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จุฬาลงกรณ์มหาวิทยาลัย

ภาคผนวก ก.

## โปรแกรมระบบการจัดการข้อมูล

```

----- UPDATE 14/MAY/86.
*          CONTROL PROGRAM
-----
BEGIN      START C
           PRINT CN,NOGEN
           SAVE (14,12)
           BALR 9,0
           USING BASE,9,10,11,12
BASE       LM 10,12,BADDR
           B  ARGUME
           CNOP C,4
BADDR     JC A(BASE+4096,BASE+8192,3A5E+12233)
           CNOP C,4
AROUND    ST 13,SAVE*
           LR 2,12
           LA 13,SAVE
           ST 13,8(12)
-----
*          BODY
-----
           MVI FLGTRN,C'1'
           BAL 14,CPRINT          PRINT FILE.
           MVI FLGTRN,C' '
           MVC PAREA(123),HEAD1
           BAL 14,CPRINT          PRINT HEADING REPORT.
           MVI FLGTRN,C'1'
           BAL 14,READCOM
           MVI FICCEE,C'1'        VERIFY.
           BAL 14,CFILE          VERIFY.
           MVI FICCEE,C'2'        VERIFY.
           BAL 14,CFILE          VERIFY.
           MVI FICCEE,C'3'        VERIFY.
           BAL 14,CFILE          VERIFY.
MAIN       MVI FLGTRN,C' '
           BAL 14,READCOM        READ COMMAND.
           LLI EQUFLC,C'E'
           BE  CLCSEF
           MVC CCMD(81),O(2)
           MVC PAREA(80),COMMAND
           BAL 14,LPRINT          PRINT LISTING.
           LLI ERFLC,C'E'        ERROR FLAG.
           BE  MAIN
*
INTERP    EQU *
           LA 0,CLCMAND-1
           SA 5,5
           ST 6,CMS
           ST 5,CLCMAND
           LA 15,SGENER
-----

```





FILE: UMSYS TEST: 81 VM/SP CONVERSATIONAL MONITOR SYS.

```

SCN03  B      ENDS0
SCN04  CLL    C(6),C(7).      CONTINUE SIGN.
      BNE    SCN05          CONTINUE.
      MVI    FLG1FN,C' '
      BAL    14,R#1ECCOM      READ COMMAND.
      MVC    CCN01(81),D(2)
      MVC    PARE1(80),COMMAND
      BAL    14,C#FFINT.      LISTING.
      LA     6,CC#PANDH-1
      SR     5,5
      B     SCN06
SCN05  CLL    C(6),C(7).      COMPARE WITH BLANK.
      BE    SCN06
      CLL    C(6),C(7).
      BE    SCN06
      CLL    C(6),C(7).
      BNB   SCN07
SCN06  CLL    TCKEN,C' '.      IS TOKEN = BLANK.
      BNE   ENDS0          RETURN
      B     SCNC1          SCAN CONTINUE.
SCN07  CLL    C(6),C(7).
      BNB   SCN08
      B     ENDS0
SCN08  CLL    C(6),C(7).
      BNE   SCN05
SC1    MVI    FLG1FN,C' '
      BAL    14,R#1ECCOM      READ COMMAND.
      MVC    PARE1(80),COMMAND
      MVI    FLG1FN,C' '
      BAL    14,C#FFINT.      LISTING.
      LA     6,CC#PANDH-1
      LA     5,C
SC2    A      6,=F(1)
      A      5,=F(1)
      CLL    C(6),C(7).
      BNB   SCNC5
      LR     5,7
      BH    SC1
      B     SC2
SCN09  MVC    C(1,4),D(6)      MOVE TO TOKEN.
      A      4,=F(1)         TOKEN POINTER.
      A      3,=F(1)         TOKEN LENGTH.
      B     SCNC1
ENDSC  SI     5,CLLEN1
      MVC    PARE1(80),TOKEN  *****TEST
      BAL    14,C#FFINT.      *****TEST
      SI     6,C#F
      ST     3,SI#
      ST     4,LI#
      L      7,R#E67
      L      14,R#1AUR
      BR     J4
*
SCUMTAB  B      1A(C)
COMTAB  DS      CF
      -----
      COMMAND TABLE.  *
  
```

FILE: JMSYS

TEST2 BI

V4/SP CONVERSATIONAL MONITOR SYS

```

DC CL8'INIT *
DC A(INITFIN).
DC CL8'DEFINE *
DC A(DEFFIN).
DC CL8'WRITE *
DC A(WRTFIN)
DC CL8'LOCATE *
DC A(LOC4FIN)
DC CL8'CHANGE *
DC A(CHNGFIN).
DC CL8'REPLACE *
DC A(REPFTN).
DC CL8'RELEASE *
DC A(LELFIN)
DC CL8'JIC *
DC A(ACEFIN)
DC CL8'RENAME *
DC A(RENFTN).
DC CL8'DISPLAY *
DC A(DISFIN)
DC CL8'TYPE *
DC A(TYFFIN)
DC CL8'LIST *
DC A(LISFIN)
DC CL8'FECKZ *
DC A(REGFTN)
DC CL8'*****
TAB01 MVI FICTFN,C' *
SI 14,RBTADR
LAI 7,CC0TAB LOAD ADDR OF CUMTAB.
LDUPTAB LCL C(8,7),COM
DE TABC2 FUJD.
LCL C(8,7),=C'*****' END OF TABLE.
DE TABC3
LA 7,12(7) LOAD NEXT ENTRY.
b LCLFTAB
TAB02 L 7,8(7) GET WORK ROUTINE ADDR.
b TABC4
TAB03 LA 7,ERBIN
TAB04 ST 7,*LFFFIN
L 14,RBTADR
OR 14
* INITIAL ROUTINE
INTRIN EQU *
SI 14,RBTADR1
MVI FICCN,C'1'
CAL 14,CPFILE OPEN DATA DIC.
MVI FICTFN,C' *
MVI FICCN,C'1' I=DATA DIC.
CAL 14,MUSEC MOD KEY SEQ.
MVI FICCN,C'1'
LA 14,13
SI 14,RLEN RES. LENGTH.
CAL 14,MULEN
MVI LATAFN(13),=C'A000000010001'
    
```

FILE: DMSYS

1E512 B1

VM/SP CONVERSATIONAL MONITOR S

```

MVI FICCEE,C'1'
BAL 14,WFILE
MVC DATAFN(13),=C'000000010001'
BAL 14,WFILE
MVC DATAFN(13),=C'000000010001'
BAL 14,WFILE
MVI FICCEE,C'2'          INIT DATA FILE.
BAL 14,CFILE
BAL 14,MUSEC
LA 14,26
ST 14,RLEN
BAL 14,MULEN
MVC DATAFN(30),=C'0000001 DATA FILE FOR DMSYS .'
BAL 14,WFILE
MVI FICCEE,C'3'          INIT INDEX.
BAL 14,CFILE
BAL 14,MUSEC
LA 14,44
ST 14,RLEN
BAL 14,MULEN
MVC DATAFN(35),=C'00000A
MVC DATAFN+35(9),=C' INDEX '
BAL 14,WFILE
MVI FICCEE,C'1'
BAL 14,CFILE          CLOSE DIC.
MVI FICCEE,C'2'
BAL 14,CFILE          DATA.
MVI FICCEE,C'3'
BAL 14,CFILE          INDEX.
L 14,R1ADR1
BR 14

*
DEFKIN EQU *
ST 14,R1ADR1
MVI FICCEE,C'1'
BAL 14,DEFFILE          OPEN DIC.
MVI FICCEE,C'2'
BAL 14,CFILE          DATA.
MVI FICCEE,C'3'
BAL 14,CFILE          INDEX.
MVI FLCTFN,C' '
BAL 14,RESRTA          READ DATA DIC TYPE A.
PACK NFIF(8),NFI(+)
PACK NFD(8),NFD(4)
LA 13,STIMER
BALB 14,15
MVC CCM(8),JOKEN
LCL CCM(8),=C'FIELD '
DE DEFDC1          DEFINE FIELD.
LCL CCM(8),=C'FILE '
DE DEFJ(1)          DEFINE FILE.
LCL CCM(8),=C'KEY '
DE DEFRC1          DEFINE KEY.
MVI FLCTFN,C' '
MVC FAREX(10),=C'INVALID PARAMETER.'

