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BUSINESS SCENARIO 10

MONTHLY SERVICE CHARGE PROCESSOR

Define VSAM KSDS:

```
//DEFVSAM JOB (ACCT),'DEF VSAM',CLASS=A,MSGCLASS=A,NOTIFY=&SYSUID
//STEP1 EXEC PGM=IDCAMS
//SYSPRINT DD SYSOUT=*
//SYSIN DD *

  DELETE A016.MASTER.FILE

  DEFINE CLUSTER (NAME(A016.MASTER.FILE) -
    INDEXED -
    KEYS(10 0) -
    RECSZ(80 80) -
    TRACKS(5 5) -
    VOLUMES(USR002)) -
    DATA(NAME(A016.MASTER.FILE.DATA)) -
    INDEX(NAME(A016.MASTER.FILE.INDEX))
/*
```

Create the Master File (Account Balance File):

IDENTIFICATION DIVISION.

PROGRAM-ID. LOADMAST.

ENVIRONMENT DIVISION.

INPUT-OUTPUT SECTION.

FILE-CONTROL.

SELECT MASTER-FILE ASSIGN TO MASTER

ORGANIZATION IS INDEXED

ACCESS MODE IS SEQUENTIAL

RECORD KEY IS ACCT-NO

FILE STATUS IS WS-MASTER-STATUS.

DATA DIVISION.

FILE SECTION.

FD MASTER-FILE.

01 MASTER-REC.

05 ACCT-NO PIC X(10).

05 ACCT-TYPE PIC X(1).

05 BALANCE PIC 9(7)V99.

05 FILLER PIC X(60).

WORKING-STORAGE SECTION.

01 WS-MASTER-STATUS PIC XX.

PROCEDURE DIVISION.

MAIN-LOGIC.

OPEN OUTPUT MASTER-FILE

* Sample accounts - add more as needed

MOVE '1234567890' TO ACCT-NO

MOVE 'S' TO ACCT-TYPE

MOVE 5000.00 TO BALANCE

WRITE MASTER-REC

MOVE '2345678901' TO ACCT-NO

MOVE 'C' TO ACCT-TYPE

MOVE 15000.00 TO BALANCE

WRITE MASTER-REC

MOVE '3456789012' TO ACCT-NO

MOVE 'S' TO ACCT-TYPE

MOVE 100.00 TO BALANCE

WRITE MASTER-REC

CLOSE MASTER-FILE

STOP RUN.

Create Transaction Input File

//CREATETR JOB (ACCT),'CREATE TRANS',CLASS=A,MSGCLASS=A,NOTIFY=&SYSUID

//*

//STEP0 EXEC PGM=IDCAMS

//SYSPRINT DD SYSOUT=*

//SYSIN DD *

DELETE Z82675.TRANS.FILE

SET MAXCC = 0

/*

//*

//STEP1 EXEC PGM=IEBGENER

//SYSPRINT DD SYSOUT=*

//SYSUT1 DD *

1234567890025

2345678901010

3456789012008

111111111003

/*

//SYSUT2 DD DSN=Z82675.TRANS.FILE,

// DISP=(NEW,CATLG,DELETE),

// SPACE=(TRK,(1,1)),

// DCB=(RECFM=FB,LRECL=13,BLKSIZE=0)

//SYSIN DD *

GENERATE MAXFLDS=1

RECORD FIELD=(13,1,,1)

/*

Main Service Charge Processor Program:

IDENTIFICATION DIVISION.

PROGRAM-ID. SVCCHARG.

ENVIRONMENT DIVISION.

INPUT-OUTPUT SECTION.

FILE-CONTROL.

SELECT TRANS-FILE ASSIGN TO TRANSIN

FILE STATUS IS WS-TR-STAT.

SELECT MASTER-FILE ASSIGN TO MASTER

ORGANIZATION IS INDEXED

ACCESS MODE IS RANDOM

RECORD KEY IS ACCT-NO

FILE STATUS IS WS-MA-STAT.

