

IDENTIFICATION DIVISION.

PROGRAM-ID. UNLD01N.

DATE-WRITTEN. JULY, 2025.

DATE-COMPILED.

REMARKS. READ VSAM KSDS CLUSTER SEQUENTIALLY,
WRITE RECORDS TO SEQUENTIAL FILE,
REPORT RECORDS READ/UNLOADED.

ENVIRONMENT DIVISION.

INPUT-OUTPUT SECTION.

FILE-CONTROL.

SELECT STUDENT-MASTER-FILE

ASSIGN TO STMASTI

ORGANIZATION IS INDEXED

ACCESS IS SEQUENTIAL

RECORD KEY IS SMR-STUDENT-NUMBER

FILE STATUS IS STMASTI-STATUS.

SELECT STUDENT-UNLOAD-FILE

ASSIGN TO STMASTO.

SELECT REPORT-FILE

ASSIGN TO S-REPORT.

DATA DIVISION.

FILE SECTION.

FD STUDENT-MASTER-FILE

RECORD CONTAINS 150 CHARACTERS

DATA RECORD IS STUDENT-MASTER-RECORD.

01 STUDENT-MASTER-RECORD.

02 SMR-STUDENT-NUMBER PIC X(09).

02 FILLER PIC X(141).

FD STUDENT-UNLOAD-FILE

LABEL RECORDS STANDARD

RECORD CONTAINS 150 CHARACTERS

BLOCK CONTAINS 10 RECORDS

DATA RECORD IS STUDENT-UNLOAD-RECORD.

01 STUDENT-UNLOAD-RECORD PIC X(150).

FD REPORT-FILE

LABEL RECORDS STANDARD

REPORT IS UNLOAD-REPORT.

WORKING-STORAGE SECTION.

IDENTIFICATION DIVISION.

PROGRAM-ID. UNLD01V.

DATE-WRITTEN. JULY, 2025.

DATE-COMPILED.

REMARKS. READ VSAM KSDS CLUSTER SEQUENTIALLY,
WRITE RECORDS TO SEQUENTIAL FILE,
REPORT RECORDS READ/UNLOADED.

ENVIRONMENT DIVISION.

INPUT-OUTPUT SECTION.

FILE-CONTROL.

SELECT STUDENT-UNLOAD-FILE

ASSIGN TO UT-S-STMASTO.

SELECT REPORT-FILE

ASSIGN TO UR-S-REPORT.

DATA DIVISION.

FILE SECTION.

FD STUDENT-UNLOAD-FILE

LABEL RECORDS STANDARD

RECORD CONTAINS 150 CHARACTERS

BLOCK CONTAINS 10 RECORDS

DATA RECORD IS STUDENT-UNLOAD-RECORD.

01 STUDENT-UNLOAD-RECORD PIC X(150).

FD REPORT-FILE

LABEL RECORDS OMITTED

REPORT IS UNLOAD-REPORT.

WORKING-STORAGE SECTION.

01 STUDENT-MASTER-FILE-EOF-SW PIC X VALUE 'N'.
 88 STUDENT-MASTER-FILE-EOF VALUE 'Y'.

01 STUDENT-MASTER-FILE-EOF-SW PIC X VALUE 'N'.
 88 STUDENT-MASTER-FILE-EOF VALUE 'Y'.

01 STMASTI-STATUS PIC X(02).

01 Y2K-GETD-PARAMETERS.
 02 Y2K-GETDP-DATE-G PIC 9(8).
 02 Y2K-GETDP-DATE-J PIC 9(7).
 02 Y2K-GETDP-ANUM PIC S9(7).
 02 Y2K-GETDP-CLOCK PIC 9(8).
 02 FILLER REDEFINES Y2K-GETDP-CLOCK.
 03 Y2K-GETDP-CLOCK-HH PIC 9(2).
 03 Y2K-GETDP-CLOCK-MM PIC 9(2).
 03 Y2K-GETDP-CLOCK-SS PIC 9(2).
 03 Y2K-GETDP-CLOCK-T PIC 9(1).
 03 Y2K-GETDP-CLOCK-H PIC 9(1).
 02 Y2K-GETDP-CLOCK12 PIC X(11).

