

IDENTIFICATION DIVISION.

PROGRAM-ID. READ02N.

DATE-WRITTEN. JULY, 2025.

DATE-COMPILED.

REMARKS. SORT STUDENT ROSTER RECORDS BY DEPT/COURSE/SECTION,
AT LEVEL CHANGE, LOOKUP TABLE DATA IN RRDS CLUSTER,
PRODUCE ENROLLMENT AND CLASS ROSTER REPORTS.

ENVIRONMENT DIVISION.

INPUT-OUTPUT SECTION.

FILE-CONTROL.

SELECT STUDENT-ROSTER-FILE

ASSIGN TO ROSTER1.

SELECT TABLES-FILE

ASSIGN TO TABLE1

ORGANIZATION IS RELATIVE

ACCESS IS RANDOM

RELATIVE KEY IS TABLE1-RELATIVE-KEY

FILE STATUS IS TABLE1-STATUS.

SELECT REPORT-FILE-1

ASSIGN TO S-REPORT1.

SELECT REPORT-FILE-2

ASSIGN TO S-REPORT2.

SELECT SORT-WORK-FILE

ASSIGN TO S-SORTWK.

DATA DIVISION.

FILE SECTION.

FD STUDENT-ROSTER-FILE

LABEL RECORDS STANDARD

RECORD CONTAINS 48 CHARACTERS

BLOCK CONTAINS 100 RECORDS

DATA RECORD IS STUDENT-ROSTER-RECORD.

01 STUDENT-ROSTER-RECORD.

02 SRR-DEPARTMENT PIC 9(02).

02 SRR-COURSE PIC 9(03).

02 SRR-SECTION PIC 9(01).

02 SRR-STUDENT-NUMBER PIC 9(07).

02 SRR-STUDENT-NAME PIC X(35).

FD TABLES-FILE

RECORD CONTAINS 57 CHARACTERS

IDENTIFICATION DIVISION.

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AT LEVEL CHANGE, LOOKUP TABLE DATA IN RRDS CLUSTER,
PRODUCE ENROLLMENT AND CLASS ROSTER REPORTS.

ENVIRONMENT DIVISION.

INPUT-OUTPUT SECTION.

FILE-CONTROL.

SELECT STUDENT-ROSTER-FILE

ASSIGN TO UT-S-ROSTER1.

SELECT REPORT-FILE-1

ASSIGN TO UR-S-REPORT1.

SELECT REPORT-FILE-2

ASSIGN TO UR-S-REPORT2.

SELECT SORT-WORK-FILE

ASSIGN TO UT-S-SORTWK.

DATA DIVISION.

FILE SECTION.

FD STUDENT-ROSTER-FILE

LABEL RECORDS STANDARD

RECORD CONTAINS 48 CHARACTERS

BLOCK CONTAINS 100 RECORDS

DATA RECORD IS STUDENT-ROSTER-RECORD.

01 STUDENT-ROSTER-RECORD.

02 SRR-DEPARTMENT PIC 9(02).

02 SRR-COURSE PIC 9(03).

02 SRR-SECTION PIC 9(01).

02 SRR-STUDENT-NUMBER PIC 9(07).

02 SRR-STUDENT-NAME PIC X(35).

DATA RECORD IS TABLE-RECORD.

01 TABLE-RECORD PIC X(57).

FD REPORT-FILE-1

LABEL RECORDS STANDARD

REPORT IS ENROLLMENT-REPORT.

FD REPORT-FILE-2

LABEL RECORDS STANDARD

REPORT IS CLASS-ROLL-REPORT.

SD SORT-WORK-FILE

RECORD CONTAINS 48 CHARACTERS

BLOCK CONTAINS 100 RECORDS

DATA RECORD IS SORT-WORK-RECORD.

