

Querying Data With Transact Sql 20761 H1sq4s

This is the eBook of the printed book and may not include any media, website access codes, or print supplements that may come packaged with the bound book. Prepare for Microsoft Exam 70-762, Developing SQL Databases—and help demonstrate your real-world mastery of skills for building and implementing databases across organizations. Designed for database professionals who build and implement databases across organizations and who ensure high levels of data availability, Exam Ref focuses on the critical-thinking and decision-making acumen needed for success at the MCSA level. Focus on the expertise measured by these objectives: • Design and implement database objects • Implement programmability objects • Manage database concurrency • Optimize database objects and SQL infrastructure This Microsoft Exam Ref: • Organizes its coverage by exam objectives • Features strategic, what-if scenarios to challenge you • Assumes you have working knowledge of Microsoft Windows, Transact-SQL, and relational databases About the Exam Exam 70-762 focuses on skills and knowledge for building and implementing databases across organizations and ensuring high levels of data availability. About Microsoft Certification Passing this exam earns you credit toward a Microsoft Certified Solutions Associate (MCSA) certification that demonstrates your mastery of modern database development. Exam 70-761 (Querying Data with Transact-SQL) is also required for MCSA: SQL 2016 Database Development. See full details at: microsoft.com/learning

200 practice questions to prepare & pass exam Exam 70-461: Querying Microsoft SQL Server 2012! Study this book to perform to excellence as a database developer! The exam text book follows the official Microsoft exam guidelines. The book features over 200 practice exam questions & answers. Once you learn the book, very likely you pass the exam effortlessly. SQL (Structured Query Language) programming & relational database design teach-by-practical-diagrams-&-examples book for developers, programmers, systems analysts and project managers who are new to relational database and client/server technologies. Also for database developers, database designers and database administrators (DBA), who know some SQL programming and database design, and who wish to refresh & expand their RDBMS design & development technology horizons. The book has special orientation for passing Exam 70-461. Familiarity with at least one computer programming language, Windows file system & Excel is assumed. Since the book is career advancement oriented, it has a great number of 3NF database design examples with metadata explanations along with practical SQL queries (over 1,400 SELECT queries) and T-SQL scripts, plenty to learn indeed. Great emphasis is placed on explaining the FOREIGN KEY - PRIMARY KEY constraints among tables, the connections which make the collection of individual tables a database. The database diagrams and queries are based on historic and current SQL Server sample databases: pubs (PRIMARY KEYs 9, FOREIGN KEYs 10) , Northwind (PRIMARY KEYs 13, FOREIGN KEYs 13) and the latest AdventureWorks series. Among them: AdventureWorks, AdventureWorks2008, AdventureWorks2012 (PRIMARY KEYs 71, FOREIGN KEYs 90), & AdventureWorksDW2012 (PRIMARY KEYs 27, FOREIGN KEYs 44). The last one is a data warehouse database which is the basis for multi-dimensional OLAP cubes. Sample databases installation instructions are included. The book teaches through vivid database diagrams and T-SQL queries & stored procedures; how to think in terms of sets at a very high level, focusing on set-based operations instead of loops like in procedural programming languages. There is a chapter dedicated to the new programming features of SQL Server 2012 and XML. The best way to master T-SQL programming is to type the query in your own SQL Server Management Studio Query Editor, test it, examine it, change it and study it. Wouldn't it be easier just to copy & paste it? It would, but the learning value would diminish rapidly. You need to feel relational database design and the SQL language in your DNA. SQL queries must "pour" out from your fingers into the keyboard. Why is knowing SQL queries by heart so important? After all everything can be found on the web so why not just copy & paste? Well not exactly. If you want to be an database designer & development expert, it has to be in your head not on the web. Second, when your supervisor is looking over your shoulder, "Charlie, can you tell me what is the total revenue for March?", you have to be able to type the query without documentation or SQL forum search and provide the results to your superior promptly. The book was designed to be readable in any environment, even on the beach laptop around or no laptop in sight at all. All queries are followed by results row count and /or full/partial results listing in tabular (grid) format. Screenshots are used when dealing with GUI tools such as SQL Server Management Studio. SQL Server 2012 installation instructions with screenshots are included. Mastery of the database design & SQL programming book likely to be sufficient for career advancement as a database designer and database developer.

