially with regard to unsafe memory access. The burden on you, the programmer, lies across two domains: understanding the modern machine and your language's pain-points. This book will teach you to how to

manage program performance on modern machines and build fast, memory-safe, and concurrent software in Rust. It starts with the fundamentals of Rust and discusses machine architecture concepts. You will be taken through ways to measure and improve the performance of Rust code systematically and how to write collections with confidence. You will learn

about the Sync and Send traits applied to threads, and coordinate thread execution with locks, atomic primitives, data-parallelism, and more. The book will show you how to efficiently embed Rust in C++ code and explore the functionalities of various crates for multithreaded applications. It explores implementations in depth. You will know how a mutex works and build several yourself. You

will master radically different approaches that exist in the ecosystem for structuring and managing high-scale systems. By the end of the book, you will feel comfortable with designing safe, consistent, parallel, and high-performance applications in Rust. What you will learn Probe your programs for performance and accuracy issues Create your own threading and multi-processing

environment in Rust Use coarse locks from Rust's Standard library Solve common synchronization problems or avoid synchronization using atomic programming Build lock-free/wait-free structures in Rust and understand their implementations in the crates ecosystem Leverage Rust's memory model and type system to build safety properties into your parallel programs

Understand the new features of the Rust programming language to ease the writing of parallel programs Who this book is for This book is aimed at software engineers with a basic understanding of Rust who want to exploit the parallel and concurrent nature of modern computing environments, safely. **More C++ Gems** Packt Publishing Ltd When Lucene first hit the

scene five years ago, it was nothing short of amazing. By using this open-source, highly scalable, super-fast search engine, developers could integrate search into applications quickly and efficiently. A lot has changed since then-search has grown from a "nice-to-have" feature into an indispensable part of most enterprise applications. Lucene now powers search in diverse

companies including Akamai, Netflix, LinkedIn, Tech norati, HotJobs, Epiphany, FedEx, Mayo Clinic, MIT, New Scientist Magazine, and many others. Some things remain the same, though. Lucene still delivers high-performances each features in a disarmingly easy-to-use API. Due to its vibrant and diverse open-source community of developers and users, Lucene is

relentlessly improving, with evolutions to APIs, significant new features such as payloads, and a huge increase (as much as 8x) in indexing speed with Lucene 2.3. And with clear writing, reusable examples, and unmatched advice on best practices, Lucene in Action, Second Edition is still the definitive guide to developing with Lucene. Purchase of the print book comes with an

offer of a free PDF, ePub, and Kindle eBook from Manning. Also available is all code from the book. *Programming with POSIX Threads* Taylor & Francis Summary Concurrency in .NET teaches you how to build concurrent and scalable programs in .NET using the functional paradigm. This intermediate-level guide is aimed at developers, architects, and passionate

computer programmers who are interested in writing code with improved speed and effectiveness by adopting a declarative and pain-free programming style.

Purchase of the print book includes a free eBook in PDF, Kindle, and ePub formats from Manning Publications.

About the Technology  
Unlock the incredible performance built into your multi-processor machines.  
Concurrent applications

run faster because they spread work across processor cores, performing several tasks at the same time. Modern tools and techniques on the .NET platform, including parallel LINQ, functional programming, asynchronous programming, and the Task Parallel Library, offer powerful alternatives to traditional thread-based concurrency.  
About the Book  
Concurrency in .NET

teaches you to write code that delivers the speed you need for performance-sensitive applications. Featuring examples in both C# and F#, this book guides you through concurrent and parallel designs that emphasize functional programming in theory and practice. You'll start with the foundations of concurrency and master essential techniques and design practices to optimize code running on

modern multiprocessor systems.	Terrell is a seasoned software engineer and Microsoft MVP who is passionate about functional programming. He has over 20 years' experience delivering cost-effective technology solutions in a competitive business environment.	programming techniques for concurrency
What's Inside		Functional data
The most important concurrency abstractions		structures and immutability
Employing the agent programming model		PART 2 - How to approach the different parts of a concurrent program
Implementing real-time event-stream processing		The basics of processing big data: data parallelism, part 1 PLINQ and MapReduce: data parallelism, part 2 Real-time event streams: functional reactive programming
Executing unbounded asynchronous operations		Task-based functional parallelism
Best concurrent practices and patterns that apply to all platforms	Table of Contents PART 1 - Benefits of functional programming applicable to concurrent programs	Task
About the Reader For readers skilled with C# or F#.	Functional concurrency foundations	
About the Book	Riccardo	

