

## Pl Sql Syntax Guide

This IBM® Redbooks® publication describes IBM DB2® SQL compatibility features. The latest version of DB2 includes extensive native support for the PL/SQL procedural language, new data types, scalar functions, improved concurrency, built-in packages, OCI, SQLPlus, and more. These features can help with developing applications that run on both DB2 and Oracle and can help simplify the process of moving from Oracle to DB2. In addition, IBM now provides tools to simplify the enablement process, such as the highly scalable IBM Data Movement Tool for moving schema and data into DB2, and an Editor and Profiler for PL/SQL provided by the IBM Data Studio tool suite. This Oracle to DB2 migration guide describes new technology, preferred practices for moving to DB2, and common scenarios that can help you as you move from Oracle to DB2. This book is intended for IT architects and developers who are converting from Oracle to DB2. DB2 compatibility with Oracle is provided through native support. The new capabilities in DB2 that provide compatibility are implemented at the lowest and most intimate levels of the database kernel, as though they were originally engineered for DB2. means that the DB2 implementation is done without the aid of an emulation layer. This intimacy leads to the scalable implementation that DB2 offers, providing identical performance between DB2 compatibility features and DB2 other language elements. For example, DB2 runs SQL PL at the same performance as PL/SQL implementations of the same function.

This integrated learning solution teaches all the Oracle PL/SQL skills you need, hands-on, through real-world labs, extensive examples, exercises, and projects! Completely updated for Oracle 11g, Oracle PL/SQL by Example , Fourth Edition covers all the fundamentals, from PL/SQL syntax and program control through packages and Oracle 11g's significantly improved triggers. One step at a time, you'll walk through every key task, discovering the most important PL/SQL programming techniques on your own. Building on your hands-on learning, the authors share solutions that offer deeper insights and proven best practices. End-of-chapter projects bring together all the techniques you've learned, strengthening your understanding through real-world practice. This book's approach fully reflects the authors' award-winning experience teaching PL/SQL programming to professionals at Columbia University. New database developers and DBAs can use its step-by-step instructions to get productive fast; experienced PL/SQL programmers can use this book as a practical solutions reference. Coverage includes • Mastering basic PL/SQL concepts and general programming language fundamentals, and understanding SQL's role in PL/SQL • Using conditional and iterative program control techniques, including the new CONTINUE and CONTINUE WHEN statements • Efficiently handling errors and exceptions • Working with cursors and triggers, including Oracle 11g's powerful new compound triggers • Using stored procedures, functions, and packages to write modular code that other programs can execute • Working with collections, object-relational features, native dynamic SQL, bulk SQL, and other advanced PL/SQL capabilities • Handy reference appendices: PL/SQL formatting guide, sample database schema, ANSI SQL standards reference, and more

Annotation This pocket reference condenses the most vital information from Oracle PL/SQL programming into an accessible quick reference that summarises the basics of PL/SQL - block structure, fundamental language elements, data structures, control statements, and use of procedures, functions and packages.

Teaches all the Oracle PL/SQL skills needed to start developing PL/SQL fast, through hundreds of extensive exercises, examples, and projects.

Despite its wide availability and usage, few developers and DBAs have mastered the true power of Oracle SQLPlus. This bestselling book--now updated for Oracle 10g--is the only in-depth guide to this interactive query tool for writing SQL scripts. It's an essential resource for any Oracle user. The new second edition of Oracle SQLPlus: The Definitive Guide clearly describes how to perform, step-by-step, all of the tasks that Oracle developers and DBAs want to perform with SQLPlus--and maybe some you didn't realize you could perform. With Oracle SQLPlus: The Definitive Guide, you'll expertly: write and execute script files generate ad hoc reports extract data from the database query the data dictionary tables customize an SQLPlus environment and much more It also includes a handy quick reference to all of its syntax options and an often-requested chapter on SQL itself, along with a clear, concise, and complete introduction. This book is truly the definitive guide to SQLPlus. It's an indispensable resource for those who are new to SQL\*Plus, a task-oriented learning tool for those who are already using it, and an immediately useful quick reference for every user. If you want to leverage the full power and flexibility of this popular Oracle tool, you'll need this book.

The authors have revised and updated this bestseller to include both the Oracle8i and new Oracle9i Internet-savvy database products.

