

Software Optimization Cookbook Second Edition

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[Proceedings of the ... ACM SIGPLAN Symposium on Principles & Practice of Parallel Programming](#)
Independently Published

Complete recipes spread across 15 chapters to help you overcome commonly faced issues by Python for everybody across the globe. Each recipe takes a problem-solution approach to resolve for effective Python. Key Features Develop expressive and effective Python programs Best practices and common idioms through carefully explained recipes Discover new ways to apply Python for data-focused development Make use of Python's optional type annotations Book Description Python is the preferred choice of developers, engineers, data scientists, and hobbyists everywhere. It is a great language that can power your applications and provide great speed, safety, and scalability. It can be used for simple scripting or sophisticated web applications. By exposing Python as a series of simple recipes, this book gives you insight into specific language features in a particular context. Having a tangible context helps make the language or a given standard library feature easier to understand. This book comes with 133 recipes on the latest version of Python 3.8. The recipes will benefit everyone, from beginners just starting out with Python to experts. You'll not only learn Python programming concepts but also how to build complex applications. The recipes will touch upon all necessary Python concepts related to data structures, object oriented programming, functional programming, and statistical programming. You will get acquainted with the nuances of Python syntax and how to effectively take advantage of it. By the end of this Python book, you will be equipped with knowledge of testing, web services, configuration, and application integration tips and tricks. You will be armed with the knowledge of how to create applications with flexible logging, powerful configuration, command-line options, automated unit tests, and good documentation. What you will learn See the intricate details of the Python syntax and how to use it to your advantage Improve your coding with Python readability through functions Manipulate data effectively using built-in data structures Get acquainted with advanced programming techniques in Python Equip yourself with functional and statistical programming features Write proper tests to be sure a program works as advertised Integrate application software using Python Who this book is for The Python book is for web developers, programmers, enterprise programmers, engineers, and big data scientists. If you are a beginner, this book will get you started. If you are experienced, it will expand your knowledge base. A basic knowledge of programming would help.

[PostgreSQL 9 Administration Cookbook - Second Edition](#) Packt Publishing Ltd

Write optimized queries. This book helps you write queries that perform fast and deliver results on time. You will learn that query optimization is not a dark art practiced by a small, secretive cabal of sorcerers. Any motivated professional can learn to write efficient queries from the get-go and capably optimize existing queries. You will learn to look at the process of writing a query from the database engine's point of view, and know how to think like the database optimizer. The book begins with a discussion of what a performant system is and progresses to measuring performance and setting performance goals. It introduces different classes of queries and optimization techniques suitable to each, such as the use of indexes and specific join algorithms. You will learn to read and understand query execution plans along with techniques for influencing those plans for better performance. The book also covers advanced topics such as the use of functions and procedures, dynamic SQL, and generated queries. All of these techniques are then used together to produce performant applications, avoiding the pitfalls of object-relational mappers. What You Will Learn Identify optimization goals in OLTP and OLAP systems Read and understand PostgreSQL execution plans Distinguish between short queries and long queries Choose the right optimization technique for each query type Identify indexes that will improve query performance Optimize full table scans Avoid the pitfalls of object-relational mapping systems Optimize the entire application rather than just database queries Who This Book Is For IT professionals working in PostgreSQL who want to develop performant and scalable applications, anyone whose job title contains the words "database developer" or "database administrator" or who is a backend developer charged with programming database calls, and system architects involved in the overall design of application systems running against a PostgreSQL database

