

Db2 Application Programming And Sql Guide

This cookbook has recipes written in a simple, easy to understand format with lots of screenshots and insightful tips and hints. If you are an IBM DB2 application developer who would like to exploit advanced features provided by DB2 to design and implement high quality applications, then this book is for you. This book assumes you have a basic understanding of the DB2 application development.

If you are looking for a practical DB2 book that focuses on application programming, this is the book for you. Written from the programmer's point of view, it will quickly teach you what you need to know to access and process DB2 data in your COBOL programs using embedded SQL. This second edition has been thoroughly updated and expanded to make it even more valuable to the programmer who is slugging it out on the job. You will learn: the critical DB2 concepts that let you understand how DB2 works; the basic DB2 coding features you will use in every program you write; how to use version 4 enhancements like outer joins and explicit syntax for inner joins; how to work with column functions, scalar functions, and subqueries to manipulate data; how to use error handling techniques and ROLLBACK to protect DB2 data; why program efficiency is vital under DB2... and more.

The Definitive Solutions-Oriented Guide to IBM® DB2® for z/OS®: Now Fully Updated for Both v9 and v10! The largest database tuning performance gains can often be obtained from tuning application code, and applications that use SQL to retrieve data are the best candidates for tuning. This well-organized, easy-to-understand reference brings together more than 100 SQL-related skills and techniques that any developer can use to build and optimize DB2 applications for consistently superior performance. DB2 tuning expert Tony Andrews (“Tony the Tuner”) draws on more than 20 years of DB2-related experience, empowering you to take performance into your own hands, whether you’re writing new software or tuning existing systems. Tony shows you exactly how to clear bottlenecks, resolve problems, and improve both speed and reliability. This book fully reflects the latest SQL programming best practices for DB2 V9 and DB2 V10 on z/OS: techniques that are taught in no other book and are rarely covered in general DB2 SQL courses. Drawing on his extensive consulting experience and highly praised training with Themis Inc., Tony also presents practical checklists and an invaluable 15-step methodology for optimizing virtually any DB2 application. Coverage includes Empowering developers on knowing what to do and where to look in resolving performance problems in queries or programs Providing many programming and SQL coding examples Establishing standards and guidelines that lead to high-performance SQL Implementing time-efficient code walkthroughs to ensure that your standards are followed Focusing on the small number of SQL statements that consume the most resources Identifying simple solutions that deliver the most sizable benefits Optimizing performance by rewriting query predicates more efficiently Providing a better understanding of SQL optimization and Runstat statistics Recognizing opportunities to tweak your code more effectively than the Optimizer Optimizing SQL code with COBOL applications Efficiently checking for the existence of data, rows, or tables Using Runstats’ newest capabilities to consistently optimize paths to data

This certification guide offers a complete, start-to-finish coverage of DB2 Universal Database Version 8 administration. With Version 8 key topics such as Performance Enhancements, Manageability Enhancements, etc. are addressed.

Structured Query Language (SQL) procedures, triggers, and functions, which are also known as user-defined functions (UDFs), are the key database features for developing robust and distributed applications. IBM® DB2® for i supported these features for many years, and they are enhanced in IBM i versions 6.1, 7.1, and 7.2. DB2 for i refers to the IBM DB2 family member and relational database management system

that is integrated within the IBM Power operating system that is known as IBM i. This IBM Redbooks® publication includes several of the announced features for SQL procedures, triggers, and functions in IBM i versions 6.1, 7.1, and 7.2. This book includes suggestions, guidelines, and practical examples to develop DB2 for i SQL procedures, triggers, and functions effectively. This book covers the following topics: Introduction to the SQL/Persistent Stored Modules (PSM) language, which is used in SQL procedures, triggers, and functions SQL procedures SQL triggers SQL functions This book is for IBM i database engineers and data-centric developers who strive to provide flexible, extensible, agile, and scalable database solutions that meet business requirements in a timely manner. Before you read this book, you need to know about relational database technology and the application development environment on the IBM Power Systems™ with the IBM i operating system.