01 SORT-WORK-RECORD.

02 SWR-DEPT-COURSE-SECT PIC 9(06).

02 FILLER REDEFINES SWR-DEPT-COURSE-SECT.

03 SWR-DEPARTMENT PIC 9(02).

03 SWR-COURSE PIC 9(03).

03 SWR-SECTION PIC 9(01).

02 SWR-STUDENT-NUMBER PIC 9(07).

02 SWR-STUDENT-NAME PIC X(35).

WORKING-STORAGE SECTION.

01 SORT-WORK-EOF-SW PIC X VALUE 'N'.

88 SORT-WORK-NOT-EOF VALUE 'N'.

88 SORT-WORK-EOF VALUE 'Y'.

01 TABLEI-RELATIVE-KEY PIC 9(06).

01 TABLEI-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.

FD REPORT-FILE-1

LABEL RECORDS OMITTED

REPORT IS ENROLLMENT-REPORT.

FD REPORT-FILE-2

LABEL RECORDS OMITTED

REPORT IS CLASS-ROLL-REPORT.

SD SORT-WORK-FILE

DATA RECORD IS SORT-WORK-RECORD.

01 SORT-WORK-RECORD.

02 SWR-DEPT-COURSE-SECT PIC 9(06).

02 FILLER REDEFINES SWR-DEPT-COURSE-SECT.

03 SWR-DEPARTMENT PIC 9(02).

03 SWR-COURSE PIC 9(03).

03 SWR-SECTION PIC 9(01).

02 SWR-STUDENT-NUMBER PIC 9(07).

02 SWR-STUDENT-NAME PIC X(35).

WORKING-STORAGE SECTION.

01 SORT-WORK-EOF-SW PIC X VALUE 'N'.

88 SORT-WORK-NOT-EOF VALUE 'N'.

88 SORT-WORK-EOF VALUE 'Y'.

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).

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 DEPARTMENT-TABLE-RECORD.
 02 DTR-KEY.
 03 DTR-DEPARTMENT PIC 9(02) VALUE 0.

03 FILLER PIC 9(04).
 02 DTR-NAME PIC X(40).

01 COURSE-TABLE-RECORD.
 02 CTR-KEY.
 03 CTR-DEPARTMENT PIC 9(02) VALUE 0.
 03 CTR-COURSE PIC 9(03) VALUE 0.

03 FILLER PIC 9(01).
 02 CTR-NAME PIC X(50).
 02 CTR-HOURS PIC 9(01).

01 SECTION-TABLE-RECORD.
 02 STR-KEY.
 03 STR-DEPARTMENT PIC 9(02) VALUE 0.
 03 STR-COURSE PIC 9(03) VALUE 0.
 03 STR-SECTION PIC 9(01) VALUE 0.

02 STR-DESCRIPTION PIC X(20).
 01 FILLER REDEFINES SECTION-TABLE-RECORD.
 02 FILLER PIC 9(05).
 02 STR-SECTION-BREAK.
 03 STR-SB-SECTION PIC 9(01).
 03 STR-SB-DESC PIC X(20).

01 COUNT-1 PIC 9(01) VALUE 1.

REPORT SECTION.

RD ENROLLMENT-REPORT
 CONTROLS ARE DTR-DEPARTMENT, CTR-COURSE, STR-SECTION-BREAK
 PAGE LIMIT IS 66 LINES
 HEADING 2
 FIRST DETAIL 5
 LAST DETAIL 62.

01 VSIO-PARAMETER-VALUES COPY VSAMIO.
 01 TABLEI COPY VSAMIOFB.
 01 TABLES-RECORD PIC X(57).

01 DEPARTMENT-TABLE-RECORD.
 02 DTR-KEY PIC 9(06) VALUE 0.
 02 FILLER REDEFINES DTR-KEY.
 03 DTR-DEPARTMENT PIC 9(02).
 03 FILLER PIC 9(04).
 02 DTR-NAME PIC X(40).

