Introduction To Sql Server 2017 Administration Inside Out

Readers learn to master the fundamentals of effective programming while working through Visual Basic 2017's latest features with a wealth of hands-on applications -- all placed in context within this book's engaging real-world setting. PROGRAMMING WITH MICROSOFT VISUAL BASIC 2017, 8E by best-selling technology author Diane Zak offers an ideal introduction to programming with a dynamic visual presentation, step-by-step tutorials, and strategically placed activity boxes. New hands-on applications, timely examples, and practical exercises address a variety of learning styles. Even readers with no prior programming experience can learn how to effectively plan and create interactive Visual Basic 2017 applications right away. Important Notice: Media content referenced within the product description or the product text may not be available in the ebook version.

Learn to build custom SSIS tasks using Visual Studio Community Edition and Visual Basic. Bring all the power of Microsoft .NET to bear on your data integration and ETL processes, and for no added cost over what you've already spent on licensing SQL Server. If you already have a license for SQL Server, then you do not need to spend more money to extend SSIS with custom tasks and components. Why are custom components necessary? Because even though the SSIS catalog of built-in tasks and components is a marvel of engineering, there do remain gaps in the functionality that is provided. These gaps are especially relevant to enterprises practicing Data Integration Lifecycle Management (DILMS) and/or DevOps. One of the gaps is a limitation of the SSIS Execute Package task. Developers using the stock version of that task are unable to select SSIS packages from other projects. Yet it's useful to be able to select and execute tasks across projects, and the example used throughout this book will help you to create an Execute Catalog Package task that does in fact allow you to execute a task from another project. Building on the example's pattern, you can create any task that you like, custom tailored to your specific, data integration and ETL needs. What You Will Learn Configure and execute Visual Studio in the way that best supports SSIS task development Create a class library as the basis for an SSIS task, and reference the needed SSIS assemblies Properly sign assemblies that you create in order to invoke them from your task Implement source code control via Visual Studio Team Services, or your own favorite tool set Code not only your tasks themselves, but also the associated task editors Troubleshoot and then execute your custom tasks as part of your own project Who This Book Is For Database administrators and developers who are involved in ETL projects built around SQL Server Integration Services (SSIS). Readers should have a background in programming along with a desire to optimize their ETL efforts by creating custom-tailored tasks for execution from SSIS packages.

Implement and administer successful database solution with SQL Server 2017 About This Book Master the required skills

to successfully set up, administer, and maintain your SQL Server 2017 database solution Design and configure, manage, and secure a rock-solid SQL server Comprehensive guide in keeping your SQL server disaster proof and all-time availability Who This Book Is For This book targets database administrators with an interest in SQL Server 2017 administration. Readers are expected to have some experience with previous SQL Server versions. What You Will Learn Learn about the new features of SQL Server 2017 and how to implement them Build a stable and fast SQL Server environment Fix performance issues by optimizing queries and making use of indexes Perform a health check of an existing troublesome database environment Design and use an optimal database management strategy Implement efficient backup and recovery techniques in-line with security policies Combine SQL Server 2017 and Azure and manage your solution by various automation techniques Perform data migration, cluster upgradation and server consolidation In Detail Take advantage of the real power of SQL Server 2017 with all its new features, in addition to covering core database administration tasks. This book will give you a competitive advantage by helping you quickly learn how to design, manage, and secure your database solution. You will learn how to set up your SQL Server and configure new (and existing) environments for optimal use. After covering the designing aspect, the book delves into performance-tuning aspects by teaching you how to effectively use indexes. The book will also teach you about certain choices that need to be made about backups and how to implement a rock-solid security policy and keep your environment healthy. Finally, you will learn about the techniques you should use when things go wrong, and other important topics - such as migration, upgrading, and consolidation - are covered in detail. Integration with Azure is also covered in depth. Whether you are an administrator or thinking about entering the field, this book will provide you with all the skills you need to successfully create, design, and deploy databases using SQL Server 2017. Style and approach A comprehensive guide for database professionals, covering a wide range of topics from installation, maintenance, and configuration to managing systems for operational efficiency and high availability; best practices for maintaining a highly reliable database solution are also supplied from industry experts.

The EC-Council|Press Ethical Hacking and Countermeasures series is comprised of four books covering a broad base of topics in offensive network security, ethical hacking, and network defense and countermeasures. The content of this series is designed to immerse the reader into an interactive environment where they will be shown how to scan, test, hack, and secure information systems. A wide variety of tools, viruses, and malware is presented in these books, providing a complete understanding of the tactics and tools used by hackers. The full series of books helps prepare readers to take and succeed on the C|EH certification exam from EC-Council. Important Notice: Media content referenced within the product description or the product text may not be available in the ebook version.

Readers discover all of the latest advancements in Microsoft Access 2016 with MICROSOFT OFFICE 365 & ACCESS 2016: COMPREHENSIVE -- the new edition in the acclaimed Shelly Cashman Series books. For more than three decades, the Shelly Cashman Series has effectively introduced computer skills to millions. MICROSOFT OFFICE 365 & ACCESS 2016: COMPREHENSIVE continues the Series' strong history of innovation with a proven learning approach enhanced to address the varied learning styles of today's learners. A trademark, step-by-step, screen-by-screen approach encourages readers to master all aspects of Microsoft Access 2016 through experimentation, critical thought, and personalization. This new edition delivers effective educational materials specifically designed to introduce key features, improve retention, and prepare readers for success in working with the advanced features in Microsoft Access 2016. Important Notice: Media content referenced within the product description or the product text may not be available in the ebook version.