```

FILE: DMSYS TEST2 BL V4/SP CONVERSATIONAL MONITOR S

```

DAL 14,CFFINT.
MVI ERFL6,C'E'
B REICBF ABNORMAL RETURN.
* DEFINE FIELD.
DEFD01 EQU *
LA 15,SCNER
BALF 14,15
CLI TCKE,C' '
BE EFCE3
CLC NFE(4),=C'0001'
BE LLDEF1 CHK BLK RTB.
DAL 14,SFLCQ CHK DUPLICATE NAME.
CLI ERFL6,C'E'
BNE LLDEF1CC
MVI ERFL6,C' '
B LLDEF1
LLDEF00 MVI ERFL6,C'E'
MVC PARB(29),=C'ERR***> DUPLICATE FIELD NAME.'
BAL 14,CFFINT
B REICBF
LLDEF1 MVI FICCE,C'.1'
LA 15,15
ST 15,FLEN
DAL 14,MLEN
BAL 14,MGCIR ADD JIR.
MVC LATAFN(L),=C'3' TYPE B
MVC LATAFN+1(4),NFD
MVI LATAFN+5,C' '
MVC LATAFN+(8),TOKEN MOVE FIELD NAME.
LA 15,SCNER
DALF 14,15
CLI ECJFC,C'C'
BNE LLDEF2
DEFER1 MVI FLGIRN,C' '
MVC PARE(12),=C'INCOMPLETE PARAMETER.'
BAL 14,CFFINT.
B EFCE3
DEFER2 MVI FLGIBN,C' '
MVC PARE(12),=C'LENGTH EXCESS *****'
DAL 14,CFFINT
B EFCE3
LLDEF2 MVC LATAFN+L4(3),=C'000'
LA 7,LATAFN+17
SK 7,3 FIND LENGTH OF TOKEN.
LA 4,ICBEN
EX 3,PCYER MOVE FIELD LENGTH.
DEFD02 EQU *
LA 15,SCNER
DALF 14,15
CLI TCKE,C' '
BE EFCE1
MVC LATAFN+L7(1),TOKEN MOVE DATA TYPE.
BAL 14,NBITEL WRITE DEC RIB.
CLI ECJFC,C'C'
BE EFCE3

```

FILE: JMSYS

TEST2 81

V4/SP CONVERSATIONAL MONITOR 5

```

AP      NFF(18),=P'1'
JNPK   LNEL(5),NFDP+5(3)
MVC    NFD(4),NFDP+1
UI     NFD+3,X'FO'
B      CEFC(1)

*
DEFI01 LA      15,SCANER
      BALB    14,15
      CLL    TICKED,C' '
      BE     RETC(1)
      CLC    NFI(4),=C'0001'
      BE     DEF1012
      BAL    14,STOPEND
      CLL    ERFLG,C'E'
      BNE   DEF1011
      MVI   ERFLG,C' '
      B     DEF1012
DEFI011 MVC    PAREA(28),=C'ERR***> DUPLICATE FILE NAME.'
      BAL    14,CFFINT.
      MVL   ERFLG,C'E'
      B     RETC(1)
DEFI012 ZAP    NFI(2),Z(2)
      ZAP   ADRF(2),Z(2)
      ZAP   RLENB(2),Z(2)
      MVC   FILE(14),NFI
      MVI   I,C'1'
      LA    7,R18
      MVI   C(7),C'D'
      MVC   I(4,7),NFI
      LA    7,R17
      MVC   FNAME(8),TOKEN
DEFI02  LA      15,SCANER
      BALB    14,15
      CLL    TICKED,C' '
      BNE   DEF112
      CLL    ECJFLG,C'C'
      BE     DEF103
DEFI12  BAL    14,STOPEND
      CLL    ERFLG,C'E'
      BNE   SEAR(F1)
      MVC   PAREA(34),=C'***ERR FIELD NAME NOT DEFINED.'
      BAL    14,CFFINT
      B     RETC(1)

*
SEARCH1 MVC    C(4,7),FIELDN
      PALK   FULLDE(2),FJLEN(3)
      UNPK   ALR(3),ADR(2)
      UI     ALR+2,X'FO'
      MVC    4(3,7),ADR
      LA    7,7(7)
      AP    ALR(2),FJLENP(2)
      AP    NFF(2),=P'1'
      AP    RLENB(2),FJLENP(2)
      CLL    ECJFLG,C'C'
      BE     DEF103
      MOVE FIELD NO TO RTD.
      FIELD LEN.
      MOVE OFFSET.
      INCREMENT RTD POINTER,
      ADD OFFSET WITH LEN.
      N OF FIELD IN FILE.
      COUNT REC LENGTH.

```





FILE: DMSYS

TEST2 01

11/5P CONVERSATIONAL MONITOR

```

DEF103  B      CEEIG2
        CP      RLEN(12),=P'J'
        BE      RETLFF          RETURN
        UNPK    NF(13),NFP(2)      MOVE N OF FIELDS TO RT
        UI      NF(12),X'FO'
        JNPK    RL(3),RLENP(2)
        UI      FL(2),X'FO'
        MVC     KF(12),=C'0000000000000000'
        MVC     NR(4),=C'0000'
        MVC     NFR(4),=C'0000'
        MVL     FICCHE,C'1'      MODIFY REC. LEN.
        LA      14,44
        ST      14,RLEN
        BAL     14,NRLEN
        MVL     FICCHE,C'1'
        BAL     14,NFCIR      MODIFY DIR.
        MVI     FICCHE,C'1'
        MVC     DATATR(44),RTC    WRITE RTC.
        BAL     14,NRTEL
        ZAP     RTCLIN(8),NFP(2)
        MP      RTDLIN(8),=P'7'
        AP      RTLLIN(8),=P'5'
        CVB     2,NRLEN
        ST      2,NLEN
        MVL     FICCHE,C'1'      CAL. RTD LENGTH.
        BAL     14,NRLEN      MOD LEN DIC.
        L      2,RLEN
        LA      7,DATATR
        LIA     4,RTI
        EA      2,NLEN      MOVE RTD TO DATATR.
        MVL     FICCHE,C'1'
        BAL     14,NRTEL      WRITE RTD .
        AP      NFIF(8),=P'1'
        JNPK    NF(14),NFP(3)      ADD FILE NO.
        UI      NF(13),X'FO'
DEF003  BAL     14,CFRKIA      TO UPDATE DATA DIC RTA.
        B      FETCFF
*
DEFK01  EQU     *
        LA      15,SCANER
        BALR    14,15
        CLI     ECJFLC,C'0'
        BE      FETLFF          RETURN.
        BAL     14,SEARCHNO     SEARCH FILE NO.
        CLI     ERFLC,C'E'
        BNE     EERRG2
        MVC     PARE(33),=C'****ERR FILE DATE DID NOT DEFINE.'
        BAL     14,CFRINI
        B      RETLFF
DEFK02  LA      5,KFI
        ZAP     ELLDF(2),=P'0'
        ST      5,RELE
DEFK03  LA      15,SCANER
        BALR    14,15
        CLI     ICREA,C' '

```

FILE: UMSYS IESIZ BL V4/SP CONVERSATIONAL MONITOR

```

DEFK031 BNE DEFK04
        CLC KF1(4),=C'0000'
        BE REICBF
        B DEFK06
DEFK04 BAL 14,SLEN0 SEARCH FIELD NO.
        CLL EFPLE,C'E'
        BNE DEFK05
        MVC PARE1(34),=C'****ERRK FIELD NAME DID NOT DEFINE.'
        BAL 14,LEFIN
        B REICBF
DEFK05 L 5,REES
        MVC C(4,5),RT.B+1
        PALC NFP(1),FDLEN(3)
        AP FDLEDF(2),NFP(2)
        CP FDLEDF(2),=P'30' CHK KEY LEN.
        BNE DEFK051
        MVC PARE1(27),=C'KEY LENGTH EXCESS 30 BYTES.'
        BAL 14,LEFIN
        B REICBF
DEFK051 LA 5,4(5)
        ST 5,REES
        CLL ECJFEG,C'C'
        BNE DEFK06
        B DEFK051
DEFK06 BAL 14,LEIRIC UPDATE DATA JIC REC. TYPE C.
        MVI FICCE,C'3'
        BAL 14,MEIR MOD INDEX TO JIC.
        MVC DATAFN(3:5),=C'00000A
        BAL 14,PCINT01
        MVC DATAFN(4),FILEID
        MVI DATAFN+4,C'1'
        MVC DATAFN+5(30),=C'A
        MVC DATAFN+3:5(9),=C'00000000'
        LA 6,44
        ST 6,KLEN
        BAL 14,MELEN
        BAL 14,WFJTEL FIRST REC OF INDBX.
        CLC NR(4),=C'0000'
        BE REICBF
        MVI FICCE,C'1'
        BAL 14,MEIR MOD JIC TO JIC.
        MVC DATAFN(5),=C'00001'
        BAL 14,PCINT01 LOCATE FIRST REC RTD.
        MVI DATAFN,C'D'
        MVC DATAFN+1(4),FILEID
        BAL 14,KEALCL READ RTD.
        BAL 14,MCVRTD MOVE TO RTD.
        BAL 14,MVKEY FIND KEYPJS & LEN.
        ZAP KEYP(5),=P'1'
        MVI FICCE,C'2'
        BAL 14,MEIR
        MVC DATAFN(4),FILEID
        MVC DATAFN+4(4),=C'0001'
        BAL 14,PCINT01
        UNPK LNF(5),KEYP(5)