DATA DIVISION.

FILE SECTION.

FD TRANS-FILE.

01 TRANS-REC.

05 TR-ACCT-NO PIC X(10).

05 TR-COUNT PIC 9(3).

FD MASTER-FILE.

01 MASTER-REC.

05 ACCT-NO PIC X(10).

05 ACCT-TYPE PIC X(1).

05 ACCT-BAL PIC 9(7)V99.

05 FILLER PIC X(60).

WORKING-STORAGE SECTION.

01 WS-STATS.

05 WS-TR-STAT PIC XX.

05 WS-MA-STAT PIC XX.

```

05 WS-PROC-CNT  PIC 9(4) VALUE 0.
05 WS-DEDUCT-CNT PIC 9(4) VALUE 0.
05 WS-FAIL-CNT  PIC 9(4) VALUE 0.
05 WS-TOTAL-AMT PIC 9(7)V99 VALUE 0.
01 WS-CALCS.
    05 WS-CHARGE  PIC 9(5)V99.
PROCEDURE DIVISION.
000-MAIN.
    OPEN INPUT TRANS-FILE.
    OPEN I-O  MASTER-FILE.

    PERFORM 100-READ-TRANS.

    PERFORM UNTIL WS-TR-STAT = '10'
        ADD 1 TO WS-PROC-CNT
        MOVE TR-ACCT-NO TO ACCT-NO
        READ MASTER-FILE
        IF WS-MA-STAT = '00'
            PERFORM 200-PROCESS-LOGIC
        ELSE
            DISPLAY 'RECORD NOT FOUND: ' TR-ACCT-NO
            ADD 1 TO WS-FAIL-CNT
        END-IF
        PERFORM 100-READ-TRANS
    END-PERFORM.

    PERFORM 300-PRINT-SUMMARY.
    CLOSE TRANS-FILE MASTER-FILE.
    STOP RUN.

100-READ-TRANS.
    READ TRANS-FILE.

200-PROCESS-LOGIC.
    IF ACCT-TYPE = 'S'
        IF TR-COUNT > 5
            COMPUTE WS-CHARGE = (TR-COUNT - 5) * 15
        ELSE
            MOVE 0 TO WS-CHARGE
        END-IF
    ELSE

```

```

        MOVE 200 TO WS-CHARGE
END-IF.

IF ACCT-BAL >= WS-CHARGE
    SUBTRACT WS-CHARGE FROM ACCT-BAL
    REWRITE MASTER-REC
    ADD 1 TO WS-DEDUCT-CNT
    ADD WS-CHARGE TO WS-TOTAL-AMT
ELSE
    DISPLAY 'INSUFFICIENT BALANCE: ' ACCT-NO
    ADD 1 TO WS-FAIL-CNT
END-IF.

```

300-PRINT-SUMMARY.

```

    DISPLAY '----- SERVICE CHARGE SUMMARY -----'.
    DISPLAY 'Accounts Processed : ' WS-PROC-CNT.
    DISPLAY 'Charges Deducted   : ' WS-DEDUCT-CNT.
    DISPLAY 'Failed Deductions  : ' WS-FAIL-CNT.
    DISPLAY 'Total Charges      : ' WS-TOTAL-AMT.
    DISPLAY 'Batch Completed Successfully'.

```

JCL to Load Master File:

```

//LOADJCL JOB (ACCT),'LOAD KSDS',CLASS=A,MSGCLASS=A,NOTIFY=&SYSUID
/*-----*
/* STEP 1: LOAD SAMPLE DATA INTO THE KSDS          *
/*-----*
//STEP1 EXEC PGM=IDCAMS
//SYSPRINT DD SYSOUT=*
//SYSIN DD *
    REPRO INFILE(DATAIN) OUTDATASET(Z82675.MASTER.FILE)
/*
//DATAIN DD *
1234567890S000500000
2345678901C001500000
3456789012S000010000
/*