01 COURSE-TABLE-RECORD.
 02 CTR-KEY PIC 9(06) VALUE 0.
 02 FILLER REDEFINES CTR-KEY.
 03 CTR-DEPARTMENT PIC 9(02).
 03 CTR-COURSE PIC 9(03).
 03 FILLER PIC 9(01).
 02 CTR-NAME PIC X(50).
 02 CTR-HOURS PIC 9(01).

01 SECTION-TABLE-RECORD.
 02 STR-KEY PIC 9(06) VALUE 0.
 02 STR-NUMBER REDEFINES STR-KEY.
 03 STR-DEPARTMENT PIC 9(02).
 03 STR-COURSE PIC 9(03).
 03 STR-SECTION PIC 9(01).

02 STR-DESCRIPTION PIC X(20).
 01 FILLER REDEFINES SECTION-TABLE-RECORD.
 02 FILLER PIC 9(05).
 02 STR-SECTION-BREAK.
 03 STR-SB-SECTION PIC 9(01).
 03 STR-SB-DESC PIC X(20).

01 COUNT-1 PIC 9(01) VALUE 1.

REPORT SECTION.

RD ENROLLMENT-REPORT
 CONTROLS ARE DTR-DEPARTMENT, CTR-COURSE, STR-SECTION-BREAK
 PAGE LIMIT IS 66 LINES
 HEADING 2
 FIRST DETAIL 5
 LAST DETAIL 62.

```

01 ENROLLMENT-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 30 PIC X(05) VALUE 'Royal'.
03 COLUMN 36 PIC X(06) VALUE 'Valley'.
03 COLUMN 43 PIC X(10) VALUE 'University'.
03 COLUMN 73 PIC X(04) VALUE 'Page'.
03 COLUMN 78 PIC ZZ9 SOURCE PAGE-COUNTER
                OF ENROLLMENT-REPORT.
02 LINE 3.
03 COLUMN 01 PIC X(11) SOURCE Y2K-GETDP-CLOCK12.
03 COLUMN 33 PIC X(17) VALUE 'Enrollment Report'.

01 ENROLLMENT-DEPT-HEAD TYPE CONTROL HEADING DTR-DEPARTMENT.
02 LINE PLUS 1.
03 COLUMN 01 PIC X(11) VALUE 'Department:'.
03 COLUMN 13 PIC Z9 SOURCE DTR-DEPARTMENT.
03 COLUMN 16 PIC X(40) SOURCE DTR-NAME.
02 LINE PLUS 1.

01 ENROLLMENT-COURSE-HEAD TYPE CONTROL HEADING CTR-COURSE.
02 LINE PLUS 1.
03 COLUMN 03 PIC X(07) VALUE 'Course:'.
03 COLUMN 12 PIC ZZ9 SOURCE CTR-COURSE.
03 COLUMN 16 PIC X(50) SOURCE CTR-NAME.
02 LINE PLUS 1.

01 ENROLLMENT-SECTION-DETAIL TYPE IS DETAIL.
02 LINE PLUS 1.
03 COLUMN 01 PIC 9(01) SOURCE COUNT-1.

01 ENROLLMENT-SECTION-FOOT TYPE CONTROL FOOTING
    STR-SECTION-BREAK.
02 LINE PLUS 1.
03 COLUMN 05 PIC X(08) VALUE 'Section:'.
03 COLUMN 14 PIC 9(01) SOURCE STR-SB-SECTION.
03 COLUMN 16 PIC X(20) SOURCE STR-SB-DESC.
03 COLUMN 60 PIC ZZ9 SUM COUNT-1.
03 COLUMN 63 PIC X(01) VALUE '*'.
02 LINE PLUS 1.

01 ENROLLMENT-COURSE-FOOT TYPE CONTROL FOOTING CTR-COURSE.
02 LINE PLUS 1.
03 COLUMN 04 PIC X(17) VALUE 'Course Enrollment'.
03 COLUMN 57 PIC ZZ,ZZ9 SUM COUNT-1.
03 COLUMN 63 PIC X(02) VALUE '**'.
02 LINE PLUS 1.

