

Duration: 3 days

Course Number: ISI-DB2-02

Description

This class teaches students advanced features of SQL used to access DB2 tables in COBOL programs. The following topics are presented, discussed, and built into programs:

- DB2 referential integrity.
- Inner and outer joins.
- 3-, 4-, 5-, and 6-way joins.
- Scrollable Cursors.
- Use the expanded use of unions (everywhere).
- Limiting the number of rows fetched.
- Indicator variables.
- Dynamic SQL.
- Nested table expressions.
- The CASE expression and column functions and scalar functions.
- Check constraints.
- Creating tables, views and indexes.

DB2 performance guidelines are discussed in detail. The EXPLAIN PLAN SQL statement is used to help to evaluate the efficiency of SQL statements. Advanced programming performance considerations are presented to tune programs to perform better than their untuned counterparts.

A series of written and lab exercises will be used to reinforce the classroom education.

Audience

Application programmers need use more advanced features of SQL to access DB2 tables in COBOL programs.

Prerequisites

- Six months of DB2 COBOL programming experience is required.

Course Agenda

Day 1

Single Table Access

- Course Introduction
 - DB2 Programming Review
 - Create Tables, Views and Indexes.
 - Hands-on Lab: Create and Tables with a Program
- DB2 Referential Integrity
 - Hands-on Lab
- Indicator Variables
 - Hands-on Lab: Handling Nulls – Select, Insert, Update
- Dynamic SQL
 - Hands-on Lab
- Nested Table Expressions
 - Hands-on Lab
- The CASE Expression and Column/Scalar Functions
 - Hands-on Lab

Day 2

Multiple Table Access

- Nested Table Expressions
 - Hands-on Lab
- Scrollable Cursors
 - Hands-on Lab
- Unions
 - Hands-on Lab
- Inner and Outer Joins
 - Hands-on Lab
- Joining more than 2 tables
 - Hands-on Lab
- Limiting Rows Fetched
 - Hands-on Lab

Course Agenda (continued)

Day 3

Additional Advanced Programming Considerations

- Update Triggers
- Check Constraints
- UDT
- UDF
- Hands-on Lab

Performance Considerations

- Performance Advanced DB2 Programming Considerations
- EXPLAIN Statement
- PLAN_TABLE and DSN_STATEMNT_TABLE
- Hands-on Lab: Performance - EXPLAIN (YES)