

IDENTIFICATION DIVISION.

PROGRAM-ID. READ03N.

DATE-WRITTEN. AUGUST, 2025.

DATE-COMPILED.

REMARKS. READ SALES HISTORY VIA AIX1 (CUSTOMER/TYPE),
 PRODUCE SALES HISTORY REPORT SUMMARIZED BY
 CUSTOMER, TYPE, AND YEAR OF SALE.

ENVIRONMENT DIVISION.

INPUT-OUTPUT SECTION.

FILE-CONTROL.

SELECT SALES-HISTORY-FILE

ASSIGN TO SALESI

ORGANIZATION IS INDEXED

ACCESS IS SEQUENTIAL

RECORD KEY IS SHR-ALTSEQ-FIELD-1

FILE STATUS IS SALESI-STATUS.

SELECT REPORT-FILE

ASSIGN TO S-REPORT.

DATA DIVISION.

FILE SECTION.

FD SALES-HISTORY-FILE

LABEL RECORDS STANDARD

RECORD CONTAINS 118 CHARACTERS

DATA RECORD IS SALES-HISTORY-RECORD.

01 SALES-HISTORY-RECORD.

02 SHR-DATE PIC 9(08).

02 FILLER REDEFINES SHR-DATE.

03 SHR-YEAR PIC 9(04).

03 FILLER PIC 9(04).

02 SHR-TYPE PIC 9(03).

02 SHR-DESCRIPTION PIC X(40).

02 SHR-GROSS PIC S9(5)V99 COMP-3.

02 SHR-DISCOUNT PIC V99.

02 SHR-NET PIC S9(5)V99 COMP-3.

02 SHR-ALTSEQ-FIELD-1.

03 SHR-A1-CUSTOMER PIC X(35).

03 SHR-A1-TYPE PIC 9(03).

03 SHR-A1-RRN PIC S9(8) COMP.

02 SHR-ALTSEQ-FIELD-2.

03 SHR-A2-DATE PIC 9(08).

03 SHR-A2-TYPE PIC 9(03).

03 SHR-A2-RRN PIC S9(8) COMP.

IDENTIFICATION DIVISION.

PROGRAM-ID. READ03V.

DATE-WRITTEN. AUGUST, 2025.

DATE-COMPILED.

REMARKS. READ SALES HISTORY VIA AIX1 (CUSTOMER/TYPE),
 PRODUCE SALES HISTORY REPORT SUMMARIZED BY
 CUSTOMER, TYPE, AND YEAR OF SALE.

ENVIRONMENT DIVISION.

INPUT-OUTPUT SECTION.

FILE-CONTROL.

SELECT REPORT-FILE

ASSIGN TO UR-S-REPORT.

DATA DIVISION.

FILE SECTION.

FD REPORT-FILE

LABEL RECORDS STANDARD

REPORT IS CUSTOMER-SALES-REPORT.

WORKING-STORAGE SECTION.

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01 SALES-HISTORY-EOF-SW      PIC X    VALUE 'N'.
   88 SALES-HISTORY-NOT-EOF      VALUE 'N'.
   88 SALES-HISTORY-EOF          VALUE 'Y'.

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01 SALESI-STATUS PIC X(02).

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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).

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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).

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FD REPORT-FILE

LABEL RECORDS OMITTED

REPORT IS CUSTOMER-SALES-REPORT.

WORKING-STORAGE SECTION.

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01 SALES-HISTORY-EOF-SW      PIC X    VALUE 'N'.
   88 SALES-HISTORY-NOT-EOF      VALUE 'N'.
   88 SALES-HISTORY-EOF          VALUE 'Y'.

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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).

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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).