Let us break the SQL interview with the help of SQL Server interview questions. DESCRIPTION This book gives you a complete idea about the SQL database. It starts from a very basic concept like what is a database, its usage, types, creation, and data storage, security, sorting, and searching for a stored procedure. This book is a complete set of interview breaking questions and answers with live examples and plenty of screenshots. This book takes you on a journey to mastering the SQL database, including SQL datatypes, functions, triggers, and stored procedures. This book also covers the latest and new features of SQL 2016, 2017 and 2019 CTP with examples. In the beginner section, we start with very basic concepts like what is a database, why to use a database, different types of database types, what is SQL, its usages, advantage and disadvantages, SQL datatypes, its different operators and how to use them with samples. In the intermediate section, we will learn about the different SQL functions, SQL Joins (used to fetch values from multiple SQL tables) and SQL DDL, DCL, and DTL commands. (About the last chapters) This is the advanced section of the book where we have provided an explanation of the SQL stored procedure, triggers and SQL view concepts, additionally, we have covered SQL core concepts like keys, indexes, injections and constraints. We have also introduced cutting-edge concepts like SSRS, SSIS, SQL Cloud database (Azure), JSON Support and a list of the new features of SQL 2016, 2017, CTP-2019 with SQL performance improvement tips. Finally, we have ended the book with a series of random SQL questions and answers. KEY FEATURES Database Basic Concepts SQL Fundamentals DDMS, SQL Statements, and Clauses SQL Operators, Datatypes, and Keywords SQL Functions, Wildcards and Dates SQL Joins and CASE Statement SQL DDL, DCL, and DTL Statements SQL Stored procedures, Triggers, Views, and Transactions SQL Keys, Indexes, Injection, and Constraints SSRS, SSIS, SQL Cloud database (Azure), and JSON Support New features of SQL 2016, 2017, and 2019 SQL Performance Improvement Tips Fuzzy Interview Questions and

Answers WHAT WILL YOU LEARN After reading this book, you will be able to understand SQL database concepts, handle core database activities like data security, searching, migration, and sorting. You will be able to handle the database transactions, use different SQL datatypes, functions, triggers, and stored procedures to save and retrieve data from the database. You will also be able to understand advanced SQL concepts like SQL reporting services, integration services, cloud database and new features from the latest SQL versions like 2016, 2017, and 2019. WHO THIS BOOK IS FOR This book is built in such a way that it is useful for all categories such as technical or non-technical readers. This book is perfect. If you are a fresher and you want to learn about SQL, or if you are a teacher and you want to spread SQL knowledge, this book is very helpful. If you want to crack the database interview or if you are working as a DBA and you want to upgrade your knowledge, or if you are backend developer, database tester, performance optimizer, or if your role is that of a database admin, SQL developer, data analyst, mobile app developer or if you are working on core SQL concepts, this book is just right for you. This book is very useful as it contains many simple real-time scenarios for each concept. All functionalities are explained with real SQL screenshots and database records. Table of Contents 1. Database and SQL Basics 2. DDMS SQL Statements and Clauses 3. SQL Operators, Keywords, and Datatypes 4. SQL Operators 5. SQL Functions, Wildcards, and Dates 6. SQL Joins and CASE Statement 7. SQL DDL, DCL, and DTL Statements 8. SQL Stored Procedures, Triggers, Views, and Transactions 9. SQL Keys, Indexes, Injections, and Constraints 10. SSRS, SSIS, SQL Cloud database (Azure), and JSON Support 11. New features of SQL 2016, 2017, and 2019 12. SQL Performance Improvement Tips and Fuzzy Interview Questions

Enhance Your Resume by Learning SQL. Did You Know? -Knowledge of SQL is an important skill to display on your resume. -With the growth of digital information, Database Administrator is one of the fastest growing careers. -SQL can be learned in hours and used for decades. Learn to script Transact SQL using Microsoft SQL Server. -Create tables and databases -select records -filter -sort -join tables -create views, stored procedures and more. Over 100 examples of SQL queries and statements along with images of results will help you learn T SQL. A special section included in this illustrated guide will help you test your skills and get ahead in the workplace. Now is the time to learn SQL. Click the 'buy button' and start scripting SQL TODAY!

Be guided through the techniques to back up and restore databases and files in SQL Server. Multiple techniques are presented for ensuring the integrity and consistency of database backups, as well as the reliability and manageability of restoring from backups. In today's data-driven world, the most important asset that a company has is its data. Data recovery strategies can be wide ranging; from the practically non-existent backup without verification to a very complex, distributed, and redundant system. An important objective for any database administrator is data loss prevention, and in a

catastrophic data loss event, pre-defined data recovery techniques must be employed in order to get the databases back up and running efficiently and quickly. Using a tutorial method of teaching, Beginning Backup and Restore for SQL Server explores the many facets behind the principles of backing up and restoring data from your database, and then shows practical application methods for getting the work done quickly and correctly. This book is an essential guide toward discovering the correct path to protecting the data for your organization. What You'll Learn Be instructed on backup and restore techniques and principles Understand the importance of a fully implemented backup plan in SQL Server Agent Integrate backup and restore techniques into an existing environment Consider space and time requirements for backup and restore operations Master the principles for common deployment types Who This Book Is For Administrators who need to learn or refresh their knowledge of how to back up and restore SQL Server databases in various scenarios

A guide to the practical issues and applications in database programming with updated Visual Basic.NET SQL Server Database Programming with Visual Basic.NET offers a guide to the fundamental knowledge and practical techniques for the design and creation of professional database programs that can be used for real-world commercial and industrial applications. The author—a noted expert on the topic—uses the most current version of Visual Basic.NET, Visual Basic.NET 2017 with Visual Studio.NET 2017. In addition, he introduces the updated SQL Server database and Microsoft SQL Server 2017 Express. All sample program projects can be run in the most updated version, Visual Basic.NET 2019 with Visual Studio.NET 2019. Written in an accessible, down-to-earth style, the author explains how to build a sample database using the SQL Server management system and Microsoft SQL Server Management Studio 2018. The latest version of ASP.NET, ASP.NET 4.7, is also discussed to provide the most up-to-date Web database programming technologies. This important book: • Offers illustrative practical examples and detailed descriptions to aid in comprehension of the material presented • Includes both fundamental and advanced database programming techniques • Integrates images into associated database tables using a DevExpress UI tools - WindowsUI Written for graduate and senior undergraduate students studying database implementations and programming courses, SQL Server Database Programming with Visual Basic.NET shows how to develop professional and practical database programs in Visual Basic.NET 2017/Visual Basic.NET 2019.