Get a performance-oriented introduction to the T-SQL language underlying the Microsoft SQL Server and Azure SQL database engines. This fourth edition is updated to include SQL Notebooks as well as up-to-date syntax and features for T-SQL on-premises and in the Azure cloud. Exercises and examples now include the WideWorldImporters database, the newest sample database from Microsoft for SQL Server. Also new in this edition is coverage of JSON from T-SQL, news about performance enhancements called Intelligent Query Processing, and an appendix on running SQL Server in a container on macOS or Linux. Beginning T-SQL starts you on the path to mastering T-SQL with an emphasis on best practices. Using the sound coding techniques taught in this book will lead to excellent performance in the queries that you write in your daily work. Important techniques such as windowing functions are covered to help you write fast-executing queries that solve real business problems. The book begins with an introduction to databases, normalization, and to setting up your learning environment. You will learn about the tools you need to use such as SQL Server Management Studio, Azure Data Studio, and SQL Notebooks. Each subsequent chapter teaches an aspect of T-SQL, building on the skills learned in previous chapters. Exercises in most chapters provide an opportunity for the hands-on practice that leads to true learning and distinguishes the competent professional. A stand-out feature in this book is that most chapters end with a Thinking About Performance section. These sections cover aspects of query performance relative to the content just presented, including the new Intelligent Query Processing features that make queries faster without changing code. They will help you avoid beginner mistakes by knowing about and thinking about performance from day 1. What You Will Learn Install a sandboxed SQL Server instance for learning Understand how relational databases are designed Create objects such as tables and stored procedures Query a SQL Server table Filter and order the results of a query Query and work with specialized data types such as XML and JSON Apply modern features such as window functions Choose correct techniques so that your queries perform well Who This Book Is For Anyone who wants to learn T-SQL from the beginning or improve their T-SQL skills; those who need T-SQL as an additional skill; and those who write queries such as application developers, database administrators, business intelligence developers, and data scientists. The book is also helpful for anyone who must retrieve data from a SQL Server database.

Effectively query and modify data using Transact-SQL Master T-SQL fundamentals and write robust code for Microsoft SQL Server and Azure SQL Database. Itzik Ben-Gan explains key T-SQL concepts and helps you apply your knowledge with hands-on exercises. The book first introduces T-SQL's roots and underlying logic. Next, it walks you through core topics such as single-table queries, joins, subqueries, table expressions, and set operators. Then the book covers more-advanced data-query topics such as window functions, pivoting, and grouping sets. The book also explains how to modify data, work with temporal tables, and handle transactions, and provides an overview of programmable objects. Microsoft Data Platform MVP Itzik Ben-Gan shows you how to: Review core SQL concepts and its mathematical roots Create tables and enforce data integrity Perform effective single-table queries by using the SELECT statement Query multiple tables by using joins, subqueries, table expressions, and set operators Use advanced query techniques such as window functions, pivoting, and grouping sets Insert, update, delete, and merge data Use transactions in a concurrent environment Get started with programmable objects—from variables and batches to user-defined functions, stored procedures, triggers, and dynamic SQL

"Most T-SQL developers recognize the value of window functions for data analysis calculations. But they can do far more, and recent optimizations make them even more powerful. In T-SQL Window Functions, renowned T-SQL expert Itzik Ben-Gan introduces breakthrough techniques for using them to handle many common T-SQL querying tasks with unprecedented elegance and power. Using extensive code examples, he guides you through window aggregate, ranking, distribution, offset, and ordered set functions. You'll find a detailed section on optimization, plus an extensive collection of business solutions -- including novel techniques available in no other book."--provided by publisher.

Prepare for Microsoft Exam 70-764—and help demonstrate your real-world mastery of skills for database administration. This exam is intended for database administrators charged with installation, maintenance, and configuration tasks. Their responsibilities also include setting up database systems, making sure those systems operate efficiently, and regularly storing, backing up, and securing data from unauthorized access. Focus on the expertise measured by these objectives: • Configure data access and auditing • Manage backup and restore of databases • Manage and monitor SQL Server instances • Manage high availability and disaster recovery This Microsoft Exam Ref: • Organizes its coverage by exam objectives • Features strategic, what-if scenarios to challenge you • Assumes you have working knowledge of database installation, configuration, and maintenance tasks. You should also have experience with setting up database systems, ensuring those systems operate efficiently, regularly storing and backing up data, and securing data from unauthorized access. About the Exam Exam 70-764 focuses on skills and knowledge required for database administration. About Microsoft Certification Passing both Exam 70-764 and Exam 70-765 (Provisioning SQL Databases) earns you credit toward an MCSA: SQL 2016 Database Administration certification. See full details at: microsoft.com/learning

Tackle the toughest set-based querying and query tuning problems—guided by an author team with in-depth, inside knowledge of T-SQL. Deepen your understanding of architecture and internals—and gain practical approaches and advanced techniques to optimize your code's performance. Discover how to: Move from procedural programming to the language of sets and logic Optimize query tuning with a top-down methodology Assess algorithmic complexity to predict performance Compare data-aggregation techniques, including new grouping sets Manage data modification—insert, delete, update, merge—for performance Write more efficient queries against partitioned tables Work with graphs, trees, hierarchies, and recursive queries Plus—Use pure-logic puzzles to sharpen your problem-solving skills