This book is packed with real world examples that cover all the advanced features of PL/SQL. In turn, each major certification topic is covered in a separate chapter that makes understanding concepts easier. At the end of each chapter, you will find plenty of practice questions to strengthen and test your learning. If you are a PL/SQL developer looking for deeper insight and a move from mid-level programmer to professional database developer, then this is the best guide for you. This book is also an ideal guide for all the Associate level PL/SQL programmers who are preparing for the Professional 1Z0-146 certification. This book assumes you have prior knowledge of PL/SQL programming.

This pocket reference provides quick-reference information that will help you use Oracle Corporation's extensive set of built-in functions and packages, including those new to Oracle8. Oracle's PL/SQL language is a programming language providing procedural extensions to the SQL relational database language and to an ever-growing number of Oracle development tools. Among the most useful constructs in the PL/SQL language are the built-in functions and packages. Built-in functions are constructs that operate on certain types of data (e.g., numeric, character) to return a result. By using functions, you can minimize the coding you need to do in your programs. Functions are described in detail in Steven Feuerstein's Oracle PL/SQL Programming; this comprehensive guide to building applications with PL/SQL has become the bible for PL/SQL developers who

have raved about its completeness, readability, and practicality. Built-in functions fall into several major categories: Character functions: Operate on character data. Examples include CONCAT (concatenates two strings into one), LENGTH (returns the length of a string), and REPLACE (replaces a character sequence in a string with a different set of characters). Date functions: Operate on dates and supplement the DATE datatype. Examples include SYSDATE (returns the current date and time in the Oracle Server) and LAST\_DAY (returns the last day in the month of the specified date). Numeric functions: Operate on numeric data. Examples include CEIL (returns the smallest integer greater than or equal to the specified number) and POWER (returns a number raised to a particular power). LOB functions: Operate on large object data. Examples include EMPTY\_BLOB (returns an empty locator of the binary large object type) and EMPTY\_CLOB (returns an empty locator of the character large object type). Conversion functions: Perform explicit conversions of different types of data. Examples include TO\_CHAR (converts a number or date to a string) and TO\_NUMBER (converts a string to a number). Miscellaneous functions. Examples include GREATEST (returns the greatest of the specified list of values) and UID (returns the user ID of the current Oracle session). Built-in packages (collections of PL/SQL objects, such as functions, procedures, and data structures) greatly expand the scope of the PL/SQL language. These packages are described in detail in Feuerstein's and Beresiewicz's book, Oracle Built-in Packages. Built-in packages are built by Oracle Corporation and stored directly in the Oracle database. The functionality of the built-ins is available from any programming environment that can call PL/SQL stored procedures, including Visual Basic, Oracle Developer/2000, Oracle Application Server (for Web-based development), and, of course, the Oracle database itself. Built-in packages extend the capabilities and power of PL/SQL in many significant ways. For example: DBMS\_SQL executes dynamically constructed SQL statements and PL/SQL blocks of code. DBMS\_PIPE communicates between different Oracle sessions through a pipe in the RDBMS shared memory. DBMS\_JOB submits and manages regularly scheduled jobs for execution inside the database. DBMS\_LOB accesses and manipulates Oracle8's large objects (LOBs) from within PL/SQL programs. The book shows how to call all of the commonly used built-in functions and packages. For packages, it also shows the RESTRICT REFERENCES pragmas (needed if you call packages from a SQL statement), as well as the exceptions, constants, and data structures defined in the packages.

CD-ROM contains: Practice database -- Sample scripts reference in text.

ORACLE 11G: SQL is not simply a study guide; it is written for individuals who have just a basic knowledge of databases and can be utilized in a course on this latest implementation of SQL from Oracle. Provides quick-reference information that will help you use Oracle's PL/SQL language, including the newest Oracle Database 10g features. This is a companion to Steven Feuerstein and Bill Pribyl's Oracle PL/SQL Programming.