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Get unique insights from your data by combining the power of SQL Server, R and Python Key Features Use the features of SQL Server 2017 to implement the data science project life cycle Leverage the power of R and Python to design and develop efficient data models find unique insights from your data with powerful techniques for data preprocessing and analysis Book Description SQL Server only started to fully support data science with its two most recent editions. If you are a professional from both worlds,

SQL Server and data science, and interested in using SQL Server and Machine Learning (ML) Services for your projects, then this is the ideal book for you. This book is the ideal introduction to data science with Microsoft SQL Server and In-Database ML Services. It covers all stages of a data science project, from businessand data understanding,through data overview, data preparation, modeling and using algorithms, model evaluation, and deployment. You will learn to use the engines and languages that come with SQL Server, including ML Services with R and Python languages and Transact-SQL. You will also learn how to choose which algorithm to use for which task, and learn the working of each algorithm. What you will learn Use the popular programming languages,T-SQL, R, and Python, for data science Understand your data with queries and introductory statistics Create and enhance the datasets for ML Visualize and analyze data using basic and advanced graphs Explore ML using unsupervised and supervised models Deploy models in SQL Server and perform predictions Who this book is for SQL Server professionals who want to start with data science, and data scientists who would like to start using SQL Server in their projects will find this book to be useful. Prior exposure to SQL Server will be helpful.

This self-study course aims itself at the practical man or woman who wants to know what 'those SQL commands' mean. The SQL commands that you are told to type in but have never had explained to you. I have written it for those who are want to know their way around querying databases using SQL 2019, SQL 2017, SQL 2014...all the way to SQL 2008 R2. Whether you are creating reports in a none-Microsoft product or find yourself sitting in from the SQL Server Management Studio wondering what to type in, this course is for you.I have written this course for those of you who find the 'official course material' is not helpful enough; it arguably assumes too much prior knowledge. This course is short, sharp, full of examples and pretty pictures, explanatory and waffle free. By completing the exercises at the end of each chapter, you will prove your new skills to yourself. Once you have completed the material, you will be well on your way to successfully taking a Microsoft Querying SQL exam such as the 70-761, 70-461 or for whichever exam is appropriate for your version of SQL.The appendices include instructions on how to load SQL onto your office PC, home PC or laptop. Assuming you have permissions to do so.This course has been presented and trialled in front of corporate and public audiences. This edition is the first that I've for the general public rather than previous ones I aimed at a live classroom environment. The content suits both. I also offer live online training sessions for those of you who feel you want a human element and to know that there is a helpful, caring mind behind the pages.I am a Microsoft Certified Trainer, and I have taught Microsoft SQL since Version 7 in 1998. I have worked in the industry with Microsoft SQL, Oracle and MySQL since 1994. I believe that with practice motivated by interest, anyone can learn what is going on in the SQL language.This book is in ePub format which preserves the full-colour images and diagrams, and best read on a colour Kindle, be that Fire, laptop, PC and other colour devices.

This volume constitutes the refereed proceedings of the Confederated International International Workshop on Enterprise Integration, Interoperability and Networking (EI2N), Fact Based Modeling (FBM), Industry Case Studies Program (ICSP), International Workshop on Methods, Evaluation, Tools and Applications for the Creation and Consumption of Structured Data for

the e-Society (Meta4eS), OnTheMove Academy (OTMA 2017), and ODBASE posters 2017, held as part of OTM 2017 in October 2017 in Rhodes, Greece. The 25 full papers presented together with 8 short papers were carefully reviewed and selected from 40 submissions. The workshops covers data systems and Web semantics, distributed objects, Web services, databases, information systems, enterprise work flow and collaboration, ubiquity, interoperability, mobility, grid and high-performance computing. Quickly find solutions to dozens of common problems encountered while using XML and JSON features that are built into SQL Server. Content is presented in the popular problem-solution format. Look up the problem that you want to solve. Read the solution. Apply the solution directly in your own code. Problem solved! This book shows how to take advantage of XML and JSON to share data and automate tasks. JSON is commonly used to move data back and forth between the database and front-end applications, often running in a browser. This book shows all you need to know about transforming query results into JSON format, and back again. Also covered are the processes and techniques for moving data into and out of XML format for business intelligence and other purposes, such as when transferring data from a reporting system into a data warehouse, or between different database brands such as between SQL Server and Oracle. Microsoft intensively implements XML in SQL Server, and in many related products. Execution plans are generated in XML format, and this book shows you how to parse those plans and automate the detection of performance problems. The relatively new Extended Events feature writes tracing data into XML files, and the recipes in this book help in parsing those files. XML is also used in SQL Server's BI tool set, including in SSIS, SSR, and SSAS. XML is used in many configuration files, and is even behind the construction of DDL triggers. In reading this book you'll dive deeply into the features that allow you to build and parse XML, and also JSON, which is a specific format of XML used to transmit objects in a web-friendly format between a database and its front-end applications. What You Will Learn Build XML and JSON objects in support of automation and data transfer Import and parse XML and JSON from operating system files Build appropriate indexes on XML objects to improve query performance Move data from query result sets into JSON format, and back again Automate the detection of database performance problems by querying and parsing the database's own execution plans Replace external and manual JSON processes with SQL Server's internal, JSON functionality Who This Book Is For Database administrators, .NET developers, business intelligence developers, and other professionals who want a deep and detailed skill set around working with XML and JSON in a SQL Server database environment. Web developers will particularly find the book useful for its coverage of transforming database result sets into JSON text that can be transmitted to front-end web applications. Take a deep dive into one of the most significant SQL Server features–support for In-Memory Online Transaction Processing. The latest developments are covered, including support of off-row storage, columnstore indexes and operational analytics, changes in programmability and native compilation, and more. This book describes the architecture and internals of the In-Memory OLTP Engine and explains how to develop, deploy, and maintain systems using it. With it you can dramatically increase transaction throughput to handle thousands of transactions per second supporting millions of customers. Learn the architecture and the internals of In-Memory OLTP in order to recognize when technology can make a difference. Recognize opportunities for In-

