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**KEY=PERFORMANCE - BRENDEN BENITEZ**

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## DB2 SQL Tuning Tips for z/OS Developers

**IBM Press The Definitive Solutions-Oriented Guide to IBM® DB2® for z/OS®: Now Fully Updated for Both v9 and v10! The largest database tuning performance gains can often be obtained from tuning application code, and applications that use SQL to retrieve data are the best candidates for tuning. This well-organized, easy-to-understand reference brings together more than 100 SQL-related skills and techniques that any developer can use to build and optimize DB2 applications for consistently superior performance. DB2 tuning expert Tony Andrews (“Tony the Tuner”) draws on more than 20 years of DB2-related experience, empowering you to take performance into your own hands, whether you’re writing new software or tuning existing systems. Tony shows you exactly how to clear bottlenecks, resolve problems, and improve both speed and reliability. This book fully reflects the latest SQL programming best practices for DB2 V9 and DB2 V10 on z/OS: techniques that are taught in no other book and are rarely covered in general DB2 SQL courses. Drawing on his extensive consulting experience and highly praised training with Themis Inc., Tony also presents practical checklists and an invaluable 15-step methodology for optimizing virtually any DB2 application. Coverage includes Empowering developers on knowing what to do and where to look in resolving performance problems in queries or programs Providing many programming and SQL coding examples Establishing standards and**

guidelines that lead to high-performance SQL Implementing time-efficient code walkthroughs to ensure that your standards are followed Focusing on the small number of SQL statements that consume the most resources Identifying simple solutions that deliver the most sizable benefits Optimizing performance by rewriting query predicates more efficiently Providing a better understanding of SQL optimization and Runstat statistics Recognizing opportunities to tweak your code more effectively than the Optimizer Optimizing SQL code with COBOL applications Efficiently checking for the existence of data, rows, or tables Using Runstats' newest capabilities to consistently optimize paths to data

## Learn T-SQL Querying

### A guide to developing efficient and elegant T-SQL code

Packt Publishing Ltd Troubleshoot query performance issues, identify anti-patterns in code, and write efficient T-SQL queries Key Features Discover T-SQL functionalities and services that help you interact with relational databases Understand the roles, tasks and responsibilities of a T-SQL developer Explore solutions for carrying out database querying tasks, database administration, and troubleshooting Book Description Transact-SQL (T-SQL) is Microsoft's proprietary extension to the SQL language that is used with Microsoft SQL Server and Azure SQL Database. This book will be a useful guide to learning the art of writing efficient T-SQL code in modern SQL Server versions, as well as the Azure SQL Database. The book will get you started with query processing fundamentals to help you write powerful, performant T-SQL queries. You will then focus on query execution plans and learn how to leverage them for troubleshooting. In the later chapters, you will learn how to identify various T-SQL patterns and anti-patterns. This will help you analyze execution plans to gain insights into current performance, and determine whether or not a query is scalable. You will also learn to build diagnostic queries using dynamic management views (DMVs) and dynamic management functions (DMFs) to address various challenges in T-SQL execution. Next, you will study how to leverage the built-in tools of SQL Server to shorten the time taken to address query performance and scalability issues. In the concluding chapters, the book will guide you through implementing various features, such as Extended Events, Query Store, and Query Tuning Assistant using hands-on examples. By the end of this book, you will have the skills to determine query performance bottlenecks, avoid pitfalls, and discover the anti-patterns in use. Foreword by Conor Cunningham, Partner Architect - SQL Server and Azure SQL - Microsoft What you will learn Use Query Store to

understand and easily change query performanceRecognize and eliminate bottlenecks that lead to slow performanceDeploy quick fixes and long-term solutions to improve query performanceImplement best practices to minimize performance risk using T-SQLAchieve optimal performance by ensuring careful query and index designUse the latest performance optimization features in SQL Server 2017 and SQL Server 2019Protect query performance during upgrades to newer versions of SQL ServerWho this book is for This book is for database administrators, database developers, data analysts, data scientists, and T-SQL practitioners who want to get started with writing T-SQL code and troubleshooting query performance issues, through the help of practical examples. Previous knowledge of T-SQL querying is not required to get started on this book.

## Oracle PL/SQL Best Practices

### Optimizing Oracle Code

"O'Reilly Media, Inc." In this book, Steven Feuerstein, widely recognized as one of the world's experts on the Oracle PL/SQL language, distills his many years of programming, writing, and teaching about PL/SQL into a set of PL/SQL language "best practices"--rules for writing code that is readable, maintainable, and efficient. Too often, developers focus on simply writing programs that run without errors--and ignore the impact of poorly written code upon both system performance and their ability (and their colleagues' ability) to maintain that code over time.Oracle PL/SQL Best Practices is a concise, easy-to-use reference to Feuerstein's recommendations for excellent PL/SQL coding. It answers the kinds of questions PL/SQL developers most frequently ask about their code: How should I format my code? What naming conventions, if any, should I use? How can I write my packages so they can be more easily maintained? What is the most efficient way to query information from the database? How can I get all the developers on my team to handle errors the same way? The book contains 120 best practices, divided by topic area. It's full of advice on the program development process, coding style, writing SQL in PL/SQL, data structures, control structures, exception handling, program and package construction, and built-in packages. It also contains a handy, pull-out quick reference card. As a helpful supplement to the text, code examples demonstrating each of the best practices are available on the O'Reilly web site.Oracle PL/SQL Best Practices is intended as a companion to O'Reilly's larger Oracle PL/SQL books. It's a compact, readable reference that you'll turn to again and again--a book that no serious developer can afford to be

without.

# Oracle Embedded Programming and Application Development

**CRC Press Focusing on tried and true best practice techniques in cross-technology based Oracle embedded programming, this book provides authoritative guidance for improving your code compilation and execution. Geared towards IT professionals developing Oracle-based Web-enabled applications in PL/SQL, Java, C, C++, .NET, Perl, and PHP, it covers application development from concepts to customization, following a pragmatic approach to design, coding, testing, deployment, and customization—explaining how to maximize embedded programming practices. Oracle Embedded Programming and Application Development explains application development frameworks using 3GL and 4GL high-level language code as embedded code segments across .NET, Java, and Open Source technologies, in conjunction with SQL and/or PL/SQL and the Oracle RDBMS through version 11gR2. It also: Features pluggable code using parameterized constructs to promote code reuse Explains when to use a particular embedded language as a best fit for specific applications Highlights design considerations that reduce the probability of errors, enable quick resolution, and boost performance in terms of enabling a Fast-Actionable-Synchronized-Tested (FAST) solution implementation Provides best practice techniques that can enhance any application development code-design methodology for a better, easier, faster, cheaper, and pervasive solution that in turn helps achieve a Better Business Benefit (B-B-B) This practical guide details techniques for constructing architecture and code design methodologies for live application development projects that can be generalized and standardized as application development and code design frameworks. Cover to cover, the text provides an understanding of how the designed, developed, and deployed solutions conform to emerging and next-generation trends. It also discusses the conformance and usage of Web 2.0-based RIA functionality and regulatory compliance practices involving auditing and security. Praise for: "Taking an Oracle-centric approach, Lakshman skillfully guides you through the maze of various popular programming languages and environments including .NET, C/C++, Perl, PHP, Java, and even SQL and PL/SQL - not only showing you how they interact with Oracle but also which language is the best fit for a given situation." —John Kanagaraj, Executive Editor, IOUG SELECT Journal**

