DB2 COBOL Application Programming

Course Duration
4 Days

Course Prerequisites
This course is intended for those who have programming experience.

Who Should Attend
This class is for application programmers, application analysts, database designers or anyone who needs to code SQL in or outside of a DB2 COBOL application program.

Course Description
DB2 COBOL for z/OS and OS/390 Application Development offers the student a unique opportunity to learn how to use embedded SQL. Typical business processing requirements are analyzed and coded into SQL statements. The SQL statements are tested using SPUFI, a DB2 interactive facility. In the COBOL programming phase of this course, the SQL statements are embedded in batch COBOL or PL/I programs that execute under TSO.

Course Topics
- DB2 Programming Overview
- Cursor Processing
- Embedded SQL
- DB2 Commit Processing And Program Isolation
- The Explain Function
- Stored Procedures
- Testing And Implementing DB2 Programs
I. **DB2 Programming Overview**
   A. DB2 Program Preparation
   B. The SQL Pre-compiler
   C. SQL Pre-Compiler Options
   D. The Bind Function
   E. A Typical Bind Statement – Plan
   F. A Typical Bind Statement – Package
   G. Multiple Program Applications
   H. Multiple DBRM Bind
   I. Executing DB2 Programs
   J. The DSN Command
   K. The Run Subcommand

II. **Cursor Processing**
   A. The Cursor Concept
   B. Cursor Processing
   C. Cursor Retrieval
   D. Cursor Processing
   E. Cursor Updating

III. **Embedded SQL**
   A. Coding Introduction
   B. SQL Statement Types
   C. Source Program Overview
   D. Embedded SQL Statements
   E. DB2 Host Variables and Structures
   F. Host Variables Coding Rules
   G. Declarations Generator (DCLGEN)
   H. Executing the DCLGEN Process
   I. SQL Communication Area (SQLCA)
   J. Invoking DSNTIAR
   K. Error Handling Routines

IV. **DB2 Commit Processing And Program Isolation**
   A. Units of Recovery
   B. Commit Points
   C. Row, Page and Table Space Locks
   D. DB2 Lock Processing – Bind Parameters
   E. The WITH Clause
   F. LOCK Table Statement
   G. Factors Affecting DB2 Locking
   H. Locking Tradeoffs
V. The Explain Function
   A. EXPLAIN Examples
   B. The PLAN_TABLE
   C. Querying the PLAN_TABLE
   D. EXPLAIN Examples
   E. Interpreting the EXPLAIN Output
   F. The REBIND Function
   G. Other Performance Features

VI. Stored Procedures
   A. Overview
   B. The Flow of Control
   C. Writing a Stored Procedure
   D. Stored Procedure Illustration
   E. The SYSPROCEDURES Table
   F. Accessing Non-DB2 Resources from Stored Procedures

VII. Testing And Implementing DB2 Programs
    A. Synonyms
    B. Moving Applications into Production
    C. Qualified vs. Unqualified Names
    D. Using CLIST Logic vs. JCL