

VSAM INFORMATION

INFORMATION TAKEN FROM:

VSAM ACCESS METHOD SERVICES AND PROGRAMMING
TECHNIQUES,

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. VSAM - VERY POPULAR ACCESS METHOD

.. INTRODUCED BY IBM IN THE 1970S ALONG WITH THE
IBM SERIES 370 MACHINES.

.. REPLACED OLDER ACCESS METHODS (ISAM, BDAM,
AND VIRTUAL COUNTERPARTS.)

.. IS THE UNDERLYING DATA MANAGEMENT ACCESS
METHOD THAT MOST HIGH PERFORMANCE DATA
BASE SYSTEMS FOR IBM USE.

.. A THOROUGH KNOWLEDGE OF VSAM IS REQUIRED.

.. WIDELY USED FOR MANY FORMS OF FILE ACCESS

.. MOST MAINFRAME IBM USERS STILL USE VSAM.

.. YOUR KNOWLEDGE OF VSAM WILL SUPPORT YOUR
STUDIES IN DATABASE PROCESSING AND ALL
DIRECT FILE ACCESSING USING IBM MAINFRAMES....

VSAM DATA SET STRUCTURE:

- . VSAM DATA SET IS OFTEN CALLED A "CLUSTER."
 - . A KSDS CLUSTER CONSISTS OF A
 - .. DATA COMPONENT OF CONTROL INTERVALS CONTAINING RECORDS, FREE SPACE, CONTROL INFORMATION,
 - .. INDEX COMPONENT USED TO LOCATE RECORDS.
 - . ESDS & RRDS CONSISTS OF DATA COMPONENT ONLY.
 - .. KSDS = KEY SEQUENCED DATA SET (INDEXED FILE)
 - .. RRDS = RELATIVE RECORD DATA SET (RELATIVE I/O)
 - .. ESDS = ENTRY SEQUENCED DATA SET (SEQUENTIAL FILE)
 - . VSAM KSDS FACILITY PROVIDES THE WIDEST RANGE OF FEATURES AND CAPABILITIES, AND KSDS CLUSTERS ARE MORE WIDELY USED THAN EITHER DSDS OR RRDS CLUSTERS.
 - . WILL DISCUSS RRDS CLUSTERS LATER
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ACCESS METHOD SERVICES (AMS)

- . SUPPLIED WITH VSAM
- . IS A GENERAL-PURPOSE UTILITY PROGRAM
- . USED FOR WIDE RANGE OF FUNCTIONS TO SUPPORT VSAM DATA SETS AND THEIR APPLICATIONS.

SUCH FUNCTIONS INCLUDE:

1. DEFINING, ALTERING, AND DELETING VSAM DATA SETS
 2. LISTING AND MAINTAINING VSAM CATALOG ENTRIES
 3. LOADING, COPYING, AND PRINTING VSAM DATA SETS
 4. CONSTRUCTING ALTERNATE INDEXES
 5. RECOVERING FROM VARIOUS TYPES OF ERRORS
 6. PORTING DATA SETS BETWEEN OPERATING SYSTEMS
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THE JCL SUPPORTING VSAM ACTIVITIES IS COMPLEX.

VSAM TRIES TO SIMPLIFY THE JCL AND CREATES MANY OF THE SUPPORT UNDERLYING DATA STRUCTURES (LIKE CATALOGS, INDEXES, AS NEEDED FOR VSAM) AS WELL AS PROVIDING SEVERAL UTILITY PROGRAMS THAT ARE DESIGNED TO ACCESS VSAM FILES, SUCH AS VSAM PRINT, VSAM REPRO, AND MORE.

BUT, IN ORDER FOR VSAM TO DO THESE THINGS FOR YOU, YOU MUST SET UP YOUR OWN VSAM ENVIRONMENT, WHICH INCLUDES FORMATTING YOUR OWN ADISK@ IN A MANNER THAT IS ACCESSIBLE BY THE SERVICES PROVIDED BY VSAM.

YOU MUST THEN DEFINE YOUR MASTER CATALOG, SO VSAM CAN FIND YOUR FILES.

YOU MUST ALLOCATE THE PHYSICAL SPACE ON DISK FOR YOUR CLUSTER (DATA PORTION AND INDEX PORTION).