# Pro SQL Server 2012 Practices

**Apres Pro SQL Server 2012 Practices is an anthology of high-end wisdom from a group of accomplished database administrators who are quietly but relentlessly pushing the performance and feature envelope of Microsoft SQL Server 2012. With an emphasis upon performance—but also branching into release management, auditing, and other issues—the book helps you deliver the most value for your company’s investment in Microsoft’s flagship database system. Goes beyond the manual to cover good techniques and best practices Delivers knowledge usually gained only by hard experience Focuses upon performance, scalability, reliability Helps achieve the predictability needed to be in control at all times**

# Modernizing IBM i Applications from the Database up to the User Interface and Everything in Between

**IBM Redbooks This IBM® Redbooks® publication is focused on melding industry preferred practices with the unique needs of the IBM i community and providing a holistic view of modernization. This book covers key trends for application structure, user interface, data access, and the database. Modernization is a broad term when applied to applications. It is more than a single event. It is a sequence of actions. But even more, it is a process of rethinking how to approach the creation and maintenance of applications. There are tangible deliveries when it comes to modernization, the most notable being a modern user interface (UI), such as a web browser or being able to access applications from a mobile device. The UI, however, is only the beginning. There are many more aspects to modernization. Using modern tools and methodologies can significantly improve productivity and reduce long-term cost while positioning applications for the next decade. It is time to put the past away. Tools and methodologies have undergone significant transformation, improving functionality, usability, and productivity. This is true of the plethora of IBM tools and the wealth of tools available from many Independent Solution Providers (ISVs). This publication is the result of work that was done by IBM, industry experts, and by representatives from many of the ISV Tool Providers. Some of their tools are referenced in the book. In addition to reviewing technologies based on context, there is an explanation of why modernization is important and a description of the business benefits of investing in**

modernization. This critical information is key for line-of-business executives who want to understand the benefits of a modernization project. This book is appropriate for CIOs, architects, developers, and business leaders. Related information Making the Case for Modernization, IBM Systems Magazine

## Pro Oracle SQL Development

### Best Practices for Writing Advanced Queries

**Apres Write SQL statements that are more powerful, simpler, and faster using Oracle SQL and its full range of features. This book provides a clearer way of thinking about SQL by building sets, and provides practical advice for using complex features while avoiding anti-patterns that lead to poor performance and wrong results. Relevant theories, real-world best practices, and style guidelines help you get the most out of Oracle SQL. Pro Oracle SQL Development is for anyone who already knows Oracle SQL and is ready to take their skills to the next level. Many developers, analysts, testers, and administrators use Oracle databases frequently, but their queries are limited because they do not have the knowledge, experience, or right environment to help them take full advantage of Oracle's advanced features. This book will inspire you to achieve more with your Oracle SQL statements through tips for creating your own style for writing simple, yet powerful, SQL. It teaches you how to think about and solve performance problems in Oracle SQL, and covers advanced topics and shows you how to become an Oracle expert. What You'll Learn**

- Understand the power of Oracle SQL and where to apply it**
- Create a database development environment that is simple, scalable, and conducive to learning**
- Solve complex problems that were previously solved in a procedural language**
- Write large Oracle SQL statements that are powerful, simple, and fast**
- Apply coding styles to make your SQL statements more readable**
- Tune large Oracle SQL statements to eliminate and avoid performance problems**

**Who This Book Is For** Developers, testers, analysts, and administrators who want to harness the full power of Oracle SQL to solve their problems as simply and as quickly as possible. For traditional database professionals the book offers new ways of thinking about the language they have used for so long. For modern full stack developers the book explains how a database can be much more than simply a place to store data.

# Oracle Database 12c Performance Tuning Recipes

## A Problem-Solution Approach

**Apres Performance problems are rarely "problems" per se. They are more often "crises" during which you're pressured for results by a manager standing outside your cubicle while your phone rings with queries from the help desk. You won't have the time for a leisurely perusal of the manuals, nor to lean back and read a book on theory. What you need in that situation is a book of solutions, and solutions are precisely what Oracle Database 12c Performance Tuning Recipes delivers. Oracle Database 12c Performance Tuning Recipes is a ready reference for database administrators in need of immediate help with performance issues relating to Oracle Database. The book takes an example-based approach, wherein each chapter covers a specific problem domain. Within each chapter are "recipes," showing by example how to perform common tasks in that chapter's domain. Solutions in the recipes are backed by clear explanations of background and theory from the author team. Whatever the task, if it's performance-related, you'll probably find a recipe and a solution in this book. Provides proven solutions to real-life Oracle performance problems Offers relevant background and theory to support each solution Gets straight to the point for when you're under pressure for results**

## Expert PL/SQL Practices

### for Oracle Developers and DBAs

**Apres Expert PL/SQL Practices is a book of collected wisdom on PL/SQL programming from some of the best and the brightest in the field. Each chapter is a deep-dive into a specific problem, technology, or feature set that you'll face as a PL/SQL programmer. Each author has chosen their topic out of the strong belief that what they share can make a positive difference in the quality and scalability of code that you write. The path to mastery begins with syntax and the mechanics of writing statements to make things happen. If you've reached that point with PL/SQL, then let the authors of Expert PL/SQL Practices show you how to combine syntax and mechanics with features and techniques to really**

make the language sing. You'll learn to do more with less effort, to write code that scales and performs well, and to eliminate and avoid defects. These authors are passionate about PL/SQL and the power it places at your disposal. They want you to succeed, to know all that PL/SQL can offer. Let Expert PL/SQL Practices open your eyes to the full power of Oracle's world-class language for the database engine. Goes beyond the manual to cover good techniques and best practices Delivers knowledge usually gained only by hard experience Covers the functionality that distinguishes PL/SQL as a powerful and scalable programming language for deploying logic inside the database engine