Design Feature-Rich PL/SQL Applications Deliver dynamic, client/server PL/SQL applications with expert guidance from an Oracle programming professional. With full coverage of the latest features and tools, Oracle Database 11g PL/SQL Programming lays out each topic alongside detailed explanations, cut-and-paste syntax examples, and real-world case studies. Access and modify database information, construct powerful PL/SQL statements, execute effective queries, and deploy bulletproof security. You'll also learn how to implement C, C++, and Java procedures, Web-enable your database, cut development time, and optimize performance. Create, debug, and manage Oracle-driven PL/SQL programs Use PL/SQL structures, delimiters, operators, variables, and statements Identify and eliminate errors using PLSQL\_WARNINGS and exception handlers Work with functions, procedures, packages, collections, and triggers Define and deploy varray, nested table, and associative array data types Handle external routines, object types, large objects, and secure files Communicate between parallel sessions using DBMS\_ALERT and DBMS\_PIPE Call external procedures through Oracle Net Services and PL/SQL wrappers Integrate internal and server-side Java class libraries using Oracle JVM Develop robust Web applications using PL/SQL Gateway and Web Toolkit

Be more productive with the Oracle PL/SQL language. The fifth edition of this popular pocket reference puts the syntax of specific PL/SQL language elements right at your fingertips, including features added in Oracle Database 12c. Whether you're a developer or database administrator, when you need answers quickly, the Oracle PL/SQL Language Pocket Reference will save you hours of frustration with concise summaries of: Fundamental language elements, such as block structure, datatypes, and declarations Statements for program control, cursor management, and exception handling Records, procedures, functions, triggers, and packages Execution of PL/SQL functions in SQL Compilation options, object-oriented features, collections, and Java integration This handy pocket reference is a perfect companion to Steven Feuerstein and Bill Pribyl's bestselling Oracle PL/SQL Programming.

If you have mastered the fundamentals of the PL/SQL language and are now looking for an in-depth, practical guide to solving real problems with PL/SQL stored procedures, then this is the book for you. SQL (Structured Query Language), the heart of a relational database management system, is the language used to query the database, to create new tables in the database, to update and delete fields, and to set access privileges. Aimed at everyone who needs to access an Oracle database using SQL, including developers, DBAs, designers, and managers, this book delivers all the information they need to know about standard SQL, and Oracle's extensions to it.

Find tips for creating efficient PL/SQL code If you know a bit about SQL, this book will make PL/SQL programming painless! The Oracle has spoken—you need to get up to speed on PL/SQL programming, right? We predict it'll be a breeze with this book! You'll find out about code structures, best practices, and code naming standards, how to use conditions and loops, where to place PL/SQL code in system projects, ways to manipulate data, and more. Discover how to Write efficient, easy-to-maintain code Test and debug PL/SQL routines Integrate SQL and PL/SQL Apply PL/SQL best practices Use new features introduced in Oracle 9i and 10g

From the authorized Oracle Press comes a complete guide to developing robust PL/SQL applications. The book contains new information on development tools, datatypes, SQL commands and functions, and much more. The CD-ROM contains sample code plus a sampling of development environments covered in the book.

Readers get the complete text of the following books on CD-ROM: "Oracle PL/SQL Programming, Advanced PL/SQL Programming, Oracle Web Applications, Oracle Built-in Packages, Oracle Developer's Workbook, Oracle PL/SQL Pocket Reference, Oracle Built-ins Pocket Reference", and "Oracle PL/SQL Programming: A Guide to Oracle 8i Features".

Considered the best Oracle PL/SQL programming guide by the Oracle community, this definitive guide is precisely what you need to make the most of Oracle's powerful procedural language. The sixth edition describes the features and capabilities of PL/SQL up through Oracle Database 12c Release 1. Hundreds of thousands of PL/SQL developers have benefited from this book

over the last twenty years; this edition continues that tradition. With extensive code examples and a lively sense of humor, this book explains language fundamentals, explores advanced coding techniques, and offers best practices to help you solve real-world problems. Get PL/SQL programs up and running quickly, with clear instructions for executing, tracing, testing, debugging, and managing code Understand new 12.1 features, including the ACCESSIBLE\_BY clause, WITH FUNCTION and UDF pragma, BEQUEATH CURRENT\_USER for views, and new conditional compilation directives Take advantage of extensive code samples, from easy-to-follow examples to reusable packaged utilities Optimize PL/SQL performance with features like the function result cache and Oracle utilities such as PL/Scope and the PL/SQL hierarchical profiler Build modular, easy-to-maintain PL/SQL applications using packages, procedures, functions, and triggers

Provides information on advanced Oracle SQL techniques for creating complex queries and extracting and summarizing data from large tables.