```

FILE: JMSYS TEST2 B1 V1/SP CONVERSATIONAL MONITOR S

```

DEFK07  OI  UNP+4,X'FO'
        MVC  CAT1FN(4),FILEID
        MVC  CAT1FN*(4),UNP+1
        MVI  FICCEE,C'2'
        BAL  14,R14COL      READ DATA.
        BAL  14,R14EXCL     WRITE INDEX.
        AP   KEYF13),=P'1'
        UNPK UNP(15),KEYP(3)
        OI  UNP+4,X'FO'
        CLC NR(4),UNP+1
        BE  REICBF
        B   [EFK07
REIDEF  MVI  FICCEE,C'1'
        BAL  14,CFILE      CLOSE JIC.
        MVI  FICCEE,C'2'
        BAL  14,CFILE      DATA.
        MVI  FICCEE,C'3'
        BAL  14,CFILE      INDEX.
        L   14,R14ADR1
        BR  14
*
DISRTN  EQU  *
        ST  14,R14ADR1
        MVI  FICCEE,C'1'
        BAL  14,CFILE
        BAL  14,R14ADR1A
        PACK NF1F1E),NF1(4)
        LA  15,SCANNER
        BALR 14,15
        ZAP  KEYF13),=P'1'
        CLL  ECJF1C,C'0'
        BE  [DISC1
        MVI  FICCEE,C'1'
DISRTN1 BAL  14,SE12END     SEARCH FILE NO:
        CLL  ERFLC,C'E'
        DNO  [DISC4
        MVC  PARE(133),=C'***ERR FILE DATE DID NOT DEFINE.'
        BAL  14,CPRINT.
        B   [ISR81
DIS01  MVI  FLC(1),L'0'     EVERY FILE
DIS02  MVI  FICCEE,C'1'     MODIFY TO DIR ACCESS.
        BAL  14,PL1R
DIS03  UNPK  KEYS(5),KEYP(3)
        OI  KEYS(4),X'FO'
        MVI  CAT1FN,C'0'
        MVC  CAT1FN(4),KEYS+1
        MVI  FICCEE,C'1'     READ JIC.
        BAL  14,R14COL
        MVC  FIC(144),J(2)
        CLL  FLC(1),L'0'
        BE  [DISC4     EVERY FILE.
        CLC  FN(16),J(EN)
        BE  [DISC4
        AP   KEYF13),=P'1'
        CP   KEYF13),NFIP(8)

```

FILE: UMSYS      IEB12      BI      V4/SP CONVERSATIONAL MONITOR

```

DE      EFCIS
b       DISC3
DIS04  MVC  PAREA(13),='C'FILE STRUCTURE.'
        BAL  14,CFFINT
        BAL  14,FBHEAD
        MVC  PAREA(135),HEAD2
        BAL  14,CFFINT
        MVC  PAREA(144),LINE1
        BAL  14,GFHINT
        BAL  14,CFFINT
        PACK RTCLIN(8),NFLD(3)
        CVB  8,RTCLEN
        MVI  DATAFN,C'D'
        MVC  DATAFN+1(4),FILEID
        MVI  FILEEE,C'I'
        BAL  14,FBADCL
        BAL  14,MGVRTD
        LA   5,RTCL5
        MVI  DATAFN,C'D'
*
LG0PS1 MVC  DATAFN+1(4),O(5)
        MVI  FILEEE,C'I'                READ RT3
        CLI  C(E),C'*.
        DE   DISC5C
        BAL  14,FBADCL
        MVC  RTE(18),Q(2)
        MVC  PAREA(18),FDNAME
        MVC  PAREA+16(3),FDLEN
        MVC  PAREA+32(1),TY
        BAL  14,CFFINT
DIS050  LA   5,Z(5)
        DCB  8,LCEFS1
        CLI  FLCC1,C'D'
        DE   DISC6
DIS05   LA   15,SCANER
        BALR 14,J5
        CLI  ECJH(C),C'U'
        DE   DISK#7
        b     DISK#1
DIS06   AP   KEYF(3),='P'I'
        CP   KEYF(3),NFLP(8)
        DE   DISK#1
        b     DISC3
EKDIS  MVC  PAREA(133),='C'***EKK FILE DATE DID NOT DEFINE.'
        BAL  14,GFHINT
        b     DISC3
DISK#1 MVC  PAREA(144),LINE1
        BAL  14,CFFINT
        MVI  FILEEE,C'I'
        BAL  14,CFILE
        L    14,K#1ADCL
        BR   14
*
TYPE DATA ROUTINE.
-----
TYPK#1 EQU  *
        ST  14,K#1ADCL

```

FILE: DMSYS TEST2 81 VMS/SP CONVERSATIONAL MONITOR :

```

MVI FIC00E,C'1'
BAL 14,CFFILE
MVL FIC00E,C'2'
BAL 14,CFFILE
MVI FIC00E,C'3'
BAL 14,CFFILE
BAL 14,FEACKTA
LIA 15,SEANBR
BALF 14,15
CLI TICKED,C' '
BE RETTYP
BAL 14,SEFILEEND SEARCH FILE 10.
CLL ERELE,C'E'
BNE TYP01
MVC EARE(133),=C'****ERR ICE NAME DID NOT DEFINE.'
BAL 14,GFFIND
B RETTYP
TYP01 MVC EARE(110),=C'TYPE DATA.'
BAL 14,CFFIND
BAL 14,FEAD PRINT HEAD OF FILE.
PAGN ELENF(8),KL(3)
CVB 8,HLNFP
A E,=F1)'
BAL 14,GFFIND.
ZAP KEYP(2),=P'1'
MVL FIC00E,C'2'
BAL 14,MGDIR
TYP02 UNPK KEYS(5),KEYP(3)
MVC DATAFN(4),FILEID
JI KEYS(4),X'FU'
LA 7,DATAF
LK 5,8
MVC DATAFN+(4),KEYS+1
BAL 14,HEFILE READ DATA FILE.
LK 4,2
LA 4,6(3)
TYP03 BAL 14,FFJID,10
CLL KEYS(14),NR
BE RETTYP
AP KEYP(2),=P'1'
UNPK KEYS(5),KEYP(3)
JI KEYS(4),X'FU'
B TYP02
RETTYP MVI FIC00E,C'1'
BAL 14,CFILE
MVI FIC00E,C'2'
BAL 14,CFILE
MVL FIC00E,C'3'
BAL 14,CFILE
L 14,HEFILE
BK 14
*
PRINTD SI 14,HEFILE
MVC FN(14),KEYS+1
MVC RECI(10),=C'RECORD NO.'

```

FILE: JMSYS TEST2 01 VMS/P CONVERSATIONAL MONITOR

```

TYP03  C      5,=F1100'
        BH     TYP04
        LK     3,8
        EX     3,MCVER
        BAL   14,11FLAT,      PRINT DATA
        B      FETFEJ
TYP04  L      3,=F1100'
        EX     3,MCVER
        S      3,=F1100'
        LA     2,100(7)
        LA     4,100(4)
        BAL   14,11FEAT
        MVC   PAREA(1123),PAREA-1
        B      TYP03
RETPRI L      14,REIADR3
        BR    14
*
TYPDAT ST     14,REIADR4
        MVC   PAREA(123),PAREA
        BAL   14,LEFIN
        L      14,REIADR4
        BR    14
*
WKTRIN ST     14,REIADR1
        MVI   FICFILE,C'1'
        BAL   14,LEFILE      OPEN DIO.
        MVI   FICFILE,C'2'
        BAL   14,CFFILE      DATA.
        MVI   FICFILE,C'3'
        BAL   14,CFFILE      IOX
        LA     14,C
        ST    14,KEYL      SET KEY LENGTH=0.
        ST    14,KEYPCS
        ST    14,KEYL+4
        ST    14,KEYL+8
        ST    14,KEYPCS+4
        ST    14,KEYPCS+8
        MVI   FLAGFN,C' '
        LA     15,SCANER
        BAL   14,15
        CLI   ECJFLC,C'0'
        BE    #F1F11      RETURN.
        BAL   14,FBADRTA
        BAL   14,SEFILENO      SEARCH FILE NO.
        CLI   ERFLO,L'B'
        BR    #F1C1
        MVC   PAREA(133),=C'***ERR FILE NAME DIO NOT DEFINE.'
        BAL   14,CFFIN
        C      #F1F11
WRIT01 MVI   DATAFN,C'0'
        MVC   DATAFN(4),FILEID      READ RTJ.
        MVI   FICFILE,C'1'
        BAL   14,FBALC1
        BAL   14,MOVRTD      MOVE RTJ.
        CLC   KF1(4),=C'0000' IS DEFINE KEY FOR DATA FILE.
    
```

