

Enterprise COBOL: Introduction

Course Description:

This first course of a multi-part series teaches you the basics of Enterprise COBOL application development. Topics include coding the four DIVISIONs, basic logic, data definitions (“raw” user data, COMP-3 (packed decimal) and Numeric Edited for reports), and sequential I/O processing. This course can be followed by Enterprise COBOL: Intermediate and Enterprise COBOL: Advanced, followed by other courses such as DB2 Programming, CICS COBOL Programming, VSAM COBOL Programming, etc.

Duration: 5 to 7 days

(Course length depends on the experience and background of the students.)

Participants:

Anyone with an interest in and an aptitude in being a COBOL programmer. Limited or no programming experience is assumed, unless otherwise specified by the client.

Course Objectives:

As a result of taking this course, you will be able to:

- Describe and code the layout of a basic COBOL program
- Code COBOL programs with conditional and repetitive processing
- Code modular programs with inline and paragraph PERFORMs
- Code COBOL programs that read and write sequential files
- Code and run COBOL programs that process raw data or stored data
- Compile, link and run COBOL programs using JCL.

Course Prerequisites:

Students need to know z/OS concepts, basic z/OS JCL for JES2 or JES3, and TSO/ISPF.

Format:

Lecture and hands-on computer workshops. Throughout the course, students perform many hands-on workshops and coding exercises to reinforce material presented in the lectures.

Topic Outline:

Your First Enterprise COBOL Program

- What is Enterprise COBOL
- COBOL DIVISIONs
- Column layout

Compiling and Linking Your First Program

- Creating a Loadlib PDS
- Compile and Link PROC
- Compile and Link JCL

Running Your First Program and Helpful References

- Compiler Options (PARMs)
- Run JCL
- Manuals: Enterprise COBOL and Language Environment, and Glossary

Enterprise COBOL: Introduction, *continued*

Identification Division, Load Libraries and Documentation

- Coding the Identification Division
- Load Libraries and CSECTs
- Self-Documentation

Data Division Essentials

- The four SECTIONS of the DATA DIVISION
- Naming COBOL Variables/Identifiers
- Level Numbers
- Group and Elementary Items
- Picture Clauses
- Value Clause

Data Division Essentials continued

- Numeric Edited Pictures
- Figurative Constants
- Data Continuation
- Numeric and Alphanumeric Literals/Values
- FILLER and Implied FILLER
- Blank When Zero
- Justified
- QUALIFICATION - for Duplicate Variable names
- REDEFINES
- WORKING-STORAGE Layout

COBOL Numbers

- COBOL Numbers
- Hexadecimal in COBOL
- Data Representation
- USAGE IS DISPLAY - EBCDIC
- USAGE IS COMP-3
- Big Decimal Numbers - 31 Digits

Procedure Division Essentials: Arithmetic and Assignment

- ADD
- SUBTRACT
- MULTIPLY
- DIVIDE
- COMPUTE
- ON SIZE ERROR; NOT ON SIZE ERROR
- Explicit scope terminators
- MOVE

Procedure Division Essentials: Conditions, 88's and IF's

- Conditions
- Numeric and Alphabetic Class Tests
- IF and Nested IF
- Coding and Setting 88's
- Flags/switches vs conditions for testing business rules

Enterprise COBOL: Introduction, *continued*

Procedure Division Essentials: Looping with PERFORM

- IN-LINE PERFORMs
- OUT-OF-LINE/paragraph PERFORMs
- Paragraphs as modules
- Referencing Modification - Substring

Structured Programming Concepts

- Modular Programming
- Functional Decomposition
- Pseudocode
- Structured Code and Meaningful Names
- Comments
- Testing

Sequential File I/O

- I/O Processing
- SELECT...ASSIGN...
- FD - File Definition
- OPEN and CLOSE
- READ and READ INTO
- WRITE and WRITE FROM
- A Sample Program for Sequential I/O
- Sample JCL

I/O for Raw Data, Stored Data, and Reports

- Reading Raw Data
- Writing Stored Data
- Reading Stored Data
- Writing Simple Reports