```

```

01 ENROLLMENT-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 30 PIC X(05) VALUE 'Royal'.
03 COLUMN 36 PIC X(06) VALUE 'Valley'.
03 COLUMN 43 PIC X(10) VALUE 'University'.
03 COLUMN 73 PIC X(04) VALUE 'Page'.
03 COLUMN 78 PIC ZZ9 SOURCE PAGE-COUNTER
                OF ENROLLMENT-REPORT.
02 LINE 3.
03 COLUMN 01 PIC X(11) SOURCE Y2K-GETDP-CLOCK12.
03 COLUMN 33 PIC X(17) VALUE 'Enrollment Report'.

01 ENROLLMENT-DEPT-HEAD TYPE CONTROL HEADING DTR-DEPARTMENT.
02 LINE PLUS 1.
03 COLUMN 01 PIC X(11) VALUE 'Department:'.
03 COLUMN 13 PIC Z9 SOURCE DTR-DEPARTMENT.
03 COLUMN 16 PIC X(40) SOURCE DTR-NAME.

01 ENROLLMENT-COURSE-HEAD TYPE CONTROL HEADING CTR-COURSE.
02 LINE PLUS 1.
03 COLUMN 03 PIC X(07) VALUE 'Course:'.
03 COLUMN 12 PIC ZZ9 SOURCE CTR-COURSE.
03 COLUMN 16 PIC X(50) SOURCE CTR-NAME.
02 LINE PLUS 1.

01 ENROLLMENT-SECTION-DETAIL TYPE IS DETAIL.
02 LINE PLUS 1.
03 COLUMN 01 PIC 9(01) SOURCE COUNT-1.

01 ENROLLMENT-SECTION-FOOT TYPE CONTROL FOOTING
    STR-SECTION-BREAK.
02 LINE PLUS 1.
03 COLUMN 05 PIC X(08) VALUE 'Section:'.
03 COLUMN 14 PIC 9(01) SOURCE STR-SB-SECTION.
03 COLUMN 16 PIC X(20) SOURCE STR-SB-DESC.
03 COLUMN 60 PIC ZZ9 SUM COUNT-1.
03 COLUMN 63 PIC X(01) VALUE '*'.
02 LINE PLUS 1.

01 ENROLLMENT-COURSE-FOOT TYPE CONTROL FOOTING CTR-COURSE.
02 LINE PLUS 1.
03 COLUMN 04 PIC X(17) VALUE 'Course Enrollment'.
03 COLUMN 57 PIC ZZ,ZZ9 SUM COUNT-1.
03 COLUMN 63 PIC X(02) VALUE '**'.
02 LINE PLUS 1.

```

```

01 ENROLLMENT-DEPT-FOOT TYPE CONTROL FOOTING DTR-DEPARTMENT.
02 LINE PLUS 1.
03 COLUMN 01 PIC X(21) VALUE 'Department Enrollment'.
03 COLUMN 54 PIC Z,ZZZ,ZZ9 SUM COUNT-1.
03 COLUMN 63 PIC X(03) VALUE '***'.
02 LINE PLUS 2.

```

```

RD CLASS-ROLL-REPORT
CONTROLS ARE STR-KEY
PAGE LIMIT IS 66 LINES
HEADING 2
FIRST DETAIL 5
LAST DETAIL 58.

```

```

01 CLASS-ROLL-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 30 PIC X(05) VALUE 'Royal'.
03 COLUMN 36 PIC X(06) VALUE 'Valley'.
03 COLUMN 43 PIC X(10) VALUE 'University'.
03 COLUMN 73 PIC X(04) VALUE 'Page'.
03 COLUMN 78 PIC ZZ9 SOURCE PAGE-COUNTER
OF CLASS-ROLL-REPORT.
02 LINE 3.
03 COLUMN 01 PIC X(11) SOURCE Y2K-GETDP-CLOCK12.
03 COLUMN 36 PIC X(10) VALUE 'Class Roll'.