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01 VSIO-PARAMETER-VALUES      COPY VSAMIO.
01 SALESI                     COPY VSAMIOFB.
01 SALES-HISTORY-RECORD.
   02 SHR-DATE                 PIC 9(08).
   02 FILLER                   REDEFINES SHR-DATE.
       03 SHR-YEAR             PIC 9(04).
       03 FILLER               PIC 9(04).
   02 SHR-TYPE                 PIC 9(03).
   02 SHR-DESCRIPTION          PIC X(40).
   02 SHR-GROSS                PIC S9(5)V99 COMP-3.
   02 SHR-DISCOUNT             PIC V99.
   02 SHR-NET                  PIC S9(5)V99 COMP-3.
   02 SHR-ALTSEQ-FIELD-1.
       03 SHR-A1-CUSTOMER      PIC X(35).
       03 SHR-A1-TYPE          PIC 9(03).
       03 SHR-A1-RRN           PIC S9(8) COMP.

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01 TYPE-TABLE-DEFINE.
  02 FILLER          PIC X(31) VALUE
      '101Books'.
  02 FILLER          PIC X(31) VALUE
      '102Jacket Covers'.
  02 FILLER          PIC X(31) VALUE
      '103Gift Certificate (purchased)'.
  02 FILLER          PIC X(31) VALUE
      '104Diskettes'.
  02 FILLER          PIC X(31) VALUE
      '105Out-of-print search'.
  02 FILLER          PIC X(31) VALUE
      '106Postage'.
  02 FILLER          PIC X(31) VALUE
      '107Miscellaneous'.
  02 FILLER          PIC X(31) VALUE
      '108Post cards (political)'.
  02 FILLER          PIC X(31) VALUE
      '109Post cards (general)'.
  02 FILLER          PIC X(31) VALUE
      '110Deposit on special order'.
  02 FILLER          PIC X(31) VALUE
      '111Buttons'.
01 TYPE-TABLE
  02 TYPE-TABLE-ENTRY REDEFINES TYPE-TABLE-DEFINE.
                        OCCURS 11 TIMES
                        ASCENDING KEY IS TTE-CODE
                        INDEXED BY TYPE-IX.
                        03 TTE-CODE PIC 9(03).
                        03 TTE-TEXT PIC X(28).
01 TYPE-TEXT-TO-PRINT.
  02 TTTP-CODE          PIC 9(03) VALUE 0.
  02 TTTP-TEXT.
      03 FILLER          PIC X(03).
      03 TTTP-TEXT-UNKNOWN PIC X(25).
01 COUNT-1              PIC 9(01) VALUE 1.
REPORT SECTION.
RD CUSTOMER-SALES-REPORT
  CONTROLS ARE SHR-A1-CUSTOMER, TTTP-TEXT, SHR-YEAR
  PAGE LIMIT IS 66 LINES
  HEADING 2
  FIRST DETAIL 5