## Refactoring Legacy T-SQL for Improved Performance

### Modern Practices for SQL Server Applications

Apress Breathe new life into older applications by refactoring T-SQL queries and code using modern techniques. This book shows you how to significantly improve the performance of older applications by finding common anti-patterns in T-SQL code, then rewriting those anti-patterns using new functionality that is supported in current versions of SQL Server, including SQL Server 2019. The focus moves through the different types of database objects and the code used to create them, discussing the limitations and anti-patterns commonly found for each object type in your database. Legacy code isn't just found in queries and external applications. It's also found in the definitions of underlying database objects such as views and tables. This book helps you quickly find problematic code throughout the database and points out where and how modern solutions can replace older code, thereby making your legacy applications run faster and extending their lifetimes. Author Lisa Bohm explains the logic behind each anti-pattern, helping you understand why each pattern is a problem and showing how it can be avoided. Good coding habits are discussed, including guidance on topics such as readability and maintainability. What You Will Learn Find specific areas in code to target for performance gains Identify pain points quickly and understand why they are problematic Rewrite legacy T-SQL to reduce or eliminate hidden performance issues Write modern code with an awareness of readability and maintainability Recognize and correlate T-SQL anti-patterns with techniques for better solutions Make a positive impact on application user experience in your organization Who This Book Is For Database administrators or developers who maintain older code, those frustrated with complaints about slow code when there is so much of it to fix, and those who want a head start in making a positive impact on application user experience in their organization



# Oracle Database 11g Performance Tuning Recipes

## A Problem-Solution Approach

**Apres Performance problems are rarely "problems" per se. They are more often "crises" during which you're pressured for results by a manager standing outside your cubicle while your phone rings with queries from the help desk. You won't have the time for a leisurely perusal of the manuals, nor to lean back and read a book on theory. What you need in that situation is a book of solutions, and solutions are precisely what Oracle Database 11g Performance Tuning Recipes delivers. Oracle Database 11g Performance Tuning Recipes is a ready reference for database administrators in need of immediate help with performance issues relating to Oracle Database. The book takes an example-based approach, wherein each chapter covers a specific problem domain. Within each chapter are "recipes," showing by example how to perform common tasks in that chapter's domain. Solutions in the recipes are backed by clear explanations of background and theory from the author team. Whatever the task, if it's performance-related, you'll probably find a recipe and a solution in this book. Provides proven solutions to real-life Oracle performance problems Offers relevant background and theory to support each solution Written by a team of experienced database administrators successful in their careers**

## Oracle PL/SQL Programming

## Covers Versions Through Oracle Database 11g Release 2

**"O'Reilly Media, Inc." This book is the definitive reference on PL/SQL, considered throughout the database community to be the best Oracle programming book available. Like its predecessors, this fifth edition of Oracle PL/SQL Programming covers language fundamentals, advanced coding techniques, and best practices for using Oracle's powerful procedural language. Thoroughly updated for Oracle Database 11g Release 2, this edition reveals new PL/SQL features and provides extensive code samples, ranging from simple examples to complex and complete applications, in the book and on the companion website. This indispensable reference for both novices and experienced Oracle**

programmers will help you: Get PL/SQL programs up and running quickly, with clear instructions for executing, tracing, testing, debugging, and managing PL/SQL code Optimize PL/SQL performance with the aid of a brand-new chapter in the fifth edition Explore datatypes, conditional and sequential control statements, loops, exception handling, security features, globalization and localization issues, and the PL/SQL architecture Understand and use new Oracle Database 11g features, including the edition-based redefinition capability, the function result cache, the new CONTINUE statement, fine-grained dependency tracking, sequences in PL/SQL expressions, supertype invocation from subtypes, and enhancements to native compilation, triggers, and dynamic SQL Use new Oracle Database 11g tools and techniques such as PL/Scope, the PL/SQL hierarchical profiler, and the SecureFiles technology for large objects Build modular PL/SQL applications using procedures, functions, triggers, and packages

## Java Performance

# In-Depth Advice for Tuning and Programming Java 8, 11, and Beyond

O'Reilly Media Coding and testing are generally considered separate areas of expertise. In this practical book, Java expert Scott Oaks takes the approach that anyone who works with Java should be adept at understanding how code behaves in the Java Virtual Machine—including the tunings likely to help performance. This updated second edition helps you gain in-depth knowledge of Java application performance using both the JVM and the Java platform. Developers and performance engineers alike will learn a variety of features, tools, and processes for improving the way the Java 8 and 11 LTS releases perform. While the emphasis is on production-supported releases and features, this book also features previews of exciting new technologies such as ahead-of-time compilation and experimental garbage collections. Understand how various Java platforms and compilers affect performance Learn how Java garbage collection works Apply four principles to obtain best results from performance testing Use the JDK and other tools to learn how a Java application is performing Minimize the garbage collector's impact through tuning and programming practices Tackle performance issues in Java APIs Improve Java-driven database application performance

# The Guru's Guide to SQL Server Stored Procedures, XML, and HTML

**Addison-Wesley Professional** Explores the foundations of SQL and Transact-SQL programming to teach readers how to develop coding techniques and discover solutions to programming problems, then covers practices, design considerations, and advanced topics.

## Data Analysis Using SQL and Excel

**John Wiley & Sons** A practical guide to data mining using SQL and Excel **Data Analysis Using SQL and Excel, 2nd Edition** shows you how to leverage the two most popular tools for data query and analysis—SQL and Excel—to perform sophisticated data analysis without the need for complex and expensive data mining tools. Written by a leading expert on business data mining, this book shows you how to extract useful business information from relational databases. You'll learn the fundamental techniques before moving into the "where" and "why" of each analysis, and then learn how to design and perform these analyses using SQL and Excel. Examples include SQL and Excel code, and the appendix shows how non-standard constructs are implemented in other major databases, including Oracle and IBM DB2/UDB. The companion website includes datasets and Excel spreadsheets, and the book provides hints, warnings, and technical asides to help you every step of the way. **Data Analysis Using SQL and Excel, 2nd Edition** shows you how to perform a wide range of sophisticated analyses using these simple tools, sparing you the significant expense of proprietary data mining tools like SAS. Understand core analytic techniques that work with SQL and Excel Ensure your analytic approach gets you the results you need Design and perform your analysis using SQL and Excel **Data Analysis Using SQL and Excel, 2nd Edition** shows you how to best use the tools you already know to achieve expert results.