Prepare for Microsoft Exam 70-767—and help demonstrate your real-world mastery of skills for managing data warehouses. This exam is intended for Extract, Transform, Load (ETL) data warehouse developers who create business intelligence (BI) solutions. Their responsibilities include data cleansing as well as ETL and data warehouse implementation. The reader should have experience installing and implementing a Master Data Services (MDS) model, using MDS tools, and creating a Master Data Manager database and web application. The reader should understand how to design and implement ETL control flow elements and work with a SQL Service Integration Services package. Focus on the expertise measured by these objectives: • Design, and implement, and maintain a data warehouse • Extract, transform, and load data • Build data quality solutions This Microsoft Exam Ref: • Organizes its coverage by exam objectives • Features strategic, what-if scenarios to challenge you • Assumes you have working knowledge of relational database technology and incremental database extraction, as well as experience with designing ETL control flows, using and debugging SSIS packages, accessing and importing or exporting data from multiple sources, and managing a SQL data warehouse. Implementing a SQL Data Warehouse About the Exam Exam 70-767 focuses on skills and knowledge required for working with relational database technology. About Microsoft Certification Passing this exam earns you credit toward a Microsoft Certified Professional (MCP) or Microsoft Certified Solutions Associate (MCSA) certification that demonstrates your mastery of data warehouse management Passing this exam as well as Exam 70-768 (Developing SQL Data Models) earns you credit toward a Microsoft Certified Solutions Associate (MCSA) SQL 2016 Business Intelligence (BI) Development certification. See full details at: microsoft.com/learning

Apply powerful window functions in T-SQL—and increase the performance and speed of your queries Optimize your queries—and obtain simple and elegant solutions to a variety of problems—using window functions in Transact-SQL. Led by T-SQL expert Itzik Ben-Gan, you'll learn how to apply calculations against sets of rows in a flexible, clear, and efficient manner. Ideal whether you're a database administrator or developer, this practical guide demonstrates ways to use more than a dozen T-SQL querying solutions to address common business tasks. Discover how to: Go beyond traditional query approaches to express set calculations more efficiently Delve into ordered set functions such as rank, distribution, and offset Implement hypothetical set and inverse distribution functions in standard SQL Use strategies for improving sequencing, paging, filtering, and pivoting Increase query speed using partitioning, ordering, and coverage indexing Apply new optimization iterators such as Window Spool Handle common issues such as running totals, intervals, medians, and gaps

Beginning T-SQL is a performance-oriented introduction to the T-SQL language underlying the Microsoft SQL Server database engine. T-SQL is essential in writing SQL statements to get data into and out of a database. T-SQL is the foundation for business logic embedded in the database in the form of stored procedures and functions. Beginning T-SQL starts you on the path to mastering T-SQL, with an emphasis on best-practices and sound coding techniques leading to excellent performance. This new edition is updated to cover the essential features of T-SQL found in SQL Server 2014, 2012, and 2008. Beginning T-SQL begins with an introduction to databases, normalization, and to SQL Server Management Studio. Attention is given to Azure SQL Database and how to connect to remote databases in the cloud. Each subsequent chapter teaches an aspect of T-SQL, building on the skills learned in previous chapters. Exercises in most chapters provide an opportunity for the hands-on practice that leads to true learning and distinguishes the competent professional. Important techniques such as windowing functions are covered to help write fast executing queries that solve real business problems. A stand-out feature in this book is that most chapters end with a "Thinking About Performance" section. These sections cover aspects of query performance relative to the content just presented. They'll help you avoid beginner mistakes by knowing about and thinking about performance from Day 1. Imparts best practices for writing T-SQL Helps you avoid common errors Shows how to write scalable code for good performance

Harness the powerful new SQL Server 2012 Microsoft SQL Server 2012 is the most significant update to this product since 2005, and it may change how database administrators and developers perform many aspects of their jobs. If you're a database administrator or developer, Microsoft SQL Server 2012 Bible teaches you everything you need to take full advantage of this major release. This detailed guide not only covers all the new features of SQL Server 2012, it also shows you step by step how to develop top-notch SQL Server databases and new data connections and keep your databases performing at peak. The book is crammed with specific examples, sample code, and a host of tips, workarounds, and best practices. In addition, downloadable code is available from the book's companion web site, which you can use to jumpstart your own projects. Serves as an authoritative guide to Microsoft's SQL Server 2012 for database administrators and developers Covers all the software's new features and capabilities, including SQL Azure for cloud computing, enhancements to client connectivity, and new functionality that ensures high-availability of mission-critical applications Explains major new changes to the SQL Server Business Intelligence tools, such as Integration, Reporting, and Analysis Services Demonstrates tasks both graphically and in SQL code to enhance your learning Provides source code from the companion web site, which you can use as a basis for your

own projects Explores tips, smart workarounds, and best practices to help you on the job Get thoroughly up to speed on SQL Server 2012 with Microsoft SQL Server 2012 Bible.

Direct from Microsoft, this bundle contains the following two study guides at a \$15 discount: Exam Ref 70-761 Querying Data with Transact-SQL, 9781509304332, offers professional-level preparation that helps candidates maximize their exam performance and sharpen their skills on the job. It focuses on the specific areas of expertise modern database professionals need to succeed with T-SQL database queries. Exam Ref 70-762 Developing SQL Databases, 9781509304912, offers professional-level preparation that helps candidates maximize their exam performance and sharpen their skills on the job. It focuses on the specific areas of expertise modern database professionals need to succeed with SQL database development. These are the two exams necessary for the MCSA certification in SQL Server 2016 Database Development.