```

```

01 CLASS-ROLL-SECT-HEAD TYPE CONTROL HEADING STR-KEY.
02 LINE PLUS 2.
03 COLUMN 01 PIC X(11) VALUE 'Department:'.
03 COLUMN 13 PIC Z9 SOURCE DTR-DEPARTMENT.
03 COLUMN 16 PIC X(40) SOURCE DTR-NAME.
02 LINE PLUS 2.
03 COLUMN 03 PIC X(07) VALUE 'Course:'.
03 COLUMN 12 PIC ZZ9 SOURCE CTR-COURSE.
03 COLUMN 16 PIC X(50) SOURCE CTR-NAME.
02 LINE PLUS 2.
03 COLUMN 05 PIC X(08) VALUE 'Section:'.
03 COLUMN 14 PIC 9(01) SOURCE STR-SECTION.
03 COLUMN 16 PIC X(20) SOURCE STR-DESCRIPTION.
02 LINE PLUS 1.

```

```

01 CLASS-ROLL-DETAIL TYPE IS DETAIL.
02 LINE PLUS 1.
03 COLUMN 10 PIC 9(01) SOURCE COUNT-1.
03 COLUMN 10 PIC 9(07) SOURCE SWR-STUDENT-NUMBER.
03 COLUMN 26 PIC X(35) SOURCE SWR-STUDENT-NAME.

```

```

01 ENROLLMENT-DEPT-FOOT TYPE CONTROL FOOTING DTR-DEPARTMENT.
02 LINE PLUS 1.
03 COLUMN 01 PIC X(21) VALUE 'Department Enrollment'.
03 COLUMN 54 PIC Z,ZZZ,ZZ9 SUM COUNT-1.
03 COLUMN 63 PIC X(03) VALUE '***'.
02 LINE PLUS 2.

```

```

RD CLASS-ROLL-REPORT
CONTROLS ARE STR-KEY
PAGE LIMIT IS 66 LINES
HEADING 2
FIRST DETAIL 5
LAST DETAIL 58.

```

```

01 CLASS-ROLL-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 30 PIC X(05) VALUE 'Royal'.
03 COLUMN 36 PIC X(06) VALUE 'Valley'.
03 COLUMN 43 PIC X(10) VALUE 'University'.
03 COLUMN 73 PIC X(04) VALUE 'Page'.
03 COLUMN 78 PIC ZZ9 SOURCE PAGE-COUNTER
OF CLASS-ROLL-REPORT.
02 LINE 3.
03 COLUMN 01 PIC X(11) SOURCE Y2K-GETDP-CLOCK12.
03 COLUMN 36 PIC X(10) VALUE 'Class Roll'.

```

```

01 CLASS-ROLL-SECT-HEAD TYPE CONTROL HEADING STR-KEY.
02 LINE PLUS 2.
03 COLUMN 01 PIC X(11) VALUE 'Department:'.
03 COLUMN 13 PIC Z9 SOURCE DTR-DEPARTMENT.
03 COLUMN 16 PIC X(40) SOURCE DTR-NAME.
02 LINE PLUS 2.
03 COLUMN 03 PIC X(07) VALUE 'Course:'.
03 COLUMN 12 PIC ZZ9 SOURCE CTR-COURSE.
03 COLUMN 16 PIC X(50) SOURCE CTR-NAME.
02 LINE PLUS 2.
03 COLUMN 05 PIC X(08) VALUE 'Section:'.
03 COLUMN 14 PIC 9(01) SOURCE STR-SECTION.
03 COLUMN 16 PIC X(20) SOURCE STR-DESCRIPTION.
02 LINE PLUS 1.