The book offers a systematic knowledge of Oracle SQL and PL/SQL to help students exploit the capabilities of the database in an effective and efficient manner. The book follows a step-by-step approach to the subject using real-world cases, examples and exercises in order to make it an easy, interesting and complete self-study guide. The book can be used for practical classes on Oracle version 8.0 onwards. The availability of an authorized Oracle database in conjunction with the book is sufficient to learn Oracle commands and syntaxes. It is designed to address the need of the laboratory classes on Oracle for the students of Computer Science, Information Technology and Computer Applications. The book will also be useful to professionals and academics alike for conducting training programmes on Oracle database.

Presents a syntax reference for every Oracle SQL command supported by version 9.2.

However excellent they are, most computer books are inherently passive--readers simply take in text without having any opportunity to react to it. The Oracle PL/SQL Developer's Workbook is a different kind of animal! It's designed to engage you actively, to get you solving programming problems immediately, and to help you apply what you've learned about PL/SQL--and in the process deepen your knowledge of the language. By tackling the exercises in this workbook, you'll find yourself moving more rapidly along the learning curve to join the growing ranks of PL/SQL experts. The Oracle PL/SQL Developer's Workbook is a companion to Steven Feuerstein's bestselling Oracle PL/SQL Programming and his other PL/SQL books from O'Reilly. It contains a carefully constructed set of problems and solutions that will test your language skills and help you become a better developer--both with PL/SQL and with other languages.

Exercises are provided at three levels: beginner, intermediate, and expert. The workbook exercises cover all the major features of PL/SQL, including those new to Oracle8i (e.g., Java and web features, autonomous transactions, and bulk binds). You'll find chapters on: Basic language elements--variables, naming, loops, conditional and sequential control, exception handling, and records. Data structures--index-by tables, nested tables, variables arrays (VARRAYs), and object technology. Database interaction--cursors, DML and transaction management, cursor variables, and native dynamic SQL Program construction--procedures, functions, blocks, packages, database triggers, and calling PL/SQL functions in SQL. Built-in functionality--the character, date, conversion, numeric, and miscellaneous functions, and the DBMS\_SQL, DBMS\_PIPE, DBMS\_OUTPUT, UTL\_FILE, and DBMS\_JOB built-in packages. Miscellaneous topics--using Java with PL/SQL, external programs, PL/SQL web development, tuning PL/SQL, and PL/SQL for DBAs.

This in-depth guide explains how to use SQL to work with data in a database, and how to automate complicated tasks using PL/SQL.

Master Oracle Database 12c PL/SQL Application Development Develop, debug, and administer robust database programs. Filled with detailed examples and expert strategies from an Oracle ACE, Oracle Database 12c PL/SQL Programming explains how to retrieve and process data, write PL/SQL statements, execute effective queries, incorporate PHP and Java, and work with dynamic SQL. Code testing, security, and object-oriented programming techniques are fully covered in this comprehensive Oracle Press guide. Explore new SQL and PL/SQL features in Oracle Database 12c Build control structures, cursors, and loop statements Work with collections, varrays, tables, and associative array collections Locate and repair errors and employ exception handlers Execute black box, white box, and integration tests Configure and manage stored packages and libraries Handle security with authentication and encryption Use LOBs to store text and multimedia content Write and implement PL/SQL and Java triggers Extend functionality using dynamic SQL statements Understand object types, nested tables, and unnesting queries

An interactive guide to Oracle's intensive query tool, SQL\* Plus, discusses its powerful features, furnishes a syntax quick reference, and explains how to write and execute script files, generate reports, extract data from the database, utilize new administrative features, query data dictionary tables, and more. Original. (Intermediate)

This book is the definitive reference on PL/SQL, considered throughout the database community to be the best Oracle programming book available. Like its predecessors, this fifth edition of Oracle PL/SQL Programming covers language fundamentals, advanced coding techniques, and best practices for using Oracle's powerful procedural language. Thoroughly updated for Oracle Database 11g Release 2, this edition reveals new PL/SQL features and provides extensive code samples, ranging from simple examples to complex and complete applications, in the book and on the companion website. This indispensable reference for both novices and experienced Oracle programmers will help you: Get PL/SQL programs up and running quickly, with clear instructions for executing, tracing, testing, debugging, and managing PL/SQL code Optimize PL/SQL performance with the aid of a brand-new chapter in the fifth edition Explore datatypes, conditional and sequential control statements, loops, exception handling, security features, globalization and localization issues, and the PL/SQL architecture Understand and use new Oracle Database 11g features, including the edition-based redefinition capability, the function result cache, the new CONTINUE statement, fine-grained dependency tracking, sequences in PL/SQL expressions, supertype invocation from subtypes, and enhancements to native compilation, triggers, and dynamic SQL Use new Oracle Database 11g tools and techniques such as PL/Scope, the PL/SQL hierarchical profiler, and the SecureFiles technology for large objects Build modular PL/SQL applications using procedures, functions, triggers, and packages