01 Y2K-DFMT-PARAMETERS.
 02 Y2K-DFMTP-DATEIN PIC X(8).
 02 Y2K-DFMTP-MAJOR PIC X(1).
 02 Y2K-DFMTP-MINOR PIC X(1).
 02 Y2K-DFMTP-RETURN-CODE PIC 9(1).
 02 Y2K-DFMTP-OUTPUT-SIZE PIC S9(2).
 02 Y2K-DFMTP-OUTPUT PIC X(29).

01 INPUT-COUNT PIC 9(5) VALUE 0.
 01 OUTPUT-COUNT PIC 9(5) VALUE 0.

01 Y2K-GETD-PARAMETERS.
 02 Y2K-GETDP-DATE-G PIC 9(8).
 02 Y2K-GETDP-DATE-J PIC 9(7).
 02 Y2K-GETDP-ANUM PIC S9(7).
 02 Y2K-GETDP-CLOCK PIC 9(8).
 02 FILLER REDEFINES Y2K-GETDP-CLOCK.
 03 Y2K-GETDP-CLOCK-HH PIC 9(2).
 03 Y2K-GETDP-CLOCK-MM PIC 9(2).
 03 Y2K-GETDP-CLOCK-SS PIC 9(2).
 03 Y2K-GETDP-CLOCK-T PIC 9(1).
 03 Y2K-GETDP-CLOCK-H PIC 9(1).
 02 Y2K-GETDP-CLOCK12 PIC X(11).

01 Y2K-DFMT-PARAMETERS.
 02 Y2K-DFMTP-DATEIN PIC X(8).
 02 Y2K-DFMTP-MAJOR PIC X(1).
 02 Y2K-DFMTP-MINOR PIC X(1).
 02 Y2K-DFMTP-RETURN-CODE PIC 9(1).
 02 Y2K-DFMTP-OUTPUT-SIZE PIC S9(2).
 02 Y2K-DFMTP-OUTPUT PIC X(29).

01 INPUT-COUNT PIC 9(5) VALUE 0.
 01 OUTPUT-COUNT PIC 9(5) VALUE 0.

01 VSIO-PARAMETER-VALUES COPY VSAMIO.
 01 KSDSF01 COPY VSAMIOFB.
 01 STUDENT-MASTER-INFORMATION COPY 'STMASTER'.

REPORT SECTION.

RD UNLOAD-REPORT
 PAGE LIMIT IS 66 LINES
 HEADING 2
 FIRST DETAIL 5
 LAST DETAIL 58.

01 LOAD-SUMMARY TYPE REPORT FOOTING.
 02 LINE 2.
 03 COLUMN 01 PIC X(10) SOURCE Y2K-DFMTP-OUTPUT.
 03 COLUMN 15 PIC X(03) VALUE '(N)'.
 03 COLUMN 24 PIC X(07) VALUE 'Student'.
 03 COLUMN 34 PIC X(06) VALUE 'Master'.
 03 COLUMN 44 PIC X(06) VALUE 'Unload'.
 03 COLUMN 53 PIC X(06) VALUE 'Report'.

REPORT SECTION.

RD UNLOAD-REPORT
 PAGE LIMIT IS 66 LINES
 HEADING 2
 FIRST DETAIL 5
 LAST DETAIL 58.