```

```

01 CLASS-ROLL-DETAIL TYPE IS DETAIL.
02 LINE PLUS 1.
03 COLUMN 10 PIC 9(01) SOURCE COUNT-1.
03 COLUMN 10 PIC 9(07) SOURCE SWR-STUDENT-NUMBER.
03 COLUMN 26 PIC X(35) SOURCE SWR-STUDENT-NAME.

```

```

01 CLASS-ROLL-SECT-FOOT TYPE CONTROL FOOTING STR-KEY
   NEXT GROUP NEXT PAGE.
02 LINE PLUS 2.
   03 COLUMN 07 PIC X(28) VALUE
     'Number of Students Enrolled:'.
   03 COLUMN 40 PIC ZZ9 SUM COUNT-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-SORT-ENROLLMENT-FILE.

```

SORT SORT-WORK-FILE
  ON ASCENDING KEY SWR-DEPARTMENT,
                  SWR-COURSE,
                  SWR-SECTION,
                  SWR-STUDENT-NAME
  USING STUDENT-ROSTER-FILE
  OUTPUT PROCEDURE IS 1000-LEVEL-1-ROUTINES.

```

GOBACK.

1000-LEVEL-1-ROUTINES SECTION.

1100-PROCESS-SORTED-ROSTER.

```

OPEN INPUT TABLES-FILE,
      OUTPUT REPORT-FILE-1,

```

```

01 CLASS-ROLL-SECT-FOOT TYPE CONTROL FOOTING STR-KEY
   NEXT GROUP NEXT PAGE.
02 LINE PLUS 2.
   03 COLUMN 07 PIC X(28) VALUE
     'Number of Students Enrolled:'.
   03 COLUMN 40 PIC ZZ9 SUM COUNT-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-SORT-ENROLLMENT-FILE.

```

SORT SORT-WORK-FILE
  ON ASCENDING KEY SWR-DEPARTMENT,
                  SWR-COURSE,
                  SWR-SECTION,
                  SWR-STUDENT-NAME
  USING STUDENT-ROSTER-FILE
  OUTPUT PROCEDURE IS 1000-LEVEL-1-ROUTINES.

```

GOBACK.

1000-LEVEL-1-ROUTINES SECTION.

1100-PROCESS-SORTED-ROSTER.

```

MOVE 'TABLEI ' TO VSIO-DDNAME.
MOVE VSIO-RRDS TO VSIO-ORGANIZATION.
MOVE VSIO-DIRECT TO VSIO-ACCESS.
MOVE VSIO-INPUT TO VSIO-MODE.
MOVE +57 TO VSIO-RECORD-LENGTH.
MOVE VSIO-OPEN TO VSIO-COMMAND.
CALL 'VSAMIO' USING VSIO-PARAMETER-BLOCK, TABLEI,
                  TABLES-RECORD.

```

```

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

```

REPORT-FILE-2.
INITIATE ENROLLMENT-REPORT,
CLASS-ROLL-REPORT.

PERFORM 2100-RETURN-SORT-WORK-FILE

UNTIL SORT-WORK-EOF.

TERMINATE ENROLLMENT-REPORT,
CLASS-ROLL-REPORT.

CLOSE TABLES-FILE,
REPORT-FILE-1,

REPORT-FILE-2.

2000-LEVEL-2-ROUTINES SECTION.

2100-RETURN-SORT-WORK-FILE.

RETURN SORT-WORK-FILE
AT END
MOVE 'Y' TO SORT-WORK-EOF-SW.

IF SORT-WORK-NOT-EOF

PERFORM 3100-PRODUCE-REPORT-ITEMS.

3000-LEVEL-3-ROUTINES SECTION.

3100-PRODUCE-REPORT-ITEMS.

VSIO-VSAM-FUNCTION-CODE,
VSIO-VSAM-FEEDBACK-CODE
MOVE +12 TO RETURN-CODE
STOP RUN.

OPEN OUTPUT REPORT-FILE-1,

REPORT-FILE-2.