Memory OLTP in new development and understand how to benefit from it in existing systems. Don't be without Dmitri Korotkevitch and the deep expertise he imparts in Expert SQL Server In-Memory OLTP, 2nd Edition as you move forward in using SQL Server's In-Memory OLTP technology. Dmitri Korotkevitch is the five-star author of Pro SQL Server Internals, and brings the same combination of clear thinking and deep expertise to help you in this second edition. The book: Explains In-Memory OLTP internals, architecture and programmability, including data storage, indexing, multi-version concurrency control, transaction logging and recovery, and native compilation Covers SQL Server 2016 technology enhancements, including columnstore indexes and off-row storage Guides in using In-Memory OLTP in new development and existing systems What You'll Learn Grasp how SQL Server stores and works with data in memory-optimized tables Properly design and index memory-optimized tables Plan successful deployments, including the required memory size and I/O configuration Accelerate T-SQL processing through the creation of natively compiled modules Monitor and report on the benefits and performance of your In-Memory OLTP solutions Benefit from the technology in existing systems and in the systems with the mixed workload Who This Book Is For Application developers and database administrators who create and manage online transaction processing (OLTP) systems; in particular, those wanting to take advantage of SQL Server's new offering of in-memory OLTP to dramatically improve performance and throughput of their systems

Get the most out of the rich development capabilities of SQL Server 2016 to build efficient database applications for your organization About This Book Utilize the new enhancements in Transact-SQL and security features in SQL Server 2016 to build efficient database applications Work with temporal tables to get information about data stored in the table at any point in time A detailed guide to SQL Server 2016, introducing you to multiple new features and enhancements to improve your overall development experience Who This Book Is For This book is for database developers and solution architects who plan to use the new SQL Server 2016 features for developing efficient database applications. It is also ideal for experienced SQL Server developers who want to switch to SQL Server 2016 for its rich development capabilities. Some understanding of the basic database concepts and Transact-SQL language is assumed. What You Will Learn Explore the new development features introduced in SQL Server 2016 Identify opportunities for In-Memory OLTP technology, significantly enhanced in SQL Server 2016 Use columnstore indexes to get significant storage and performance improvements Extend database design solutions using temporal tables Exchange JSON data between applications and SQL Server in a more efficient way Migrate historical data transparently and securely to Microsoft Azure by using Stretch Database Use the new security features to encrypt or to have more granular control over access to rows in a table Simplify performance troubleshooting with Query Store Discover the potential of R's integration with SQL Server In Detail Microsoft SQL Server 2016 is considered the biggest leap in the data platform history of the Microsoft, in the ongoing era of Big Data and data science. Compared to its predecessors, SQL Server 2016 offers developers a unique opportunity to leverage the advanced features and build applications that are robust, scalable, and easy to administer. This book introduces you to new features of SQL Server 2016 which will open a completely new set of possibilities for you as a

developer. It prepares you for the more advanced topics by starting with a quick introduction to SQL Server 2016's new features and a recapitulation of the possibilities you may have already explored with previous versions of SQL Server. The next part introduces you to small delights in the Transact-SQL language and then switches to a completely new technology inside SQL Server - JSON support. We also take a look at the Stretch database, security enhancements, and temporal tables. The last chapters concentrate on implementing advanced topics, including Query Store, columnstore indexes, and In-Memory OLTP. You will finally be introduced to R and how to use the R language with Transact-SQL for data exploration and analysis. By the end of this book, you will have the required information to design efficient, high-performance database applications without any hassle. Style and approach This book is a detailed guide to mastering the development features offered by SQL Server 2016, with a unique learn-as-you-do approach. All the concepts are explained in a very easy-to-understand manner and are supplemented with examples to ensure that you—the developer—are able to take that next step in building more powerful, robust applications for your organization with ease.

How to get started creating applications using this exciting easy to use Microsoft C# framework. Using over 250 diagrams and images, this book describes what Blazor is, what makes it different, and how to use it to create business applications. The tutorials walk you through 100% of the required code to build the applications and examples. Chapter 1: What is Blazor? Chapter 2: Getting Started Chapter 3: Blazor Binding, Events and Parameters Chapter 4: Creating a Step-By-Step End-To-End Database Server-Side Blazor Application Chapter 5: Blazor Forms and Validation Chapter 6: Implementing State Management in Blazor Chapter 7: Creating Blazor Templated Components Chapter 8: Blazor JavaScript Interop Chapter 9: A Demonstration of Simple Server Side Blazor Cookie Authentication Chapter 10: Deploying a Server Side Blazor Application To Azure

This book presents nearly 90 carefully selected contributions at the 12th International Conference Mechatronics, which took place in Brno, Czech Republic on 6–8 September 2017. Reflecting the most progressive and constantly changing areas of mechatronics, these proceedings includes papers concerning modeling and simulation, automatic control, robotics, sensors and actuators, electrical machines, and energy harvesting. It not only offers inspiration, but also deepens readers' interdisciplinary and integrated understanding of modern engineering. The book is intended for experts in the integration of electronic, mechanical, control and computer sciences.

As industries are rapidly being digitalized and information is being more heavily stored and transmitted online, the security of information has become a top priority in securing the use of online networks as a safe and effective platform. With the vast and diverse potential of artificial intelligence (AI) applications, it has become easier than ever to identify cyber vulnerabilities, potential threats, and the identification of solutions to these unique problems. The latest tools and technologies for AI applications have untapped potential that conventional systems and human security systems cannot meet, leading AI to be a frontrunner in the fight against malware, cyber-attacks, and various security issues. However, even with the tremendous progress AI has made within the sphere of security, it's important to understand the impacts, implications, and critical issues and challenges of AI applications

along with the many benefits and emerging trends in this essential field of security-based research. Research Anthology on Artificial Intelligence Applications in Security seeks to address the fundamental advancements and technologies being used in AI applications for the security of digital data and information. The included chapters cover a wide range of topics related to AI in security stemming from the development and design of these applications, the latest tools and technologies, as well as the utilization of AI and what challenges and impacts have been discovered along the way. This resource work is a critical exploration of the latest research on security and an overview of how AI has impacted the field and will continue to advance as an essential tool for security, safety, and privacy online. This book is ideally intended for cyber security analysts, computer engineers, IT specialists, practitioners, stakeholders, researchers, academicians, and students interested in AI applications in the realm of security research.