PL/SQL is an extension of SQL for the Oracle Database. Learn PL/SQL in 1 Day serves as beginner guide for a crash course in PL/SQL development. The book contains tons of examples that prepare you for real-world development project. This book is considered the best Oracle PL/SQL programming guide by the Oracle community. The books gives clear instructions for executing, tracing, testing, debugging, and managing PL/SQL code. Here is what you will learn Chapter 1: What Is PL/SQL? Introduction & Architecture Chapter 2: SQL Vs PL/SQL Vs T-SQL:

Key Differences Chapter 3: PL/ SQL Block: STRUCTURE, Syntax, ANONYMOUS Example Chapter 4: PL/SQL First Program: Hello World Example Chapter 5: Oracle PL/SQL Data Types: Character, Number, Boolean, Date, LOB Chapter 6: Oracle PL/SQL Variable Identifiers Tutorial with Examples Chapter 7: Oracle PL/SQL Collections: Varrays, Nested & Index by Tables Chapter 8: Oracle PL/SQL Records Type with Examples Chapter 9: Oracle PL/SQL IF THEN ELSE Statement: ELSIF, NESTED-IF Chapter 10: Oracle PL/SQL: CASE Statement with Examples Chapter 11: Oracle PL/SQL LOOP with Example Chapter 12: Oracle PL/SQL FOR LOOP with Example Chapter 13: Oracle PL/SQL WHILE LOOP with Example Chapter 14: Oracle PL/SQL Stored Procedure & Functions with Examples Chapter 15: Oracle PL/SQL Exception Handling: Examples to Raise User-defined Exception Chapter 16: Oracle PL/SQL Insert, Update, Delete & Select Into [Example] Chapter 17: Oracle PL/SQL Cursor: Implicit, Explicit, Cursor FOR Loop [Example] Chapter 18: Oracle PL/SQL BULK COLLECT: FORALL Example Chapter 19: Autonomous Transaction in Oracle PL/SQL: Commit, Rollback Chapter 20: Oracle PL/SQL Package: Type, Specification, Body [Example] Chapter 21: Oracle PL/SQL Trigger Tutorial: Instead of, Compound [Example] Chapter 22: Oracle PL/SQL Object Types Tutorial with EXAMPLES Chapter 23: Oracle PL/SQL Dynamic SQL Tutorial: Execute Immediate & DBMS\_SQL Chapter 24: Nested Blocks & Variable Scope in Oracle PL/SQL Tutorial [Example]

A guide to creating client/server applications using PL/SQL covers such topics as recovering errors, using intersession communication, managing large data sets, and working with Oracle Net Services.

The fourth edition of this popular pocket guide provides quick-reference information that will help you use Oracle's PL/SQL language, including the newest Oracle Database 11g features. It's a companion to Steven Feuerstein and Bill Pribyl's bestselling Oracle PL/SQL Programming. This concise guide boils down the most vital PL/SQL information into an accessible summary of: Fundamental language elements (e.g., block structure, datatypes, declarations) Statements for program control, cursor management, and exception handling Records, procedures, functions, triggers, and packages Calling PL/SQL functions in SQL Compilation options, object-oriented features, collections, and Java integration The new edition describes such Oracle Database 11g elements as PL/SQL's function result cache, compound triggers, the CONTINUE statement, the SIMPLE\_INTEGER datatype, and improvements to native compilation, regular expressions, and compiler optimization (including intra-unit inlining). In addition, this book now includes substantial new sections on Oracle's built-in functions and packages. When you need answers quickly, the Oracle PL/SQL Language Pocket Reference will save you hours of frustration.

Developers using PL/SQL 9i as an environment for corporate applications will find detailed technical information and practical tips in Lakshman's book.

This is a guide to developing SQL-based applications, with examples and usable code specific to the Oracle extensions of standard SQL.

Despite the wide use of SQL \*Plus, few developers and database administrators know how powerful it really is. And the syntax can sometimes be tricky. This portable guide provides a quick reference to subjects such as interacting with SQL \*Plus, selecting data, formatting reports, writing scripting, and tuning SQL. There's also a command reference.