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02 SHR-ALTSEQ-FIELD-2.
03 SHR-A2-DATE          PIC 9(08).
03 SHR-A2-TYPE          PIC 9(03).
03 SHR-A2-RRN          PIC S9(8) COMP.
01 TYPE-TABLE-DEFINE.
  02 FILLER          PIC X(31) VALUE
      '101Books'.
  02 FILLER          PIC X(31) VALUE
      '102Jacket Covers'.
  02 FILLER          PIC X(31) VALUE
      '103Gift Certificate (purchased)'.
  02 FILLER          PIC X(31) VALUE
      '104Diskettes'.
  02 FILLER          PIC X(31) VALUE
      '105Out-of-print search'.
  02 FILLER          PIC X(31) VALUE
      '106Postage'.
  02 FILLER          PIC X(31) VALUE
      '107Miscellaneous'.
  02 FILLER          PIC X(31) VALUE
      '108Post cards (political)'.
  02 FILLER          PIC X(31) VALUE
      '109Post cards (general)'.
  02 FILLER          PIC X(31) VALUE
      '110Deposit on special order'.
  02 FILLER          PIC X(31) VALUE
      '111Buttons'.
01 TYPE-TABLE
  02 TYPE-TABLE-ENTRY REDEFINES TYPE-TABLE-DEFINE.
                        OCCURS 11 TIMES
                        ASCENDING KEY IS TTE-CODE
                        INDEXED BY TYPE-IX.
                        03 TTE-CODE PIC 9(03).
                        03 TTE-TEXT PIC X(28).
01 TYPE-TEXT-TO-PRINT.
  02 TTTP-CODE          PIC 9(03) VALUE 0.
  02 TTTP-TEXT.
      03 FILLER          PIC X(03).
      03 TTTP-TEXT-UNKNOWN PIC X(25).
01 COUNT-1              PIC 9(01) VALUE 1.
REPORT SECTION.
RD CUSTOMER-SALES-REPORT
  CONTROLS ARE SHR-A1-CUSTOMER, TTTP-TEXT, SHR-YEAR
  PAGE LIMIT IS 66 LINES
  HEADING 2
  FIRST DETAIL 5

```

LAST DETAIL 58.

01 PAGE-HEAD TYPE PAGE HEADING.

02 LINE 2.

03 COLUMN 01 PIC X(10) SOURCE Y2K-DFMTP-OUTPUT.

03 COLUMN 15 PIC X(03) VALUE '(N)'.

03 COLUMN 25 PIC X(09) VALUE 'Discovery'.

03 COLUMN 36 PIC X(04) VALUE 'Nook'.

03 COLUMN 42 PIC X(05) VALUE 'Sales'.

03 COLUMN 49 PIC X(07) VALUE 'History'.

03 COLUMN 73 PIC X(04) VALUE 'Page'.

03 COLUMN 78 PIC ZZ9 SOURCE PAGE-COUNTER.

02 LINE 3.

03 COLUMN 01 PIC X(11) SOURCE Y2K-GETDP-CLOCK12.

03 COLUMN 23 PIC X(12) VALUE 'By Customer,'.

03 COLUMN 36 PIC X(14) VALUE 'Type, and Year'.

01 CUSTOMER-HEAD TYPE CONTROL HEADING SHR-A1-CUSTOMER.

02 LINE PLUS 1.

03 COLUMN 05 PIC X(35) SOURCE SHR-A1-CUSTOMER.

02 LINE PLUS 1.

01 TYPE-HEAD TYPE CONTROL HEADING TTTP-TEXT.

02 LINE PLUS 1.

03 COLUMN 08 PIC X(28) SOURCE TTTP-TEXT.

01 SALE-DETAIL TYPE IS DETAIL.

02 LINE PLUS 1.