Time to market, flexibility, and cost reduction are among the top concerns common to all IT executives. If significant resource investments are placed in mature systems, IT organizations need to balance old and new technology. Older technology, such as non-IBM pre-relational databases, is costly, inflexible, and non-standard. Users store their information on the mainframe and thus preserve the skills and qualities of service their business needs. But users also benefit from standards-based modernization by migrating to IBM® DB2® for z/OS®. With this migration, users deliver new application features quickly and respond to changing business requirements more effectively. When migrating, the main decision is choosing between conversion and re-engineering. Although the rewards associated with rebuilding mature applications are high, so are the risks and customers that are embarking on a migration need that migration done quickly. In this IBM Redbooks® publication, we examine how to best approach the migration process by evaluating the environment, assessing the application as a conversion candidate, and identifying suitable tools. This publication is intended for IT decision makers and database administrators who are considering migrating their information to a modern database management system.

IBM DB2 Universal Database V8 offers breakthrough availability, manageability, performance, and scalability. Now, straight from IBM, there's a start-to-finish guide to DB2 Universal Database V8 administration and development for UNIX, Linux, and Windows. This definitive reference covers every aspect of deploying and managing DB2 Universal Database V8, including database design for optimal performance, availability, and recoverability; day-to-day administration and backup; comparing, selecting, and using appropriate DB2 programming techniques; deploying networked and Internet-centered database applications; migrating to DB2 UDB from other databases or earlier versions of DB2; and much more. Using real-world examples, this book shows how to take full advantage of DB2 V8's most powerful enhancements. Philip K. Gunning brings together IBM's best tips and techniques for saving time and money in every facet of database design, development, deployment, and administration. Coverage includes: bull; Leveraging DB2 V8's new Wizards, Advisors, and other automation/self-management features Using the enhanced DB2 XML Extender to build next-generation B2B applications Quickly creating Stored Procedures and UDFs with the new Development Center Exploiting multidimensional clustering, prefetching, materialized query tables, Java threading, and other performance improvements Using the DB2 improved monitoring and logging facilities Maximizing availability via online table and index reorganization and dynamic configuration Understanding the latest changes in the DB2 product family

Implementing Practical DB2 Applications provides a concise source of information for the development and implication of applications using IBM's DB2 relational database package in the MVS environment. The book describes the flagship DB2 version, namely that implemented for the MVS operating system environment where DB2 operates with the MVS

transaction processing subsystems: CICS, IMS and TSO. The book is intended for both beginners and experts. It describes how the various components of SQL are used to provide practical applications. Containing tips and notes that were discovered the hard way - through hands on experience - this book will be welcomed by all those looking to implement applications in DB2.

The accompanying CD-ROM contains source code, DB2 product documentation, and a complete trial version of DB2 Enterprise Server Edition for Windows version 8.2.

This IBM Redbooks publication describes the major enhancements that affect application programming when accessing DB2 data on a S/390 or zSeries platform, including the object-oriented extensions such as triggers, user-defined function and user-defined distinct types, the usage of temporary tables, savepoints and the numerous extensions to the SQL language, to help you build powerful, reliable and scalable applications, whether it be in a traditional environment or on an e-business platform. IBM DATABASE 2 Universal Database Server for z/OS and OS/390 Version 7 is currently at its eleventh release. Over the last couple of versions a large number of enhancements were added to the product. Many of these affect application programming and the way you access your DB2 data. This book will help you to understand how these programming enhancements work and will provide examples of how to use them. It provides considerations and recommendations for implementing these enhancements and for evaluating their applicability in your DB2 environments. A comprehensive Perl reference contains a CD-Rom with sample scripts and applications from the book, in addition to appendices for the advanced Perl user with an alphabetized function reference for the built-in Perl functions, and much more. Original. (All Users).