01 LOAD-SUMMARY TYPE REPORT FOOTING.
 02 LINE 2.
 03 COLUMN 01 PIC X(10) SOURCE Y2K-DFMTP-OUTPUT.
 03 COLUMN 15 PIC X(03) VALUE '(V)'.
 03 COLUMN 24 PIC X(07) VALUE 'Student'.
 03 COLUMN 34 PIC X(06) VALUE 'Master'.
 03 COLUMN 44 PIC X(06) VALUE 'Unload'.
 03 COLUMN 53 PIC X(06) VALUE 'Report'.

unld01n - unld01v

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03 COLUMN 71 PIC X(04) VALUE 'Page'.
03 COLUMN 76 PIC Z,ZZ9 SOURCE PAGE-COUNTER.
02 LINE 3.
03 COLUMN 01 PIC X(11) SOURCE Y2K-GETDP-CLOCK12.
02 LINE 6.
03 COLUMN 13 PIC ZZ,ZZ9 SOURCE INPUT-COUNT.
03 COLUMN 20 PIC X(30) VALUE
'Records read from STMASTI'.
02 LINE PLUS 2.
03 COLUMN 13 PIC ZZ,ZZ9 SOURCE OUTPUT-COUNT.
03 COLUMN 20 PIC X(30) VALUE
'Records written to STMASTO'.
```

PROCEDURE DIVISION.

0000-MAIN SECTION.

0000-UNLOAD-STUDENT-MASTER.

```
CALL 'Y2KGETD' USING Y2K-GETD-PARAMETERS.
MOVE Y2K-GETDP-DATE-G TO Y2K-DFMTP-DATEIN.
MOVE '1' TO Y2K-DFMTP-MAJOR.
MOVE '3' TO Y2K-DFMTP-MINOR.
CALL 'Y2KDFMT' USING Y2K-DFMT-PARAMETERS.
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```
OPEN INPUT STUDENT-MASTER-FILE,
      OUTPUT STUDENT-UNLOAD-FILE,
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```
REPORT-FILE.
INITIATE UNLOAD-REPORT.

PERFORM 2100-READ-STUDENT-MASTER
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```
03 COLUMN 71 PIC X(04) VALUE 'Page'.
03 COLUMN 76 PIC Z,ZZ9 SOURCE PAGE-COUNTER.
02 LINE 3.
03 COLUMN 01 PIC X(11) SOURCE Y2K-GETDP-CLOCK12.
02 LINE 6.
03 COLUMN 13 PIC ZZ,ZZ9 SOURCE INPUT-COUNT.
03 COLUMN 20 PIC X(30) VALUE
'Records read from STMASTI'.
02 LINE PLUS 2.
03 COLUMN 13 PIC ZZ,ZZ9 SOURCE OUTPUT-COUNT.
03 COLUMN 20 PIC X(30) VALUE
'Records written to STMASTO'.
```

PROCEDURE DIVISION.

0000-MAIN SECTION.

0000-UNLOAD-STUDENT-MASTER.

```
CALL 'Y2KGETD' USING Y2K-GETD-PARAMETERS.
MOVE Y2K-GETDP-DATE-G TO Y2K-DFMTP-DATEIN.
MOVE '1' TO Y2K-DFMTP-MAJOR.
MOVE '3' TO Y2K-DFMTP-MINOR.
CALL 'Y2KDFMT' USING Y2K-DFMT-PARAMETERS.
```

```
MOVE 'STMASTI' TO VSIO-DDNAME.
MOVE VSIO-KSDS TO VSIO-ORGANIZATION.
MOVE VSIO-SEQUENTIAL TO VSIO-ACCESS.
MOVE VSIO-INPUT TO VSIO-MODE.
MOVE +150 TO VSIO-RECORD-LENGTH.
MOVE +0 TO VSIO-KEY-POSITION.
MOVE +9 TO VSIO-KEY-LENGTH.
MOVE VSIO-OPEN TO VSIO-COMMAND.
CALL 'VSAMIO' USING VSIO-PARAMETER-BLOCK, KSDSF01,
STUDENT-MASTER-INFORMATION.