INITIATE ENROLLMENT-REPORT,
CLASS-ROLL-REPORT.

PERFORM 2100-RETURN-SORT-WORK-FILE

THRU 2199-EXIT

UNTIL SORT-WORK-EOF.

TERMINATE ENROLLMENT-REPORT,
CLASS-ROLL-REPORT.

MOVE VSIO-CLOSE TO VSIO-COMMAND.
CALL 'VSAMIO' USING VSIO-PARAMETER-BLOCK, TABLEI,
TABLES-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.

CLOSE REPORT-FILE-1,
REPORT-FILE-2.

2000-LEVEL-2-ROUTINES SECTION.

2100-RETURN-SORT-WORK-FILE.

RETURN SORT-WORK-FILE
AT END
MOVE 'Y' TO SORT-WORK-EOF-SW.

IF SORT-WORK-NOT-EOF

PERFORM 3100-PRODUCE-REPORT-ITEMS
THRU 3199-EXIT.

2199-EXIT.
EXIT.

3000-LEVEL-3-ROUTINES SECTION.

3100-PRODUCE-REPORT-ITEMS.

```
IF SWR-DEPARTMENT NOT = DTR-DEPARTMENT
  PERFORM 4100-RETRIEVE-DEPT-TABLE
```

```
  PERFORM 4200-RETRIEVE-COURSE-TABLE
```

```
  PERFORM 4300-RETRIEVE-SECT-TABLE
```

```
ELSE
```

```
  IF SWR-COURSE NOT = CTR-COURSE
    PERFORM 4200-RETRIEVE-COURSE-TABLE
```

```
  PERFORM 4300-RETRIEVE-SECT-TABLE
```

```
ELSE
```

```
  IF SWR-SECTION NOT = STR-SECTION
```

```
    PERFORM 4300-RETRIEVE-SECT-TABLE.
```

```
GENERATE CLASS-ROLL-DETAIL.
GENERATE ENROLLMENT-REPORT.
```

```
4000-LEVEL-3-ROUTINES SECTION.
```

```
4100-RETRIEVE-DEPT-TABLE.
```

```
MOVE ZEROS TO DTR-KEY.
```

```
MOVE SWR-DEPARTMENT TO DTR-DEPARTMENT.
```

```
MOVE DTR-KEY TO TABLEI-RELATIVE-KEY.
```

```
READ TABLES-FILE RECORD INTO DEPARTMENT-TABLE-RECORD
```

```
  INVALID KEY
```

```
    MOVE '*** Not Found ***'
```

```
    TO DTR-NAME.
```

```
IF SWR-DEPARTMENT NOT = DTR-DEPARTMENT
  PERFORM 4100-RETRIEVE-DEPT-TABLE
```

```
  THRU 4199-EXIT
```

```
  PERFORM 4200-RETRIEVE-COURSE-TABLE
```

```
  THRU 4299-EXIT
```

```
  PERFORM 4300-RETRIEVE-SECT-TABLE
```

```
  THRU 4399-EXIT
```

```
ELSE
```

```
  IF SWR-COURSE NOT = CTR-COURSE
    PERFORM 4200-RETRIEVE-COURSE-TABLE
```

```
  THRU 4299-EXIT
```

```
  PERFORM 4300-RETRIEVE-SECT-TABLE
```

```
  THRU 4399-EXIT
```

```
ELSE
```

```
  IF SWR-SECTION NOT = STR-SECTION
```

```
    PERFORM 4300-RETRIEVE-SECT-TABLE
```

```
    THRU 4399-EXIT.
```

```
GENERATE CLASS-ROLL-DETAIL.
GENERATE ENROLLMENT-REPORT.
```

```
3199-EXIT.
EXIT.
```

```
4000-LEVEL-3-ROUTINES SECTION.
```

```
4100-RETRIEVE-DEPT-TABLE.
```

```
MOVE ZEROS TO DTR-KEY.
```

```
MOVE SWR-DEPARTMENT TO DTR-DEPARTMENT.
```

```
MOVE DTR-KEY TO VSIO-RELATIVE-RECORD.
```

```
MOVE VSIO-READ TO VSIO-COMMAND.
```

```
CALL 'VSAMIO' USING VSIO-PARAMETER-BLOCK, TABLEI,
  TABLES-RECORD.
```

```
IF VSIO-SUCCESS
```

```
  MOVE TABLES-RECORD TO DEPARTMENT-TABLE-RECORD
```

```
ELSE
```

```
  IF VSIO-LOGIC-ERROR
```

```
    IF VSIO-RECORD-NOT-FOUND
```

```
      MOVE '*** Not Found ***' TO DTR-NAME
```

```
    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
```


