

Duration: 2 days

Course Number: ISI-DB2-19

Description

This hands-on workshop presents several advanced DB2/400 topics for application developers. Basic SQL statements will be reviewed. Design issues of referential integrity, table check constraints, user-defined data types, functions, triggers and large objects will be reviewed. Basic DB2 administration functions will be reviewed and some DB2 utilities will be used. Program design issues which effect concurrency, integrity, and performance will be considered.

Upon successful completion of this class, students will be able to:

- Select rows of data from DB2 tables.
- Use Command Center to execute SQL statements.
- Use the WHERE clause to select specific rows of a DB2 table.
- Build queries using the ORDER BY, GROUP BY, and HAVING clauses.
- Join tables together to get information from each.
- Change table data using the INSERT, UPDATE, and DELETE statements.
- Describe the security provided by the GRANT and REVOKE statements.
- Discuss the design considerations of referential integrity.
- Discuss overall DB2 performance considerations.
- Run the EXPLAIN PLAN SQL statement and analyze results.
- Discuss additional SQL features of the latest DB2 Feature.
- Review the DB2 Catalog and Runstats utility.
- Discuss concepts in DB2 efficiency.
- Discuss the DB2 Explain and Visual Explain.
- Discuss other advanced topics, such as recursive SQL, Group By – CUBE, and ROLLUP.

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

Audience

Application programmers and designers.

Prerequisites

- Basic knowledge of the OS/400 operating system.
- **DB2/400 SQL Workshop**, or equivalent experience.

Course Agenda

Day 1

Introduction to DB2

- DB2 – Concepts / Terminology and z/OS – OS/400 environment differences

Structured Query Language (SQL)

- The SELECT Statement
- Command Center / GUI Access to DB2
- Special Features
- ORDER BY, GROUP BY, HAVING
- Join, Sub-select, UNION
- Data Definition Language
- INSERT, UPDATE, DELETE
- Data Control Language
- Other SQL Considerations

Hands-on Lab: SQL Review and Refinement

Day 2

DB2 Performance Considerations - Overview

DB2 Catalog and Runstats Utility

Concepts In DB2 Efficiency

DB2 Explain and Visual Explain

Additional SQL Features

- User-Defined Distinct Types
- User-Defined Functions
- Triggers
- New Scalar and Column Functions

SQL Advanced Topics: Recursive SQL, Group By – CUBE, ROLLUP

Hands-on Lab: SQL Review and Refinement