FILE: UMSYS TEST2 01 11/5P CONVERSATIONAL MONITOR SY

```

DE BRIC3 BRANCH TO WRITE DATA.
BAL 14,MOVEKEY GET KEY FIELDS.
WRT03 BAL 14,READCOM READ DATA CARD.
MVC CCM(18),O(2)
CLL ECJF(1,C,C'E'
BE WRIRB1
MVL FARE(18),COMMAND
BAL 14,CPRINT.
CLL CCM(18),=C'DATA'
BE WRIC4
MVL ERFL(1,C'E' ERROR
MVC FARE(18),=C'***ERR NOT DEFINE START OF DATA.'
BAL 14,CPRINT
B WRIRB1
WRT04 PACK FLEN(18),RL(3)
CVB 6,RLNPP LOAD REGS WITH RECLEN.
WRT05 LR 5,6
WRT5 LIA 7,DATAIRN+9
WRT06 BAL 14,READCOM READ DATA.
MVC CCM(18),O(2)
MVC FARE(18),I(2)
BAL 14,CPRINT PRINT INPUT DATA.
CLL CCM(18),=C'END' CHECK END OF DATA.
BE WRIRB1
CLL ECJF(1,C,C'E'
DE WRIRB1
CLL ECJF(1,C,C'
BE WRIRB1
LA 4,COMMAND
C 5,=F'EC' REGS=COUNT REG LEN.
BH WRIC7
LR 3,5 GET LENGTH TO BE MOVE.
EX 3,MOVER MOVE DATA SEGMENT.
B WRIC8 WRITE DATA.
WRT07 L 3,=F'EC'
EX 3,MOVER
S 5,=F'EC' SUBTRACT RECLEN. (80).
LA 7,C(47)
D BRIC8 READ TEXT CARD.
WRT08 PACK NRP(3),NR(4)
AP NRP(3),=P'1'
UNPK LNF(5),NRP(3)
UI LNP+4,X'F0'
A 6,=F'5' ADD KEY OF VSAM 3+1 BYTES.
ST 6,RLNPP
MVL FIC(1,C'.2'
BAL 14,MLEN MODIFY DATA FILE RECLEN.
BAL 14,MLER MODIFY DATA FILE TO IIR ACCESS.
MVC DATAIRN(4),FILEID
MVC DATAIRN+(4),JNP+1
MVC NR(4),UNP+1 SAVE 11. OF RECORDS.
MVL FIC(1,C'.2'
MVL DATAIRN+8,C' '
BAL 14,WRITEL WRITE DATA.
S 6,=F'5'

```



FILE: DMSYS TEST2 DL V4/SP CONVERSATIONAL MONITOR

```
LK 5,6
L 4,KEYFCS
C 4,=FIC' IS DEFINE DATA KEY.
BE *R115 NO READ NEXT CARD.
BAL 14,*)CXCL. WRITE INDEX.
B *R115
WRITEI BAL 14,C)FIC.
WRITEI MVI FIC)E,C'.1'
BAL 14,C)FILE CLOSE DIC.
MVL FIC)E,C'.2'
BAL 14,C)FILE DATA.
MVI FIC)E,C'.3'
BAL 14,C)FILE IDX.
L 14,R)IADR.1
BK 14
* LOCATE DATA RECORD.
LOCRTN EQU *
ST 14,R)IADR.1
MVI FIC)E,C'.1'
BAL 14,C)FILE OPEN DIC.
BAL 14,R)ADR)A
MVI FIC)E,C'.2'
BAL 14,C)FILE. DATA.
MVI FIC)E,C'.3'
BAL 14,C)FILE. IDX.
LA 15,S)IADR
BALH 14,15
LLI EC)FIC,C'.C'
BE RE)LLC
BAL 14,S)FILENO SEARCH FILE FILE NO.
CLI ER)FLG,C'.E'
BNB LC)C)
MVC PARE)1(34),=C'***ERR FILE NAME DID NOT DEFINE .'
BAL 14,C)FINT)
B RE)LLC
LOC01 MVC FIC)1(14),FILEID
MVL FIC)E,C'.1'
BAL 14,M)E)R
MVI DAT)1(14),C'.0'
MVC CA)1(14)+L(14),FILEID
BAL 14,R)ADR.1 READ R)D.
BAL 14,M)E)R)D
LA 15,S)IADR
BALH 14,15
CLL T)K)E)1(14),=C'RECNO '
DE LL)F)C LOCATE WITH RECORD NO.
CLL T)K)E)1(14),=C'KEY '
DE LL)K)E)Y LOCATE WITH KEY.
CLL T)K)E)1(14),=C'FILED '
DE LL)C)F)I
MVC PARE)1(20),=C'***ERR INVALID PARAMETER.'
BAL 14,C)FINT)
MVL ER)FLG,C'.1'
B RE)LLC
LOC)EC LA 15,S)IADR
```



FILE: UMSYS      TEST2      B1      V4/SP CONVERSATIONAL MONITOR S

```

LOCKEY  BALF  14,15
        MVC  REC1L(4),TOKEN
        MVC  FIIC(4),FILEID
        B    RETLEC
LOCKEY  EQU   *
        MVL  FICCEE,C'3'
        MVC  [DATA]RN(4),DATA]RN-1
        LA   14,C
        ST   14,KEY1
        ST   14,KEY2+4
        ST   14,KEY2+8
        ST   5,REES
        ST   6,REEE
        BAL  14,MOVEKEY
        MVL  FICCEE,C'3'
        BAL  14,MCIR
        MVC  [DATA]RN(4),FILEID
        MVI  [DATA]RN+4,C'1'      SET KEY FOR IDX FILE.
        LA   7,DATA]RN+5
        LI   5,=F13'
        LA   0,KEY1
LOCK01  LA   15,SCANNER
        BALF  14,15
        CLI  TOKEN,C' '
        BE   LLLK02
        L    3,C(4)
        C    3,=F10'
        BE   LLLK02
        LA   4,TOKEN
        EX   3,MOVEK      MOVE KEY VALUE.
        A    7,C(6)
        A    6,=F14'
LOCK02  DCF   5,LOCK01
        CLI  [DATA]RN+5,C' '
        BE   RETLEC
        MVI  FICCEE,C'3'
        BAL  14,MOVEK
        MVC  FIIC(4),FILEID      GET FILE NO.
        MVC  REC1L(4),30(2)      MOVE LOC OF DATA REC.
        B    RETLEC
LOCK03  MVC  [DATA]RN(4),30(2)
        B    RETLEC
LOCK04  LA   15,SCANNER
        BALF  14,15
        CLI  TOKEN,C' '
        BE   RETLEC
        BAL  14,SEARCH      SEARCH FIELD 10.
        CLI  ERFL,C'E'      IS FIND?
        BNE  LLLFC1
        MVC  PARE2(30),=C'***ERR: FIELD NAME DID NOT DEFINE.'
        BAL  14,PRINT
        B    RETLEC
LOCK05  BAL  14,SEARCH      SEARCH FIELD 11 RTD.
        CLI  ERFL,C'E'
        BNE  LLLFC2

```

```

FILE: JMSYS      IE812      B1      VM/SP CONVERSATIONAL MONITOR

      MVC      PARE1(42),=C'****ERR FIELD NAME DID NOT DEFINE IN FILE.
      BAL      14,CFFINT
      B        RETLUC
LUCF02  PACK   RILLIN(8),4(3,7)
      CVB      8,RILLEN
      ST       8,FLFES
      PACK   RTLLIN(8),FDLEN(3)
      CVB      8,RILLEN
      ST       8,LFIC
      LIA     15,SCANER
      BALF    14,15
      MVC     VALB(80),TOKEN
      MVC     PARE1(3),4(7)
      MVC     PARE1+4(3),FDLEN
      MVC     PARE1+10(30),VALUE
      BAL     14,CFFINT
RETLUC  MVI    FICCE,C.1'
      BAL     14,CFILE
      MVI    FICCE,C.2'
      BAL     14,CFILE
      MVI    FICCE,C.3'
      BAL     14,CFILE
      LI     14,RBIADR1
      BR     14
*
LUCVLU  ST     14,RBIADR4      READ DATA AND GET FIELD VLU.
      MVC     ICKEA(80),TOKEN-1
      LA     7,TOKEN
      L      5,FLFES
      MVI    FICCE,C.2'
      MVC     CATATN(4),FILEID
      UNPK   KEYS(5) RECNO(3)
      JI     KEYS+4,X'FO'
      MVC     CATATN*(4),KEYS+1
      BAL     14,FEADCL      READ DATA FILE.
      ST     2,REC2
      LK     4,2
      AK     4,5      ADDR. MURKDA.
      A      4,=FIS!      POSITION OF READ DATA FLD.
      L      3,LFEE      FLD LEN.
      EX     3,MVER
      L      14,RBIADR4
      BR     14
*
CHNKTN  EQU    *      CHANGE DATA VALUE RTN.
      ST     14,RBIADR1
      MVI    FICCE,C.1'
      BAL     14,CFILE
      BAL     14,MCLIK
      MVI    FICCE,C.2'
      BAL     14,CFILE
      BAL     14,MCLIK
      LIA     15,SCANER
      BALF    14,15
      CLD    EQU FLD,C.0'