## The Art of SQL

"O'Reilly Media, Inc." For all the buzz about trendy IT techniques, data processing is still at the core of our systems, especially now that enterprises all over the world are confronted with exploding volumes of data. Database

performance has become a major headache, and most IT departments believe that developers should provide simple SQL code to solve immediate problems and let DBAs tune any "bad SQL" later. In *The Art of SQL*, author and SQL expert Stephane Faroult argues that this "safe approach" only leads to disaster. His insightful book, named after *Art of War* by Sun Tzu, contends that writing quick inefficient code is sweeping the dirt under the rug. SQL code may run for 5 to 10 years, surviving several major releases of the database management system and on several generations of hardware. The code must be fast and sound from the start, and that requires a firm understanding of SQL and relational theory. *The Art of SQL* offers best practices that teach experienced SQL users to focus on strategy rather than specifics. Faroult's approach takes a page from Sun Tzu's classic treatise by viewing database design as a military campaign. You need knowledge, skills, and talent. Talent can't be taught, but every strategist from Sun Tzu to modern-day generals believed that it can be nurtured through the experience of others. They passed on their experience acquired in the field through basic principles that served as guiding stars amid the sound and fury of battle. This is what Faroult does with SQL. Like a successful battle plan, good architectural choices are based on contingencies. What if the volume of this or that table increases unexpectedly? What if, following a merger, the number of users doubles? What if you want to keep several years of data online? Faroult's way of looking at SQL performance may be unconventional and unique, but he's deadly serious about writing good SQL and using SQL well. *The Art of SQL* is not a cookbook, listing problems and giving recipes. The aim is to get you-and your manager-to raise good questions.

## Oracle PL/SQL Best Practices

### Write the Best PL/SQL Code of Your Life

"O'Reilly Media, Inc." In this compact book, Steven Feuerstein, widely recognized as one of the world's leading experts on the Oracle PL/SQL language, distills his many years of programming, teaching, and writing about PL/SQL into a set of best practices-recommendations for developing successful applications. Covering the latest Oracle release, Oracle Database 11gR2, Feuerstein has rewritten this new edition in the style of his bestselling *Oracle PL/SQL Programming*. The text is organized in a problem/solution format, and chronicles the programming exploits of developers at a mythical company called My Flimsy Excuse, Inc., as they write code, make mistakes, and learn from those mistakes-and each other. This book offers practical answers to some of the hardest questions faced by PL/SQL developers, including:

**What is the best way to write the SQL logic in my application code? How should I write my packages so they can be leveraged by my entire team of developers? How can I make sure that all my team's programs handle and record errors consistently? Oracle PL/SQL Best Practices summarizes PL/SQL best practices in nine major categories: overall PL/SQL application development; programming standards; program testing, tracing, and debugging; variables and data structures; control logic; error handling; the use of SQL in PL/SQL; building procedures, functions, packages, and triggers; and overall program performance. This book is a concise and entertaining guide that PL/SQL developers will turn to again and again as they seek out ways to write higher quality code and more successful applications. "This book presents ideas that make the difference between a successful project and one that never gets off the ground. It goes beyond just listing a set of rules, and provides realistic scenarios that help the reader understand where the rules come from. This book should be required reading for any team of Oracle database professionals." --Dwayne King, President, KRIDAN Consulting**

## Advanced Oracle PL/SQL Developer's Guide

**Packt Publishing Ltd Master the advanced concepts of PL/SQL for professional-level certification and learn the new capabilities of Oracle Database 12c About This Book Learn advanced application development features of Oracle Database 12c and prepare for the 1Z0-146 examination Build robust and secure applications in Oracle PL/SQL using the best practices Packed with feature demonstrations and illustrations that will help you learn and understand the enhanced capabilities of Oracle Database 12c Who This Book Is For This book is for Oracle developers responsible for database management. Readers are expected to have basic knowledge of Oracle Database and the fundamentals of PL/SQL programming. Certification aspirants can use this book to prepare for 1Z0-146 examination in order to be an Oracle Certified Professional in Advanced PL/SQL. What You Will Learn Learn and understand the key SQL and PL/SQL features of Oracle Database 12c Understand the new Multitenant architecture and Database In-Memory option of Oracle Database 12c Know more about the advanced concepts of the Oracle PL/SQL language such as external procedures, securing data using Virtual Private Database (VPD), SecureFiles, and PL/SQL code tracing and profiling Implement Virtual Private Databases to prevent unauthorized data access Trace, analyze, profile, and debug PL/SQL code while developing database applications Integrate the new application development features of Oracle Database 12c with the current concepts Discover techniques to analyze and maintain PL/SQL code Get acquainted with the best practices of writing PL/SQL code and develop secure applications In Detail Oracle Database is one of the most popular**

databases and allows users to make efficient use of their resources and to enhance service levels while reducing the IT costs incurred. Oracle Database is sometimes compared with Microsoft SQL Server, however, Oracle Database clearly supersedes SQL server in terms of high availability and addressing planned and unplanned downtime. Oracle PL/SQL provides a rich platform for application developers to code and build scalable database applications and introduces multiple new features and enhancements to improve development experience. *Advanced Oracle PL/SQL Developer's Guide, Second Edition* is a handy technical reference for seasoned professionals in the database development space. This book starts with a refresher of fundamental concepts of PL/SQL, such as anonymous block, subprograms, and exceptions, and prepares you for the upcoming advanced concepts. The next chapter introduces you to the new features of Oracle Database 12c, not limited to PL/SQL. In this chapter, you will understand some of the most talked about features such as Multitenant and Database In-Memory. Moving forward, each chapter introduces advanced concepts with the help of demonstrations, and provides you with the latest update from Oracle Database 12c context. This helps you to visualize the pre- and post-applications of a feature over the database releases. By the end of this book, you will have become an expert in PL/SQL programming and will be able to implement advanced concepts of PL/SQL for efficient management of Oracle Database. **Style and approach** The book follows the structure of the Oracle Certification examination but doesn't restrict itself to the exam objectives. Advanced concepts have been explained in an easy-to-understand style, supported with feature demonstrations and case illustrations.

## SQL

### 3 books in 1 - The Ultimate Beginners, Intermediate and Expert Guide to Master SQL Programming

**Publishing Factory** Are you looking for a dynamic and workable programming language? Have you tried a few but none seem to work to your liking? Have you considered SQL? There are literally thousands of programming languages available in today's market, ranging from the simple to the infinitely complex. As a beginner you probably want something that is easy to use and to get your head around and SQL, or Structured Query Language, could be the answer. Inside the pages of *SQL: The Ultimate Beginners, Intermediate & Expert Guide to Learn SQL Programming Step*

by Step, you'll find a comprehensive guide to get you started & is ideal for helping you with a range of intermediate skills including chapters on: Book 1 • Data definition language • SQL joins and union • Ensuring data integrity • Database creation • Database administration • Modifying and controlling tables • And more... Book 2 • A recap on the basics of SQL • An easy guide to installing and configuring SQL • Data types and their functions • Encrypting, creating and indexing views • Getting the most out of stored routines and functions • The benefits of normalizing your data • And more... Book 3 • How to access databases using ODBC and JDBC • Quick and easy mapping • How to combine JSON and SQL • Ways to develop procedural capabilities • Simplifying advanced interface methods • Tuning and compiling made easy • And more... When searching for a programming language that is the right one for you, SQL is one of the best around for ease of use and flexibility for the beginner. And as this book has been written with the novice in mind, it means that you could soon be writing your own programs quickly and efficiently, building on your new skills with each passing chapter. Don't wait any longer and get your copy today. There really is no better way to get started with a programming language and you'll be amazed how fast you will learn with SQL!