[Modern Python Cookbook](#) Packt Publishing Ltd

If you want to learn how to program in Rust and create strong, reliable apps with the most recent version Rust 1.68, then you need the "Practical Rust 1.x Cookbook (Second Edition)"—a book full of real-world solutions. An extensive collection of practical recipes covering a wide range of topics, this edition expands upon the first and guarantees that you will be well-versed in the complexities of Rust. You will learn the fundamentals of programming, how to set up a development environment, and the syntax of Rust in the first few chapters. Data structures, pattern matching, error handling, and concurrency are all covered in the recipes, which will set you up for success with more complex topics. As you go through the book, you'll learn how to write efficient and secure code by managing memory, using Rust's ownership model, and borrowing rules. You will gain an understanding of how to make use of robust Rust features such as traits, generics, and lifetimes to build code that is both flexible and reusable. The testing and debugging chapters provide the necessary tools and techniques to guarantee that your applications are dependable and free of bugs. Using profiling tools like valgrind and perf, the cookbook teaches you how to find and fix performance bottlenecks, which is a major focus of performance optimization. By learning about SIMD instructions, compiler optimization flags, and parallel processing with libraries like rayon, you can greatly improve the efficiency of your code. In the more advanced chapters, you will learn how to use static and dynamic analysis, fuzz testing, and external high-performance libraries to make your applications even better. In no time at all, you will be able to build robust, high-performance Rust applications by following these potent recipes and becoming an expert Rust programmer. Key Learnings Learn the ins and outs of Rust's ownership model to avoid data races and make sure memory is safe. Develop your skills in pattern matching and advanced error handling to create code that is both strong and easy to maintain. Use the robust primitives and rayon library in Rust to implement parallelism and concurrency. Use the perf, valgrind, and SIMD instructions to optimize performance for efficient execution. Carry out thorough fuzz testing and static analysis with clippy and cargo-fuzz. Enable efficient memory management by studying high-performance libraries such as hashbrown

and jemalloc. With diesel and sqlx, you can manage databases and make queries and integrations a breeze. Optimize the deployment of Rust applications and establish CI/CD pipelines. Table of Content Setting up and Configuring Rust Environment Hands-on Traits, Enums and Struct Pattern Matching, Concurrency, Pointers and Modules Using Declarative and Procedural Macros Implementing Concurrency and Multithreading Asynchronous Programming Developing REST and SOAP APIs Building Microservices & Architectures Working around CI/CD Working around Kubernetes Fuzz Testing and Static Analysis Code Performance Optimization [Performance Analysis and Tuning on Modern CPUs](#) Packt Publishing Ltd This book follows a Cookbook style and is packed with intermediate and advanced level recipes. This book is for Java developers who have an interest in discovering new ways to quickly get the job done using a new language that shares many similarities with Java. The book 's recipes start simple, therefore no previous Groovy experience is required to understand the code and the explanations accompanying the examples.

[Python GUI Programming Cookbook](#) Packt Publishing Ltd

Leverage Docker to deploying software at scale Key Features Leverage practical examples to manage containers efficiently Integrate with orchestration tools such as Kubernetes for controlled deployments Learn to implement best practices on improving efficiency and security of containers Book Description Docker is an open source platform for building, shipping, managing, and securing containers. Docker has become the tool of choice for people willing to work with containers. Since the market is moving toward containerization, Docker will definitely have a big role to play in the future tech market. This book starts with setting up Docker in different environment, and helps you learn how to work with Docker images. Then, you will take a deep dive into network and data management for containers. The book explores the RESTful APIs provided by Docker to perform different actions, such as image/container operations. The book then explores logs and troubleshooting Docker to solve issues and bottlenecks. You will gain an understanding of Docker use cases, orchestration, security, ecosystems, and hosting platforms to make your applications easy to deploy, build, and collaborate on. The book covers the new features of Docker 18.xx (or later), such as working with AWS and Azure, Docker Engine, Docker Swarm, Docker Compose, and so on. By the end of this book, you will have gained hands-on experience of finding quick solutions to different problems encountered while working with Docker. What you will learn Install Docker on various platforms Work with Docker images and containers Container networking and data sharing Docker APIs and language bindings Various PaaS solutions for Docker Implement container orchestration using Docker Swarm and Kubernetes Container security Docker on various clouds Who this book is for Book is targeted towards developers, system administrators, and DevOps engineers who want to use Docker in his/her development, QA, or production environments. It is expected that the reader has basic Linux/Unix skills such as installing packages, editing files, managing services, and so on. Any experience in virtualization technologies such as KVM, XEN, and VMware will be an added advantage