Identify and fix causes of poor performance. You will learn Query Store, adaptive execution plans, and automated tuning on the Microsoft Azure SQL Database platform. Anyone responsible for writing or creating T-SQL queries will find valuable the insight into bottlenecks, including how to recognize them and eliminate them. This book covers the latest in performance optimization features and techniques and is current with SQL Server 2017. If your queries are not running fast enough and you're tired of phone calls from frustrated users, then this book is the answer to your performance problems. SQL Server 2017 Query Performance Tuning is about more than quick tips and fixes. You'll learn to be proactive in establishing performance baselines using tools such as Performance Monitor and Extended Events. You'll recognize bottlenecks and defuse them before the phone rings. You'll learn some quick solutions too, but emphasis is on designing for performance and getting it right. The goal is to head off trouble before it occurs. What You'll Learn Use Query Store to understand and easily change query performance Recognize and eliminate bottlenecks leading to slow performance Deploy quick fixes when needed, following up with long-term solutions Implement best practices in T-SQL to minimize performance risk Design in the performance that you need through careful query and index design Utilize the latest performance optimization features in SQL Server 2017 Protect query performance during upgrades to the newer versions of SQL Server Who This Book Is For Developers and database administrators with responsibility for application performance in SQL Server environments. Anyone responsible for writing or creating T-SQL queries will find valuable the insight into bottlenecks, including how to recognize them and eliminate them.

Learn to build a simple data-driven mobile game application using the power of Xamarin.Forms, ASP.NET, the Web API, and SignalR with this short book. In it you will build a cross-platform mobile application that targets both iOS and Android, connect your app with your database using Entity Framework, and implement real-time syncing functionality using SignalR. Understanding Game Application Development starts by giving you an overview of the development tools, an installation guide, and a list of prerequisites. You will learn how to manage application flow, create your workspace, and set up your database. Next, you will see how to access data for handling CRUD operations and define the necessary API endpoints. Further, you will build a mobile application with Xamarin.Forms, both in iOS and in Android. You will also understand the deployment and testing process as well

as how to build a real-time leader board using ASP.NET MVC and SignalR. Finally, you will understand how to publish your source code on GitHub from Visual Studio 2017. What You Will Learn Understand the basic concept and fundamentals of the technologies used for building the applications Set up your development environment Create a SQL database from scratch Implement a data access layer Define REST service endpoints using the Web API Deploy, test, and debug iOS and Android applications Push your source code to GitHub Who This Book Is For .NET developers who want to jump on mobile application development with Xamarin and learn with practical examples.

Whether it is learning different techniques to monitor and tune an Azure SQL database or improving performance using in-memory technology, this book will enable you to make the most out of Azure SQL database features and functionality for data management solutions.

This book is one of the many sources that are spread outside to learn SQL and T-SQL programming in SQL Server databases that are compiled by focusing on the practice directly and based on the author's teaching experience during this time, so that readers are expected to better understand the concepts and practices of programming in SQL Server databases. By the time this book is written the SQL Server database has already reached version 2019, therefore this book is based on that version for use in Windows operating systems. Discussion in this book starts from the basic to intermediate level, so it is expected that after studying it the reader will have strong programming skills to build database solutions with SQL and TSQL in SQL Server. Hopefully this book can be another alternative as a learning resource for exercises, tutorials, or references for those who want to learn SQL and T-SQL programming in SQL Server database.

Use Microsoft Azure to optimally design your data solutions and save time and money. Scenarios are presented covering analysis, design, integration, monitoring, and derivatives. This book is about data and provides you with a wide range of possibilities to implement a data solution on Azure, from hybrid cloud to PaaS services. Migration from existing solutions is presented in detail. Alternatives and their scope are discussed. Five of six chapters explore PaaS, while one focuses on SQL Server features for cloud and relates to hybrid cloud and IaaS functionalities. What You'll Learn Know the Azure services useful to implement a data solution Match the products/services used to your specific needs Fit relational databases efficiently into data design Understand how to work with any type of data using Azure hybrid and public cloud features Use non-relational alternatives to solve even complex requirements Orchestrate data movement using Azure services Approach analysis and manipulation according to the data life cycle Who This Book Is For Software developers and professionals with a good data design background and basic development skills who want to learn how to implement a solution using Azure data services

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!

Get SQL Server up and running on the Linux operating system and containers. No database professional managing or developing SQL Server on Linux will want to be without this deep and authoritative guide by one of the most respected experts on SQL Server in the industry. Get an inside look at how SQL Server for Linux works through the eyes of an engineer on the team that made it possible. Microsoft SQL Server is one of the leading database platforms in the industry, and SQL Server 2017 offers developers and administrators the ability to run a database management system on Linux, offering proven support for enterprise-level features and without onerous licensing terms. Organizations invested in Microsoft and open source technologies are now able to run a unified database platform across all their operating system investments. Organizations are further able to take full advantage of containerization through popular platforms such as Docker and Kubernetes. Pro SQL Server on Linux walks you through installing and configuring SQL Server on the Linux platform. The author is one of the principal architects of SQL Server for Linux, and brings a corresponding depth of knowledge that no database professional or developer on Linux will want to be without. Throughout this book are internals of how SQL Server on Linux works including an in depth look at the innovative architecture. The book covers day-to-day management and troubleshooting, including diagnostics and monitoring, the use of containers to manage deployments, and the use of self-tuning and the in-memory capabilities. Also covered are performance capabilities, high availability, and disaster recovery along with security and encryption. The book covers the product-specific knowledge to bring SQL Server and its powerful features to life on the Linux platform, including coverage

of containerization through Docker and Kubernetes. What You'll Learn Learn about the history and internal of the unique SQL Server on Linux architecture. Install and configure Microsoft's flagship database product on the Linux platform Manage your deployments using container technology through Docker and Kubernetes Know the basics of building databases, the T-SQL language, and developing applications against SQL Server on Linux Use tools and features to diagnose, manage, and monitor SQL Server on Linux Scale your application by learning the performance capabilities of SQL Server Deliver high availability and disaster recovery to ensure business continuity Secure your database from attack, and protect sensitive data through encryption Take advantage of powerful features such as Failover Clusters, Availability Groups, In-Memory Support, and SQL Server's Self-Tuning Engine Learn how to migrate your database from older releases of SQL Server and other database platforms such as Oracle and PostgreSQL Build and maintain schemas, and perform management tasks from both GUI and command line Who This Book Is For Developers and IT professionals who are new to SQL Server and wish to configure it on the Linux operating system. This book is also useful to those familiar with SQL Server on Windows who want to learn the unique aspects of managing SQL Server on the Linux platform and Docker containers. Readers should have a grasp of relational database concepts and be comfortable with the SQL language.

