

## **Introduction to VSAM**

### **Course Summary**

#### **Description**

This course is designed to introduce the concepts of VSAM to application programmers, project managers and systems personnel. The materials contain a detailed description of using VSAM data sets and catalogs. Background information will be given on how to create and maintain files, and suggested ways to optimize performance and to provide data security and integrity.

#### **Goals**

Upon completion of the course, the student should be able to:

- Understand VSAM catalogs
- Allocate space for a file
- Create, print, copy or reorganize VSAM files
- Load records into a file
- Understand control intervals and control areas
- Understand the use of alternate indexes
- Code the logic needed to access VSAM files in application programs

#### **Prerequisites**

The student should have a basic knowledge of COBOL or ALC.

#### **Audience**

This course is designed for personnel involved with the development or maintenance of applications which utilize the Virtual Storage Access Method (VSAM).

#### **Duration**

Three days

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### **Course Outline**

#### **I. Introducing VSAM**

A brief description of a VSAM file and a presentation of the advantages of using VSAM.

#### **II. Types of data sets**

A discussion of the characteristics of key-sequenced, entry-sequenced and relative record data sets. The definition of control intervals and control areas; a description of the characteristics and structure of indexes and an explanation of control interval and control area splits.

#### **III. Alternate Indexes**

A discussion of the purpose for alternate indexes; an explanation of alternate index records; and a presentation on the maintenance of alternate indexes.

#### **IV. VSAM Catalogs**

A description of the characteristics of a VSAM catalog; an explanation of the information contained in a VSAM catalog; and a discussion of the purpose of user catalogs.

#### **V. AMS/IDCAMS**

A brief description of the purpose of IDCAMS; an explanation of the syntax requirements for the DEFINE, REPRO, PRINT, LISTCAT, EXPORT, IMPORT, and DELETE commands.

#### **VI. Coding in COBOL**

A presentation of the VSAM syntax requirements for the SELECT, FD, OPEN, CLOSE, READ, WRITE, REWRITE, and DELETE statements; and a description of the STATUS KEY indicators.

#### **VII. Coding in ALC**

An explanation of the ACB, EXLST, RPL, MODCB, SHOWCB, and TESTCB macros; an explanation of I/O feedback; and a discussion on the use of OPEN, CLOSE, GET, PUT and ERASE macros.

#### **VIII. Coding in PL/I**

A presentation of the VSAM syntax requirements for FILE DECLARATIONS, the TRANSMISSION STATEMENTS READ, WRITE, REWRITE, and DELETE; and a description of some sample ON CONDITIONS.

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