Get a detailed look at the internal architecture of T-SQL with this comprehensive programming reference. Database developers and administrators get best practices, expert techniques, and code samples to master the intricacies of this programming language—solving complex problems with real-world solutions. Discover how to: Work with T-SQL and CLR user-defined functions, stored procedures, and triggers. Handle transactions, concurrency, and error handling. Efficiently use temporary objects, including temporary tables, table variables, and table expressions. Evaluate when to use set-based programming techniques and when to use cursors. Work with dynamic SQL in an efficient and secure manner. Treat date- and time-related data in a robust manner. Develop CLR user-defined types and learn about temporal support in the relational model. Use XML and XQuery and implement a dynamic schema solution. Work with spatial data using the new geometry and geography types and spatial indexes. Track access and changes to data using extended events, SQL Server Audit, change tracking, and change data capture. Use Service Broker for controlled asynchronous processing in database applications. All the book's code samples will be available for download from the companion Web site.

Learn effective and scalable database design techniques in a SQL Server 2016 and higher environment. This book is revised to cover in-memory online transaction processing, temporal data storage, row-level security, durability enhancements, and other design-related features that are new or changed in SQL Server 2016. Designing an effective and scalable database using SQL Server is a task requiring skills that have been around for forty years coupled with technology that is constantly changing. Pro SQL Server Relational Database Design and Implementation covers everything from design logic that business users will understand, all the way to the physical implementation of design in a SQL Server database. Grounded in best practices and a solid understanding of the underlying theory, Louis Davidson shows how to "get it right" in SQL Server database design and lay a solid groundwork for the future use of valuable business data. The pace of change in relational database management systems has been tremendous these past few years. Whereas in the past it was enough to think about optimizing data residing on spinning hard drives, today one also must consider solid-state storage as well as data that are constantly held in memory and never written to disk at all except as a backup. Furthermore, there is a trend toward hybrid cloud and on-premise database configurations as well a move toward preconfigured appliances. Pro SQL Server Relational Database Design and Implementation guides in the understanding of these massive changes and in their application toward sound database design. Gives a solid foundation in best practices and relational theory Covers the latest implementation features in SQL Server 2016 Helps you master in-memory OLTP and use it effectively Takes you from conceptual design to an effective, physical implementation What You Will Learn Develop conceptual models of client data using interviews and client documentation Recognize and apply common database design patterns Normalize data models to enhance scalability and the long term use of valuable data Translate conceptual models into high-performing SQL Server databases Secure and protect data integrity as part of meeting regulatory requirements Create effective indexing to speed query performance Who This Book Is For Programmers and database administrators of all types who want to use SQL Server to store data. The book is especially useful to those wanting to learn the very latest design features in SQL Server 2016, features that include an improved approach to in-memory OLTP, durability enhancements, temporal data support, and more. Chapters on fundamental concepts, the language of database modeling, SQL implementation, and of course, the normalization process, lay a solid groundwork for readers who are just entering the field of database design. More advanced chapters serve the seasoned veteran by tackling the very latest in physical implementation features that SQL Server has to offer. The book has been carefully revised to cover all the design-related features that are new in SQL Server 2016.

See how SQL interfaces with today's environments Start building and using relational databases with SQL's newest features The database may be the twenty-first century filing cabinet, but building one is a little more complex than sliding drawers into a metal box. With this book to guide you through all the newest features of SQL, you'll soon be whipping up relational databases, using SQL with XML to power data-driven Web sites, and more! Discover how to * Use SQL in a client/server system * Build a multitable relational database * Construct nested and recursive queries * Set up database security * Use SQL within applications * Map SQL to XML

Your hands-on, step-by-step guide to building applications with Microsoft SQL Server 2012 Teach yourself the programming fundamentals of SQL Server 2012—one step at a time. Ideal for beginning SQL Server database administrators and developers, this tutorial provides clear guidance and practical, learn-by-doing exercises for building database solutions that solve real-world business problems. Discover how to: Install and work with core components and tools Create tables and index structures Manipulate and retrieve data Secure, manage, back up, and recover databases Apply techniques for building high-performing applications Use clustering, database mirroring, and log shipping

Discussing new and existing features, SQL Server designer and administrator Michael Coles takes you on an expert guided tour of Transact-SQL functionality in SQL Server 2008 in his book, Pro T-SQL 2008 Programmer's Guide. Fully functioning examples and downloadable source code bring Coles' technically accurate and engaging treatment of Transact-SQL into your own hands. Step-by-step explanations ensure clarity, and an advocacy of best-practices will steer you down the road to success. Pro T-SQL 2008 Programmer's Guide is every developer's key to making full use of SQL Server 2008's powerful, built-in Transact-SQL language. Transact-SQL is the language developers and DBAs use to interact with SQL Server. It's used for everything from querying data, to writing stored procedures, to managing the database. New features in SQL Server 2008 include a spatial data type, SQLCLR integration, the MERGE statement, a dramatically improved and market-leading XML feature set, and support for encryption—all of which are covered in this book