[The Software Optimization Cookbook](#) John Wiley & Sons

Technology/Engineering/Mechanical Provides all the tools needed to begin solving optimization problems using MATLAB® The Second Edition of Applied Optimization with MATLAB® Programming enables readers to harness all the features of MATLAB® to solve optimization problems using a variety of linear and nonlinear design optimization techniques. By breaking down complex mathematical concepts into simple ideas and offering plenty of easy-to-follow examples, this text is an ideal introduction to the field. Examples come from all engineering disciplines as well as science, economics, operations research, and mathematics, helping readers understand how to apply optimization techniques to solve actual problems. This Second Edition has been thoroughly revised, incorporating current optimization techniques as well as the improved MATLAB® tools. Two important new features of the text are: Introduction to the scan and zoom method, providing a simple, effective technique that works for unconstrained, constrained, and global optimization problems New chapter, Hybrid Mathematics: An Application, using examples to illustrate how optimization can develop analytical or explicit solutions to differential systems and data-fitting problems Each chapter ends with a set of problems that give readers an opportunity to put their new skills into practice. Almost all of the numerical techniques covered in the text are supported by MATLAB® code, which readers can download on the text's companion Web site www.wiley.com/go/venkat2e and use to begin solving problems on their own. This text is recommended for upper-level undergraduate and graduate students in all areas of engineering as well as other disciplines that use optimization techniques to solve design problems.

[OpenGL 4 Shading Language Cookbook, Second Edition](#) "O'Reilly Media, Inc."

Embedded Computing for High Performance: Design Exploration and Customization Using High-level Compilation and Synthesis Tools provides a set of real-life example implementations that migrate traditional desktop systems to embedded systems. Working with popular hardware, including Xilinx and ARM, the book offers a comprehensive description of techniques for mapping computations expressed in programming languages such as C or MATLAB to high-performance embedded architectures consisting of multiple CPUs, GPUs, and reconfigurable hardware (FPGAs). The authors demonstrate a domain-specific language (LARA) that facilitates retargeting to multiple computing systems using the same source code. In this way, users can decouple original application code from transformed code and enhance productivity and program portability. After reading this book, engineers will understand the processes, methodologies, and best practices needed for the development of applications for high-performance embedded computing systems. - Focuses on maximizing performance while managing energy consumption in embedded systems - Explains how to retarget code for heterogeneous systems with GPUs and FPGAs - Demonstrates a domain-specific language that facilitates migrating and retargeting existing applications to modern systems - Includes downloadable slides, tools, and tutorials

[PostgreSQL Query Optimization](#) Packt Publishing Ltd

[OpenCV 3 Computer Vision Application Programming Cookbook](#) is appropriate for novice C++ programmers who want to learn how to use the OpenCV library to build computer vision applications. It is also suitable for professional software developers wishing to be introduced to the concepts of computer vision programming. It can also be used as a companion book in a university-level computer vision courses. It constitutes an excellent reference for graduate students and researchers in image processing and computer vision.

[Docker Cookbook](#) IGI Global

[OpenGL Shading Language 4 Cookbook](#) is a hands-on guide that gets straight to the point — actually creating graphics, instead of just theoretical learning. Each recipe is specifically tailored to satisfy your appetite for producing real-time 3-D graphics using the latest GLSL specification. This book is for OpenGL programmers looking to use the modern features of GLSL 4 to create real-time, three-dimensional graphics. Familiarity with OpenGL programming, along with the typical 3D coordinate systems, projections, and

transformations is assumed. It can also be useful for experienced GLSL programmers who are looking to implement the techniques that are presented here.

Handbook of Research on Computational Science and Engineering: Theory and Practice John Wiley & Sons
Perform data analysis with R quickly and efficiently with more than 275 practical recipes in this expanded second edition. The R language provides everything you need to do statistical work, but its structure can be difficult to master. These task-oriented recipes make you productive with R immediately. Solutions range from basic tasks to input and output, general statistics, graphics, and linear regression. Each recipe addresses a specific problem and includes a discussion that explains the solution and provides insight into how it works. If you're a beginner, R Cookbook will help get you started. If you're an intermediate user, this book will jog your memory and expand your horizons. You'll get the job done faster and learn more about R in the process. Create vectors, handle variables, and perform basic functions Simplify data input and output Tackle data structures such as matrices, lists, factors, and data frames Work with probability, probability distributions, and random variables Calculate statistics and confidence intervals and perform statistical tests Create a variety of graphic displays Build statistical models with linear regressions and analysis of variance (ANOVA) Explore advanced statistical techniques, such as finding clusters in your data

Introduction to High Performance Computing for Scientists and Engineers "O'Reilly Media, Inc."