A complete guide to SQL\*Loader, a utility used to move data from external files into an Oracle database, offers step-by-step instruction in the various applications of SQL\*Loader, providing a task-oriented approach that covers the latest Oracle 8 and Oracle 8i features. Original. (Beginner/Intermediate)

The Oracle SQLPlus Pocket Reference is a must-have for anyone working with Oracle databases, especially those looking to maximize the effectiveness of SQLPlus. As Oracle's long-standing interactive query tool, SQLPlus is available at every Oracle site, from the largest data warehouse to the smallest single-user system. Despite its wide use, however, SQLPlus is still often not completely understood or fully utilized. Database administrators and developers alike will therefore find the Oracle SQLPlus Pocket Reference to be extremely beneficial. In addition to summarizing all of the SQLPlus syntax and format options, including new Oracle Database 10g features, this handy, on-the-job guide specifically shows readers how to: Differentiate between SQL and SQLPlus Interact with SQLPlus from both the command line and the web browser Select, insert, update, and delete data Format both text and HTML reports with SQLPlus Specify SQLPlus commands and format elements Tune SQL queries The new third edition of this book has been updated for Oracle Database 10g to include information on both SQLPlus and SQL. New SQL information includes the SELECT statement's new MODEL clause, flashback queries, partition outer joins, and DBMS\_XPLAN. With its quick-reference format and compact size, the Oracle SQLPlus Pocket Reference follows in the long line of successful "pocket references" offered by O'Reilly. It also serves as the ideal companion to O'Reilly's larger, more comprehensive book on SQLPlus, the bestselling Oracle SQLPlus: The Definitive Guide. Author Jonathan Gennick is an editor for O'Reilly specializing in database and programming titles, having amassed some 17 years of programming and database management experience.

Master the advanced concepts of PL/SQL for professional-level certification and learn the new capabilities of Oracle Database 12c About This Book Learn advanced application development features of Oracle Database 12c and prepare for the 1Z0-146 examination Build robust and secure applications in Oracle PL/SQL using the best practices Packed with feature demonstrations and illustrations that will help you learn and understand the enhanced capabilities of Oracle Database 12c Who This Book Is For This book is for Oracle developers responsible for database management. Readers are expected to have basic knowledge of Oracle Database and the fundamentals of PL/SQL programming. Certification aspirants can use this book to prepare for 1Z0-146 examination in order to be an Oracle Certified Professional in Advanced PL/SQL. What You Will Learn Learn and understand the key SQL and PL/SQL features of Oracle Database 12c Understand the new Multitenant architecture and Database In-Memory option of Oracle Database 12c Know more about the advanced concepts of the Oracle PL/SQL language such as external procedures, securing data using Virtual Private Database (VPD), SecureFiles, and PL/SQL code tracing and profiling Implement Virtual Private Databases to prevent unauthorized data access Trace, analyze, profile, and debug PL/SQL code while developing database applications Integrate the new application development features of Oracle Database 12c with the current concepts Discover techniques to analyze and maintain PL/SQL code Get acquainted with the best practices of writing PL/SQL code and develop secure applications In Detail Oracle Database is one of the most popular databases and allows users to make efficient use of their resources and to enhance service levels while reducing the IT costs incurred. Oracle Database is sometimes compared with Microsoft SQL Server, however, Oracle Database clearly supersedes SQL server in terms of high availability and addressing planned and unplanned downtime. Oracle PL/SQL provides a rich platform for application developers to code and build scalable database applications and introduces multiple new features and enhancements to improve

development experience. *Advanced Oracle PL/SQL Developer's Guide, Second Edition* is a handy technical reference for seasoned professionals in the database development space. This book starts with a refresher of fundamental concepts of PL/SQL, such as anonymous block, subprograms, and exceptions, and prepares you for the upcoming advanced concepts. The next chapter introduces you to the new features of Oracle Database 12c, not limited to PL/SQL. In this chapter, you will understand some of the most talked about features such as Multitenant and Database In-Memory. Moving forward, each chapter introduces advanced concepts with the help of demonstrations, and provides you with the latest update from Oracle Database 12c context. This helps you to visualize the pre- and post-applications of a feature over the database releases. By the end of this book, you will have become an expert in PL/SQL programming and will be able to implement advanced concepts of PL/SQL for efficient management of Oracle Database. *Style and approach* The book follows the structure of the Oracle Certification examination but doesn't restrict itself to the exam objectives. Advanced concepts have been explained in an easy-to-understand style, supported with feature demonstrations and case illustrations.