<p>asynchronicity for the win</p> <p>Asynchronous functional programming in F#</p> <p>Functional combinators for fluent concurrent programming</p> <p>Applying reactive programming everywhere with agents</p> <p>Parallel workflow and agent programming with TPL</p> <p>Dataflow PART 3 - Modern patterns of concurrent programming applied</p> <p>Recipes and design patterns for successful concurrent</p>	<p>programming</p> <p>Building a scalable mobile app with concurrent functional programming</p> <p><u>Hands-on Rust</u></p> <p>Pearson Education Summary</p> <p>Manning's bestselling Java 8 book has been revised for Java 9! In Modern Java in Action, you'll build on your existing Java language skills with the newest features and techniques.</p> <p>Purchase of the print book includes a free eBook in PDF, Kindle, and</p>	<p>ePub formats from Manning Publications.</p> <p>About the Technology Modern applications take advantage of innovative designs, including microservices, reactive architectures, and streaming data. Modern Java features like lambdas, streams, and the long-awaited Java Module System make implementing these designs significantly easier. It's time to upgrade your skills and meet these</p>
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challenges head on! About the Book Modern Java in Action connects new features of the Java language with their practical applications. Using crystal-clear examples and careful attention to detail, this book respects your time. It will help you expand your existing knowledge of core Java as you master modern additions like the Streams API and the Java Module System, explore new

approaches to concurrency, and learn how functional concepts can help you write code that's easier to read and maintain. What's inside Thoroughly revised edition of Manning's bestselling Java 8 in Action New features in Java 8, Java 9, and beyond Streaming data and reactive programming The Java Module System About the Reader Written for developers familiar with core Java features.

About the Author Raoul-Gabriel Urma is CEO of Cambridge Spark. Mario Fusco is a senior software engineer at Red Hat. Alan Mycroft is a University of Cambridge computer science professor; he cofounded the Raspberry Pi Foundation. Table of Contents PART 1 - FUNDAMENTALS Java 8, 9, 10, and 11: what's happening? Passing code with behavior parameterization on Lambda

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performance	behind	and Schuster
PART 3 -	CompletableF	Software --
EFFECTIVE	uture and	Programming
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G WITH	programming	<b>C++17 STL</b>
STREAMS AND	CompletableF	<b>Cookbook</b>
LAMBDDAS	uture:	Simon and
Collection API	composable	Schuster
enhancements	asynchronous	Practically and
Refactoring,	programming	deeply
testing, and	Reactive	understand
debugging	programming	concurrency in
Domain-	PART 6 -	Python to
specific	FUNCTIONAL	write efficient
languages	PROGRAMMIN	programs

About This Book Build highly efficient, robust, and concurrent applications Work through practical examples that will help you address the challenges of writing concurrent code Improve the overall speed of execution in multiprocessor and multicore systems and keep them highly available Who This Book Is For This book is for Python developers who would like to get started with

concurrent programming. Readers are expected to have a working knowledge of the Python language, as this book will build on these fundamentals concepts. What You Will Learn Explore the concept of threading and multiprocessing in Python Understand concurrency with threads Manage exceptions in child threads Handle the hardest part in a concurrent system — shared resources Build

concurrent systems with Communicating Sequential Processes (CSP) Maintain all concurrent systems and master them Apply reactive programming to build concurrent systems Use GPU to solve specific problems In Detail Python is a very high level, general purpose language that is utilized heavily in fields such as data science and research, as well as being one of the top choices for general

purpose programming for programmers around the world. It features a wide number of powerful, high and low-level libraries and frameworks that complement its delightful syntax and enable Python programmers to create. This book introduces some of the most popular libraries and frameworks and goes in-depth into how you can leverage these libraries for your own

high-concurrent, highly-performant Python programs. We'll cover the fundamental concepts of concurrency needed to be able to write your own concurrent and parallel software systems in Python. The book will guide you down the path to mastering Python concurrency, giving you all the necessary hardware and theoretical knowledge. We'll cover concepts such

as debugging and exception handling as well as some of the most popular libraries and frameworks that allow you to create event-driven and reactive systems. By the end of the book, you'll have learned the techniques to write incredibly efficient concurrent systems that follow best practices. Style and approach This easy-to-follow guide teaches you new practices and techniques to

optimize your code, and then moves toward more advanced ways to effectively write efficient Python code. Small and simple practical examples will help you test the concepts yourself, and you will be able to easily adapt them for any application. C++ High Performance Packt Publishing Ltd Master professional-level coding in Rust. For developers who've mastered the

basics, this book is the next step on your way to professional-level programming in Rust. It covers everything you need to build and maintain larger code bases, write powerful and flexible applications and libraries, and confidently expand the scope and complexity of your projects. Author Jon Gjengset takes you deep into the Rust programming language,

dissecting core topics like ownership, traits, concurrency, and unsafe code. You'll explore key concepts like type layout and trait coherence, delve into the inner workings of concurrent programming and asynchrony with `async/await`, and take a tour of the world of `no_std` programming. Gjengset also provides expert guidance on API design, testing