## Expert SQL Server 2005 Development

Apres While building on the skills you already have, Expert SQL Server 2005 Development will help you become an even better developer by focusing on best practices and demonstrating how to design high-performance, maintainable database applications. This book starts by reintroducing the database as a integral part of the software development ecosystem. You'll learn how to think about SQL Server development as you would any other software development. For example, there's no reason you can't architect and test database routines just as you would architect and test application code. And nothing should stop you from implementing the types of exception handling and security rules that are considered so important in other tiers, even if they are usually ignored in the database. You'll learn how to apply development methodologies like these to produce high-quality encryption and SQLCLR solutions. Furthermore, you'll discover how to exploit a variety of tools that SQL Server offers in order to properly use dynamic SQL and to improve concurrency in your applications. Finally, you'll become well versed in implementing spatial and temporal database designs, as well as approaching graph and hierarchy problems.

# Expert Oracle Database Architecture

## 9i and 10g Programming Techniques and Solutions

**Apress \* Based on a proven best-seller and written by the most recognized Oracle expert in the world and f \* Fully revised book, covering both for the 9i and 10g versions of the database \* Based on what is widely-recognized as the best Oracle book ever written. It defines what Oracle really is, and why it is so powerful \* Inspired by the thousands of questions Tom has answered on his <http://asktom.oracle.com> site. It defines what Oracle really is, and why it is so powerful It and it tackles the problems that developers and DBAs struggle with every day**

## Learning SQL

## Master SQL Fundamentals

**O'Reilly Media Updated for the latest database management systems -- including MySQL 6.0, Oracle 11g, and Microsoft's SQL Server 2008 -- this introductory guide will get you up and running with SQL quickly. Whether you need to write database applications, perform administrative tasks, or generate reports, Learning SQL, Second Edition, will help you easily master all the SQL fundamentals. Each chapter presents a self-contained lesson on a key SQL concept or technique, with numerous illustrations and annotated examples. Exercises at the end of each chapter let you practice the skills you learn. With this book, you will: Move quickly through SQL basics and learn several advanced features Use SQL data statements to generate, manipulate, and retrieve data Create database objects, such as tables, indexes, and constraints, using SQL schema statements Learn how data sets interact with queries, and understand the importance of subqueries Convert and manipulate data with SQL's built-in functions, and use conditional logic in data statements Knowledge of SQL is a must for interacting with data. With Learning SQL, you'll quickly learn how to put the power and flexibility of this language to work.**



# Oracle Application Express by Design

## Managing Cost, Schedule, and Quality

**Apres Learn the many design decisions that must be made before starting to build a large Oracle Application Express (APEX) application for the cloud or enterprise. One of APEX's key strengths is the fact that it is a Rapid Application Development (RAD) tool. This is also a major weakness when it tempts developers to start coding too soon. Small applications that consist of tens of pages can be coded without a lot of design work because they can be re-factored quickly when design flaws are discovered. Design flaws in large cloud and enterprise applications that consist of hundreds or thousands of pages are not so easy to re-factor due to the time needed to redevelop and retest the application, not to mention the risk of breaking functionality in subtle ways. Designing a large application before coding starts is a profitable exercise because a thoughtful design goes a long way in mitigating cost overruns and schedule slippage while simultaneously enhancing quality. This book takes into account perspectives from other non-developer stakeholders such as maintenance developers, business analysts, testers, technical writers, end users, and business owners. Overlooking these perspectives is one of the chief causes of expensive rework late in the development cycle. Oracle Application Express by Design illustrates APEX design principles by using architecture diagrams, screen shots, and explicit code snippets to guide developers through the many design choices and complex interrelationship issues that must be evaluated before embarking on large APEX projects. This book: Guides you through important, up-front APEX design decisions Helps you to optimize your design by keeping all stakeholders in mind Explicit code examples show how design impacts cost, schedule, and quality What You Will Learn Pick and choose from the list of designs before coding begins Bake optimal quality into the underlying fabric of an APEX application Think and design from outside the developer's narrow perspective Optimize APEX application designs to satisfy multiple stakeholder groups Evaluate design options through hands-on, explicit code examples Define and measure success for large cloud and enterprise APEX applications Who This Book Is For APEX developers and development teams**

# Building Solutions with the Microsoft .NET Compact Framework

## Architecture and Best Practices for Mobile Development

**Addison-Wesley Professional bull; bull;The .NET Compact Framework (CF) brings the power of .NET to mobile devices, yet there is very little information on how to use it effectively bull;The number of developers using the .NET CF over the next few years is anticipated to increase greatly bull;Covers related important topics such as SQL Server 2000 Windows CE edition**

## Entity Framework Core in Action, Second Edition

**Simon and Schuster Entity Framework Core in Action, Second Edition teaches you to write flawless database interactions for .NET applications. Summary Entity Framework Core in Action, Second Edition is an in-depth guide to reading and writing databases with EF Core. Revised from the bestselling original edition, it's filled with over 100 diagrams, code snippets, and examples—including building and scaling your own bookselling web application. Learn from author Jon Smith's extensive experience working with EF Core in production, as you discover time-saving patterns and best practices for security, performance tuning, and unit testing. All of the book's code is available on GitHub. Purchase of the print book includes a free eBook in PDF, Kindle, and ePub formats from Manning Publications. About the technology Entity Framework radically simplifies data access in .NET applications. This easy-to-use object-relational mapper (ORM) lets you write database code in pure C#. It automatically maps classes to database tables and enables queries with standard LINQ commands. It even generates SQL, so you don't have to! About the book Entity Framework Core in Action, Second Edition teaches you to write flawless database interactions for .NET applications. Following relevant examples from author Jon Smith's extensive experience, you'll progress quickly from EF basics to advanced techniques. In addition to the latest EF features, this book addresses performance, security, refactoring, and unit testing. This updated edition also contains new material on NoSQL databases. What's inside Configure EF to define**

every table and column Update your schema as your app grows Integrating EF with existing C# application Write and test business logic for database access Applying a Domain-Driven Design to EF Core Getting the best performance out of EF Core About the reader For .NET developers familiar with relational databases. About the author Jon P. Smith is a freelance software developer and architect with a special focus on .NET and Azure. Table of Contents PART 1 1 Introduction to Entity Framework Core 2 Querying the database 3 Changing the database content 4 Using EF Core in business logic 5 Using EF Core in ASP.NET Core web applications 6 Tips and techniques for reading and writing with EF Core PART 2 7 Configuring nonrelational properties 8 Configuring relationships 9 Handling database migrations 10 Configuring advanced features and handling concurrency conflicts 11 Going deeper into the DbContext PART 3 12 Using entity events to solve business problems 13 Domain-Driven Design and other architectural approaches 14 EF Core performance tuning 15 Master class on performance-tuning database queries 16 Cosmos DB, CQRS, and other database types 17 Unit testing EF Core applications

