

At the end of this workshop, the student will be able to code and test batch IMS COBOL programs to load a database, retrieve information from the database and update the database with adds, changes and deletes.

Audience

- Applications Programmers
- Programmer/Analysts

Course Length

- Five Days

Prerequisites

- COBOL skills and general programming experience

Teaching Methods

- Instructor-led or Self-directed with a Mentor
- Skeleton programs to reduce coding times
- Sample solutions, test data, setup instructions

Learning Objectives

- Apply IMS batch programming concepts
- Differentiate between physical and logical databases.
- Recognize and interpret DBD gen statements
- Select a PSB to support program functions
- Construct SSA□s to handle data retrieval and update
- Code calls to retrieve data and update the database
- Detect and handle error situations
- Compile, link, and execute batch IMS programs
- Test/debug IMS batch programs
- Practice using DLT0

Course Outline

Conceptual Review

- Database concepts
- The Hierarchical Model
- The Physical Data Base
- The Logical Data Base
- Components in the IMS Batch Environment

Working Storage Coding Considerations

- Function codes
- Qualified and Unqualified SSA□s
- I/O Area

Creating a Database from Scratch

- The DBA□s role
- The Programmer□s role

Workshop 1

Retrieving Data from the Database

- Sequential Retrieval
- Direct Retrieval for selected records
- Efficiency considerations: the Path Call
- Using DLT0 to test call patterns

Workshop 2 & 3

Database Updates

- Test Environment Considerations
- Using DLT0
- Backing out changes
- Adding new records
- Applying changes to existing records
- Review of SSA considerations
- Multiple level control break
- Summary vs. Detail reporting

Workshop 4 & 5

Workshops

Workshop 1: Initial Load of the Database from a flat file

Database test case description
PSB selection
Procedure Division coding considerations
 The DL/I Insert Call (ISRT)
 Success/Error handling
JCL considerations

Workshop 2: Sequential Retrieval of Data for reporting

Test case description and JCL
PSB selection
The GN, GNP function codes
Simple but inelegant: Using DLT0
The COBOL alternative:
 SSA considerations
 Procedure Division statements

Workshop 3: Selective Retrieval of Data

Test case description and JCL
The GU function code
The PATH call
SSA considerations
I/O Area alternatives
Procedure division considerations

Workshop 4: Applying Changes from an Input File

Test case description and JCL
PSB selection
The ISRT and REPL function codes
Procedure Division coding
 Call structure
 Success/Error Handling

Workshop 5: Deleting Records

Test case description and JCL
PSB selection
The DLET function code
Procedure Division coding
 Call structure
 Success/Error Handling