Prepare for Microsoft Exam 70-761—and help demonstrate your real-world mastery of SQL Server 2016 Transact-SQL data management, queries, and database programming. Designed for experienced IT professionals ready to advance their status, Exam Ref focuses on the critical-thinking and decision-making acumen needed for success at the MCSA level. Focus on the expertise measured by these objectives: • Filter, sort, join, aggregate, and modify data • Use subqueries, table expressions, grouping sets, and pivoting • Query temporal and non-relational data, and output XML or JSON • Create views,

user-defined functions, and stored procedures • Implement error handling, transactions, data types, and nulls This Microsoft Exam Ref: • Organizes its coverage by exam objectives • Features strategic, what-if scenarios to challenge you • Assumes you have experience working with SQL Server as a database administrator, system engineer, or developer • Includes downloadable sample database and code for SQL Server 2016 SP1 (or later) and Azure SQL Database Querying Data with Transact-SQL About the Exam Exam 70-761 focuses on the skills and knowledge necessary to manage and query data and to program databases with Transact-SQL in SQL Server 2016. About Microsoft Certification Passing this exam earns you credit toward a Microsoft Certified Solutions Associate (MCSA) certification that demonstrates your mastery of essential skills for building and implementing on-premises and cloud-based databases across organizations. Exam 70-762 (Developing SQL Databases) is also required for MCSA: SQL 2016 Database Development certification. See full details at: microsoft.com/learning

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 performance Recognize and eliminate bottlenecks that lead to slow performance Deploy quick fixes and long-term solutions to improve query performance Implement best practices to minimize performance risk using T-SQL Achieve optimal performance by ensuring careful query and index design Use the latest performance optimization features in SQL Server 2017 and SQL Server 2019 Protect query performance during upgrades to newer versions of SQL Server Who 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.

Gain a solid understanding of T-SQL—and write better queries Master the fundamentals of Transact-SQL—and develop your own code for querying and modifying data in Microsoft SQL Server 2012. Led by a SQL Server expert, you'll learn the concepts behind T-SQL querying and programming, and then apply your knowledge with exercises in each chapter. Once you understand the logic behind T-SQL, you'll quickly learn how to write effective code—whether you're a programmer or database administrator. Discover how to: Work with programming practices unique to T-SQL Create database tables and define data integrity Query multiple tables using joins and subqueries Simplify code and improve maintainability with table expressions Implement insert, update, delete, and merge data modification strategies Tackle advanced techniques such as window functions, pivoting and grouping sets Control data consistency using isolation levels, and mitigate deadlocks and blocking Take T-SQL to the next level with programmable objects

A surprisingly simple way for students to master any subject--based on one of the world's most popular online courses and the bestselling book A Mind for Numbers A Mind for Numbers and its wildly popular online companion course "Learning How to Learn" have empowered more than two million learners of all ages from around the world to master subjects that they once struggled with. Fans often wish they'd discovered these learning strategies earlier and ask how they can help their kids master these skills as well. Now in this new book for kids and teens, the authors reveal how to make the most of time spent studying. We all have the tools to learn what might not seem to come naturally to us at first--the secret is to understand how the brain works so we can unlock its power. This book explains: • Why sometimes letting your mind wander is an important part of the learning process • How to avoid "rut think" in order to think outside the box • Why having a poor memory can be a good thing • The value of metaphors in developing understanding • A simple, yet powerful, way to stop procrastinating Filled with illustrations, application questions, and exercises, this book makes learning easy and fun.

Exam Ref 70-761 Querying Data with Transact-SQL Microsoft Press

The industry's most complete, useful, and up-to-date guide to SQL Server 2014. You'll find start-to-finish coverage of SQL Server's core database server and management capabilities: all the real-world information, tips, guidelines, and examples you'll need to install, monitor, maintain, and optimize the most complex database environments. The provided examples and sample code provide plenty of hands-on opportunities to learn more about SQL Server and create your own viable solutions. Four leading SQL Server experts present deep practical insights for administering SQL Server, analyzing and optimizing queries, implementing data warehouses, ensuring high availability, tuning performance, and much more. You will benefit from their behind-the-scenes look into SQL Server, showing what goes on behind the various wizards and GUI-based tools. You'll learn how to use the underlying SQL commands to fully unlock the power and capabilities of SQL Server. Writing for all intermediate-to-advanced-level SQL Server professionals, the authors draw on immense production experience with SQL Server. Throughout, they focus on successfully applying SQL Server 2014's most powerful capabilities and its newest tools and features. Detailed information on how to... Understand SQL Server 2014's new features and each edition's capabilities and licensing Install, upgrade to, and configure SQL Server 2014 for better performance and easier management Streamline and automate key administration tasks with Smart Admin Leverage powerful new backup/restore options: flexible backup to URL, Managed Backup to Windows Azure, and encrypted backups Strengthen security with new features for enforcing "least privilege" Improve performance with updateable columnstore indexes, Delayed Durability, and other enhancements Execute queries and business logic more efficiently with memoryoptimized tables, buffer pool extension, and natively-compiled stored procedures Control workloads and Disk I/O with the Resource Governor Deploy AlwaysOn Availability Groups and Failover Cluster Instances to achieve enterprise-class availability and disaster recovery Apply new Business Intelligence improvements in Master Data Services, data quality, and Parallel Data Warehouse

