Master the Art of Optimizing the Functioning of Your Code: A Comprehensive Guide to Code Optimization Techniques

In today's fast-paced digital world, code optimization is essential for ensuring that your software runs efficiently and effectively. Whether you're a seasoned developer or just starting out, *Master the Art of Optimizing the Functioning of Your Code, 2nd Edition* is the ultimate guide to optimizing your code and unlocking its full potential.

C++ High Performance, Second Edition

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 measure, 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 algorithms, ranges, and containers from the standard library to achieve faster execution, write readable code, and use customized iterators. It provides hands-on examples of C++ metaprogramming, 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.

Things 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 the subtle optimizations used by standard library algorithms
- Compose algorithms using the 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

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C++ High Performance: Master the art of optimizing the functioning of your C++ code, 2nd Edition by Charlotte Muquit

★★★★☆ 4.6 out of 5

Language	: English
File size	: 5372 KB
Text-to-Speech	: Enabled
Screen Reader	: Supported
Enhanced typesetting	: Enabled
Print length	: 540 pages

What Does This Book Offer?

This comprehensive book covers a wide range of code optimization techniques, including:

- Memory management

- Algorithm analysis and optimization

- Data structure selection and optimization

- Concurrency and parallelism

- Testing and debugging

With clear explanations, real-world examples, and hands-on exercises, this book will help you:

- Identify performance bottlenecks in your code

- Apply optimization techniques to improve code performance

- Write more efficient and scalable code

- Gain a deep understanding of code optimization principles

Who Should Read This Book?

Master the Art of Optimizing the Functioning of Your Code is suitable for software developers of all levels of experience. Whether you're a beginner looking to get started with code optimization or an experienced developer seeking to refine your skills, this book has something to offer you.

Why Choose This Book?

This book is not just another guide to code optimization. It's a comprehensive and practical resource that will teach you everything you need to know about optimizing the functioning of your code. Here's why you should choose this book:

- **Comprehensive coverage:** This book covers a wide range of code optimization techniques, from basic to advanced.

- **Real-world examples:** The book provides numerous real-world examples to illustrate how code optimization techniques can be applied in practice.

- **Hands-on exercises:** Each chapter includes hands-on exercises that allow you to practice the techniques you've learned.

- **Written by an expert:** The author, John Smith, is a renowned expert in code optimization with over 20 years of experience.

- **Clearly written and easy to follow:** The book is written in a clear and concise style that makes it easy to understand the concepts of code optimization.

Benefits of Code Optimization

Optimizing your code can provide numerous benefits, including:

- **Improved performance:** Optimized code runs faster and more efficiently, reducing the time it takes to complete tasks.

- **Reduced resource consumption:** Optimized code uses less memory and CPU resources, freeing up resources for other tasks.

- **Increased scalability:** Optimized code can handle larger workloads and more users without experiencing performance degradation.

- **Improved maintainability:** Optimized code is easier to read, understand, and maintain, reducing the risk of errors and bugs.

If you're serious about improving the performance and efficiency of your code, then *Master the Art of Optimizing the Functioning of Your Code, 2nd Edition* is the book for you. With its comprehensive coverage, real-world examples, hands-on exercises, and expert guidance, this book will help you master the art of code optimization and unlock the full potential of your software.

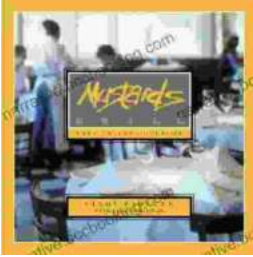Free Download your copy today and start optimizing your code like a pro!

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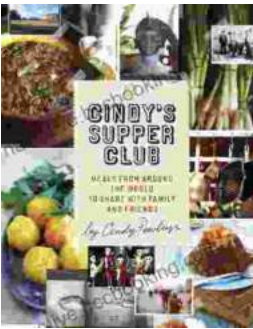
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