Modern businesses depend on data for their very survival, creating a need for sophisticated databases and database technologies to help store, organise and transport their valuable data. This updated and expanded, easy-to-read textbook/reference presents a comprehensive introduction to databases, opening with a concise history of databases and of data as an organisational asset. As relational database management systems are no longer the only database solution, the book takes a wider view of database technology, encompassing big data, NoSQL, object and object-relational, and in-memory databases. Presenting both theoretical and practical elements, the new edition also examines the issues of scalability, availability, performance and security encountered when building and running a database in the real world. Topics and features: Presents review and discussion questions at the end of each chapter, in addition to skill-building, hands-on exercises Provides new material on database adaptiveness, integration, and efficiency in relation to data growth Introduces a range of commercial databases and encourages the reader to experiment with these in an associated learning environment Reviews use of a variety of databases in business environments, including numerous examples Discusses areas for further research within this fast-moving domain With its learning-by-doing approach, supported by both theoretical and practical examples, this clearly-structured textbook will be of great value to advanced undergraduate and postgraduate students of computer science, software engineering, and information technology. Practising database professionals and application developers will also find the book an ideal reference that addresses

today's business needs. Konstantinos Domdouzis is senior lecturer in the Communication and Computing Research Centre at Sheffield Hallam University, UK. Peter Lake (now retired) was formerly course leader for the Oracle IT&M MSc and the IT Professional MSc at Sheffield Hallam University. Paul Crowther (now retired) was formerly head of postgraduatetaught programmes in the Faculty of Arts, Computing, Engineering and Sciences at Sheffield Hallam University.

A Detailed Look at Data Processing Extensions

Auditing is constantly and quickly changing due to the continuous evolution of information and communication technologies. As the auditing process is forced to adapt to these changes, issues have arisen that lead to a decrease in the auditing effectiveness and efficiency, leading to a greater dissatisfaction among users. More research is needed to provide effective management and mitigation of the risk associated to organizational transactions and to assign a more reliable and accurate character to the execution of business transactions and processes. Organizational Auditing and Assurance in the Digital Age is an essential reference source that discusses challenges, identifies opportunities, and presents solutions in relation to issues in auditing, information systems auditing, and assurance services and provides best practices for ensuring accountability, accuracy, and transparency. Featuring research on topics such as forensic auditing, financial services, and corporate governance, this book is ideally designed for internal and external auditors, assurance providers, managers, risk managers, academicians, professionals, and students.

Apply the new Query Store feature to identify and fix poorly performing queries in SQL Server. Query Store is an important and recent feature in SQL Server that provides insight into the details of query execution and how that execution has changed over time. Query Store helps to identify queries that aren't performing well, or that have regressed in their performance. Query Store provides detailed information such as wait stats that you need to resolve root causes, and it allows you to force the use of a known good execution plan. With SQL Server 2017 and later you can automate the correction of regressions in performance. Query Store for SQL Server 2019 helps you protect your database's performance during upgrades of applications or version of SQL Server. The book provides fundamental information on how Query Store works and best practices for implementation and use. You will learn to run and interpret built-in reports, configure automatic plan correction, and troubleshoot queries using Query Store when needed. Query Store for SQL Server 2019 helps you master Query Store and bring value to your organization through consistent query execution times and automate correction of regressions. What You'll Learn Apply best practices in implementing Query Store on production servers Detect and correct regressions in query performance Lower the risk of performance degradation following an upgrade Use tools and techniques to get the most from Query Store Automate regression

correction and other uses of Query Store Who This Book Is For SQL Server developers and administrators responsible for query performance on SQL Server. Anyone responsible for identifying poorly performing queries will be able to use Query Store to find these queries and resolve the underlying issues.

Get introduced to the world of Docker containers from a SQL Server DBA's perspective. This book explains container technology and how it can improve the deployment of your SQL Server databases without infrastructure lock-in. You will be equipped with the right technical skills to guide stakeholders in your business as they adopt and adapt to new technologies to improve time-to-market and competitiveness. You will learn how to build a lab environment at home on which to build skills that transfer directly into your day job. This book teaches you how to install and configure Docker on both Windows Server and Linux operating systems. You will learn the most common Docker commands that you need to know as a DBA to deploy and manage SQL Server on containers. Support for SQL Server on Linux is new, and this book has your back with guidance on creating Docker images specifically for deployment to a Linux platform. Included is coverage of key Linux commands needed to manage SQL Server on that operating system. By the end of the book you will have learned how to create your own custom SQL Server container images with configuration settings that are specific to your organization, that are capable of being deployed to both Windows Server and Linux. What You Will Learn Create Docker containers for agile deployment of SQL Server Run multiple SQL Server instances on a single Linux machine Deploy custom images specific to your organization's needs Know the benefits and architecture of container technology Install and configure Docker on Windows Server and Linux Manage and persist SQL Server data in Docker containers Who This Book Is For Intermediate to senior SQL Server DBAs who are familiar with SQL Server on Windows and want to build their existing skills to deploy and manage SQL Server on Linux and through Docker containers. Readers should have a grasp of relational database concepts and be comfortable with the Transact-SQL language.