Over 85 recipes to help you complete real-world data science projects in R and Python About This Book Tackle every step in the data science pipeline and use it to acquire, clean, analyze, and visualize your data Get beyond the theory and implement real-world projects in data science using R and Python Easy-to-follow recipes will help you understand and implement the numerical computing concepts Who This Book Is For If you are an aspiring data scientist who wants to learn data science and numerical programming concepts through hands-on, real-world project examples, this is the book for you. Whether you are brand new to data science or you are a seasoned expert, you will benefit from learning about the structure of real-world data science projects and the programming examples in R and Python. What You Will Learn Learn and understand the installation procedure and environment required for R and Python on various platforms Prepare data for analysis by implement various data science concepts such as acquisition, cleaning and munging through R and Python Build a predictive model and an exploratory model Analyze the results of your model and create reports on the acquired data Build various tree-based methods and Build random forest In Detail As increasing amounts of data are generated each year, the need to analyze and create value out of it is more important than ever. Companies that know what to do with their data and how to do it well will have a competitive advantage over companies that don't. Because of this, there will be an increasing demand for people that possess both the analytical and technical abilities to extract valuable insights from data and create valuable solutions that put those insights to use. Starting with the basics, this book covers how to set up your numerical programming environment, introduces you to the data science pipeline, and guides you through several data projects in a step-by-step format. By sequentially working through the steps in each chapter, you will quickly familiarize yourself with the process and learn how to apply it to a variety of situations with examples using the two most popular programming languages for data analysis—R and Python. Style and approach This step-by-step guide to data science is full of hands-on examples of real-world data science tasks. Each recipe focuses on a particular task involved in the data science pipeline, ranging from readying the dataset to analytics and visualization

The Software Optimization Cookbook Cambridge University Press

High Performance MySQL is the definitive guide to building fast, reliable systems with MySQL. Written by noted experts with years of real-world experience building very large systems, this book covers every aspect of MySQL performance in detail, and focuses on robustness, security, and data integrity. High Performance MySQL teaches you advanced techniques in depth so you can bring out MySQL's full power. Learn how to design schemas, indexes, queries and advanced MySQL features for maximum performance, and get detailed guidance for tuning your MySQL server, operating system, and hardware to their fullest potential. You'll also learn practical, safe, high-performance ways to scale your applications with replication, load balancing, high availability, and failover. This second edition is completely revised and greatly expanded, with deeper coverage in all areas. Major additions include: Emphasis throughout on both performance and reliability Thorough coverage of storage engines, including in-depth tuning and optimizations for the InnoDB storage engine Effects of new features in MySQL 5.0 and 5.1, including stored procedures, partitioned databases, triggers, and views A detailed discussion on how to build very large, highly scalable systems with MySQL New options for backups and replication Optimization of advanced querying features, such as full-text searches Four new appendices The book also includes chapters on benchmarking, profiling, backups, security, and tools and techniques to help you measure, monitor, and manage your MySQL installations.