Procedures, triggers, and user-defined functions (UDFs) are the key database software features for developing robust and distributed applications. IBM Universal Database™ for i (IBM DB2® for i) supported these features for many years, and they were enhanced in V5R1, V5R2, and V5R3 of IBM® OS/400® and V5R4 of IBM i5/OSTM. This IBM Redbooks® publication includes several of the announced features for procedures, triggers, and UDFs in V5R1, V5R2, V5R3, and V5R4. This book includes suggestions, guidelines, and practical examples to help you effectively develop IBM DB2 for i procedures, triggers, and UDFs. The following topics are covered in this book: External stored procedures and triggers Java procedures (both Java Database Connectivity (JDBC) and Structured Query Language for Java (SQLJ)) External triggers External UDFs This publication also offers examples that were developed in several programming languages, including RPG, COBOL, C, Java, and Visual Basic, by using native and SQL data access interfaces. This book is part of the original IBM Redbooks publication, Stored Procedures, Triggers, and User-Defined Functions on DB2 Universal Database for iSeries, SG24-6503-02, that covered external procedures, triggers, and functions, and also SQL

procedures, triggers, and functions. All of the information that relates to external routines was left in this publication. All of the information that relates to SQL routines was rewritten and updated. This information is in the new IBM Redbooks publication, SQL Procedures, Triggers, and Functions on IBM DB2 for i, SG24-8326. This book is intended for anyone who wants to develop IBM DB2 for i procedures, triggers, and UDFs. Before you read this book, you need to know about relational database technology and the application development environment on the IBM i server.

IBM's definitive DB2 UDB V7.1 application development reference and exam study guide for the OS/390 and z/OS platforms An official IBM self-study guide for the DB2 UDB V7.1 Family Application Development Exam (#514) Expert DB2 programming tips, techniques, and guidelines from application development experts Covers data structures, SQL, stored procedures, programming/language environments, debugging, tuning, and more CD-ROM contains complete DB2 application development sample exam The definitive, authoritative guide to DB2 OS/390 application development certification Covers data structures, SQL, stored procedures, programming/language environments, debugging, tuning, and much more Includes a full section on object-relational programming and other advanced techniques Sample test questions help you prepare for the IBM DB2 UDB V7.1 Family Application Development Exam (#514) About the CD The CD-ROM included with this book contains a complete DB2 UDB V7.1 Family Application Development Exam (#514) sample exam. IBM DB2 UDB Version 7.1 for OS/390 and z/OS delivers unparalleled performance, scalability, and reliability in today's enterprise business environments. Now, there's a complete, authoritative guide to developing applications with DB2 UDB V7.1 in both OS/390 and z/OS environments--and preparing for the IBM DB2 UDB V7.1 Family Application Development Exam (#514). This comprehensive day-to-day guide to DB2 UDB application development is also the only book that delivers the depth of knowledge professionals need to pass IBM's challenging application development exam for the OS/390 and z/OS platforms. IBM Gold Consultant Susan Lawson presents hundreds of useful tips, practical techniques, and expert guidelines for every facet of DB2 UDB application development and every stage of the development process for both OS/390 and z/OS platforms Coverage includes: Foundations for effective DB2 development, including an overview of the DB2 UDB product family and DB2 for OS/390 data structures SQL: basic concepts and coding techniques through advanced OLAP features, star schemas, and star joins Stored procedures, including the SQL procedure language and IBM's Stored Procedure Builder Best practices for application testing, debugging, and performance tuning The full range of DB2 development tools, including ODBC/CLI, Java(tm), COBOL, C, C++, REXX, CAF, CICS, and RRSAF Object-relational programming, including user-defined functions, user-defined data types, and triggers In-depth coverage of locking and concurrency Whether you're developing for DB2 UDB V7.1 in an OS/390 or z/OS environment, managing DB2 UDB V7.1 application development, preparing for DB2 UDB

V7.1 Family Application Development, or all three, DB2 UDB for OS/390 Version 7.1 Application Certification Guide will be your single most valuable resource. IBM DB2 Series

