Course Code: K04009GW

Course Title: dashDB SQL for Subqueries, Functions, Procedures, and Performance

Description:

This course is intended for Developers, Database Administrators, and System Programmers who require further insight into the SQL language.

Note: Guided eLearning is a self-paced offering which includes web-based content for self-study and videos (including audio) that demonstrate activities.

If you are enrolling in a Self Paced Virtual Classroom or Web Based Training course, before you enroll, please review the Self-Paced Virtual Classes and Web-Based Training Classes on our Terms and Conditions page, as well as the system requirements, to ensure that your system meets the minimum requirements for this course. http://www.ibm.com/training/terms

Objectives:

Please refer to course overview

Prerequisites:

• dashDB SQL for Basic Queries (K04001)• dashDB SQL for tables, views, advanced queries, and analytic constructs (K04004)• Or equivalent experience or knowledge

Duration:

8 Hrs

Topics:

1.Using Subqueries• Subquery in a basic predicate• Subquery with IN predicate• Subquery with a NOT IN predicate• Subquery with ORDER BY• Subquery with ALL predicate• Subquery with ANY or SOME predicate• Subquery with EXISTS predicate• Activity• SQL challenges2. Using correlated subqueries• Correlated subquery with an EXISTS predicate• Scalar fullselect as a correlated subquery• Update statement including a subquery• Activity• SQL Challenges3. Scalar functions (other than DATE/TIME functions)• Scalar function – SUBSTR – substring• Scalar function – POSSTR – string position• Scalar function – COALESCE/VALUE• Scalar function – DECIMAL• Scalar function – ROUND• Scalar function – DIGITS• Scalar function – SQRT and POWER• Scalar function – CHAR with arguments other than date/time• Scalar function – LENGTH• Scalar functions – LTRIM/RTRIM – Left TRIM/Right Trim• Activity• SQL challenges4. Scalar functions – DATE/TIME functions• DATE, TIME, and TIMESTAMP formats• Scalar function – CHAR with date/time arguments• Scalar functions – date related (part 1)• Scalar functions – date related (part 2)• Scalar functions – time related• Labelled DATE/TIME durations• Activity• SQL challenges5. Table expressions• Nested table expressions• Nested table expressions in Joins• Common table expressions (CTEs)• SQL challenges6. Recursive SQL• SQL challenges7. Introduction to UDTs, UDFs, and stored procedures• User-defined distinct Types (UDTs)• User-defined functions (UDFs)• Sourced user-defined functions• External user-defined functions• User-defined SQL functions• User-defined stored procedures• Activity• SQL challenges8. SQL and dashDB performance• Note on indexes• dashDB optimizer• Index overview• Clustered and non-clustered

indexes• Index utilization• Predicate processing• General guidelines – correlated subqueries• General guidelines – minimize dashDB sorts• General guidelines – view usage• General guidelines – expressions• General guidelines – NOT EQUAL predicates• General guidelines – arithmetic• General guidelines – conversion• General guidelines – retrieve only necessary data• Monitor the SQL workload and use the EXPLAIN facility• SQL challenges

Audience:

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