Conquer SQL Server 2019 administration—from the inside out Dive into SQL Server 2019 administration—and really put your SQL Server DBA expertise to work. This supremely organized reference packs hundreds of timesaving solutions, tips, and workarounds—all you need to plan, implement, manage, and secure SQL Server 2019 in any production environment: on-premises, cloud, or hybrid. Six experts thoroughly tour DBA capabilities available in SQL Server 2019 Database Engine, SQL Server Data Tools, SQL Server Management Studio, PowerShell, and Azure Portal. You'll find extensive new coverage of Azure SQL, big data clusters, PolyBase, data protection, automation, and more. Discover how experts tackle today's essential tasks—and challenge yourself to new levels of mastery. Explore SQL Server 2019's toolset, including the improved SQL Server Management Studio, Azure Data Studio, and Configuration Manager Design, implement, manage, and govern on-premises, hybrid, or Azure database

infrastructures Install and configure SQL Server on Windows and Linux Master modern maintenance and monitoring with extended events, Resource Governor, and the SQL Assessment API Automate tasks with maintenance plans, PowerShell, Policy-Based Management, and more Plan and manage data recovery, including hybrid backup/restore, Azure SQL Database recovery, and geo-replication Use availability groups for high availability and disaster recovery Protect data with Transparent Data Encryption, Always Encrypted, new Certificate Management capabilities, and other advances Optimize databases with SQL Server 2019's advanced performance and indexing features Provision and operate Azure SQL Database and its managed instances Move SQL Server workloads to Azure: planning, testing, migration, and post-migration

Dive deep inside the architecture of SQL Server 2012 Explore the core engine of Microsoft SQL Server 2012--and put that practical knowledge to work. Led by a team of SQL Server experts, you'll learn the skills you need to exploit key architectural features. Go behind the scenes to understand internal operations for creating, expanding, shrinking, and moving databases--whether you're a database developer, architect, or administrator. Discover how to: Dig into SQL Server 2012 architecture and configuration Use the right recovery model and control transaction logging Reduce query execution time through proper index design Track events, from triggers to the Extended Event Engine Examine internal structures with database console commands Transcend row-size limitations with special storage capabilities Choose the right transaction isolation level and concurrency model Take control over query plan caching and reuse

"This complete video course guides you hands-on through all the concepts and skills you'll need to manage data effectively with SQL Server 2016 and Transact-SQL, and prepare for Microsoft's MCSA Exam 70-761. T-SQL expert and Microsoft Certified Trainer Marilyn White presents 11 hours of video lessons fully aligned to Microsoft's official exam topics, including 43 video lab walk-through demos with downloadable .sql files for extensive realistic practice. There's no better way to master the core techniques of T-SQL data management, querying, and basic programming."--Resource description page.

Written for the MS SQL Server developer having performance problems with SQL, this book is a comprehensive guide to the T-SQL language including case studies and examples demonstrating how to write or rewrite T-SQL source code. In addition, the author covers several ways of writing code for optimal performance and maintainability. Demonstrates important concepts and offers working Transact-SQL code, covering data filtering, DDL, DML, statistical functions, runs and sequences, transactions, stored procedures and triggers, and performance tuning.

Complete coverage of the Microsoft Certified Solutions Associate 70-761 exam Querying Data with Transact-SQL. This book will teach you everything you need to know to pass the exam. The intended audience for this book is database developers and administrators with several years of experience, who want to further their career by passing this exam. Do you need to extend your knowledge of querying in SQL Server? Then this book helps you take your existing skills to the next level as you discover how to write complex and robust SQL queries that enable you to deliver powerful analyses and meaningful insights. This book takes you further on your journey to mastering SQL querying with SQL Server. Step by step, you learn how to build on your existing knowledge and understand the subtleties of T-SQL, the Microsoft flavor of the standard database query language. No matter what your current level of SQL knowledge, this book helps you improve your existing proficiency and gives you the confidence to handle any SQL querying challenge. If you are coming to SQL Server from another database, then this book helps you transition smoothly to T-SQL, as well as deepening your knowledge of many of the more advanced SQL Server query techniques. In an age in which data is key, you need to ensure that you have the right skills to analyze your data and produce the insight that gives you the competitive edge. So get ahead with SQL using the dozens of practical and enjoyable examples and the methodical and comprehensive approach that this book provides. To smooth the learning curve, all the sample data used in the book, as well as all the essential query snippets, are available online at www.tetraspublishing.com.