Database Design and Programming for DB2/400 is a comprehensive introduction to the design and implementation of application databases on IBM's AS/400. This clear and authoritative text teaches you the following essential skills: Coding Data Description Specifications (DDS) for physical and logical files, entering CL commands to create DB2/400 files from DDS, using field reference files, accessing database files from RPG IV, RPG/400, COBOL/400, and other AS/400 high-level languages, the Relational Database Model as a foundation for DB2/400 and database design, practical database design and data modeling, using SQL/400 to define and access database files, advanced DB2/400 features (including commitment control, the Open Query File command, database constraints, triggers, distributed database access, and others), database security, and data backup and recovery. Paul Conte, a leading DB2/400 authority with extensive application development experience, provides easy-to-follow instruction in the proper way to create efficient, flexible databases on the AS/400. His explanations and advice assure that you'll handle your design and coding challenges with confidence and professional-level techniques. This book provides complete coverage of both DDS, the traditional approach to defining DB2/400 files, and of SQL/400, the industry-standard database language that is IBM's strategic language for the future of DB2/400. With this text, you can be sure of handling not only existing application databases, but also developing new SQL/400 databases. These skills will put you in the forefront of AS/400 application developers. Database Design and Programming for DB2/400 also provides an excellent introduction to practical database design techniques. You get a solid introduction to the relational database model, which underlies the whole DB2/400 architecture and the SQL language. On that foundation, the book explains a step-by-step method of modeling an organization's database requirements and developing a design for the necessary database files. The text is designed for college-level courses and for independent study. Each chapter has numerous examples and exercises. The material is organized into four parts - DDS, database design, SQL, and advanced DB2/400 features - so you can focus on particular topics as needed. Appendices provide extensive reference material. You can use the book as your single DB2/400 resource, eliminating the need for many IBM manuals. You will find Database Design and Programming for DB2/400 immediately useful, whether you're just beginning to learn DB2/400 or you are an experienced developer. You will turn to this book time and time again for advice on the best way to design and program DB2/400 databases.

DB2 SQL developers now have a handy reference guide with tuning tips to improve performance in queries, programs and applications. Poorly coded programs or improperly coded SQL statements are often the culprit causing poor performance. Many developers working with an IBM DB2 relational database will benefit from this guide, entitled 'DB2 SQL 75+ Tuning Tips For Developers'. The book's focus is to

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increase developers' knowledge in the ways of performance and tuning in an IBM DB2 relational database environment. In an organized and easy-to-understand format, the guide provides development and SQL tips that will help developers improve performance problems. By modifying application and SQL code, understanding Runstat options, or adding and altering indexes, there are many things that developers can do to resolve performance issues. This book provides development tips and suggestions, along with many SQL coding examples, all with the purpose of gaining better performance.

Marketshare for DB2 has been growing steadily over the past 5 years and with the recent release of DB2 Universal Database V8, the product has never had more momentum. Not only is the product used in every company on the Fortune 500, but it is becoming very popular in the small to medium sized businesses as well. Sams Teach Yourself DB2 Universal Database in 21 Days, Second Edition, focuses on performing tasks using the graphical interfaces and wizards that are provided with DB2 on the Windows platform. (DB2 also runs on z/OS, OS/400, AIX, Linux, HP-UX, and Sun Solaris.) Readers are guided through performing all the commonly used tasks to run DB2, including installing DB2, setting up DB2, creating databases and tables, populating the database with data, accessing the data, ensuring the database is tuned for performance. This book differs from the competition in that it provides examples and scenarios making it very easy for the reader to learn complicated tasks. It gives them everything they need for the commonly used tasks in a simple to understand manner. Quizzes and exercises strengthen the knowledge gained and ensure concepts are learned rather than memorized.

Shows how to manage and access DB2 data and includes tips for writing DB2 application programs. Programmers who have little or no experience in coding programs which access DB2 data will find this example-laden text useful.