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

PL/SQL is an extension of SQL for the Oracle Database. *Learn PL/SQL in 1 Day* serves as beginner guide for a crash course in PL/SQL development. The book contains tons of examples that prepare you for real-world development project. This book is considered the best Oracle PL/SQL programming guide by the Oracle community. The books gives clear instructions for executing, tracing, testing, debugging, and managing PL/SQL code. Here is what you will learn Chapter 1: Introduction What Is PL/SQL? Architecture of PL/SQL Advantage of Using PL/SQL Basic Difference between SQL and PL/SQL Chapter 2: Blocks What is PL/SQL block? Block Structure Types of PL/SQL block Chapter 3: First Program: Hello World SQL Plus Connecting to Database How to write a simple program using PL/SQL Declaring and usage of variables in program Commenting Codes Chapter 4: Data Types CHARACTER NUMBER BOOLEAN DATE LOB Chapter 5: Complex Data Types Record Type Collection Constructor and Initialization Concept in Collections Collection Methods Chapter 6: Decision Making Statements Introduction to Decision Making Statements IF-THEN Statement IF-THEN-ELSE Statement IF-THEN-ELSIF Statement NESTED-IF Statement CASE Statement SEARCHED CASE Statement Chapter 7: Loops Introduction to Loops Concept Loop Control Statements Types of Loop in PL/SQL Nested Loops Labelling of Loops Chapter 8: Subprograms: Procedures and Functions Terminologies in PL/SQL Subprograms Procedure Function Similarities between Procedure and Function Difference between Procedure and Function Built-in Functions in PL/SQL Chapter 9: Exception Handling Exception-Handling Predefined Exceptions User-defined Exception Raising an Exception Important points to note in Exception Chapter 10: SQL DML Transactions in PL/SQL CURSOR Concept in PL/SQL Cursor Attributes FOR Loop Cursor statement BULK COLLECT in PL/SQL TCL Statements in PL/SQL Autonomous Transaction Chapter 11: Packages Components of Packages Package Initialization Forward Declarations Overloading Package Information UTL FILE - An Overview Chapter 12: Triggers Benefits of Triggers Trigger Classification Trigger Creation :NEW and :OLD Clause INSTEAD OF Trigger Compound Trigger Chapter 13: Object Types Components of Object Types Creation of Objects Declaration Initialization of Object Type Constructors Inheritance in Object Type Equality of PL/SQL Objects Chapter 14: Dynamic SQL Ways to write dynamic SQL NDS DBMS\_SQL for Dynamic SQL Chapter 15: Nested Blocks Nested Block Structure Scopes in Nested Block Chapter 16: Identifiers Properties of Identifiers Naming Conventions of Identifiers Variables - An Identifier Declaration of Variables Data storing in Variables Explores Oracle's implementation of SQL and explains how to perform tasks including querying time-based data, implementing conditional logic in queries, writing queries, and joining data from two or more tables.

Oracle SQLThe Essential Reference"O'Reilly Media, Inc."

Introduce the latest version of the fundamental SQL language used in all relational databases today with Casteel's *ORACLE 12C: SQL, 3E*. Much more than a study guide, this edition helps those who have only a basic knowledge of databases master the latest SQL and Oracle concepts and techniques. Learners gain a strong understanding of how to use Oracle 12c SQL most effectively as they prepare for the first exam in the Oracle Database Administrator or Oracle Developer Certification Exam paths. This edition initially focuses on creating database objects, including tables, constraints, indexes, sequences, and more. The author then explores data query techniques, such as row filtering, joins, single-row functions, aggregate functions, subqueries, and views, as well as advanced query topics. *ORACLE 12C: SQL, 3E* introduces the latest features and enhancements in 12c, from enhanced data types and invisible columns to new CROSS and OUTER APPLY methods for joins. To help readers transition to further studies, appendixes introduce SQL tuning, compare Oracle's SQL syntax with other databases, and overview Oracle connection interface tools: SQL Developer and SQL Plus. Readers can trust *ORACLE 12C: SQL, 3E* to provide the knowledge for Oracle certification testing and the solid foundation for pursuing a career as a successful database administrator or developer. Important Notice: Media content referenced within the product description or the product text may not be available in the ebook version.

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