Programming Language Pragmatics Packt Publishing Ltd

Leverage the full potential of Entity Framework with this collection of powerful and easy-to-follow recipes About This Book Learn how to use the new features of Entity Framework Core 1 Improve your queries by leveraging some of the advanced features Avoid common pitfalls Make the best of your .NET APIs by integrating with Entity Framework Who This Book Is For This book is for .NET developers who work with relational databases on a daily basis and understand the basics of Entity Framework, but now want to use it in a more efficient manner. You are expected to have some prior knowledge of Entity Framework. What You Will Learn Master the technique of using sequence key generators Validate groups of entities that are to be saved / updated Improve MVC applications that cover applications developed using ASP.NET MVC Core 1 Retrieve database information (table, column names, and so on) for entities Discover optimistic concurrency control and pessimistic concurrency control. Implement Multilatency on the data side of things. Enhance the performance and/or scalability of Entity Framework Core Explore and overcome the pitfalls of Entity Framework Core In Detail Entity Framework is a highly recommended Object Relation Mapping tool used to build complex systems. In order to survive in this growing market, the knowledge of a framework that helps provide easy access to databases, that is, Entity Framework has become a necessity. This book will provide .NET developers with this knowledge and guide them through working efficiently with data using Entity Framework Core. You will start off by learning how to efficiently use Entity Framework in practical situations. You will gain a deep understanding of mapping properties and find out how to handle validation in Entity Framework. The book will then explain how to work with transactions and stored procedures along with improving Entity Framework using query libraries. Moving on, you will learn to improve complex query scenarios and implement transaction and concurrency control. You will then be taught to improve and develop Entity Framework in complex business scenarios. With the concluding chapter on performance and scalability, this book will get you ready to use Entity Framework proficiently. Style and approach Filled with rich code-based examples, this book takes a recipe-based approach that will teach .NET developers to improve their understanding of Entity Framework and help them effortlessly apply this knowledge in everyday situations.

Microsoft System Center 2016 Service Manager Cookbook Packt Publishing Ltd

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 concepts, ranges, and coroutines Utilize C++ constructs and techniques to carry out effective data structure optimization and memory 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 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. 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. Programming Multicore and Many-core Computing Systems "O'Reilly Media, Inc."

Publisher's note: This edition from 2021 is outdated and does not cover the most recent Power BI updates. A new third edition, updated to the latest release is now available in color Purchase of the print or Kindle book includes a free eBook in the PDF format. Key Features Update your knowledge with new recipes for query optimization, aggregation tables, Power BI API, and paginated reports Work with recipes across diverse Power BI platforms including the Power BI Service and Mobile Applications Implement custom solutions with M and DAX languages through actionable guidance and proven development techniques Book Description The complete everyday reference guide to Power BI, written by an internationally recognized Power BI expert duo, is back with a new and updated edition. Packed with revised practical recipes, Microsoft Power BI Cookbook, Second Edition, helps you navigate Power BI tools and advanced features. It also demonstrates the use of end-to-end solutions that integrate those features to get the most out of Power BI. With the help of the recipes in this book, you'll gain advanced design and development insight, practical tips, and guidance on enhancing existing Power BI projects. The updated recipes will equip you with everything you need to know to implement evergreen frameworks that will stay relevant as Power BI updates. You'll familiarize yourself with Power BI development tools and services by going deep into the data connectivity, transformation, modeling, visualization, and analytical capabilities of Power BI. By the end of this book, you'll make the most of Power BI's functional programming languages of DAX and M and deliver powerful solutions to common business intelligence challenges. What you will learn Cleanse, stage, and integrate your data sources with Power Query (M) Remove data complexities and provide users with intuitive, self-service BI capabilities Build business logic and analysis into your solutions via the DAX programming language and dashboard-ready calculations Implement aggregation tables to accelerate query performance over large data sources Create and integrate paginated reports Understand the differences and implications of DirectQuery, live connections, Import, and Composite model datasets Integrate other Microsoft data tools into your Power BI solution Who this book is for If you're a BI professional who wants to up their knowledge of Power BI and offer more value to their organization, then this book is for you. Those looking for quick solutions to common Power BI problems will also find this book an extremely useful resource. Please be aware that this is not a beginner's guide; you'll need a solid understanding of Power BI and experience working with datasets before you dive in.