This IBM® Redbooks® publication is based on the book Introduction to the New Mainframe: z/OS Basics, SG24-6366, which was produced by the International Technical Support Organization (ITSO), Poughkeepsie Center. It provides students of information systems technology with the background knowledge and skills necessary to begin using the basic facilities of a mainframe computer. For optimal learning, students are assumed to have successfully completed an introductory course in computer system concepts, such as computer organization and architecture, operating systems, data management, or data communications. They should also have successfully completed courses in one or more programming languages, and be PC literate. This textbook can also be used as a prerequisite for courses in advanced topics, or for internships and special studies. It is not intended to be a complete text covering all aspects of mainframe operation. It is also not a reference book that discusses every feature and option of the mainframe facilities. Others who can benefit from this course include experienced data processing professionals who have worked with non-mainframe platforms, or who are familiar with some aspects of the mainframe but want to become knowledgeable with other facilities and benefits of the mainframe environment. As we go through this course, we suggest that the instructor alternate between text, lecture, discussions, and hands-on exercises. Many of the exercises are cumulative, and are designed to show the student how to design and implement the topic presented. The instructor-led discussions and hands-on exercises are an integral part of the course, and can include topics not covered in this textbook. In this course, we use simplified examples and focus mainly on basic system functions. Hands-on exercises are provided throughout the course to help students explore the mainframe style of computing. At the end of this course, you will be familiar with the following information: Basic concepts of the mainframe, including its usage and architecture Fundamentals of IBM z/VSE® (VSE), an IBM zTM Systems entry mainframe operating system (OS) An understanding of mainframe workloads and the major middleware applications in use on mainframes today The basis for subsequent course work in more advanced, specialized areas of z/VSE, such as system administration or application programming

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DB2® packages were introduced with DB2 V2.3 in 1993. During the 15 years that have elapsed, a lot has changed. In particular, there is a more widespread use of distributed computing, Java™ language, new tools, and upgrades in the platform software and hardware. The best practices back then just might not be optimal today. In this IBM® Redbooks® publication, we take a fresh look at bringing packages into the 21st century. We begin with an overview of packages and explain the advantages of using packages. Because database request module (DBRM) based plans have been deprecated in DB2 9, you need to convert to packages if you did not use packages already. We provide guidance on using a DB2 provided function to convert from DBRM-based plans to packages. We re-examine the application development frameworks for packages: program preparation, package setup, and execution. For distributed applications, we include a discussion of a utility to identify and remove deprecated private protocol and converting to DRDA® as well as an introduction to the new pureQuery function of Data Studio. We also discuss common problems and their resolutions. We then explore administration and operational activities dealing with packages, including security, access path management (where we discuss the newly introduced package stability feature to allow for a seamless fallback), and management and performance aspects. The appendixes include useful queries and mention tools for managing packages effectively.

Marketshare for DB2 has been growing steadily over the past 5 years and with the announcement of DB2 Universal Database V8 (T-Rex), the product has never had more momentum. DB2 owns about 30 percent of the database market--the same as Oracle. Not only is the product used in many Fortune 500 companies, but it is becoming very popular in small to medium sized businesses as well. This book provides the reader with a comprehensive reference and research tool for DB2 for the mainframe. Official material is awkwardly written, spans over a dozen manuals in PDF format, and lacks real-world guidance. Author, Craig Mullins, consistently hears from readers of past editions that they rely on this book as their primary reference for DB2. Craig Mullins is constantly being asked when it will support a new release.

"The accompanying CD-ROM contains a complete trial version of IBM DB2 Universal Database Personal Edition version 8.1, for Windows operating environments, evaluation copy"--Back cover.

For more than 40 years, Computerworld has been the leading source of technology news and information for IT influencers worldwide. Computerworld's award-winning Web site (Computerworld.com), twice-monthly publication, focused conference series and custom research form the hub of the world's largest global IT media network.