SQL Made Easy- The Ultimate Step by Step Guide To Success Do you want to learn SQL programming without the complicated explanations? Do you want to understand how to manage databases without all the confusion? Well than, this is your go to guide to help you master SQL programming in no time! This book breaks down the fundamentals elements that are essential to make you proficient in SQL programming and database management. By the end of this book you will be confident enough to take on any problems that encompass SQL. SQL software can be complex, but a powerful tool if used with the right understanding. In this book you will discover how SQL is simple, flexible, portable and most of all well integrated to various database applications. The demand for SQL professionals is HUGE and the opportunities are endless! Learn how to easily master it and land yourself high grade paying jobs or free-lance work. Entry level positions in the US can easily earn $90,000+ USD salary. - That's almost six figures! The demand for these

desirable skill sets are high, so become familiar with SQL ASAP. What Sets This Book Apart From The Rest? This is most comprehensive and detailed book out for beginners to use. Complicated subject matter is simplified in an easy to read structured fashion that increases the knowledge retention and real world application capacity for any reader. Normal SQL books on the market can be expensive, but, this book gives you so much immense value and is far superior than any book out there for beginners. Why not start off at an affordable price? Don't miss out on this opportunity! What You'll Learn SQL and its uses Data definition language statements Detailed keywords, statements, commands and functions, and how to put them to use in specific or altered ways Data query language statements How to use each formula in real life situations Transactional control commands Terminology, syntax and expressions Understanding Cursors, Triggers and Errors And, much, much more The amount of value you receive is immense and the return on investment is exponential. Make the greatest investment in yourself by starting yourself off the right way today From the examples, images, and step by step guide instructions you can have the assurance that you will be on the right path to mastery and long term success in SQL programming and database management. What are you waiting for? Take advantage this opportunity while you still can. Grab your copy now!

Deliver advanced functionality faster and cheaper by exploiting SQL Server's ever-growing amount of built-in support for modern data formats. Learn about the growing support within SQL Server for operations and data transformations that have previously required third-party software and all the associated licensing and development costs. Benefit through a better understanding of what can be done inside the database engine with no additional costs or development time invested in outside software. Widely used types such as JSON and XML are well-supported by the database engine. The same is true of hierarchical data and even temporal data. Knowledge of these advanced types is crucial to unleashing the full power that's available from your organization's SQL Server database investment. SQL Server Advanced Data Types explores each of the complex data types supplied within SQL Server. Common usage scenarios for each complex data type are discussed, followed by a detailed discussion on how to work with each data type. Each chapter demystifies the complex data and you learn how to use the data types most efficiently. The book offers a practical guide to working with complex data, using real-world examples to demonstrate how each data type can be leveraged. Performance considerations are also discussed, including the implementation of special indexes such as XML indexes and spatial indexes. What You'll Learn Understand the implementation of basic data types and why using the correct type is so important Work with XML data through the XML data type Construct XML data from relational result sets Store and manipulate JSON data using the JSON data type Model and analyze spatial data for geographic information systems Define hierarchies and query them efficiently through the HierarchyID type Who This Book Is For SQL Server developers and application developers who need to store and access complex data structures

Here is a practical guide for analyzing and troubleshooting SQL Server performance using wait statistics. Learn to identify

precisely why your queries are running slowly. Measure the amount of time consumed by each bottleneck so that you can focus attention on making the largest improvements first. This edition is updated to cover analysis of wait statistics inside Query Store, the CXCONSUMER wait event, and to be current with SQL Server 2019. Whether you are new to wait statistics, or already familiar with them, this book provides a deeper understanding on how wait statistics are generated and what they can mean for your SQL Server instance's performance. Pro SQL Server 2019 Wait Statistics goes beyond the most common wait types into the more complex and performance-threatening wait types. You'll learn about per-query wait statistics and session-based wait statistics, and the types of problems they each can help you solve. The different wait types are categorized by their area of impact, including CPU, IO, Lock, and many more. The book presents clear examples to help you gain practical knowledge of why and how specific wait times increase or decrease, and how they impact your SQL Server's performance. After reading this book you won't want to be without the valuable information that wait statistics provide regarding where you should be spending your limited tuning time to maximize performance and value to your business. What You'll Learn Identify resource bottlenecks in a running SQL Server instance Locate wait statistics information inside DMVs and Query Store Analyze the root cause of sub-optimal performance Diagnose I/O contention and locking contention Benchmark SQL Server performance Lower the wait time of the most popular wait types Who This Book Is For Database administrators who want to identify and resolve performance bottlenecks, those who want to learn more about how the SQL Server engine accesses and uses resources inside SQL Server, and administrators concerned with achieving—and knowing they have achieved—optimal performance

Expert tabular modeling techniques for building and deploying cutting-edge business analytical reporting solutions About This Book Build and deploy Tabular Model projects from relational data sources Leverage DAX and create high-performing calculated fields and measures Create ad-hoc reports based on a Tabular Model solution Useful tips to monitor and optimize your tabular solutions Who This Book Is For This book is for SQL BI professionals and Architects who want to exploit the full power of the new Tabular models in Analysis Services. Some knowledge of previous versions of Analysis services would be helpful but is not essential. What You Will Learn Learn all about Tabular services mode and how it speeds up development Build solutions using sample datasets Explore built-in actions and transitions in SSAS 2016 Implement row-column, and role-based security in a Tabular Data model Realize the benefits of in-memory and DirectQuery deployment modes Get up to date with the new features added to SQL Server 2016 Analysis Services Optimize Data Models and Relationships Usage In Detail SQL Server Analysis Service (SSAS) has been widely used across multiple businesses to build smart online analytical reporting solutions. It includes two different types of modeling for analysis services: Tabular and Multi Dimensional. This book covers Tabular modeling, which uses tables and relationships with a fast in-memory engine to provide state of the art compression algorithms and query performance. The book begins by quickly taking you through the concepts required to model tabular data and set up the necessary tools and services. As you learn to create tabular models using tools such as Excel and Power View, you'll be shown various strategies to deploy your model on the server and choose a query mode (In-memory or DirectQuery) that best suits your reporting

needs. You'll also learn how to implement key and newly introduced DAX functions to create calculated columns and measures for your model data. Last but not least, you'll be shown techniques that will help you administer and secure your BI implementation along with some widely used tips and tricks to optimize your reporting solution. By the end of this book, you'll have gained hands-on experience with the powerful new features that have been added to Tabular models in SSAS 2016 and you'll be able to improve user satisfaction with faster reports and analytical queries. Style and approach This book takes a practical, recipe-based approach where each recipe lists the steps to address or implement a solution. You will be provided with several approaches to creating a business intelligence semantic model using analysis services.