## Learning PostgreSQL 10

# A beginner's guide to building high-performance PostgreSQL database solutions

Packt Publishing Ltd Leverage the power of PostgreSQL 10 to build powerful database and data warehousing applications. About This Book Be introduced to the concept of relational databases and PostgreSQL, one of the fastest growing open source databases in the world Learn client-side and server-side programming in PostgreSQL, and how to administer PostgreSQL databases Discover tips on implementing efficient database solutions with PostgreSQL 10 Who This Book Is For If you're interested in learning more about PostgreSQL - one of the most popular relational databases in the world, then this book is for you. Those looking to build solid database or data warehousing applications with PostgreSQL 10 will also find this book a useful resource. No prior knowledge of database programming or administration is required to get started with this book. What You Will Learn Understand the fundamentals of relational databases, relational algebra, and data modeling Install a PostgreSQL cluster, create a database, and implement your data model Create tables and views, define indexes, and implement triggers, stored procedures, and

other schema objects Use the Structured Query Language (SQL) to manipulate data in the database Implement business logic on the server side with triggers and stored procedures using PL/pgSQL Make use of advanced data types supported by PostgreSQL 10: Arrays, hstore, JSONB, and others Develop OLAP database solutions using the most recent features of PostgreSQL 10 Connect your Python applications to a PostgreSQL database and work with the data efficiently Test your database code, find bottlenecks, improve performance, and enhance the reliability of the database applications In Detail PostgreSQL is one of the most popular open source databases in the world, and supports the most advanced features included in SQL standards and beyond. This book will familiarize you with the latest new features released in PostgreSQL 10, and get you up and running with building efficient PostgreSQL database solutions from scratch. We'll start with the concepts of relational databases and their core principles. Then you'll get a thorough introduction to PostgreSQL and the new features introduced in PostgreSQL 10. We'll cover the Data Definition Language (DDL) with an emphasis on PostgreSQL, and the common DDL commands supported by ANSI SQL. You'll learn to create tables, define integrity constraints, build indexes, and set up views and other schema objects. Moving on, you'll get to know the concepts of Data Manipulation Language (DML) and PostgreSQL server-side programming capabilities using PL/pgSQL. This will give you a very robust background to develop, tune, test, and troubleshoot your database application. We'll also explore the NoSQL capabilities of PostgreSQL and connect to your PostgreSQL database to manipulate data objects. By the end of this book, you'll have a thorough understanding of the basics of PostgreSQL 10 and will have the necessary skills to build efficient database solutions. Style and approach This book is a comprehensive beginner level tutorial on PostgreSQL and introduces the features of the newest version 10, along with explanation of concepts in a very easy to understand manner. Practical tips and examples are provided at every step to ensure you are able to grasp each topic as quickly as possible.

## A Complete Guide to Portals and User Experience Platforms

CRC Press Build a Next-Generation Enterprise Digital Platform with Portals and UXP A Complete Guide to Portals and User Experience Platforms provides in-depth coverage of portal technologies and user experience platforms (UXPs), which form the key pillars of a modern digital platform. Drawing on his experience in various roles in numerous portal engagements, the author gives you different perspectives of the same technology platform. The first section

introduces portal through multiple viewpoints to cater to a wide audience, including business, operations, development, integration, performance, and architecture views. The book details many novel and practically proven models and frameworks, such as portal value realization framework, portal assessment framework, portal evaluation model, portal infrastructure planning techniques, and portal integration techniques. You also learn about effective digital program strategies, including portal roadmap strategy, collaboration strategy, portal security planning, portal testing strategy, SEO, and analytics planning concepts. The second section dives into UXP and advanced topics. It elaborates on UXP design concepts, including UXP reference architecture, customer touch point analysis, user experience mapping, and responsive web design. It also looks at advanced topics, such as next-generation portals, portal trends, portal user experience strategy, omni-channel strategy, portal KPI, portal pitfalls and best practices, portal security, portal governance, digital program management, and portal performance engineering. In the third section, the book presents four case studies related to intranet portals, retail portals, customer service portals, and portal content management. It discusses business drivers, challenges, portal solutions, and solution benefits for each of the case studies. Written by a seasoned practitioner, this book balances the core topics of modern portals along with emerging technologies in the digital space. Suitable for the entire digital technology community, including IT managers, digital architects, developers, and testers, it provides you with a practical guide for successfully building best practices-based digital platforms with forward-looking features.

## Hitchhiker's Guide to Visual Studio and SQL Server Best Practice Architectures and Examples

Addison-Wesley Professional Since 1994 when he wrote his first “Hitchhiker’s Guide”, William Vaughn has been providing developers all over the world the intimate details of how SQL Server can be accessed and managed from RAD languages like Visual Basic and Visual Basic .NET. With the 7th Edition, Bill has completely rewritten this encyclopedic work from cover to cover-giving readers his insightful views on how applications should be built to maximize both developer and code performance. Visual Studio and the languages it hosts have never been as sophisticated as they are today-the same can be said for SQL Server. This makes it even more important for developers to understand how to best leverage their features without being held back by their complexity. That’s what this book is all about-making

it easier for developers regardless of their know-how. The 7th edition is unique in that it's designed to provide not only up-to-date tutorials on the latest development tools provided by Visual Studio and SQL Server, but also a solid platform of architectural advice and rich examples for developers trying to choose between the myriad of platform options. Beginners and experts alike will find comprehensive step-by-step instructions that can make the reader's introduction to the latest versions of Visual Studio and SQL Server far easier. Key topic coverage includes:

- Data access architectures and how to choose the best strategy for Windows Forms, ASP.NET, XML Web Services, and SQL Server CLR executables. Where do these make sense and how much will they cost to build and maintain?
- SQL Server and relational database fundamentals and inner-machinery. How does SQL Server work and why is it important that developers know?
- Making the development experience more productive through judicious use of the Visual Studio toolset, and how to know when the wizards can help.
- Using the latest ADO.NET data provider efficiently and safely.
- How to protect the security of your database-and your job-by avoiding common mistakes.
- How to build secure, efficient, scalable applications in less time with fewer resources-how to create faster code faster.
- How to leverage the potential of SQL Server CLR executables and knowing when these features make sense.
- How to work with your DBA to maintain database integrity and security.
- Working with the new Visual Studio report controls to expose your organization's data safely and easily with or without leveraging existing SQL Server Reporting Services technology.

