www.400SCHOOL.COM

IBM i (iSeries, AS/400) Db2 SQL Design Workshop (SQ33)

3 Days (75% Lecture, 25% Workshop)

Instructor: Martin Hubel

The use of SQL takes iSeries application development to a new level of productivity. Also crucial is data integrity, and new Db2 features make it easier to build this into applications. Performance can be maintained if proper design techniques are followed.

This course teaches the latest improvements in Db2 and SQL so companies can build optimal database applications. Students are taught proven design techniques that ensure high performance. At the end of the course, important on-line and batch issues are summarized.

Prerequisites: Students should have some familiarity with SQL programming.

Course Outline

Review of Common SQL Constructs
IN, LIKE, CASE and CAST expressions

Advanced SQL constructs
Temporary tables, OLAP queries
Common table expressions, recursive queries
Merge statements

Object Management
Types of objects and their relationships
Tables and Views
Identity columns and sequences
Materialized query tables
The Db2 Catalog

Functions
Scalar, column, row and table functions
External, SQL, and sourced user-defined functions
OLAP expressions and window partitioning

Stored Procedures and Triggers
Procedural constructs
Before and after triggers
Client server architecture

Index Design
Index structure, cardinality
Index design

Processing implications
Overview of access path selection
When indexes are used
Factors used in access path selection

Evaluating SQL Performance
Visual Explain
Index advisor
Remedial actions

Concurrency control
Units of work and locking
Lock sizes & types
Lock suspensions, timeouts and deadlocks

Online Design Considerations
Reducing contention & deadlocks
Efficient use of SQL
Browsing techniques

Batch Processing
Goals of batch program design
Batch restart methods, cursor repositioning
Parallel batch execution, mass update activity

Appendices: Logical to Physical Transformation and Referential Integrity
These topics can be taught as needed or simply supplied as reference material based on time and interest.

For more information, call (314) 932-2430
Or e-mail info@400School.com

The 400 School, Inc – 1828 Canyon View Ct. – Chesterfield, MO 63017

Db2 Instructor Profile

Martin Hubel has both extensive and intensive experience in database design, enterprise and application architecture, and system administration for relational database management systems, particularly Db2. For the past 32 years, Martin has consulted and taught more than 400 clients worldwide to use Db2 effectively, and designed Db2 product lines for software vendors. Prior to his software experience, Martin worked in both the private and public sectors gaining broad experience in most areas of information technology.

Martin has worked on mainframe Db2 since 1985, with Db2 on Linux, Unix and Windows since 1993 and with iSeries since 2006. The majority of his consulting work focuses around database and application design, performance, recovery, and systems management issues.

He is also an IBM Gold Consultant and an IBM Champion for Information Management. He has written many Db2 related articles for various industry publications; is active in a number of professional organizations including the International Db2 Users Group (IDUG) and is an internationally recognized speaker on various Db2 topics. Martin's client list includes companies in the banking, communications, finance, insurance, retail, health care, K-12, public utilities, transportation, and software industries.

See Martin's DB2 Website at: **www.mhubel.com**