Students who are beginning studies in technology need a strong foundation in the basics before moving on to more advanced technology courses and certification programs. The Microsoft Technology Associate (MTA) is a new and innovative certification track designed to provide a pathway for future success in technology courses and careers. The MTA program curriculum helps instructors teach and validate fundamental technology knowledge and provides students with a foundation for their careers as well as the confidence they need to succeed in advanced studies. Through the use of MOAC MTA titles you can help ensure your students future success in and out of the classroom. Database Administration Fundamentals covers introductory knowledge and skills including: relational databases; core database concepts; relational database concepts; security requirements for databases and the data stored in them; database objects -- such as tables and views; graphical tools and T-SQL scripts; database queries; and stored procedures.

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.

For many researchers, Python is a first-class tool mainly because of its libraries for storing, manipulating, and gaining insight from data. Several resources exist for individual pieces of this data science stack, but only with the Python Data Science Handbook do you get them all—IPython, NumPy, Pandas, Matplotlib, Scikit-Learn, and other related tools. Working scientists and data crunchers familiar with reading and writing Python code will find this comprehensive desk reference ideal for tackling day-to-day issues: manipulating, transforming, and cleaning data; visualizing different types of data; and using data to build statistical or machine learning models. Quite simply, this is the must-have reference for scientific computing in Python. With this handbook, you'll learn how to use: IPython and Jupyter: provide computational environments for data scientists using Python NumPy: includes the ndarray for efficient storage and manipulation of dense data arrays in Python Pandas: features the DataFrame for efficient storage and manipulation of labeled/columnar data in Python Matplotlib: includes capabilities for a flexible range of data visualizations in Python Scikit-Learn: for efficient and clean Python implementations of the most important and established machine learning algorithms

"Microsoft's SQL Server database platform is dominant in the enterprise database marketplace, making those with MS SQL Server skills highly sought after in any job market. Possessing a Microsoft Certified Solutions Associate (MCSA) SQL 2016 Database Development certificate tells employers worldwide that you have these skills. Earning the certificate requires you to pass two exams: The MS 70-761 and the MS 70-762. This course prepares you to pass MS 70-761. MS 70-761 is all about Transact-SQL, the programming language central to working with MS SQL Server. Designed for those relatively new to the world of MS SQL Server, the course covers the basics of database development and then moves into an easy-to-understand, step-by-step, detailed presentation of how to work with Transact-SQL. This course features lots of hands-on coding with plenty of animations, photos, and screenshots all designed to help you grasp Transact-SQL's underlying concepts and technologies."--Resource description page.

This guide contains a wealth of solutions to problems that SQL Server programmers face. The recipes in the book range from those that show how to perform simple tasks to ones that are more complicated.

T-SQL insiders help you tackle your toughest queries and query-tuning problems Squeeze maximum performance and efficiency from every T-SQL query you write or tune. Four leading experts take an in-depth look at T-SQL's internal architecture and offer advanced practical techniques for optimizing response time and resource usage. Emphasizing a correct understanding of the language and its foundations, the authors present unique solutions they have spent years developing and refining. All code and techniques are fully updated to reflect new T-SQL enhancements in Microsoft SQL Server 2014 and SQL Server 2012. Write faster, more efficient T-SQL code: Move from procedural programming to the language of sets and logic Master an efficient top-down tuning methodology Assess algorithmic complexity to predict performance Compare data aggregation techniques, including new grouping sets Efficiently perform data-analysis calculations Make the most of T-SQL's optimized bulk import tools Avoid date/time pitfalls that lead to buggy, poorly performing code Create optimized BI statistical queries without additional software Use programmable objects to accelerate queries Unlock major performance improvements with In-Memory OLTP Master useful and elegant approaches to manipulating graphs About This Book For experienced T-SQL practitioners Includes coverage updated from Inside Microsoft SQL Server 2008 T-SQL Querying and Inside Microsoft SQL Server 2008 T-SQL Programming Valuable to developers, DBAs, BI professionals, and data scientists Covers many MCSE 70-464 and MCSA/MCSE 70-461 exam topics