```

FILE: DMSYS TEST2 01 VMSP CONVERSATIONAL MONITOR

```

DE      RETCN          RETURN.
BAL    14,SRFCN      SEARCH FIELD NO.
CLL    ERFLG,C'E'
BNE    CFNC01
MVC    PAREA(34),=C'***ERRK FIELD NAME DID NOT DEFINE.'
BAL    14,CPRINT.
CHN001 0      RETCN
BAL    14,MECHK
BAL    14,CENFLG      CHECK IF FIELD IS A KEY.
CLL    FLGC1,C'D'
BE     CFNC11
BAL    14,MOVEKEY
0      CHN111
CHN011 MVI    FICCEE,C'1'
CHN111 MVI    DATAFN,C'D'
MVC    DATAFN+L(4),FILEID
BAL    14,READCL      READ RTD.
BAL    14,MOVRTD      MOVE DATA TO RTD.
BAL    14,SRFD        SEARCH FIELD IN RTD.
CLL    ERFLG,C'E'
BNE    CFNC02
MVC    PAREA(42),=C'***ERRK FIELD NAME DID NOT DEFINE IN FILE.'
BAL    14,CPRINT
CHN002 0      RETCN
MVC    ALR(3),4(7)    GET FIELD POSITION IN REC.
PACK   RTLEN(6),RL(3)  GET REC LEN.
CVB    8,RTLEN
A      8,=F'9'        ADD KEY + DELETE BYTE.
ST     8,RLLEN
MVI    FICCEE,C'2'
BAL    14,MELEN
LA     15,SCANNER
BAL    14,15
CLL    TCKED,C' '
BE     RETCN
MVI    FICCEE,C'2'
BAL    14,MELEPC
MVC    COMMAND(80),TCKED  DATA READ FROM CARD.
L      5,FLGFCS      CHECK LOCATE.
C      5,=F'0'
BNE    CFNC03
CLL    LCLAREA,C' '
BNE    CFNC05
MVC    PAREA(30),=C'***ERRK> DATA RECORD DID NOT LOCATE.'
BAL    14,CPRINT
0      RETCN
CHN003 ZAP   RECN(3),=P'1'
CHNLOOP BAL    14,LCLVLD      READ DATA AND MOVE FIELD.
CLL    TCKED(80),VALUE
DND    CFNC04
CLL    FLGC1,C'D'
BE     CFNLECI
L      8,RLLEN
LA     7,DATAFN
LA     4,RELC

```

FILE: UMSYS IES12 81

VM/SP CONVERSATIONAL MONITOR :

```

      EX      8,MVER
      BAL     14,CB1IDX
CHN001  BAL     14,CBNDLU
      CLI     FLGC1,C'0'
      BE      CHNG4
      BAL     14,h)EXCL
CHN004  CLI     NR(4),KEYS+1
      BE      RETLBN
      AP      REGNE(3),=P'1'
      B       CHNLEP
CHN005  MVC     CAT1FN(8),LUCAREA
      MVI     FICCE,C'2'
      BAL     14,READCL
      ST      2,REG2
      CLI     FLGC1,C'0'
      BE      CHNC15
      L       8,RLEN
      LA      7,CAT1FN
      LA      4,REG2
      EX      8,MVER
      BAL     14,CB1IDX
CHN015  BAL     14,CBNDLU
      CLI     FLGC1,C'0'
      BE      RETLBN
      BAL     14,h)EXCL
RETLBN  MVI     FICCE,C'1'
      BAL     14,CFILE
      MVI     FICCE,C'2'
      BAL     14,CFILE
      LI      14,REIADR1
      BR      14
*
CHNFLG  EQU     *
      ST      14,REIADR4          CHK HAS A KEY.
      ST      5,REG5
      ST      6,REG6
      LIA     5,3
      LA      6,KFI
FLGLUP  LLL     6(4,6),FLELDN    CK IS CHANGE FLD IS KEY.
      DC      FLGDT
      LA      6,416)
      BCT     5,FLGLUP
      MVI     FLGC1,C'0'
      B       RETFLG
FLGEXT  MVI     FLGC1,C'1'
RETFLG  L       5,REG5
      LI      6,REG6
      L       14,REIADR4
      BR      14
*
DEL1X   EQU     *
      ST      14,REIADR4
      BAL     14,MV1K
      MVC     CAT1FN(55),KEYREC
      MVI     FICCE,C'3'

```



FILE: DMSYS TEST2 BL M/SP CONVERSATIONAL MONITOR SY

```

BAL 14,MECLD MOD TO UPDATE.
BAL 14,REACCL
BAL 14,EFAS
BAL 14,MECIR
L 14,REIADR4
BR 14

```

\* CHANGE DATA .

```

CHNVLU EQU *
ST 14,REIADR4
L 4,REER
LA 7,DATATRN
L 3,RLBN
EX 3,MCVER
PACK RITLEN(8),ADR(3)
CVB 5,RTILEN
AR 7,E
A 7,=F99'
PACK RITLEN(8),FLEN(3)
CVB 3,RTILEN
LA 5,CCOMAND DATA READ.
EX 3,MCVER
MVC PAREA(8),DATATRN
BAL 14,DEFINT.
MVI FICCE,C'2'
BAL 14,RTIADR4 WRITE DATA.
LI 14,REIADR4
BR 14

```

\* REPLACE DATA RECORD.

```

REPRIN EQU *
ST 14,RTIADR1
MVI FICCE,C'2'
BAL 14,CEFILE
CAL 14,MECLPD
MVI FICCE,C'3'
BAL 14,CEFILE
BAL 14,REACCOM
ULL CCMAND(4),=C'DATA'
DE REPRCC
MVC PAREA(22),=C'NOT DEFINE START DATA.'
BAL 14,DEFINT
REPR#1
REPROJ L 5,FLEPCS LOCATE REC BY VALUE.
C 5,=F1C'
DNE REPRC1
ULL LCCAREA,C' ' LOCATE REC BY RECORD OR KEY.
DNE REPRC2
MVC PAREA(30),=C'***ERRK> DATA RECORD DID NOT LOCATE.'
BAL 14,CEFINI
B REPR#1
REPOOL ZAP RELEN(13),=P'1'
BAL 14,SECL SEARCH DATA RECORD.
ULL REPRC,C'E' CHECK SEARCH COMPLETE.
DNE REPRC4
MVC PAREA(20),=C'***ERRK> RECORD NOT FOUND.'
BAL 14,CEFINI

```

FILE: UMJYS TEST2 BI VM/SP CONVERSATIONAL MON.

```

REPO02  B      REPR01
        MVC     DATAFN(8),LCLAREA
        MVI     FILEDE,C'.2'
        BAL     14,READDL
        CLI     0(2),C'#'
        BNB     REPC03
        MVC     PARE#(32),=C'***ERROR RECORD HAS BEEN DELETED.'
        BAL     14,CFFINT
        MVL     ERFL6,C'. '
        B      REPR01
REPO03  ST      2,RE02
REPO04  CLL     KF1,C'0'
        BE      REPC05
        BAL     14,MOVEKEY  KEY POSITION.
        BAL     14,MOVIK   MOVE KEY TO KEYREC.
        MVC     TOKEN(25),KEYREC
        BAL     14,READG   READ DATA TO BE REPLACE.
        BAL     14,MOVIK   MOVE KEY
        MVC     COMMAND(35),KEYREC
        CLL     COMMAND(35),TOKEN  IS KEY CHANGE
        BE      REPC06
        MVC     KEYREC(35),TOKEN
        MVC     TOKEN(44),DATAIRN
        BAL     14,CILIX   DELETE IDEX ENTRY.
        MVC     DATAIRN(44),TOKEN
        B      REPC06
REPO05  BAL     14,READDL   READ DATA TO BE REPLACE.
REPO06  MVI     FILEDE,C'.2'
        PACK   RTCLIM(8),RL(3)
        CVB    6,RTLEN
        A      6,=F99!
        SI     6,RTLEN
        BAL     14,RTLEN
        BAL     14,VRTTEL
        CLI     KF1,C'0'  CHECK DEFINE KEY.
        BE      REPR01
REPR01  BAL     14,RTCLXCL
        LIA    6,C
        BAL     14,RTCOM   READ END CARD.
        CLL    0(4,2),=C'END'
        BE      REPR01
        MVL    ERFL6,C'E'
REPR01  ST      6,FILEFLS
        MVL    LCLAREA,C' '
        MVI    FILEDE,C'.2'
        BAL    14,CFILE
        MVI    FILEDE,C'.3'
        BAL    14,CFILE
        L      14,RTADK1
        OR     14
ADK1IN  EQU     *
        ST     14,RTADK1
        MVI    FILEDE,C'.1'  OPEN FILE.
        BAL    14,CFFILE
        BAL    14,RTCLM