The first start-to-finish guide to IBM's brand-new DB2 Application Developer certification exam! Write DB2 applications using Embedded SQL, ADO, CLI/ODBC, JDBC, SQLJ, Perl DBI, stored procedures, and more! Leverage new DB2 extenders for searching documents, XML composition/decomposition; managing multimedia databases, and more. Complete cross-platform coverage for UNIX, Linux, Windows and OS/2 environments! IBM has just expanded its highly successful DB2 certification program to include a developer's exam -- and this is the first book to offer start-to-finish preparation! The book covers every DB2 Application Developer exam objective, and includes a complete sample exam. Start by reviewing the DB2 client/server environment, comparing the multiple programming interfaces available to DB2 application developers, and understanding when to choose each. Next, walk through the fundamentals of DB2

application development with Embedded SQL, ADO, CLI/ODBC, JDBC, SQLJ, and the Perl DBI. Learn how to create effective stored procedures, and when to use them. Discover how to use DB2 extenders to enhance your application's functionality, adding more effective search features, XML support, multimedia archive management, and more. Steve Sanyal is a Software Developer for the DB2 Universal Database Application Development Team at the IBM Toronto Lab. He specializes in JDBC, SQLJ and CLI/ODBC, and leads IBM's project to develop Java and XML-based performance and troubleshooting tools for DB2. David Martineau is a Staff Software Developer providing technical support for the DB2 UDB Application Development Team. He has provided sample code for DB2 UDB using interfaces such as ADO, CLI and Net.Data. Michael Kyprianou has worked with DB2 Universal Database and its predecessors since 1995. He is an IBM Advanced Technical Expert in DB2 DRDA and certified in DB2 UDB Database Administration and Application Development. Kevin Gashyna is a DB2 Universal Database application development specialist specializing in DB2 Extenders and Net.Data.

-- Critical part of DB2 -- Application Programming Interface (API) is a set of routines, protocols, and tools for building software applications. A good API makes it easier to develop a program by providing all the building blocks. A programmer puts the blocks together. -- First comprehensive reference -- This will be the first book available for DB2 Universal Database application developers that want to write applications using the Application programming Interface functions that are provided with DB2. -- DB2 Market Share -- IBM's DB2 database took the lead in the database market in license revenue for 1998. Now controlling 32.3% of the market.

IBM Db2® for z/OS® is well known as the gold-standard information steward. Deep synergy with the z/OS operating system and System Z platform provides support for the highest transaction volumes with the ultimate levels of availability. Just like any high-performance engine, occasional maintenance or upgrades are needed to maintain peak performance and to incorporate new features. Those that demand the highest standards and protection of their production environments know that you want to test changes outside of production first. It is common to have development or test environments for application development and verification. What about applying Db2 maintenance or performing migrations to new version or release levels? Sure, you probably perform these activities outside of production first, but are these environments similar enough to production to surface the same results as those you might encounter in production? Your production Db2 Catalog & Directory often has a different mix and complexity of objects, which were created at different levels of Db2, that can span decades of time. The best test of these activities is against your production system, but this is the system that we want to protect. How can we accomplish this? Clone it! Skeleton cloning produces a specific kind of clone, which provides a replica of the portions of your Db2 production environment that are

needed to complete your testing. You can use the skeleton clone to find issues before they occur in production. This process allows you to refine maintenance steps in a safe environment and to minimize potential downtime when performing the same steps in a production system. This IBM® Redpaper™ publication gives a high-level overview of the IBM Db2 Cloning Tool and includes specific use cases for the tool. It also details the skeleton cloning process, which you can use to test migration, function levels, and maintenance, and includes demo examples that show a Db2 11 to 12 migration test using skeleton cloning.

For more than 20 years, Network World has been the premier provider of information, intelligence and insight for network and IT executives responsible for the digital nervous systems of large organizations. Readers are responsible for designing, implementing and managing the voice, data and video systems their companies use to support everything from business critical applications to employee collaboration and electronic commerce.