Learn about business intelligence (BI) features in T-SQL and how they can help you with data science and analytics efforts without the need to bring in other languages such as R and Python. This book shows you how to compute statistical measures using your existing skills in T-SQL. You will learn how to calculate descriptive statistics, including centers, spreads, skewness, and kurtosis of distributions. You will also learn to find associations between pairs of variables, including calculating linear regression formulas and confidence levels with definite integration. No analysis is good without data quality. Advanced Analytics with Transact-SQL introduces data quality issues and shows you how to check for completeness and accuracy, and measure improvements in data quality over time. The book also explains how to optimize queries involving temporal data, such as when you search for overlapping intervals. More advanced time-oriented information in the book includes hazard and survival analysis. Forecasting with exponential moving averages and autoregression is covered as well. Every web/retail shop wants to know the products customers tend to buy together. Trying to predict the target discrete or continuous variable with few input variables is important for practically every type of business. This book helps you understand data science and the advanced algorithms use to analyze data, and terms such as data mining, machine learning, and text mining. Key to many of the solutions in this book are T-SQL window functions. Author Dejan Sarka demonstrates efficient statistical queries that are based on window functions and optimized through algorithms built using mathematical knowledge and creativity. The formulas and usage of those statistical procedures are explained so you can understand and modify the techniques presented. T-SQL is supported in SQL Server, Azure SQL Database, and in Azure Synapse Analytics. There are so many BI features in T-SQL that it might become your primary analytic database language. If you want to learn how to get information from your data with the T-SQL language that you already are familiar with, then this is the book for you. What You Will Learn Describe distribution of variables with statistical measures Find associations between pairs of variables Evaluate the quality of the data you are analyzing Perform time-series analysis on your data Forecast values of a continuous variable Perform market-basket analysis to predict customer purchasing patterns Predict target variable outcomes from one or more input variables Categorize passages of text by extracting and analyzing keywords Who This Book Is For Database developers and database administrators who want to translate their T-SQL skills into the world of business intelligence (BI) and data science. For readers who want to analyze large amounts of data efficiently by using their existing knowledge of T-SQL and

Microsoft's various database platforms such as SQL Server and Azure SQL Database. Also for readers who want to improve their querying by learning new and original optimization techniques.

T-SQL insiders help you tackle your toughest queries and query-tuning problems Squeeze maximum performance and efficiency from every T-SQL query you write or tune. Four leading experts take an in-depth look at T-SQL's internal architecture and offer advanced practical techniques for optimizing response time and resource usage. Emphasizing a correct understanding of the language and its foundations, the authors present unique solutions they have spent years developing and refining. All code and techniques are fully updated to reflect new T-SQL enhancements in Microsoft SQL Server 2014 and SQL Server 2012. Write faster, more efficient T-SQL code: Move from procedural programming to the language of sets and logic Master an efficient top-down tuning methodology Assess algorithmic complexity to predict performance Compare data aggregation techniques, including new grouping sets Efficiently perform data-analysis calculations Make the most of T-SQL's optimized bulk import tools Avoid date/time pitfalls that lead to buggy, poorly performing code Create optimized BI statistical queries without additional software Use programmable objects to accelerate queries Unlock major performance improvements with In-Memory OLTP Master useful and elegant approaches to manipulating graphs About This Book For experienced T-SQL practitioners Includes coverage updated from Inside Microsoft SQL Server 2008 T-SQL Querying and Inside Microsoft SQL Server 2008 T-SQL Programming Valuable to developers, DBAs, BI professionals, and data scientists Covers many MCSE 70-464 and MCSA/MCSE 70-461 exam topics

Ace your preparation for Microsoft® Certification Exam 70-461 with this 2-in-1 Training Kit from Microsoft Press®. Work at your own pace through a series of lessons and practical exercises, and then assess your skills with practice tests on CD—featuring multiple, customizable testing options. Maximize your performance on the exam by learning how to: Create database objects Work with data Modify data Troubleshoot and optimize queries You also get an exam discount voucher—making this book an exceptional value and a great career investment.

Anyone who interacts with today's modern databases needs to know SQL (Structured Query Language), the standard language for generating, manipulating, and retrieving database information. In recent years, the dramatic rise in the popularity of relational databases and multi-user databases has fueled a healthy demand for application developers and others who can write SQL code efficiently and correctly. If you're new to databases, or need a SQL refresher, Learning SQL on SQL Server 2005 is an ideal step-by-step introduction to this database query tool, with everything you need for programming SQL using Microsoft's SQL Server 2005—one of the most powerful and popular database engines used today. Plenty of books explain database theory. This guide lets you apply the theory as you learn SQL. You don't need prior database knowledge, or even prior computer knowledge. Based on a popular university-level course designed by authors Sikha Saha Bagui and Richard Walsh Earp, Learning SQL on SQL Server 2005 starts with very simple SQL concepts, and slowly builds into more complex query development. Every topic, concept, and idea comes with examples of code and output, along with exercises to help you gain proficiency in SQL and SQL Server 2005. With this book, you'll learn: Beginning SQL commands, such as how and where to type an SQL query, and how to create, populate, alter and delete tables How to customize SQL Server 2005's settings and about SQL Server 2005's functions About joins, a common database mechanism for combining tables Query development, the use of views and other derived structures, and simple set operations Subqueries, aggregate functions and correlated subqueries, as well as indexes and constraints that can be added to tables in SQL Server 2005 Whether you're an undergraduate computer science or MIS student, a self-learner who has access to the new Microsoft database, or work for your company's IT department, Learning SQL on SQL Server 2005 will get you up to speed on SQL in no time.

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