William R. Vaughnis the President of Beta V Corporation and a Microsoft MVP. In 2000 he retired from Microsoft after 14 years to focus on mentoring, speaking, and writing. His specialty is data access application design especially when connecting to SQL Server-over the years he's written 12 books on the subject. He's a popular speaker at technical conferences all over the world where his wit and no-holds-barred technical insights win him rave reviews. William is also a member of the prestigious INETA Speaker's Bureau. His works include articles for SQL Server Magazine and a bi-weekly editorial for Processor Magazine as well as books published by Microsoft Press and Apress. The book includes a DVD that contains a wealth of examples as well as several sample databases used to illustrate points discussed in the book. Authenticated readers will also have unrestricted access to the book's supporting web site, [www.hitchhikerguides.net](http://www.hitchhikerguides.net), where additional examples, online forums, and other supplementary materials are available. [www.awprofessional.com/msserverseries](http://www.awprofessional.com/msserverseries) [www.hitchhikerguides.net](http://www.hitchhikerguides.net) [www.betav.com/blogs/billva](http://www.betav.com/blogs/billva) [www.betav.com](http://www.betav.com)

## Expert One-on-One Oracle

**Apres \* A proven best-seller by the most recognized Oracle expert in the world. \* The best Oracle book ever written. It defines what Oracle really is, and why it is so powerful. \* Inspired by the thousands of questions Tom has answered on his <http://asktom.oracle.com> site. It tackles the problems that developers and DBAs struggle with every day. \* Provides everything you need to know to program correctly with the database and exploit its feature-set effectively.**

## Microsoft SQL Server 2000 Bible

**Wiley Organization: The book is divided into 6 parts: Preparing to Develop with SQL Server; Building and Managing Databases with SQL Server; Managing Data with SQL Server; Implementing Business Rules with SQL Server; Monitoring and Performance Tuning with SQL Server; and Advanced Data Transfer and Analysis with SQL Server. Comprehensive coverage: This Bible covers both beginning and advanced topics. Topics covered include: installing and configuring SQL Server; using SQL server's development tools; securing databases; retrieving data; SQL Server transactions; working with XML; understanding transact SQL language extensions; developing stored procedures; tuning queries and indexes; and developing for English query. Sample database applications: The book builds on sample database applications to demonstrate topics/concepts. Sidebars: So as readers can focus on practical information, the author is using sidebars throughout to explain the best practices associated with the product and highlight material. ABOUT THE CD-ROM The CD-ROM contains the sample database applications and code examples in the book; SQL Server utilities; and links to Web sites, including the author's own SQL Server Web site ([www.IsNotNull.com](http://www.IsNotNull.com)).**

## Pro Oracle SQL

**Apres Pro Oracle SQL, Second Edition unlocks the power of SQL in the Oracle database—one of the most potent SQL implementations on the market today. To master it requires a multi-pronged approach: learn the language features, learn how and why the language features work, learn the supporting features that Oracle provides to help use the language effectively, and learn to think and work in sets. Karen Morton has updated the content for Oracle version 12c and helps you master powerful aspects of Oracle SQL from the inside-out. You'll learn analytic functions, the MODEL**

clause, and advanced grouping syntax—features that will help in creating good queries for reporting and business intelligence applications. **Pro Oracle SQL, Second Edition** also helps you minimize parsing overhead, read execution plans, test for correct results, understand performance management, and exert control over SQL execution in your database. You'll learn when to create indexes, how to verify that they make a difference, how to use SQL Baselines and Profiles to optimize and stabilize SQL execution plans, and much more. You'll also understand how SQL is optimized for working in sets, and that the key to getting accurate results lies in making sure that queries ask clear and precise questions. **Pro Oracle SQL, Second Edition** helps you work at a truly professional level in the Oracle dialect of SQL. You'll master the language, the tools to work effectively with the language, and the right way to think about a problem in SQL. Endorsed by the OakTable Network, a group of Oracle technologists well-known for their rigorous and scientific approach to Oracle Database performance Comprehensive—goes beyond the language with a focus on what you need to know to write successful queries and data manipulation statements. Performance focused—teaches you how to measure the performance of your SQL statements and not just the syntax. What you'll learn Master powerful SQL features implemented in the Oracle Database Understand how the Oracle Optimizer develops execution plans Read and interpret SQL execution plans Quickly diagnose and fix badly performing SQL Control execution plans through hints, profiles, and plan baselines Optimize queries within packaged applications without touching the code Recognize when not to waste time on SQL that is performing optimally Who this book is for **Pro Oracle SQL, Second Edition** is aimed at developers and database administrators who submit SQL for execution by an Oracle database. Readers should already know the basic four SQL statements, and be ready to learn deeply about Oracle's specific implementation of the language, including Oracle-specific features and syntax. Readers should also want to learn about Oracle Database features such as analytic queries, the MODEL clause, and the WITH clause (subquery factoring) that are designed to help developers and database administrators exert control over their SQL environment and its execution. Table of Contents Core SQL SQL Execution Access and Join Methods SQL is About Sets It's About the Question SQL Execution Plans Advanced Grouping Analytic Functions The Model Clause Subquery Factoring Semi-joins and Anti-joins Indexes Beyond the SELECT Transaction Processing Testing and Quality Assurance Plan Stability Plan Management/Control Cool SQL Constructs



# Practical Automated Machine Learning on Azure

## Using Azure Machine Learning to Quickly Build AI Solutions

O'Reilly Media Develop smart applications without spending days and weeks building machine-learning models. With this practical book, you'll learn how to apply automated machine learning (AutoML), a process that uses machine learning to help people build machine learning models. Deepak Mukunthu, Parashar Shah, and Wee Hyong Tok provide a mix of technical depth, hands-on examples, and case studies that show how customers are solving real-world problems with this technology. Building machine-learning models is an iterative and time-consuming process. Even those who know how to create ML models may be limited in how much they can explore. Once you complete this book, you'll understand how to apply AutoML to your data right away. Learn how companies in different industries are benefiting from AutoML Get started with AutoML using Azure Explore aspects such as algorithm selection, auto featurization, and hyperparameter tuning Understand how data analysts, BI professions, developers can use AutoML in their familiar tools and experiences Learn how to get started using AutoML for use cases including classification, regression, and forecasting.

## DB2 9 for z/OS: Packages Revisited

IBM Redbooks DB2® packages were introduced with DB2 V2.3 in 1993. During the 15 years that have elapsed, a lot has changed. In particular, there is a more widespread use of distributed computing, Java™ language, new tools, and upgrades in the platform software and hardware. The best practices back then just might not be optimal today. In this IBM® Redbooks® publication, we take a fresh look at bringing packages into the 21st century. We begin with an overview of packages and explain the advantages of using packages. Because database request module (DBRM) based plans have been deprecated in DB2 9, you need to convert to packages if you did not use packages already. We provide guidance on using a DB2 provided function to convert from DBRM-based plans to packages. We re-examine the

application development frameworks for packages: program preparation, package setup, and execution. For distributed applications, we include a discussion of a utility to identify and remove deprecated private protocol and converting to DRDA® as well as an introduction to the new pureQuery function of Data Studio. We also discuss common problems and their resolutions. We then explore administration and operational activities dealing with packages, including security, access path management (where we discuss the newly introduced package stability feature to allow for a seamless fallback), and management and performance aspects. The appendixes include useful queries and mention tools for managing packages effectively.

