Advanced COBOL Programming

Course Summary

Description

This course is designed for students who desire a more in depth understanding of Cobol.

Objectives

Upon completion of this course, the student should have the ability to:

- Complete a KSDS Vsam random update program, with an optional sequential reading through an alternate index
- Complete a program that loads a table from an external file using a perform varying and then later on in the program perform a serial search on the table. Also define another table using the redefines technique and perform a binary search on it.
- Complete a program the sorts a file with data provided from an input procedure and produces a report using an output procedure.
- Complete a dynamically subprogram that will be called a provided main program.
- Write a sequential master file update program.
- Complete a two level control break report with control heading and control footings.
- Complete a program that will inspect input records and unstring the text in them.

Topics

- VSAM file concepts and processing techniques
- Advanced table handling
- Advanced sort merge processing
- Subprogram concept
- Nested program concept
- Numeric data types
- COBOL compiler options useful for testing and debugging
- Match merge processing
- Control break logic

Audience

Application programmers and analysts

Prerequisites

The student should have a basic understanding of COBOL.

Duration

Five days

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Course Outline

I. VSAM File Concepts and Processing Techniques
- A. I/O verbs
  - 1. Start
  - 2. Read
  - 3. Write
  - 4. Rewrite
  - 5. Delete
- B. VSAM status 1 field
- C. VSAM status 2 field
- D. Access random vs. dynamic

II. Advanced Table Handling
- A. One dimensional
- B. Two dimensional
- C, Three dimensional
- D. Occurs depending on
- E. Indexing vs. sub-scripting
- F. Binary search vs. sequential search

III. Advanced Sort Merge Processing
- A. Special registers
- B. Using
- C. Giving
- D. Input procedure
- E. Output procedure

IV. Subprogram Concept
- A. Static vs. dynamic calls
- B. Passing parameter addresses (using)
- C. Linkage section requirements
- D. JCL parameter processing
- E. Usage of external data items and files
- F. Program ID common option

V. Numeric Data Types
- A. Internal representation
- B. Recommendations on usage
  - 1. External decimal
  - 2. Packed decimal
  - 3. Binary

VI. COBOL Compiler Options Useful for Testing and Debugging
- A. Offset/list
- B. OPT
- C. SSR
- D. FDUMP
- E. Test(,sym)
- F. Flag(I,w)
- G. Process (cbl) statement
- H. *cbl statement

VII. Match Merge Processing
- A. Sequential master file updating, design and logic flow

VIII. Control Break Logic