Coding and Calling DB2 Stored Procedures

CDT632

This course introduces the student to how to code, debug, and call both DB2 stored procedures and DB2 SQL Procedure Language (SPL) stored procedures. This course uses the following book as a reference: DB2 SQL Procedural Language for Linux, UNIX, and Windows by Paul Yip, Drew Bradstock, Hana Curtis, Michael X. Gao, Zamil Janmohamed, Clara Liu, Fraser McArthur. ISBN: 0-13-100772-6, Prentice Hall, 2003.

Audience

- This course is targeted at technical programmers, analysts, team leaders and project managers who need to understand how to code, debug, and call DB2 stored procedures.

Prerequisites

- The student should have DB2 SQL coding experience

Course Length

- Two Days

Learning Objectives

- Course Topics
- DB2 Stored Procedures
- Preparing The Stored Procedure Environment
- External Stored Procedures
- Writing An SQL Procedure Using SQL Procedure Language (SPL)
- Calling A Stored Procedure
- Preparing An Application To Use A Stored Procedure
- Testing A Stored Procedure

Course Outline

HD5

DB2 STORED PROCEDURES

- Introduction to DB2 Stored Procedures
- A Sample DB2 Stored Procedure

PREPARING THE STORED PROCEDURE ENVIRONMENT

- Defining Your Stored Procedure to DB2
- Setting Up the Work Load Manager (WLM) Address Space

EXTERNAL STORED PROCEDURES

- External Stored Procedure Language Considerations
- Calling Other Programs from an External Stored Procedure
- Writing Reentrant External Stored Procedures
- Writing an External Stored Procedure as a Main or Subprogram
- Restrictions on an External Stored Procedure
- Using COMMIT and ROLLBACK Statements in an External Stored Procedure
- Using Special Registers in a Stored Procedure
- Accessing Remote Tables from a Stored Procedure
- Writing a Stored Procedure to Access an IMS Database
- Returning Result Sets to a DRDA Client
- Preparing an External Stored Procedure
- Binding an External Stored Procedure
- An External Stored Procedure Written in Cobol
- Calling an External Stored Procedure from Cobol
- An External Stored Procedure Written in Java
- Calling an External Stored Procedure from Java

WRITING AN SQL PROCEDURE USING SQL PROCEDURE LANGUAGE (SPL)

- Comparing SQL Procedure Language (SPL) to External Stored Procedures
- Statements That May Appear in the SQL Procedure Body
  - ASSIGNMENT Statement
  - CALL Statement
  - CASE Statement
  - GET DIAGNOSTICS Statement
  - GOTO Statement
  - IF Statement
  - ITERATE Statement
  - LEAVE Statement
  - LOOP Statement
  - REPEAT Statement
  - WHILE Statement
  - COMPOUND Statement
  - SQL Statement
  - SIGNAL Statement
  - RESIGNAL Statement
- Declaring and Using Variables in an SQL Procedure
- Parameter Style for an SQL Procedure
- Terminating Statements in an SQL Procedure
- Handling SQL Conditions in an SQL Procedure
- Examples of SQL Procedures
- Preparing an SQL Procedure

CALLING A STORED PROCEDURE

- Call Statement Formats
- Authorization for Executing Stored Procedures
- Authorization for Executing Stored Procedures
- Linkage Conventions
- Using Indicator Variables to Speed Processing
- Declaring Data Types for Passing Parameters
- Writing a DB2 UDB for z/OS Client or SQL Procedure to Receive Result Sets
- Accessing Transition Tables in a Stored Procedure
- Preparing a Client Program

PREPARING AN APPLICATION TO USE A STORED PROCEDURE

- How DB2 Determines Which Version of a Stored Procedure to Run
- Using a Single Application Program to Call Different Versions of a Stored Procedure
- Running Multiple Stored Procedures Concurrently
- Running Multiple Instances of a Stored Procedure Concurrently
- Accessing non-DB2 Resources

TESTING A STORED PROCEDURE

- Debugging a Stored Procedure as a Stand-Alone Program
- Debugging with the IBM Debug Tool
- Debugging an SQL Procedure with the IBM Debug Tool
- Debugging with IBM Debug Tool Interactively and in Batch Mode
- Using the MSGFILE Run-Time Option
- Using Driver Applications
- Using SQL Insert Statements