Unity 2021 Cookbook Packt Publishing Ltd

Discover over 100 practical recipes to help you master the art of IT service management for your organization About This Book Unleash the capabilities of Microsoft System Center 2016 Service Manager Master the skills of configuring, deploying, managing, and troubleshooting your Service Manager 2016 This book contains practical recipes that leverage the key and newly added features and functionalities of Microsoft System Center 2016 Service Manager Who This Book Is For This book will be useful to IT professionals including SCSM administrators who want to configure and administer System Center Service Manager 2016 and understand how to solve specific problems and scenarios that arise. It will also be useful to users of Service Manager 2012 who want to learn about the new features and capabilities of the Service Manager 2016 release. It will be ideal if you have Service Manager experience as well as experience with other System Center products. What You Will Learn See a practical implementation of the ITSM framework and processes based on ITIL Deploy and configure the new Service Manager HTML5 Self-Service Portal along with Service Catalog design and configuration Get to know about Incident, Problem, and Change Management processes and configuration Get to grips with performing advanced personalization in Service Manager Discover how to set up and use automation with and within Service Manager 2016 Work with Service Manager Data Warehouse Find out what Security Roles are and how to implement them Learn how to upgrade from SCSM 2012 R2 to SCSM 2016 In Detail System Center Service Manager (SCSM) is an integrated platform that offers a simplified data center management experience by implementing best practices such as Incident Management, Service Request, and Change Control to achieve efficient service delivery across your organization. This book provides you with real-world recipes that can be used immediately and will show you how to configure and administer SCSM 2016. You'll also find out how to solve particular problems and scenarios to take this tool further. You'll start with recipes on implementing ITSM frameworks and processes and configuring Service Level Agreements (SLAs). Then, you'll work through deploying and configuring the HTML5 Self-Service Portal, configuring Incident and Problem Management, and designing and configuring Change and Release Management. You'll also learn about security roles and overall Microsoft SCSM 2016 administration. Toward the end of the book, we'll look at advanced topics, such as presenting the wealth of information stored within the Service Manager Data Warehouse, standardizing SCSM deployments, and implementing automation. Style and approach This book will enlighten you on Microsoft System Center 2016 Service Manager through recipes that can be implemented directly in any enterprise. You can read the book from start to end if you're a beginner, or just open up any chapter and start following the recipes as a reference for advanced users. This book consists of a pool of step-by-step recipes on how to perform activities in Service Manager.

Docker Cookbook - Second Edition Food & Agriculture Org.

Annotation Four Intel experts explain the techniques and tools that you can use to improve the performance of applications for IA-32 processors. Simple explanations and code examples help you to develop software that benefits from Intel's Extended Memory 64 Technology (Intel's EM64T), multi-core processing, Hyper-Threading Technology, OpenMP*, and multimedia extensions. This book guides you through the growing collection of software tools, compiler switches, and coding optimizations, showing you efficient ways to get the best performance from software applications.

Parallel Programming with Intel Parallel Studio XE Oxford University Press, USA

This book introduces the reader to all the key concepts and technologies needed to begin developing their own bioinformatics tools. The new edition includes more bioinformatics-specific content and a new chapter on good software engineering practices to help people working in teams.

The Software Optimization Cookbook Morgan Kaufmann

Programming Language Pragmatics, Third Edition, is the most comprehensive programming language book available today. Taking the perspective that language design and implementation are tightly interconnected and that neither can be fully understood in isolation, this critically acclaimed and bestselling book has been thoroughly updated to cover the most recent developments in programming language design, including Java 6 and 7, C++0X, C# 3.0, F#, Fortran 2003 and 2008, Ada 2005, and Scheme R6RS. A new chapter on run-time program management covers virtual machines, managed code, just-in-time and dynamic compilation, reflection, binary translation and rewriting, mobile code, sandboxing, and debugging and program analysis tools. Over 800 numbered examples are provided to help the reader quickly cross-reference and access content. This text is designed for undergraduate Computer Science students, programmers, and systems and software engineers. - Classic programming foundations text now updated to familiarize students with the languages they are most likely to encounter in the workforce, including including Java 7, C++, C# 3.0, F#, Fortran 2008, Ada 2005, Scheme R6RS, and Perl 6. - New and expanded coverage of concurrency and run-time systems ensures students and professionals understand the most important advances driving software today. - Includes over 800 numbered examples to help the

reader quickly cross-reference and access content.

[Proceedings](#) Packt Publishing Ltd

Through example-driven recipes, with plenty of code, focused on the most vital features of the latest PostgreSQL version (9.4), both administrators and developers will follow short, specific guides to understand and leverage useful Postgre functionalities to create better and more efficient databases.