03 COLUMN 01 PIC 9(02) SOURCE COUNT-1.

03 COLUMN 05 PIC 99999.99- SOURCE SHR-NET.

01 YEAR-FOOT TYPE IS CONTROL FOOTING SHR-YEAR.

02 LINE PLUS 1.

03 COLUMN 20 PIC 9(04) SOURCE SHR-YEAR.

03 COLUMN 27 PIC Z,ZZ9 SUM COUNT-1.

03 COLUMN 32 PIC X(01) VALUE '**'.

03 COLUMN 38 PIC \$ZZ,ZZ9.99 SUM SHR-NET.

03 COLUMN 48 PIC X(01) VALUE '**'.

01 TYPE-FOOT TYPE IS CONTROL FOOTING TTTP-TEXT.

02 LINE PLUS 1.

03 COLUMN 27 PIC Z,ZZ9 SUM COUNT-1.

03 COLUMN 32 PIC X(01) VALUE '**'.

03 COLUMN 38 PIC \$ZZ,ZZ9.99 SUM SHR-NET.

03 COLUMN 48 PIC X(02) VALUE '**'.

01 CUSTOMER-FOOT TYPE CONTROL FOOTING SHR-A1-CUSTOMER.

02 LINE PLUS 2.

03 COLUMN 05 PIC X(18) VALUE 'Total for Customer'.

LAST DETAIL 58.

01 PAGE-HEAD TYPE PAGE HEADING.

02 LINE 2.

03 COLUMN 01 PIC X(10) SOURCE Y2K-DFMTP-OUTPUT.

03 COLUMN 15 PIC X(03) VALUE '(V)'.

03 COLUMN 25 PIC X(09) VALUE 'Discovery'.

03 COLUMN 36 PIC X(04) VALUE 'Nook'.

03 COLUMN 42 PIC X(05) VALUE 'Sales'.

03 COLUMN 49 PIC X(07) VALUE 'History'.

03 COLUMN 73 PIC X(04) VALUE 'Page'.

03 COLUMN 78 PIC ZZ9 SOURCE PAGE-COUNTER.

02 LINE 3.

03 COLUMN 01 PIC X(11) SOURCE Y2K-GETDP-CLOCK12.

03 COLUMN 23 PIC X(12) VALUE 'By Customer,'.

03 COLUMN 36 PIC X(14) VALUE 'Type, and Year'.

01 CUSTOMER-HEAD TYPE CONTROL HEADING SHR-A1-CUSTOMER.

02 LINE PLUS 1.

03 COLUMN 05 PIC X(35) SOURCE SHR-A1-CUSTOMER.

02 LINE PLUS 1.

01 TYPE-HEAD TYPE CONTROL HEADING TTTP-TEXT.

02 LINE PLUS 1.

03 COLUMN 08 PIC X(28) SOURCE TTTP-TEXT.

01 SALE-DETAIL TYPE IS DETAIL.

02 LINE PLUS 1.

03 COLUMN 01 PIC 9(02) SOURCE COUNT-1.

03 COLUMN 05 PIC 99999.99- SOURCE SHR-NET.

01 YEAR-FOOT TYPE IS CONTROL FOOTING SHR-YEAR.

02 LINE PLUS 1.

03 COLUMN 20 PIC 9(04) SOURCE SHR-YEAR.

03 COLUMN 27 PIC Z,ZZ9 SUM COUNT-1.

03 COLUMN 32 PIC X(01) VALUE '**'.

03 COLUMN 38 PIC \$ZZ,ZZ9.99 SUM SHR-NET.

03 COLUMN 48 PIC X(01) VALUE '**'.

01 TYPE-FOOT TYPE IS CONTROL FOOTING TTTP-TEXT.

02 LINE PLUS 1.

03 COLUMN 27 PIC Z,ZZ9 SUM COUNT-1.

03 COLUMN 32 PIC X(01) VALUE '**'.

03 COLUMN 38 PIC \$ZZ,ZZ9.99 SUM SHR-NET.

03 COLUMN 48 PIC X(02) VALUE '**'.

01 CUSTOMER-FOOT TYPE CONTROL FOOTING SHR-A1-CUSTOMER.

02 LINE PLUS 2.

03 COLUMN 05 PIC X(18) VALUE 'Total for Customer'.

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```
03 COLUMN 26 PIC ZZ,ZZ9 SUM COUNT-1.
03 COLUMN 32 PIC X(03) VALUE '***'.
03 COLUMN 38 PIC $ZZ,ZZ9.99 SUM SHR-NET.
03 COLUMN 48 PIC X(03) VALUE '***'.
02 LINE PLUS 1.
```