IF NOT VSIO-SUCCESS
    DISPLAY 'VSAMIO ERROR OCCURRED DURING '
VSIO-COMMAND
EXHIBIT NAMED VSIO-RETURN-CODE,
EXHIBIT NAMED VSIO-VSAM-RETURN-CODE,
VSIO-VSAM-FUNCTION-CODE,
VSIO-VSAM-FEEDBACK-CODE

STOP RUN.
```

```
OPEN OUTPUT STUDENT-UNLOAD-FILE,
      REPORT-FILE.
INITIATE UNLOAD-REPORT.
```

PERFORM 2100-READ-STUDENT-MASTER

UNTIL STUDENT-MASTER-FILE-EOF.

GENERATE UNLOAD-REPORT.
TERMINATE UNLOAD-REPORT.

CLOSE STUDENT-MASTER-FILE,
STUDENT-UNLOAD-FILE,

REPORT-FILE.

GOBACK.

2000-PERFORMED-ROUTINES SECTION.

2100-READ-STUDENT-MASTER.

READ STUDENT-MASTER-FILE
AT END

MOVE 'Y' TO STUDENT-MASTER-FILE-EOF-SW.

IF NOT STUDENT-MASTER-FILE-EOF

PERFORM 2200-WRITE-RECORD-TO-BACKUP.

2200-WRITE-RECORD-TO-BACKUP.

THRU 2199-EXIT

UNTIL STUDENT-MASTER-FILE-EOF.

GENERATE UNLOAD-REPORT.
TERMINATE UNLOAD-REPORT.

MOVE VSIO-CLOSE TO VSIO-COMMAND.
CALL 'VSAMIO' USING VSIO-PARAMETER-BLOCK, KSDSF01,
STUDENT-MASTER-INFORMATION.

IF NOT VSIO-SUCCESS
DISPLAY 'VSAMIO ERROR OCCURRED DURING '
VSIO-COMMAND
EXHIBIT NAMED VSIO-RETURN-CODE,
EXHIBIT NAMED VSIO-VSAM-RETURN-CODE,
VSIO-VSAM-FUNCTION-CODE,
VSIO-VSAM-FEEDBACK-CODE.

CLOSE STUDENT-UNLOAD-FILE,
REPORT-FILE.

GOBACK.

2000-PERFORMED-ROUTINES SECTION.

2100-READ-STUDENT-MASTER.

MOVE VSIO-READ TO VSIO-COMMAND.
CALL 'VSAMIO' USING VSIO-PARAMETER-BLOCK, KSDSF01,
STUDENT-MASTER-INFORMATION.

IF NOT VSIO-SUCCESS
IF VSIO-END-OF-FILE
MOVE 'Y' TO STUDENT-MASTER-FILE-EOF-SW
ELSE
DISPLAY 'VSAMIO ERROR OCCURRED DURING '
VSIO-COMMAND
EXHIBIT NAMED VSIO-RETURN-CODE,
EXHIBIT NAMED VSIO-VSAM-RETURN-CODE,
VSIO-VSAM-FUNCTION-CODE,
VSIO-VSAM-FEEDBACK-CODE

MOVE 'Y' TO STUDENT-MASTER-FILE-EOF-SW.

IF NOT STUDENT-MASTER-FILE-EOF

PERFORM 2200-WRITE-RECORD-TO-BACKUP
THRU 2299-EXIT.

2199-EXIT.
EXIT.

2200-WRITE-RECORD-TO-BACKUP.

unld01n - unld01v

ADD 1 TO INPUT-COUNT.

ADD 1 TO INPUT-COUNT.

WRITE STUDENT-UNLOAD-RECORD FROM STUDENT-MASTER-RECORD.

WRITE STUDENT-UNLOAD-RECORD FROM STUDENT-MASTER-INFORMATION.

ADD 1 TO OUTPUT-COUNT.

ADD 1 TO OUTPUT-COUNT.

2299-EXIT.
EXIT.