## Microservices Communication in .NET Using gRPC

### A practical guide for .NET developers to build efficient communication mechanism for distributed apps

**Packt Publishing Ltd** Learn how to implement gRPC on the .NET platform step by step and cover how to use gRPC on .NET, including fundamentals, use cases, and best practices **Key Features** Explore all aspects of gRPC implementation on .NET, from the most basic features to advanced ones **Discover best practices** for using gRPC to make sure that your applications are as efficient and as scalable as possible **Identify when gRPC is the best tool** for the job and when it isn't **Book Description** Explore gRPC's capabilities for faster communication between your microservices using the HTTP/2 protocol in this practical guide that shows you how to implement gRPC on the .NET platform. gRPC is one of the most efficient protocols for communication between microservices that is also relatively easy to implement. However, its official documentation is often fragmented and .NET developers might find it difficult to recognize the best way to map between C# data types and fields in gRPC messages. This book will address these concerns and much more. Starting with the fundamentals of gRPC, you'll discover how to use it inside .NET apps. You'll explore best practices for performance and focus on scaling a gRPC app. Once you're familiar with the inner workings of the different call types that gRPC supports, you'll advance to learning how to secure your gRPC endpoints by applying authentication and authorization. With detailed explanations, this gRPC .NET book will show you how the Protobuf protocol allows you to send messages efficiently by including only the necessary data. You'll never get confused again while translating

between C# data types and the ones available in Protobuf. By the end of the book, you'll have gained practical gRPC knowledge and be able to use it in .NET apps to enable direct communication between microservices. What you will learn Get to grips with the fundamentals of gRPC and Protobuf Debug gRPC components inside a .NET application to locate and fix errors Understand gRPC best practices, such as performance enhancement Effectively translate between gRPC and native C# code by applying well-known types Secure gRPC communication inside a .NET application Discover how to monitor gRPC on .NET by applying logging and metrics Who this book is for This book is for .NET developers who are working with microservices and are looking for efficient solutions to facilitate communication between services using gRPC. Anyone who is familiar with microservices architecture and has knowledge of the fundamentals of .NET Core, but not necessarily of gRPC, will also find this book useful.

## Learning PostgreSQL 11

# A beginner's guide to building high-performance PostgreSQL database solutions, 3rd Edition

Packt Publishing Ltd Leverage the power of PostgreSQL 11 to build powerful database and data warehousing applications Key Features Monitor, secure, and fine-tune your PostgreSQL 11 database Learn client-side and server-side programming using SQL and PL/pgSQL Discover tips on implementing efficient database solutions Book Description PostgreSQL is one of the most popular open source database management systems in the world, and it supports advanced features included in SQL standards. This book will familiarize you with the latest features in PostgreSQL 11, and get you up and running with building efficient PostgreSQL database solutions from scratch. Learning PostgreSQL, 11 begins by covering the concepts of relational databases and their core principles. You'll explore the Data Definition Language (DDL) and commonly used DDL commands supported by ANSI SQL. You'll also learn how to create tables, define integrity constraints, build indexes, and set up views and other schema objects. As you advance, you'll come to understand Data Manipulation Language (DML) and server-side programming capabilities using PL/pgSQL, giving you a robust background to develop, tune, test, and troubleshoot your database application. The book will guide you in exploring NoSQL capabilities and connecting to your database to manipulate data objects. You'll get to grips with

using data warehousing in analytical solutions and reports, and scaling the database for high availability and performance. By the end of this book, you'll have gained a thorough understanding of PostgreSQL 11 and developed the necessary skills to build efficient database solutions. What you will learn Understand the basics of relational databases, relational algebra, and data modeling Install a PostgreSQL server, create a database, and implement your data model Create tables and views, define indexes and stored procedures, and implement triggers Make use of advanced data types such as Arrays, hstore, and JSONB Connect your Python applications to PostgreSQL and work with data efficiently Identify bottlenecks to enhance reliability and performance of database applications Who this book is for This book is for you if you're interested in learning about PostgreSQL from scratch. Those looking to build solid database or data warehousing applications or wanting to get up to speed with the latest features of PostgreSQL 11 will also find this book useful. No prior knowledge of database programming or administration is required to get started.

## SQL Performance Explained

## Everything Developers Need to Know about SQL

## Performance

## Pro SQL Server 2005

**Apress \* First book to provide comprehensive, deeply practical coverage on all major new SS2005 features. • Lead author (Tom Rizzo) is a key member of the SQL Server team at Microsoft and a respected author and blogger. • Gets the DBA and developer up and running with SS2005 in the fastest possible time. • The facts, not the evangelism.**

## Microsoft SQL Server 2000 Resource Kit

**Microsoft SQL Server 2000 is the high-end, mission-critical relational database management system for rapidly building the next generation of scalable e-commerce, line-of-business, and data-warehousing solutions. "Microsoft SQL**

**Server 2000 Resource Kit" gives database administrators and other IT professionals the definitive technical information and tools they need to deploy, manage, and maintain SQL Server 2000. Delivered direct from the Microsoft SQL Server 2000 product team and Microsoft Consulting Services, it includes special information about core functionality and new features of the product, plus a CD-ROM packed with unique tools and utilities to simplify SQL Server management. It also covers vital topics such as security, clustering and scalability, and Extensible Markup Language (XML). This powerhouse reference is an essential resource for every database administrator who seeks maximum performance from SQL Server 2000.**

## Security Functions of IBM DB2 10 for z/OS

**IBM Redbooks IBM® DB2® 9 and 10 for z/OS® have added functions in the areas of security, regulatory compliance, and audit capability that provide solutions for the most compelling requirements. DB2 10 enhances the DB2 9 role-based security with additional administrative and other finer-grained authorities and privileges. This authority granularity helps separate administration and data access that provide only the minimum appropriate authority. The authority profiles provide better separation of duties while limiting or eliminating blanket authority over all aspects of a table and its data. In addition, DB2 10 provides a set of criteria for auditing for the possible abuse and overlapping of authorities within a system. In DB2 10, improvements to security and regulatory compliance focus on data retention and protecting sensitive data from privileged users and administrators. Improvements also help to separate security administration from database administration. DB2 10 also lets administrators enable security on a particular column or particular row in the database complementing the privilege model. This IBM Redbooks® publication provides a detailed description of DB2 10 security functions from the implementation and usage point of view. It is intended to be used by database, audit, and security administrators.**

## TOAD Handbook

**Sams Publishing Explores the interactive environment used for Oracle development and administration, covering topics including features, menus, defaults, shortcut keys, and SQL tuning.**