```

JCL to Compile and Execute Main Program:

```

//RUNJCL JOB (ACCT),'FIX0C4',CLASS=A,MSGCLASS=A,NOTIFY=&SYSUID
/*-----*

```

```

/* STEP 1: COMPILE - USING 0M REGION TO PREVENT 0C4
/*-----*
//COMPILE EXEC PGM=IGYCRCTL,REGION=0M,PARM='APOST,MAP,XREF'
//STEPLIB DD DSN=IGY640.SIGYCOMP,DISP=SHR
// DD DSN=CEE.SCEERUN,DISP=SHR
// DD DSN=CEE.SCEERUN2,DISP=SHR
//SYSIN DD DSN=Z82675.COBOL.SRC(SVCCHARG),DISP=SHR
//SYSLIN DD DSN=&&OBJMOD,DISP=(NEW,PASS),UNIT=SYSDA,
// SPACE=(TRK,(10,10))
//SYSPRINT DD SYSOUT=*
/* LARGER WORK FILES TO PREVENT COMPILER CRASH
//SYSUT1 DD UNIT=SYSDA,SPACE=(CYL,(5,5))
//SYSUT2 DD UNIT=SYSDA,SPACE=(CYL,(5,5))
//SYSUT3 DD UNIT=SYSDA,SPACE=(CYL,(5,5))
//SYSUT4 DD UNIT=SYSDA,SPACE=(CYL,(5,5))
//SYSUT5 DD UNIT=SYSDA,SPACE=(CYL,(5,5))
//SYSUT6 DD UNIT=SYSDA,SPACE=(CYL,(5,5))
//SYSUT7 DD UNIT=SYSDA,SPACE=(CYL,(5,5))
/*-----*
/* STEP 2: LINK-EDIT (ONLY RUNS IF COMPILE IS OK)
/*-----*
//LKED EXEC PGM=IEWL,REGION=0M,PARM='LIST,XREF,LET,MAP',
// COND=(4,LT,COMPILE)
//SYSLIN DD DSN=&&OBJMOD,DISP=(OLD,DELETE)
//SYSLMOD DD DSN=Z82675.BATCH.LOADLIB(SVCCHARG),DISP=SHR
//SYSLIB DD DSN=CEE.SCEELKED,DISP=SHR
//SYSPRINT DD SYSOUT=*
//SYSUT1 DD UNIT=SYSDA,SPACE=(TRK,(10,10))
/*-----*
/* STEP 3: RUN THE PROGRAM
/*-----*
//RUNSTEP EXEC PGM=SVCCHARG
//STEPLIB DD DSN=Z82675.BATCH.LOADLIB,DISP=SHR
// DD DSN=CEE.SCEERUN,DISP=SHR
//TRANSIN DD DSN=Z82675.INPUT,DISP=SHR
//MASTER DD DSN=Z82675.INPUT,DISP=SHR
//SYSOUT DD SYSOUT=*

```

OUTPUT:

```
mainframe
File Edit View Tools Help
Clear Erase PA1 PA2 PA3 EraseF
03.15.26 JOB04879 $HASP165 A016COMP ENDED AT N1 MAXCC=0 CN(INTERNAL)
***
```

```
mainframe
File Edit View Tools Help
Clear Erase PA1 PA2 PA3 EraseF
Display Filter View Print Options Help
-----
SDSF OUTPUT DISPLAY A016COMP JOB04983 DSID 103 LINE 0 COLUMNS 02- 81
COMMAND INPUT ==> SCROLL ==> PAGE
***** TOP OF DATA *****
RECORD NOT FOUND: 111111111
----- SERVICE CHARGE SUMMARY -----
ACCOUNTS PROCESSED : 0004
CHARGES DEDUCTED : 0003
FAILED DEDUCTIONS : 0001
TOTAL CHARGES : 000054500
BATCH COMPLETED SUCCESSFULLY
***** BOTTOM OF DATA *****

-D S L I S T * I S F P C U 4
```