SQL for DB2 ISBN: 978-1-58304-123-9 This focused, comprehensive textbook provides start-to-finish coverage of SQL for DB2. Whether you're a college student studying SQL for DB2 for the first time or a professional developer who needs to learn SQL for DB2, this book covers all the basics necessary for success. The purpose of any database book is to learn how to develop databases effectively and precisely without the need for a lot of complicated jargon. This book delivers on that promise by focusing on the skill set necessary to develop well-designed DB2 databases. SQL for DB2 covers the core requirements of a traditional database course. Topics are presented in an accessible, easy-to-learn manner with numerous examples and tips. End-of-chapter materials include a chapter summary, list of key terms, and hands-on exercises that put the concepts to work. SQL for DB2 builds on the foundation of its widely acclaimed predecessor, SQL/400 Developers Guide, to provide an up-to-date introduction to SQL for DB2 for today's students and professionals. All chapters have been refreshed, with improved organization throughout. Examples have been updated, and new material has been added. This new edition includes: New chapters introducing DB2 and System i Navigator Expanded coverage of single- and multiple-table queries Expanded coverage of updating databases with SQL An expanded discussion of normalization Table of Contents Chapter 1 Introduction to DB2 Chapter 2 Introduction to SQL Chapter 3 Single-Table Queries Chapter 4 Introduction to Data Modeling and Database Design Chapter 5 Logical Data Modeling Chapter 6 Entity Relationship Diagram Chapter 7 Normalization Chapter 8 Physical Database Design Chapter 9 Database Constraints Chapter 10 Multiple Table Queries Chapter 11 Views and Indexes Chapter 12 Updating Tables Chapter 13 Static and Dynamic Embedded Statements Chapter 14 SQL Cursors and Result Sets Chapter 15 The Create SQL Program Command Chapter 16 Using SQL in RPG Programs Chapter 17 Triggers Chapter 18 Additional SQL Topics Chapter 19 Database Security and Grant and Revoke Statements

A practical guide to DB2 z/OS database administration that is 100 percent focused on running DB2 in z/OS environments. The only comprehensive preparation guide for the IBM Certified Database Administrator for DB2 Universal Database V8 z/OS certification. Covers database planning, design, implementation, operation, recovery, security, performance, installation, migration, and more. Sample test questions help you prepare for both IBM DB2 DBA Tests 700 and 702. IBM DB2 Universal Database Version 8 for z/OS offers enterprises unprecedented opportunities to integrate information, deliver it on demand, and manage it simply and cost-effectively. Now, one of the world's leading DB2 consultants presents the definitive guide to administering DB2 UDB V8 databases in z/OS environments. DB2 for z/OS Version 8 DBA Certification Guide also serves as a key tool for anyone preparing for IBM Certified Database Administrator for DB2 Universal Database V8 for z/OS certification. IBM Gold Consultant Susan Lawson presents hundreds of practical techniques, expert guidelines, and useful tips for every facet of DB2 UDB database administration, including database implementation, operation, recovery, security, auditing, performance, installation, migration, SQL, and more. Coverage includes Understanding the DB2 product family, architecture, attachments, and the DB2 z/OS environment; Securing enterprise-class DB2 installations and applications; Using SQL to create and manage database objects, and manipulate and retrieve information; Mastering key DBA tasks, including loading, reorganizing, quiescing, repairing, and recovering data; recovering and rebuilding indexes; and gathering statistics; Implementing data sharing in Parallel Sysplex environments; Learning the fundamentals of DB2 application development from the DBA's perspective; Leveraging advanced DB2 functions, including stored procedures and other object-relational extensions; Optimizing DB2 applications and the DB2 engine for maximum performance. Whether you are administering DB2 UDB V8 in z/OS environments, planning to do so, or preparing for DB2 UDB V8 DBA certification, DB2 for z/OS Version 8 DBA Certification Guide will be your single most valuable resource.

