

VSAM for COBOL Programmers

Course Summary

Description

This course is designed for COBOL programmers who need to work with VSAM data sets, both from an AMS (Access Method Services) perspective, and from COBOL programs.

Objectives

By the end of this course, students will be able to:

- Create and delete VSAM data sets, using Access Method Services (AMS)
- Load VSAM data sets, using AMS REPRO or COBOL programs
- Use the AMS PRINT command to list all or parts of a VSAM data set, and the AMS LISTCAT command to list all or part of a VSAM catalog
- Use COBOL programs to process VSAM data sets
- Create and use VSAM alternate indexes and paths.

Topics

- Introduction
- Catalog Hierarchy
- Job Alternatives
- Key Sequenced Data Sets (KSDS)
- VSAM and COBOL: An Introduction
- COBOL and KSDS
- Alternate Indexes
- Using Alternate Indexes in COBOL
- Relative Record Data Sets (RRDS)
- Randomizing Algorithms
- COBOL and RRDS
- Extra exercise

Audience

Students who complete this course will be able to define, load, print, and delete VSAM data sets, and to process VSAM data sets from COBOL programs.

Prerequisite

Experience working with COBOL; knowledge of JCL, a text editor, and submitting jobs is required for this course.

Duration

Two Days

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Course Outline

- I. **Introduction**
 - A. VSAM Space Concepts
 - B. CI's and CA's
 - C. ESDS, KSDS, RRDS, LSDS
 - D. RBA's
 - E. JCL for VSAM data sets
- II. **Catalog Hierarchy**
 - A. Entry Sequenced Data Sets (ESDS) and Access Method Services (AMS)
 - B. ESDS Characteristics
 - C. Introduction to AMS
 - D. DEFINE CLUSTER, REPRO, PRINT, DELETE commands
 - Computer Exercise: ESDS and AMS
- III. **Job Alternatives**
 - A. Single versus multiple steps and jobs
 - B. JES2 vs JES3
- IV. **Key Sequenced Data Sets (KSDS)**
 - A. Creating KSDSs — Overview
 - B. KSDS Terms and Concepts
 - C. Free Space
 - D. CI splits and CA splits
 - E. DEFINE CLUSTER for KSDS
 - F. LISTCAT Command
 - Computer Exercise: KSDS and AMS
- V. **VSAM and COBOL: An Introduction**
 - A. Defining VSAM files in a COBOL program
 - B. File status items for VSAM files
 - C. OPENing and CLOSEing VSAM files
 - D. File Position Indicator
 - E. File status processing concerns
 - F. COBOL and ESDS
 - G. File Processing
- VI. **COBOL and KSDS**
 - A. File Processing
 - Computer Exercise: Processing a KSDS Randomly
- VII. **Alternate Indexes**
 - A. AIX Concepts
 - B. DEFINE AIX, BLDINDEX, DEFINE PATH Commands
 - Computer Exercise: AIX and AMS
- VIII. **Using Alternate Indexes in COBOL**
- IX. **Relative Record Data Sets (RRDS)**
 - A. RRDS Concepts
- X. **Randomizing Algorithms**
 - A. DEFINE CLUSTER for RRDS
- XI. **COBOL and RRDS**
 - A. File Processing
 - B. Variable Length Record RRDS Support
 - Computer Exercise: Random Processing of an RRDS
- XII. **Extra exercise**
 - Computer Exercise: COBOL and AIX (optional)