strategies, and error handling, and will help develop your understanding of foreign function interfaces, object safety, procedural macros, and much more. You'll Learn: How to design reliable, idiomatic, and ergonomic Rust programs based on best principles Effective use of declarative and procedural macros, and the difference between them How asynchrony works in Rust - all the way

from the Pin and Waker types used in manual implementations of Futures, to how `async/await` saves you from thinking about most of those words What it means for code to be unsafe, and best practices for writing and interacting with unsafe functions and traits How to organize and configure more complex Rust projects so that they integrate nicely with the rest of the ecosystem How to write Rust code that

can interoperate with non-Rust libraries and systems, or run in constrained and embedded environments Brimming with practical, pragmatic insights that you can immediately apply, *Rust for Rustaceans* helps you do more with Rust, while also teaching you its underlying mechanisms. *Lucene in Action Apress* A fast-paced, thorough introduction to modern C++ written for

experienced programmers. After reading C++ Crash Course, you'll be proficient in the core language concepts, the C++ Standard Library, and the Boost Libraries. C++ is one of the most widely used languages for real-world software. In the hands of a knowledgeable programmer, C++ can produce small, efficient, and readable code that any programmer would be proud of. Designed for

intermediate to advanced programmers, C++ Crash Course cuts through the weeds to get you straight to the core of C++17, the most modern revision of the ISO standard. Part 1 covers the core of the C++ language, where you'll learn about everything from types and functions, to the object life cycle and expressions. Part 2 introduces you to the C++ Standard Library and Boost Libraries,

where you'll learn about all of the high-quality, fully-featured facilities available to you. You'll cover special utility classes, data structures, and algorithms, and learn how to manipulate file systems and build high-performance programs that communicate over networks. You'll learn all the major features of modern C++, including: Fundamental types, reference

<p>types, and user-defined types The object lifecycle including storage duration, memory management, exceptions, call stacks, and the RAII paradigm Compile-time polymorphism with templates and run-time polymorphism with virtual classes Advanced expressions, statements, and functions Smart pointers, data structures, dates and times, numerics, and</p>	<p>probability/statistics facilities Containers, iterators, strings, and algorithms Streams and files, concurrency, networking, and application development With well over 500 code samples and nearly 100 exercises, C++ Crash Course is sure to help you build a strong C++ foundation. <a href="#"><u>C++ Crash Course</u></a> Simon and Schuster Learn how to accelerate C++ programs using data</p>	<p>parallelism. This open access book enables C++ programmers to be at the forefront of this exciting and important new development that is helping to push computing to new levels. It is full of practical advice, detailed explanations, and code examples to illustrate key topics. Data parallelism in C++ enables access to parallel resources in a modern heterogeneous system,</p>
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freeing you from being locked into any particular computing device. Now a single C++ application can use any combination of devices—including GPUs, CPUs, FPGAs and AI ASICs—that are suitable to the problems at hand. This book begins by introducing data parallelism and foundational topics for effective use of the SYCL standard from the Khronos Group and Data Parallel

C++ (DPC++), the open source compiler used in this book. Later chapters cover advanced topics including error handling, hardware-specific programming, communication and synchronization, and memory model considerations. Data Parallel C++ provides you with everything needed to use SYCL for programming heterogeneous systems. What You'll Learn

Accelerate C++ programs using data-parallel programming Target multiple device types (e.g. CPU, GPU, FPGA) Use SYCL and SYCL compilers Connect with computing's heterogeneous future via Intel's oneAPI initiative Who This Book Is For Those new data-parallel programming and computer programmers interested in data-parallel programming using C++. *Go in Action* Simon and

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Designing  
Audio Effect  
Plugins in  
C++ presents  
everything  
you need to  
know about  
digital signal  
processing in  
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pitch shifting,  
nonlinear  
processing,  
sample rate  
conversion  
and more. You  
will then be  
ready to  
design and  
implement  
your own  
unique plugins  
on any  
platform and  
within almost

any host program. This new edition is fully updated and improved and presents a plugin core that allows readers to move freely between application programming interfaces and platforms. Readers are expected to have some knowledge of C++ and high school math.

*Mastering C++ Multithreading*  
Packt Publishing Ltd  
Rust is an exciting new programming language combining the power of C

with memory safety, fearless concurrency, and productivity boosters - and what better way to learn than by making games. Each chapter in this book presents hands-on, practical projects ranging from "Hello, World" to building a full dungeon crawler game. With this book, you'll learn game development skills applicable to other engines, including Unity and Unreal. Rust is

an exciting programming language combining the power of C with memory safety, fearless concurrency, and productivity boosters. With Rust, you have a shiny new playground where your game ideas can flourish. Each chapter in this book presents hands-on, practical projects that take you on a journey from "Hello, World" to building a full dungeon crawler game. Start by

setting up Rust and getting comfortable with your development environment. Learn the language basics with practical examples as you make your own version of Flappy Bird. Discover what it takes to randomly generate dungeons and populate them with monsters as you build a complete dungeon crawl game. Run game systems concurrently for high-performance and fast

game-play, while retaining the ability to debug your program. Unleash your creativity with magical items, tougher monsters, and intricate dungeon design. Add layered graphics and polish your game with style. What You Need: A computer running Windows 10, Linux, or Mac OS X. A text editor, such as Visual Studio Code. A video card and drivers capable of running OpenGL 3.2.