DB2 Developer's Guide is the field's #1 go-to source for on-the-job information on programming and administering DB2 on IBM z/OS mainframes. Now, three-time IBM Information Champion Craig S. Mullins has thoroughly updated this classic for DB2 v9 and v10. Mullins fully covers new DB2 innovations including temporal database support; hashing; universal tablespaces; pureXML; performance, security and governance improvements; new data types, and much more. Using current versions of DB2 for z/OS, readers will learn how to:

- * Build better databases and applications for CICS, IMS, batch, CAF, and RRSAP
- * Write proficient, code-optimized DB2 SQL
- * Implement efficient dynamic and static SQL applications
- * Use binding and rebinding to optimize applications
- * Efficiently create, administer, and manage DB2 databases and applications
- * Design, build, and populate efficient DB2 database structures for online, batch, and data warehousing
- * Improve the performance of DB2 subsystems, databases, utilities, programs, and SQL stat DB2

Developer's Guide, Sixth Edition builds on the unique approach that has made previous editions so valuable. It combines:

- * Condensed, easy-to-read coverage of all essential topics: information otherwise scattered through dozens of documents
- * Detailed discussions of crucial details within each topic
- * Expert, field-tested implementation advice
- * Sensible examples

The DB2® pureXML® feature offers sophisticated capabilities to store, process and manage XML data in its native hierarchical format. By integrating XML data intact into a relational database structure, users can take full advantage of DB2's relational data management features. In this IBM® Redbooks® publication, we document the steps for the implementation of a simple but meaningful XML application scenario. We have chosen to provide samples in COBOL and Java™ language. The purpose is to provide an easy path to follow to integrate the XML data type for the traditional DB2 for z/OS® user. We also add considerations for the data administrator and suggest best practices for ease of use and better performance.

The Easy, Visual Way to Master IBM® DB2 for Linux®, UNIX®, and Windows®—Fully Updated for Version 9.5 IBM DB2 9 and DB2 9.5 provide breakthrough capabilities for providing Information on Demand, implementing Web services and Service Oriented Architecture, and streamlining information management. Understanding DB2: Learning Visually with Examples, Second Edition, is the easiest way to master the latest versions of DB2 and apply their full power to your business challenges. Written by four IBM DB2 experts, this book introduces key concepts with dozens of examples drawn from the authors' experience working with DB2 in enterprise environments. Thoroughly updated for DB2 9.5, it covers new innovations ranging from manageability to performance and XML support to API integration. Each concept is presented with easy-to-understand screenshots, diagrams, charts, and tables. This book is for everyone who works with DB2: database administrators, system administrators, developers, and consultants. With hundreds of well-designed review questions and answers, it will also help professionals prepare for the IBM DB2 Certification Exams 730, 731, or 736. Coverage includes

- Choosing the right version of DB2 for your needs
- Installing and configuring DB2
- Understanding the DB2 environment, instances, and databases
- Establishing client and server connectivity
- Working with database objects
- Utilizing breakthrough pureXML™ technology, which provides for nativeXML support
- Mastering administration, maintenance, performance optimization, troubleshooting, and recovery
- Understanding improvements in the DB2 process, memory, and storage models
- Implementing effective database security
- Leveraging the power of SQL and XQuery

As IBM® continues to enhance the functionality, performance, and availability of IBM Db2®, the utilities have made significant strides towards self-management. IBM Db2 for z/OS utilities is leading the trend towards autonomies. During the last couple of versions of Db2 for z/OS, and through the maintenance stream, new features and enhancements have

been delivered to further improve the performance and functionality of the Db2 utilities. The intent of this IBM Redpaper™ publication is to help Db2 Database Administrators, Db2 System Programmers, and anyone who runs Db2 for z/OS utilities implement best practices. The intent of this paper is not to replicate the Db2 for z/OS Utilities Reference Guide or the Db2 for z/OS Installation Guide. This paper describes and informs you how to apply real-life practical preferred practices for the IBM Db2 for z/OS Utilities Suite. The paper concentrates on the enhancements provided by Db2 utilities, regardless of the version, albeit some functions and features are available only in Db2 12 for IBM z/OS®. Updates the comprehensive user's guide to IBM's popular relational database software for mainframe computers, to describe the latest version, 2.3. Explains all the key components of the DB2 environment including the IBM "solution frameworks" AD/cycle, and the information warehouse, in which DB2 plays a pivotal role. Annotation copyrighted by Book News, Inc., Portland, OR

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