

## **Advanced SQL for Db2 LUW**

### **Course Summary**

#### **Description**

This course for Db2 on Linux, UNIX, and Windows covers advanced SQL coding techniques. This course assumes a good understanding of basic SQL and builds on that knowledge to provide a good understanding of the entire SQL language as implemented within Db2 for LUW.

#### **Topics**

- Review of Common SQL Constructs
- Finding errors
- Functions
- Accessing multiple tables
- More advanced constructs
- Processing implications
- Evaluating SQL Performance

#### **Audience**

This course is designed for Db2 DBAs and experienced developers.

#### **Prerequisites**

There are no prerequisites required for this course.

#### **Duration**

Three days

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### Course Outline

- I. Review of Common SQL Constructs**
  - A. IN, LIKE
  - B. CASE expressions
  - C. CAST expressions
- II. Finding errors**
  - A. Common errors
  - B. SQLCODE and SQLSTATE messages
  - C. Debugging techniques for complex statements
  - D. Testing complex SQL
- III. Functions**
  - A. Scalar, column, row and table functions
  - B. External, SQL, and sourced user-defined functions
  - C. OLAP expressions and window partitioning
- IV. Accessing multiple tables**
  - A. Joins
  - B. Subselects
  - C. Outer joins
  - D. Unions
  - E. Star joins
- V. More advanced constructs**
  - A. Temporary tables
  - B. In-line SQL
  - C. Recursive queries
  - D. Merge statements
- VI. Processing implications**
  - A. Overview of access paths
  - B. When indexes are used
  - C. Range delimiting and sargable predicates
  - D. Factors used in access path selection
  - E. Join methods
- VII. Evaluating SQL Performance**
  - A. Explain tables and Db2exfmt
  - B. Db2expln
  - C. Visual Explain