VSAM EXERCISES

& CASE STUDY

Virtual Storage Access Method (VSAM)

1. The Requirement Statement:

This exercise is aimed at providing a complete knowledge on all the important and frequently used commands, options and facilities of Virtual Storage Access Method (VSAM). You are requested to have this exercise beside you when you are on a terminal connected to a Z/OS system and make use of this in your practical session strictly in the sequence of step is given.

Note: - 1) Process Step A (1 to 3) needs to be done as a Class Room discussion and should be completed within 1 hours and Process Step B needs to be done on Mainframes and needs to be completed within 5 hours.

2) You will be provided with a Mainframe ID and Password, the ID will be TRYXXX where Y need to be replaced with **A** by Ahamadabad team, **C** by Chennai Team, **H** by Hyderabad Team and **T** by Trivandrum Team. XXX will vary from 001 to 540

2. Process Steps:

A. Process Steps for VSAM Exercises:

1. Write down the IDCAMS Definition statement for a VSAM file with below characteristics.

Name	: TRYxxx.VSAM.EXER3A
Dataset Type	: Indexed
Record Length	: 500
Key Start Position	: 3
Key Length	: 10

2. Write down the IDCAMS Definition statement for a VSAM file with below characteristics.

Name	: TRYxxx.VSAM.EXER3B
Dataset Type	: Indexed
Record Length (Min)	: 50 (Logical)
Record Length (Max)	: 550 (Logical)
Key Start Position	: 2(Logical)
Key Length	: 10

3. Clearly detail the difference (if any) between the two statements. Under what situations would they behave same/differently

```
//DELETE1  EXEC  PGM=IDCAMS
//SYSPRINT DD  SYSOUT=*
//SYSIN    DD  *
  DELETE TRYXXX.VSAM.CIF.MSG.CUST.CFLAR CLUSTER ERASE -
      PURGE
//**
//*-------------------------------------------------------------------
//*-------------------------------------------------------------------
//DEFCF    EXEC  PGM=IDCAMS
//SYSPRINT DD  SYSOUT=*
//SYSIN    DD  *
  DEFINE CLUSTER( -
        NAME(TRYXXX.VSAM.CIF.MSG.CUST.CFLAR) -
        INDEXED  -
        KEYS(27 1)  -
        REUSE  -
        OWNER($IAM)  -
        RECSZ(119 119)    -
        SHR(2 3)  -
        SPEED  -
        VOL(* * *)) -
      DATA( -
        NAME(TRYXXX.VSAM.CIF.MSG.CUST.CFLAR.DATA) -
        CISZ(4096)  -
        CYL(20 20))  -
      INDEX( -
        NAME(TRYXXX.VSAM.CIF.MSG.CUST.CFLAR.INDEX) -
        CISZ(4096))
//**
```

```
//DELETE1  EXEC  PGM=IDCAMS
//SYSPRINT DD  SYSOUT=*
//SYSIN    DD  *
  DELETE TRYXXX.VSAM.CIF.MSG.CUST.CFLAR CLUSTER ERASE -
      PURGE
      SET MAXCC=0
  DEFINE CLUSTER( -
        NAME(TRYXXX.VSAM.CIF.MSG.CUST.CFLAR) -
        INDEXED  -
        KEYS(27 1)  -
        REUSE  -
        OWNER($IAM)  -
        RECSZ(119 119)    -
        SHR(2 3)  -
        SPEED  -
        VOL(* * *)) -
      DATA( -
        NAME(TRYXXX.VSAM.CIF.MSG.CUST.CFLAR.DATA) -
        CISZ(4096)  -
        CYL(20 20))  -
      INDEX( -
        NAME(TRYXXX.VSAM.CIF.MSG.CUST.CFLAR.INDEX) -
        CISZ(4096))
//**
```

B. Process Steps for VSAM Case Study:

Allocate a PDS TRYxxx.VSAM.CASE (Attributes are RECFM = FB, LRECL=80, BLKSIZE=800, DIRBLOCKS = 3, SPACE = 20 Primary Tracks) using ISPF option 3.2. Each JCL should be created as a separate member in this PDS.

NOTE: The 'XXX' must be replaced or substituted by the Userid everywhere in the Case Guide.

1. Use IDCAMS JCL to do the following.

   - Define a KSDS Cluster with the following characteristics. Use sample JCL provided in Appendix A to define the below given KSDS cluster by changing the parameters appropriately.

Cluster	: TRYxxx.VSAM.CASE.CLUSTER
Data	: TRYxxx.VSAM.CASE.DATA
Index	: TRYxxx.VSAM.CASE.INDEX.
Recsize	: 180
Keys	: (10,1)
Space	: Primary 2 Tracks; Secondary 2 Tracks;
CI Size	: 4 K Bytes

   - Create a Physical Sequential File with RECFM = FB, LRECL = 180 and BLKSIZE=0 using the IEFBR14 JCL and enter some sample data into it (Minimum of 5

rows and ensure that the data from column 1 to column 10 in each row is unique). The structure of the PS is also given in Appendix B.

- Write a REPRO JCL to copy the above created Physical Sequential File into the above new allocated KSDS Cluster. Use sample JCL provided in Appendix B
- Write an IDCAMS JCL to print the KSDS file TRYxxx.VSAM.CASE.CLUSTER. Use sample JCL provided in Appendix B.
- Use the LISTCAT command to verify the KSDS file TRYxxx.VSAM.CASE.CLUSTER Attributes. Use sample JCL provided in Appendix A
- Write an IDCAMS JCL to delete the KSDS FILE TRYxxx.VSAM.CASE.CLUSTER. Use sample JCL provided in Appendix A

2. Repeat the above set of operations using Access Method Services option from primary ISPF window; The option is U.5.1. Do not delete the KSDS Cluster in this step.

3. Use VSAM Maintenance Utility from primary ISPF window to do the operations specified below on the KSDS Cluster created in exercise 2. Please use the option U.5.1 from the ISPF window to navigate to VSAM Maintenance Utility.

- Add a record with key value 'SAMPLREC'
- Browse the record using the key 'SAMPLREC'
- Modify the record with the key 'SAMPLREC'
- Delete the record.

4. Use IDCAMS JCL to do the following
   - Define an ESDS Cluster with record length 80.

     Cluster : TRYxxx.VSAM.CASE.ESDS
     Data : TRYxxx.VSAM.CASE.ESDS.DATA
     Recsize : 80
     Space : Primary 2 Tracks; Secondary 2 Tracks;

APPENDIX-A

KSDS CLUSTER : TRG1T.SAMPLE.JCL(KSDS)
LIST CATALOG : TRG1T.SAMPLE.JCL(LIST)
DELETE CLUSTER : TRG1T.SAMPLE.JCL(DELETE)
PRINT CLUSTER : TRG1T.SAMPLE.JCL(PRINT)

APPENDIX-B

SAMPLE JCL TO COPY CONTENTS FROM A PS TO VSAM FILE

PS TO VSAM : TRG1T.SAMPLE.JCL(COPY)

FILE ATTRIBUTES OF THE INPUT PS FILE

File Organization : Linear Sequential
File Name : TRYxxx.VSAM.INPUTPS
Record Size : 180

FILE FORMAT FOR DELETE FILE:

S No	Name of the Field	Type	Size
1	KEY-INDEX	Numeric	10
2	SAMPLE-TEXT	Alphanumeric	170