```

FILE: DMSYS TEST2 BI J1/SP CONVERSATIONAL MONITOR

```

MVL  FICLRE,C'.2'
BAL  14,CFFILE          OPEN FILE.
LA   15,SU1NER
BALR 14,15
CLI  TICKED,C' '
BE   ALDRE1
BAL  14,SFILENO        SEARCH FIELD NO.
CLI  ERFILE,C'E'
BNE  ALDCC1
MVC  PAREA(130),=C'***ERR> FIELD NAME NOT FOUND.'
BAL  14,CFRINT
D    ALDRE1
ADUU01 LA 15,SU1NER
BALR 14,15
CLI  TICKED,C' '
BNE  ALDCC2
MVC  PAREA(130),=C'ERR----> FILE NAME NOT SPECIFY.'
BAL  14,CFRINT.
MVI  ERFILE,C'U'
D    ALDRE1
ADUU02 BAL 14,SFILENO
CLI  ERFILE,C'E'
BNE  ALDCC3
MVC  PAREA(131),=C'ERR----> FILE NAME IS UNDEFINE.'
BAL  14,CFRINT.
D    ALDRE1
ADUU03 PACK KEYF(3),NFLD(3)   NO. OF FIELD.
AP   KEYF(3),=P'1'
UNPR KEYS(5),KEYP(3)
UI   KEYS+4,X'FO'
MVC  NFLD(3),KEYS+2
MVC  ALK(3),KL
PACK KEYF(3),KL(3)
PACK RECN(3),FDLEN(3)
AP   KEYF(3),RECN(3)   ADD REC LEN.
UNPR KEYS(5),KEYP(3)
UI   KEYS+4,X'FO'
MVC  RL(3),KEYS+2
BAL  14,CBLRTC        UPDATE RTD.
MVL  FICLRE,C'.1'
MVI  DATATHN...D'     READ RTD
MVC  DATATHN+1(4),FILEID
BAL  14,READCL
BAL  14,PLVRI
PACK RTLEN(8),NFLD(3)
AP   RTLEN(8),=P'7'
AP   RTLEN(8),=P'5'
AP   RTLEN(13),=P'7'
CVB  7,RTLEN
LIA  4,RTLE
AR   4,7              POS FIELD IS ADD.
MVC  C(4,4),FIELDN
MVC  4(3,4),ADR
BAL  14,CBLRDI        UPDATE RTD.
BAL  14,READCOM      READ DATA CARD.

```

FILE: DMSYS TEST2 BL V4/SP CONVERSATIONAL MONITOR

```

      CLC  COMMAND(4),=C'DATA'
      BE  ADD004
      MVC  BARE(13D),=C'ERR----> NOT DEFINE START DATA.'
      BAL  14,CFRINI
      MVI  ERFLG,C'E'
      B   ADDR01
ADD004 MVI  FILLDE,C'2'
      BAL  14,MLCPD
      PACK R1LEN(8),FOLEN(3)
      CVB  3,R1LEN      FLEN LEN FROM RTB.
      ST   3,REG3
      ZAP  RECNO(3),=P'1'      TEXT REC.
ADD005 BAL  14,R1ACCOM
      CLC  COMMAND(2),=C'END'
      BE  ADD015
      MVI  FLG01,C' '
      B   ADD115
ADD015 MVI  FLG01,C'E'
ADD115 PAUK  R1LEN(8),R1(3)
      CVB  6,R1LEN      RECLEN.
      A   6,=F'5'
ADD006 UNPK  KEYS(5),RECNO(3)
      MVI  FILLDE,C'2'
      UI   KEYS+4,X'FO'
      MVC  DATAFN(4),FILEID
      MVC  DATAFN+4(4),KEYS+1      DATA VSAM KEY.
      BAL  14,R1ACCL      READ DATA.
      ST   2,REG2
      AP   RECNO(3),=P'1'
      CLL  6(2),C'!'      CHK DEL BYTE.
      BNE  ADD007
      CLC  KEYS+1(4),NR      CHK END OF DATA FILE.
      BE  ALLH01
      B   ADD006
ADD007 LA   7,LAT1TN
      L   4,REC2
      EX  6,MCVER
      L   3,REG3
      PACK R1LEN(8),ADR(3)
      CVB  6,R1LEN      POS IN REC.
      A   7,=F'5'
      AR  7,c
      CLL  FLG01,C'E'
      BNE  ADD008
      LA  4,REG1
      B   ADD009
ADD008 LIA  4,LLMMANDI
ADD009 LX  3,MLVER
      ST   8,RLEN
      MVI  FILLDE,C'2'
      BAL  14,MLLEN
      BAL  14,WFITEL
      CLC  KEYS+1(4),NR
      BE  ADDR01
      CLL  FLG01,C'E'

```



FILE: UMSYS JES12 BI MASP CONVERSATIONAL MONITOR SYS

```

BE      ADDC66
B       ADDC65
ADDKET  CLI   FLGC1,C'E'
BE      ADDRFT2
ADDKET1 BAL  14,R1ADCOM
        CLC   G(3,23),=C'END'
BE      ADDRFT2
        CLI   ECJFLG,C'E'
BE      ADDRFT2
        B     ADDRFT1
ADDKET2 MVL  FLGC1,C' '
        MVL  FICCEE,C'1'
        BAL  14,CFILE
        MVL  FICCEE,C'2'
        BAL  14,CFILE
        L    14,R1ADCOM
        BR   14
*
DELRTN  EQU  *
        ST   14,R1ADCOM
        MVL  FICCEE,C'1'
        BAL  14,CFILE
        MVL  FICCEE,C'2'
        BAL  14,CFILE
        MVL  FICCEE,C'3'
        BAL  14,CFILE
        LA   15,SCADER
        BALR 14,15
        CLI  TICKED,C' '
        BE   DELRFB1 RETURN
        CLC  TICKED(8),=C'FILE '
        BE   DELRFG1
        CLC  TICKED(8),=C'RECORD '
        BE   DELRGC1
        CLC  TICKED(8),=C'FIELD '
        BE   DELDC1
        MVL  PAREA(27),=C'ERR----> INVALID PARAMETER.'
        BAL  14,CBFINT
        MVL  EXFLG,C'0'
        B     DELRFB1
DELFOO1 LA   15,SCANER
        BALR 14,15
        BAL  14,SFILENO SEARCH FILE NO.
        CLI  EXFLG,C'E' IS FOUND) FILE NO.
        BNE  DELRGC2
        MVL  PAREA(34),=C'ERR----> FILE NAME DID NOT DEFINE.'
        BAL  14,CBFINT
        B     DELRFB1
DELFOO2 MVL  R1C+5,C'*' SET DELETE STYLE.
        BAL  14,CFLRIG UPDATE CTR.
        B     DELRFB1
DELFOO3 L    5,FLDFUS CHK LOCATE REC.
        L    5,=F'0'
        BNE  DELRGC2
        CLI  LCCAREA,C' '

```

FILE: UMSYS TEST2 01 J4/SP CONVERSATIONAL MONITOR SY

```

BNE DELK003
MVC PARE#(30),=C'ERR----> RECORD NOT PREVIOUSLY LOCATED.'
BAL 14,CPRINT.
MVI ERFLG,L'E'
B DELR01
DELK002 ZAP FICCN(3),=P'1'
BAL 14,SFEC
CLI ERFLG,L'E'
BNE DELK003
MVC FARE#(30),=C'ERR----> DATA RECORD NOT FOUND.'
BAL 14,CPRINT.
B DELR01
DELK005 MVI FICCN(2),C'2'
BAL 14,MFLPD
MVC DATA#(8),LOCAREA
BAL 14,READ01 READ DATA.
ST 2,REG2
LA 7,CATATRN
L 4,REG2
PACK RILL#(8),RL(3)
CVB 6,RI&LEN
A 6,=F'9' REG LEN.
EX 6,PLVER MOVE DATA.
ST 6,RL&N
MVI DATA#(8),C' #' SET DELETE BYTE.
MVI FICCN(2),C'2'
BAL 14,M&LEN MODIFY LENGTH.
BAL 14,WRITEL WRITE DATA.
LA 6,C
ST 6,FL&FCS
MVI LOCAREA,C' '
PACK LFAC#(3),NDR(4)
AP CFAC#(3),=P'1'
UNPK KEYS(5),C,PACK(3)
UI KEYS(4),X'FO'
BAL 14,CPRINT
B DELR01
DEL001 LA 15,SCANR
BALF 14,15
CLI TCKED,C' '
BE DELR01
BAL 14,SELDNA SEARCH FIELD ID.
CLI ERFLG,C'E'
BNE DEL002
MVC FARE#(30),=C'ERR----> FIELD NAME NOT FOUND.'
BAL 14,CPRINT.
B DELR01
DEL002 LA 15,SCANR
BALF 14,15
CLI TCKED,C' '
BNE DEL003
MVI FLG(1),L' '
B DEL003
DEL005 MVI FLG(1),C'F'
BAL 14,SELDNA SEARCH FIELD ID.