*Programming Erlang* Addison-Wesley Professional Principles of Concurrent and Distributed Programming provides an introduction to concurrent programming focusing on general principles and not on specific systems. Software today is inherently concurrent or distributed - from event-based GUI designs to operating and real-time systems to Internet applications.

This edition is an introduction to concurrency and examines the growing importance of concurrency constructs embedded in programming languages and of formal methods such as model checking. Functional Programming in C#, Second Edition Simon and Schuster More C++ Gems picks up where the first book left off, presenting tips, tricks, proven strategies, easy-to-follow techniques, and usable

source code. *Nim in Action* Routledge If you have a working knowledge of Haskell, this hands-on book shows you how to use the language's many APIs and frameworks for writing both parallel and concurrent programs. You'll learn how parallelism exploits multicore processors to speed up computation-heavy programs, and how concurrency enables you to write

programs with threads for multiple interactions. Author Simon Marlow walks you through the process with lots of code examples that you can run, experiment with, and extend. Divided into separate sections on Parallel and Concurrent Haskell, this book also includes exercises to help you become familiar with the concepts presented: Express parallelism in Haskell with

the Eval  
 monad and  
 Evaluation  
 Strategies  
 Parallelize  
 ordinary  
 Haskell code  
 with the Par  
 monad Build  
 parallel array-  
 based  
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 using the  
 Repa library  
 Use the  
 Accelerate  
 library to run  
 computations  
 directly on the  
 GPU Work  
 with basic  
 interfaces for  
 writing  
 concurrent  
 code Build  
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 threads for  
 larger and  
 more complex  
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 Learn how to  
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 and find out  
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 Who This Book  
 Is For This  
 book is for  
 intermediate  
 C++  
 developers  
 who wish to  
 extend their  
 knowledge of  
 multithreading  
 and  
 concurrent  
 processing.  
 You should  
 have basic  
 experience  
 with  
 multithreading  
 and be  
 comfortable

using C++ development toolchains on the command line. What You Will Learn

Deep dive into the details of the how various operating systems currently implement multithreading

Choose the best multithreading APIs when designing a new application

Explore the use of mutexes, spinlocks, and other synchronization concepts and see how to safely pass data between

threads

Understand the level of API support provided by various C++ toolchains

Resolve common issues in multithreaded code and recognize common pitfalls using tools such as Memcheck, CacheGrind, DRD, Helgrind, and more

Discover the nature of atomic operations and understand how they can be useful in optimizing code

Implement a multithreaded

application in a distributed computing environment

Design a C++-based GPGPU application that employs multithreading

In Detail

Multithreaded applications execute multiple threads in a single processor environment, allowing developers achieve concurrency. This book will teach you the finer points of multithreading and concurrency concepts and how to apply them efficiently in

C++. Divided into three modules, we start with a brief introduction to the fundamentals of multithreading and concurrency concepts. We then take an in-depth look at how these concepts work at the hardware-level as well as how both operating systems and frameworks use these low-level functions. In the next module, you will learn

about the native multithreading and concurrency support available in C++ since the 2011 revision, synchronization and communication between threads, debugging concurrent C++ applications, and the best programming practices in C++. In the final module, you will learn about atomic operations before moving on to apply concurrency

to distributed and GPGPU-based processing. The comprehensive coverage of essential multithreading concepts means you will be able to efficiently apply multithreading concepts while coding in C++. Style and approach This book is filled with examples that will help you become a master at writing robust concurrent and parallel applications in C++.

Best Sellers - Books :



- [Oh, The Places You'll Go!](#)
- [Too Late: Definitive Edition By Colleen Hoover](#)
- [A Court Of Mist And Fury \(a Court Of Thorns And Roses, 2\)](#)
- [Dog Man: Twenty Thousand Fleas Under The Sea: A Graphic Novel \(dog Man #11\): From The Creator Of Captain Underpants By Dav Pilkey](#)
- [Harry Potter Paperback Box Set \(books 1-7\) By J. K. Rowling](#)
- [8 Rules Of Love: How To Find It, Keep It, And Let It Go](#)
- [The Five-star Weekend By Elin Hilderbrand](#)
- [Regretting You By Colleen Hoover](#)
- [Twisted Love \(twisted, 1\) By Ana Huang](#)
- [Never Lie: An Addictive Psychological Thriller By Freida Mcfadden](#)