STOP RUN.

4199-EXIT.
EXIT.

4200-RETRIEVE-COURSE-TABLE.

```
MOVE ZEROS TO CTR-KEY.
MOVE SWR-DEPARTMENT TO CTR-DEPARTMENT.
MOVE SWR-COURSE TO CTR-COURSE.
MOVE CTR-KEY TO TABLEI-RELATIVE-KEY
READ TABLES-FILE RECORD INTO COURSE-TABLE-RECORD
INVALID KEY
  MOVE '*** Not Found ***'
  TO CTR-NAME
  MOVE 0 TO CTR-HOURS.
```

4200-RETRIEVE-COURSE-TABLE.

```
MOVE ZEROS TO CTR-KEY.
MOVE SWR-DEPARTMENT TO CTR-DEPARTMENT.
MOVE SWR-COURSE TO CTR-COURSE.
MOVE CTR-KEY TO VSIO-RELATIVE-RECORD.
MOVE VSIO-READ TO VSIO-COMMAND.
CALL 'VSAMIO' USING VSIO-PARAMETER-BLOCK, TABLEI,
TABLES-RECORD.
IF VSIO-SUCCESS
  MOVE TABLES-RECORD TO COURSE-TABLE-RECORD
ELSE
  IF VSIO-LOGIC-ERROR
    IF VSIO-RECORD-NOT-FOUND
      MOVE '*** Not Found ***' TO CTR-NAME
      MOVE 0 TO CTR-HOURS
    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
      STOP RUN.
```

4299-EXIT.
EXIT.

4300-RETRIEVE-SECT-TABLE.

```
MOVE ZEROS TO STR-KEY.
MOVE SWR-DEPARTMENT TO STR-DEPARTMENT.
MOVE SWR-COURSE TO STR-COURSE.
MOVE SWR-SECTION TO STR-SECTION.
MOVE STR-KEY TO TABLEI-RELATIVE-KEY
READ TABLES-FILE RECORD INTO SECTION-TABLE-RECORD
INVALID KEY
  MOVE '*** Not Found ***'
  TO STR-DESCRIPTION.
```

4300-RETRIEVE-SECT-TABLE.

```
MOVE ZEROS TO STR-KEY.
MOVE SWR-DEPARTMENT TO STR-DEPARTMENT.
MOVE SWR-COURSE TO STR-COURSE.
MOVE SWR-SECTION TO STR-SECTION.
MOVE STR-KEY TO VSIO-RELATIVE-RECORD.
MOVE VSIO-READ TO VSIO-COMMAND.
CALL 'VSAMIO' USING VSIO-PARAMETER-BLOCK, TABLEI,
TABLES-RECORD.
IF VSIO-SUCCESS
  MOVE TABLES-RECORD TO SECTION-TABLE-RECORD
ELSE
  IF VSIO-LOGIC-ERROR
    IF VSIO-RECORD-NOT-FOUND
```

read02n - read02v

```
MOVE '*** Not Found ***' TO STR-DESCRIPTION
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
  STOP RUN.
```

```
4399-EXIT.
EXIT.
```