```

FILE: DMSYS TEST2 01 . V4/SP CONVERSATIONAL MONITOR SYS

```

      CALL ERFILE,C'E'
      BNB DELE04
      MVC PAKE(129),=C'ERR----> FILE NAME NOT FOUND.'
      BAL 14,CFFINT
      B DELR01
DELE04 MVI FICCEE,C'1'
      MVI DATAFN,C'D'
      MVC DATAFN+1(4),FILEID
      BAL 14,READCL
      BAL 14,MCVRID
      BAL 14,STFL SEARCH FIELD IN FILE.
      CALL ERFILE,C'E'
      BNB DELE05
      MVC PAKE(138),=C'ERR----> FIELD NAME NOT FOUND IN FILE.'
      BAL 14,CFFINT
      B DELR01
DELE05 MVC C(4,7),=C'****' SET DELET FLAG.
      BAL 14,LCRTRD UPDATE RTD.
      PACK CPACK(3),RESV(4)
      AP CPACK(3),=P'1'
      UNPK KEYS(5),CPACK(3)
      UI KEYS+4,X'FO'
      MVC RESV(4),KEYS+1
      BAL 14,LCRTRD
      B DELR01
DELE06 BAL 14,READRTA READ RTA.
      MVI RTE+5,C'%' SET DELETE BYTE.
      BAL 14,LCRTRB UPDATE RTB.
      ZAP RECNO(3),=P'1'
      MVI FICCEE,C'1'
DELE06 UNPK KEYS(5),RECNO(3)
      UI KEYS+4,X'FO'
      LLL NF(14),KEYS+1
      BE DELR01
      MVI DATAFN,C'D'
      MVC DATAFN+L(4),KEYS+1
      BAL 14,READCL
      BAL 14,MCVRID
      BAL 14,STFL
      MVI ERFILE,C'E'
      BE DELE06
      MVC C(4,7),=C'****' SET DELETE FLAG.
      BAL 14,LCRTRD UPDATE RTD.
DELE06 AP RECNO(3),=P'1' NEXT REC. NO.
      B DELE06
DELE06 MVI FICCEE,C'1'
      BAL 14,CFILE
      MVI FICCEE,C'2'
      BAL 14,CFILE
      MVI FICCEE,C'3'
      BAL 14,CFILE
      L 14,KEYJALCL
      BN 14
*
      KENKIN EQU *
```

FILE: DMSYS TEST2 31

V4/SP CONVERSATIONAL MONITOR S

```

ST      14.R#TADR1
MVL    FICLDE,C'1'
BAL    14.G#FILE
BAL    14.M#DIR
LA     15.S#ANER
BALH   14,15
CLI    TCKED,C' '
BE     RENC#1
CLC    TCKED(8),=C'FILE '
BE     RENC#1
CLC    TCKED(8),=C'FIELD '
BE     RENC#2
MVC    PAREA(27),=C'ERR----> INVALID PARAMETER.'
BAL    14.C#FRINT
RENU01 LA     15.S#ANER
BALH   14,15
BAL    14.S#ILEND SEARCH FILE NJ.
CLI    ERFL6,C'E'
BNE    RENC#1
MVC    PAREA(34),=C'----> RR FILE NAME DID NOT DEFINE.'
BAL    14.C#FRINT
RENU01 B     RENC#1
LIA    15.S#ANER
BALH   14,15
MVC    FNAME(8),TOKEN
BAL    14.C#LRTC
RENU02 B     RENC#1
LA     15.S#ANER
BALH   14,15
BAL    14.S#LCND
CLI    ERFLG,C'E'
BNE    RENC#2
MVC    PAREA(35),=C'ERR----> FIELD NAME DID NOT DEFINE.'
BAL    14.C#FRINT
RENU02 B     RENC#1
LIA    15.S#ANER
BALH   14,15
MVC    FNAME(8),TOKEN
BAL    14.C#FRIB
RENU01 MVL    FICLDE,C'1'
BAL    14.C#FILE
L      14.R#TADR1
BK     14
*
LISTIN EQU *
ST      14.R#TADR1
MVL    FICLDE,C'2'
BAL    14.C#FILEB
BAL    14.M#DIR
LI     3,L#FC
L      5,F#L#FLS
L      5,=F#C'
BNE    LISC#1
CLI    LCLAREA,C' '
BE     L#SEFF
LISTIN EQU *
LIST DATA ROUTINE.
-----

```

```

FILE: JMSYS      TEST2      31      VMS/SP CONVERSATIONAL MONITOR

LIS01      B      E1SC2
          ZAP      RECNE(3),=P'1'
          MVI      FICCEE,C'2'
          BAL      14,RECIR
          MVC      DATAFN(4),FILEID
          MVC      DATAFN+(4),=C'0001'
          BAL      14,PFINTD1
LISL00P    BAL      14,LCCVLD
          LLC      TICKET(80),VALUE
          BNE      LISCG1
          LA      7,CADJAP
          LI      4,REC2
          LA      4,B(4)
          PACK      RTDLEN(8),RL(3)
          LVB      8,RTDLEN
          A      8,=P'1'
          LR      5,B
          BAL      14,PFINTD1
LIS001     CLC      NR(4),KEYS+1
          BNE      LISCG2
          LA      5,C
          ST      5,FILEFS
          B      RETLIS
LIS002     AP      RECNE(3),=P'1'
          B      LISL00P
LIS02      MVC      DATAFN(8),LOCAREA
          MVI      FICCEE,C'2'
          BAL      14,READOL
          PACK      RTDLEN(8),RL(3)
          LVB      8,RTDLEN
          LIR      5,B
          LA      7,CADJAP
          LR      4,2
          LA      4,B(4)
          MVC      KEYS+1(4),4(2)
          BAL      14,PFINTD
          MVB      LCLAREA,C' '
          B      RETLIS
LISERR     MVC      PARE+1(42),=C'EKK---> DATA RECORD NOT PREVIOUSLY LOCATE.'
          BAL      14,CBFIN
RETLIS     MVI      FICCEE,C'2'
          BAL      14,CFILE
          L      14,RTDRL
          BR      14
*
*          NEW          REORGANIZE ROUTINE.
*          -----
REKRTN     EQU      *
          ST      14,RTDRL
          MVI      FICCEE,C'1'
          DAL      14,CBFILE
          MVB      FICLLL,C'2'
          BAL      14,CBFILE
          DAL      14,FILEOL
          MVB      FICCEE,C'4'          BACK DATA
          BAL      14,CBFILE
          DAL      14,RTDRLA

```



FILE: DMSYS TEST2 B1 V4/SP CONVERSATIONAL MONITOR SY

```
REG001  ZAP  RTCN(13),=P'1'  GET FILE ID.
        UNPK KEYS(5),RTCN(3)
        UI  KEYS+4,X'FO'
        MVI FICCEE,C'1'
        CLC KEYS+1(4),NFI  CHK END OF RTC.
        BE  RECCJ
        MVI DATAFN,C'0'
        MVC DATAFN+L(4),KEYS+1
        MVI FICCEE,C'1'
        BAL 14,RTADCL  READ RTC.
        MVC RTCN(4),D(2)
        LLI 5(2),C'#'  CHK DELETE BYTE.
        BNE RECCB
REG002  AP  RTCN(3),=P'1'  ADD RTC ID.
        B  RECCJ  READ NEXT RTC.
REG003  LLI  RESV(4),=C'0000'  CHK DELETE FIELD IN FILE.
        BE  RECCQ2
        MVI DATAFN,C'D'
        MVC DATAFN+L(4),KEYS+1
        MVI FICCEE,C'1'
        BAL 14,RTADCL  READ RTC.
        BAL 14,RTYRJD
        PACK RTDLEN(8),NFLEN(3)  ID. OF FIELD.
        LVB 4,RTDLEN
        ST 4,REK4
        LA 5,RTC 5=ADR RTC.
        LA 6,NRTC 6=ADR NEW RTC.
        ZAP NFLEN(3),=P'0'  RESET NO. OF FIELD(NEW FILE.)
        ZAP NRECCLEN(3),=P'0'  RESET NO. OF REC. (NEW).
        ZAP NRECC(3),=P'0'
        ZAP RECN(3),=P'1'
        MVC C(6,6),O(5)
        LA 6,5(6)
        LIA 5,5(5)
        L 8,REK4
REG004  CLC C(4,5),=C'****'  CHK DELETE FIELD IN RTD.
        BNE RECCQ4
        A 5,=F'7'  NEXT FIELD.
        B RECCQ5
REG004  MVC C(4,6),O(5)  GIVE DATA TO NEW RTD
        UNPK KEYS(5),NRECCLEN(3)
        UI  KEYS+4,X'FO'
        MVC 4(3,4),KEYS+2
        MVI FICCEE,C'1'
        MVI DATAFN,C'0'
        MVC DATAFN+L(4),O(5)
        BAL 14,RTADCL  READ RTC
        MVC FICLEN(2),D(2)
        PACK FOLEN(2),FOLEN(3)  SET FIELD LEN.
        AP  NFLEN(3),=P'1'  NO. OF FIELD (NEW).
        AP  NRECCLEN(3),FOLEN(2)
        A 5,=F'7'
        A 6,=F'7'
REG005  BCI 8,REK4LLP.
REG006  UNPK KEYS(5),RTCN(3)  READ DATA FILE.
```

