

**Chapter 1: VSAM: Introduction and Overview**

VSAM: Origin and Dataset Organization .....	1
Record Management.....	1
Catalog Management.....	1
VSAM Concepts.....	2
VSAM Definitions and Terminology .....	2
VSAM Organization.....	3
VSAM Catalogs.....	3
VSAM Datasets .....	4
ESDS: Entry-sequence Datasets.....	4
RRDS: Relative-record Datasets .....	5
KSDS: Key-sequenced Datasets .....	5
VRRDS: Variable-length Relative Record Datasets	6
LDS: Linear Dataset.....	7
Alternate Indexes and Paths .....	8
Control Intervals and Control Areas.....	9
VSAM Dataset Definition.....	10
IDCAMS .....	10
AMS Commands .....	11
Functional Commands .....	13
Modal Commands .....	13

**Chapter 2: Access Method Services**

Cluster - Definition.....	1
Abbreviations - Parameters.....	1
KSDS Definition .....	2
KSDS - Parameter Allocation.....	2
ESDS Definition.....	4
ESDS - Parameter Allocation.....	4
RRDS Definition.....	5
RRDS - Parameter Allocation.....	5
Additional Parameters.....	7
SHAREOPTIONS.....	9
REPRO Command / IDCAMS.....	10
KSDS - Loading .....	11
ESDS - Loading .....	12
RRDS - Loading .....	12
REPRO Parameter Options.....	13
REPLACE Option.....	13
REUSE Option.....	13
SKIP and COUNT.....	13
FROMKEY and TOKEY .....	14
REPRO as Backup and Restore Facility.....	15
KSDS: Reorganization .....	17
VSAM Dataset - Printing .....	18
Selective Printing .....	19
System Managed Data.....	20
AMS ALLOCATE - Allocating Datasets .....	21
AMS ALLOCATE - Temporary VSAM Dataset Definition .....	22
Extended Format Dataset - Defining.....	23

**Chapter 3: VSAM Datasets**

Control Interval Control Information .....	1
Record Definition Field.....	2
Binary Number Field .....	2
Access Modes.....	3
Sequential Access.....	3
Direct Access .....	3
Skip-sequential Access.....	4
Control Interval Access .....	4
VSAM Architecture.....	5
Control Interval Structure .....	5
Processing Options .....	7
Relative-record Datasets.....	8
Control Interval Structure .....	8
Key-sequenced Datasets .....	10
Index Component.....	10
Index Record Structure .....	12
Free Control Interval Pointers.....	14
Index Entry Sections .....	14
Key Compression.....	15
Front Compression.....	15
Rear Compression .....	15
Index Entry - CI Spanned Records Segment.....	16
Spanned Records .....	16
Key-sequenced Datasets .....	17
Data Component .....	17
Distribution Free Space.....	18
Free Space Computation.....	18
Processing Options .....	19
Control Interval Spans.....	21
Splits During Direct Processing .....	21
CI and CA Splits During Direct Processing .....	22
Splits During Sequential Processing .....	24
Keyrange Datasets.....	27



**Chapter 4: Application Programming**

VSAM Dataset Definition in a Program.....	1
ENVIRONMENT DIVISION.....	1
VSAM COBOL SELECT - Examples .....	3
DATA DIVISION.....	4
Connecting a Program to a VSAM Dataset .....	5
Processing VSAM Datasets .....	6
CRP: Current Record Pointer.....	6
INVALID KEY Condition.....	6
WRITE Statement .....	7
INVALID KEY - WRITE Statement.....	8
START Statement .....	9
INVALID KEY - START Statement .....	9
READ Statement.....	10
Sequential Retrieval .....	10
Random - Direct Retrieval.....	11
REWRITE Statement .....	13
DELETE Statement.....	14
Disconnecting a Program from a VSAM dataset.....	15
FILE STATUS Values .....	15
KSDS Access Examples .....	16
KSDS Random Access .....	16
KSDS Sequential Access.....	17
EVALUATE VSAM-STATUS-CODE.....	19

**Chapter 5: Alternate Indexes and Paths**

Alternate Indexes.....	1
Alternate Keys.....	1
Alternate Index Format.....	3
Alternate Index Upgrade.....	3
Paths .....	4
Processing Options .....	4
Alternate Index Allocation .....	7
DEFINE AIX ALTERNATEINDEX DS.....	8
JCL for Defining a Unique Key Alternate Index.....	9
JCL for Defining a Non-unique Key Alternate Index.....	10
Unique and Non-unique AIX DS.....	10
BLDINDEX: LOAD.....	11
JCL - Loading a Unique Key Record example.....	12
DEFINE PATH.....	13
UPDATE Option .....	13
VSAM KSDS - Access Sequentially and Randomly .....	14
ALTERNATE Index Definition - COBOL .....	16

**Chapter 6: VSAM Enhancements**

VSAM RLS: Record Level Sharing .....	1
VSAM RLS: Outside of CICS File Control .....	2
VSAM RLS and DFMS/MVS Lock Manager .....	2
VSAM RLS Read Integrity.....	3
Dataset Compression.....	4
Sample Space Calculation for the Data Component of a KSDS .....	4
SMS and JCL - VSAM Dataset Definition .....	5
JCL DD Statement - REORG Parameter .....	5
Temporary VSAM Datasets .....	6
JCL Allocations - Examples .....	6
VSAM - Reusable Dataset as Work Files .....	7

**Chapter 7: CICS File Control**

File Control.....	1
CICS File Control Command /RIDFLD Option/ Record Identification Field.....	1
VSAM in RLS Mode .....	2
VSAM Dataset Locking .....	3
Locks: Exclusive and Shared .....	3
Lock Duration .....	3
RLS: Active and Retained Status .....	4
Deadlocks - Transaction .....	5
CICS Transaction Server and VSAM .....	6
Shared Data Tables .....	6
VSAM / CICS Tuning .....	6