Harness the power of SQL Server 2017 Integration Services to build your data integration solutions with ease About This Book Acquaint yourself with all the newly introduced features in SQL Server 2017 Integration Services Program and extend your packages to enhance their functionality This detailed, step-by-step guide covers everything you need to develop efficient data integration and data transformation solutions for your organization Who This Book Is For This book is ideal for software engineers, DW/ETL architects, and ETL developers who need to create a new, or enhance an existing, ETL implementation with SQL Server 2017 Integration Services. This book would also be good for individuals who develop ETL solutions that use SSIS and are keen to learn the new features and capabilities in SSIS 2017. What You Will Learn Understand the key components of an ETL solution using SQL Server 2016-2017 Integration Services Design the architecture of a modern ETL solution Have a good knowledge of the new capabilities and features added to Integration Services Implement ETL solutions using Integration Services for both on-premises and Azure data Improve the performance and scalability of an ETL solution Enhance the ETL solution using a custom framework Be able to work on the ETL solution with many other developers and have common design paradigms or techniques Effectively use scripting to solve complex data issues In Detail SQL Server Integration Services is a tool that facilitates data extraction, consolidation, and loading options (ETL), SQL Server coding enhancements, data warehousing, and customizations. With the help of the recipes in this book, you'll gain complete hands-on experience of SSIS 2017 as well as the 2016 new features, design and development improvements including SCD, Tuning, and Customizations. At the start, you'll learn to install and set up SSIS as well other SQL Server resources to make optimal use of this Business Intelligence tools. We'll begin by taking you through the new features in SSIS 2016/2017 and implementing the necessary features to get a modern scalable ETL solution that fits the modern data warehouse. Through the course of chapters, you will learn how to design and build SSIS data warehouses packages using SQL Server Data Tools. Additionally, you'll learn to develop SSIS packages designed to maintain a data warehouse using the Data Flow and other control flow tasks. You'll also be demonstrated many recipes on cleansing data and how to get the end result after applying different transformations. Some real-world scenarios that you might face are also covered and how to handle various issues that you might face when designing your packages. At the end of this book, you'll get to know all the key concepts to perform data integration and transformation. You'll have explored on-premises Big Data integration processes to create a classic data warehouse, and will know how to extend the toolbox with custom tasks and transforms. Style and approach

This cookbook follows a problem-solution approach and tackles all kinds of data integration scenarios by using the capabilities of SQL Server 2016 Integration Services. This book is well supplemented with screenshots, tips, and tricks. Each recipe focuses on a particular task and is written in a very easy-to-follow manner.

Microsoft SQL Server 2017 is the next big step in the data platform history of Microsoft as it brings in the power of R and Python for machine learning and containerization-based deployment on Windows and Linux. This book prepares you for more advanced topics by starting with a quick introduction to SQL Server 2017's new features and a recapitulation of the possibilities you may have already explored with previous versions of SQL Server. The next part introduces you to enhancements in the Transact-SQL language and new database engine capabilities and then switches to a completely new technology inside SQL Server: JSON support. We also take a look at the Stretch database, security enhancements, and temporal tables. Furthermore, the book focuses on implementing advanced topics, including Query Store, columnstore indexes, and In-Memory OLTP. Towards the end of the book, you'll be introduced to R and how to use the R language with Transact-SQL for data exploration and analysis. You'll also learn to integrate Python code in SQL Server and graph database implementations along with deployment options on Linux and SQL Server in containers for development and testing. By the end of this book, you will have the required information to design efficient, high-performance database applications without any hassle.

Visual Basic 2017 Made Easy is written by Dr. Liew, the webmaster of the popular online Visual Basic Tutorial, vbtutor.net. This book is a complete guide to mastering Visual Basic 2017, for beginner to intermediate programmers. It is also an excellent reference text for high school or college-level computer science courses. Reading this book will allow you to: i) Understand the basic concepts of Visual Basic 2017 programming ii) Create your own Visual Basic 2017 applications from scratch iii) Get inspiration from a variety of interesting sample programs iv) Modify the code samples easily to suit your needs v) Learn how to package and distribute your applications

Harness the power of PolyBase data virtualization software to make data from a variety of sources easily accessible through SQL queries while using the T-SQL skills you already know and have mastered. PolyBase Revealed shows you how to use the PolyBase feature of SQL Server 2019 to integrate SQL Server with Azure Blob Storage, Apache Hadoop, other SQL Server instances, Oracle, Cosmos DB, Apache Spark, and more. You will learn how PolyBase can help you reduce storage and other costs by avoiding the need for ETL processes that duplicate data in order to make it accessible from one source. PolyBase makes SQL Server into that one source, and T-SQL is your golden ticket. The book also covers PolyBase scale-out clusters, allowing you to distribute PolyBase queries among several SQL Server instances, thus improving performance. With great flexibility comes great complexity, and this book shows you where to look when queries fail, complete with coverage of internals, troubleshooting techniques, and where to find more information on obscure cross-platform errors. Data virtualization is a key target for Microsoft with SQL Server 2019. This book will help you keep your skills current, remain relevant, and build new business and career opportunities around Microsoft's product direction. What You Will Learn Install and configure PolyBase as a stand-alone service,

or unlock its capabilities with a scale-out cluster Understand how PolyBase interacts with outside data sources while presenting their data as regular SQL Server tables Write queries combining data from SQL Server, Apache Hadoop, Oracle, Cosmos DB, Apache Spark, and more Troubleshoot PolyBase queries using SQL Server Dynamic Management Views Tune PolyBase queries using statistics and execution plans Solve common business problems, including "cold storage" of infrequently accessed data and simplifying ETL jobs Who This Book Is For SQL Server developers working in multi-platform environments who want one easy way of communicating with, and collecting data from, all of these sources

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