PROCEDURE DIVISION.

0000-MAIN SECTION.

0000-HOUSEKEEPING.

```
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.
```

0100-PRODUCE-REPORT.

```
OPEN INPUT SALES-HISTORY-FILE,
      OUTPUT REPORT-FILE.
```

INITIATE CUSTOMER-SALES-REPORT.

PERFORM 1100-READ-SALES-HISTORY

UNTIL SALES-HISTORY-EOF.

```
03 COLUMN 26 PIC ZZ,ZZ9 SUM COUNT-1.
03 COLUMN 32 PIC X(03) VALUE '***'.
03 COLUMN 38 PIC $ZZ,ZZ9.99 SUM SHR-NET.
03 COLUMN 48 PIC X(03) VALUE '***'.
02 LINE PLUS 1.
```

PROCEDURE DIVISION.

0000-MAIN SECTION.

0000-HOUSEKEEPING.

```
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.
```

0100-PRODUCE-REPORT.

```
MOVE 'SALES1 ' TO VSIO-DDNAME.
MOVE VSIO-KSDS TO VSIO-ORGANIZATION.
MOVE VSIO-SEQUENTIAL TO VSIO-ACCESS.
MOVE VSIO-INPUT TO VSIO-MODE.
MOVE +118 TO VSIO-RECORD-LENGTH.
MOVE VSIO-OPEN TO VSIO-COMMAND.
CALL 'VSAMIO' USING VSIO-PARAMETER-BLOCK, SALES1,
                  SALES-HISTORY-RECORD.
```

```
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
    MOVE +12 TO RETURN-CODE
    STOP RUN.
```

```
OPEN OUTPUT REPORT-FILE.
INITIATE CUSTOMER-SALES-REPORT.
```

PERFORM 1100-READ-SALES-HISTORY

THRU 1199-EXIT

UNTIL SALES-HISTORY-EOF.

```
MOVE VSIO-CLOSE TO VSIO-COMMAND.
CALL 'VSAMIO' USING VSIO-PARAMETER-BLOCK, SALES1,
                  SALES-HISTORY-RECORD.
IF NOT VSIO-SUCCESS
```

TERMINATE CUSTOMER-SALES-REPORT.

CLOSE SALES-HISTORY-FILE,
REPORT-FILE.

GOBACK.

1000-LEVEL-1-ROUTINES SECTION.

1100-READ-SALES-HISTORY.

READ SALES-HISTORY-FILE NEXT RECORD
AT END

MOVE 'Y' TO SALES-HISTORY-EOF-SW.

IF SALES-HISTORY-NOT-EOF

PERFORM 2100-PRODUCE-REPORT.

2000-LEVEL-2-ROUTINES SECTION.

2100-PRODUCE-REPORT.

IF TTTP-CODE NOT = SHR-A1-TYPE

MOVE SHR-A1-TYPE TO TTTP-CODE, TTTP-TEXT
SET TYPE-IX TO +1
SEARCH TYPE-TABLE-ENTRY

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 +12 TO RETURN-CODE.

TERMINATE CUSTOMER-SALES-REPORT.

CLOSE REPORT-FILE.

GOBACK.

1000-LEVEL-1-ROUTINES SECTION.

1100-READ-SALES-HISTORY.

MOVE VSIO-READ TO VSIO-COMMAND.
CALL 'VSAMIO' USING VSIO-PARAMETER-BLOCK, SALESI,
SALES-HISTORY-RECORD.

IF NOT VSIO-SUCCESS

IF VSIO-END-OF-FILE

MOVE 'Y' TO SALES-HISTORY-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 +12 TO RETURN-CODE

MOVE 'Y' TO SALES-HISTORY-EOF-SW.

IF SALES-HISTORY-NOT-EOF

PERFORM 2100-PRODUCE-REPORT
THRU 2199-EXIT.

1199-EXIT.

EXIT.

2000-LEVEL-2-ROUTINES SECTION.

2100-PRODUCE-REPORT.

IF TTTP-CODE NOT = SHR-A1-TYPE

MOVE SHR-A1-TYPE TO TTTP-CODE, TTTP-TEXT
SET TYPE-IX TO +1
SEARCH TYPE-TABLE-ENTRY

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AT END

MOVE ' ** Unknown **' TO TTTP-TEXT-UNKNOWN
WHEN TTE-CODE (TYPE-IX) = TTTP-CODE
MOVE TTE-TEXT (TYPE-IX) TO TTTP-TEXT.

GENERATE CUSTOMER-SALES-REPORT.

AT END

MOVE ' ** Unknown **' TO TTTP-TEXT-UNKNOWN
WHEN TTE-CODE (TYPE-IX) = TTTP-CODE
MOVE TTE-TEXT (TYPE-IX) TO TTTP-TEXT.

GENERATE CUSTOMER-SALES-REPORT.

2199-EXIT.
EXIT.