FILE: OMSYS TEST2 01 V4/SP CONVERSATIONAL MONITOR SYS

```

DI      KEYS+4,X'.FU'
CLC    KEYS+1),R
BH     RECC10
MVI    FICCEE,C'.2'
MVC    DATAFN(4),FILEID
MVC    DATAFN+(4),KEYS+1      GET KEY DATA FILE.
BAL    14,READOL
ST     2,REG2
AP     RECNE(3),=P'1'
CLI    8(2),C'0'
BNE    RECC67      CHK DELETE REC.
B      RECC66
REG007 UNPK  KEYS(5),NREGNO(3)      NEW FILE.
DI     KEYS+4,X'.FU'
MVC    NDATAFN(4),FILEID
MVC    NDATAFN+(4),KEYS+1
LA     5,RTLEN
LIA    6,NRTLEN
ZAP    RTLEN(6),NRTLEN(3)
CVB    8,RTLEN
ST     8,REG8
REG017 CLI    6(5),C'0'      CHK DEL FLD IN REG.
BNE    RECC68
A      5,=F'17'
B      RECC17
REG008 LA     7,NDATAFN+9
L      4,REG2
A      4,=F'15'
MVI    FICCEE,C'.1'
MVI    DATAFN,C'B'      GET LET FROM REG.
MVC    DATAFN+L(4),O(5)
BAL    14,READOL
MVC    RTB(18),J(2)
PACK   RTLEN(8),FULEN(3)
CVB    3,RTLEN
EX     3,MOVE      MOVE EACH FIELD TO NEW FILE BUF.
A      5,=F'17'
A      6,=F'17'
REG009 OCT    8,RECC17
LA     7,DATAFNW      WRITE DATA.
LIA    4,NDATAFN
PACK   RTLEN(8),NRECCLEN(3)
CVB    3,RTLEN
A      3,=F'15'
ST     3,RTLEN
EX     3,MOVE
MVI    FICCEE,C'.4'
BAL    14,NRTLEN
BAL    14,NRTLEN
AP     NRTLEN(3),=P'1'
B      RECC66
REG010 UNPK  KEYS(5),NRECCLEN(3)
DI     KEYS+4,X'.FU'
MVC    RT(3),KEYS+2      REC LET.
UNPK  KEYS(5),NRTLEN(3)

```

FILE: DMSYS TEST2 BL J.1/SP CONVERSATIONAL MONITOR :

```

UI      KEYS(4,X'FO'
MVC    NFIELD(3),KEYS+2      N OF FIELD.
BAL    14,UPDATE            UPDATE RTC.
PACK   RTDLEN(8),NFIELD(3)
MP     RTDLEN(8),=P'7'
AP     RTDLEN(8),=P'5'
CVD    3,RTDLEN
LA     4,RTDLEN
LA     7,RTDLEN
EX     3,PGYER
BAL    14,UPDATE            UPDATE RTD.
B      FECC1
REQ011 MVI    FICCEE,C'4'
BAL    14,CFILE
MVI    FICCEE,C'5'
BAL    14,CFILE
BAL    14,READRTA
MVC    DATAFN(13),0(2)
MVI    FICCEE,C'5'
LA     14,13
ST     14,RTDLEN
BAL    14,RTDLEN
BAL    14,RTDLEN
ZAP    RECNO(3),=P'1'
REQ012 MVI    FICCEE,C'1'
MVC    DATAFN(5),=C'ADJUD'
BAL    14,PGINTO1
BAL    14,PGSECC
BAL    14,PGADCL
MVC    DATAFN(13),0(2)
MVI    FICCEE,C'5'
LA     14,C
ST     14,RTDLEN
BAL    14,RTDLEN
BAL    14,PGSECC
BAL    14,PGADCL
REQ013 MVI    FICCEE,C'1'
BAL    14,PGADCL
CLI    5(2),C'0'
BNE    RELC13
CLI    5(2),C'0'
BE     RELC13
MVC    DATAFN(13),0(2)
LA     14,C
ST     14,RTDLEN
MVI    FICCEE,C'5'
BAL    14,RTDLEN
BAL    14,RTDLEN
B      RELC13
REQ013 CLI    5(2),C'0'
B      RELC13
REQ0335 MVI    FICCEE,C'5'
LA     14,44
ST     14,RTDLEN
MVC    DATAFN(44),0(2)

```



FILE: DMSYS TEST2 31 V.1/SP CONVERSATIONAL MONITOR SY

```

      BAL 14,MFLN
      BAL 14,MFILEL
REU035 MVL FICCEE,C'1'
      BAL 14,RFACCL
      CLI C(2),C'C'
      BNB RECC14
      CLI 5(2),C'#'
      BE RECC33 READ NEXT
REU014 ZAR FICLN(13),=P'1'
      MVL FICCEE,C'1'
      MVC DATATR(5),=C'0001'
      BAL 14,FCINTOL
      BAL 14,MFCIR
REU114 JNPK KEYS(5),RTCN(13)
      BI KEYS(4),X'FO'
      CLL KEYS(1(4)),NR
      BH RECC16
      MVL DATATR,C'0'
      MVC DATATR+L(4),KEYS+1
      BAL 14,RFACCL READ RTC.
      MVC FIC(44),Q(2)
      CLL FIC+5,C'#'
      BE RECC15
      PACK FICLN(8),NFLD(3)
      MP RTDLEN(8),=P'7'
      AP RTDLEN(8),=P'5'
      CVB 3,MFILEN
      ST 3,RLBN
      MVL FICCEE,C'1'
      MVL DATATR,C'D'
      MVC DATATR+L(4),KEYS+1
      BAL 14,RFACCL
      BAL 14,MLVRTD
      LA 7,DATATR
      LA 4,RTC
      EX 3,MGVER
      MVL FICCEE,C'5'
      BAL 14,MFLN
      BAL 14,MFILEL
REU015 AP FICLN(13),=P'1'
      B RECC14
REU016 MVL FICCEE,C'1'
      BAL 14,CFILE
      MVL FICCEE,C'2'
      BAL 14,CFILE
      MVL FICCEE,C'5'
      BAL 14,CFILE
      L 14,REIADCL
      BR 14
*
PHLAD ST 14,MFILEL
      MVC PARE(5(18)),=C'FILE NAME' :
      MVC PARE(12(8)),FNAML
      BAL 14,LENIN
      MVC PARE(5(18)),=C'RECORD LENGTH' :

```

FILE: DMSYS

TEST2 61

V.17/SP CONVERSATIONAL MONITOR SY

```

MVC PARE1+2(3),RL
BAL 14,CFFINT
MVC PARE1+5(18),=C'NO. OF FIELD : '
MVC PAKE1+2(3),NFLD
BAL 14,CFFINT
MVC PAKE1+5(18),=C'NO. OF RECORD : '
PACK CPACK(3),NR(4)
PACK KYP(3),NR(4)
SP CPACK(3),KYP(3)
JNPK KEYS(5),CPACK(3)
UI KEYS(4),X'FO'
MVC FARE1+2(4),KEYS+1
BAL 14,GERINT.
MVC PARE1(44),LINE1
BAL 14,UFFINT
BAL 14,CFFINT
L 14,REIADR4
BR 14

```

```

*
UPURTA EQU * UPDATE RTA.
ST 14,REIADR4
MVL FILL(5),C'1'
MVC DATAFN(5),=C'AJJUU'
BAL 14,FCJNDI1
LA 15,13
ST 15,RELEN
BAL 14,MLEN
BAL 14,MCLPD MOD JIC TJ JPD.
MVC DATAFN(5),=C'AJJUU'
BAL 14,REIADR4
LK 4,2
LA 3,13 RECLE1=13
LA 7,DATAIRW ADR DATA BUF.
EX 3,MVER MOVE READ DATA TO DATAFN.
LA 3,4 UPDATE FIELD.
LA 7,5(7)
LIA 4,NF3
EX 3,MVER UPDATE FILE NO.
LA 7,4(7)
LA 4,NF6 UPDATE FIELD NO.
EX 3,MVER
BAL 14,NF4TEL.
L 14,REIADR4
BR 14

```

```

*
UPURTB EQU *
ST 14,REIADR4
MVL FILL(5),C'1'
LA 14,18
ST 14,RELEN
BAL 14,MLEN
BAL 14,MCLPD
MVC DATAFN(13),RT3
BAL 14,FCJNDI1
BAL 14,REIADR4

```



FILE: UMSYS TEST2 31

M/SP CONVERSATIONAL MONITOR SYS

```
MVL DATAFN(18),RTB
BAL 14,VFIIEL
LI 14,RFIADR4
BR 14
*
OPFILE EQU *
ST 14,RFIADR4
MVL FLGRW,C'1'
BAL 14,ICEMSYS
LI 14,RFIADR4
BR 14
*
CFILE EQU *
ST 14,RFIADR4
MVL FLGRW,C'2'
BAL 14,ICEMSYS
L 14,RFIADR4
BR 14
*
UPDRTC EQU * UPDATE RTC.
ST 14,RFIADR4
MVL FICDE,C'1'
LA 14,44
SI 14,RIEN
BAL 14,MLEN
BAL 14,MOLPC
MVC DATAFN(5),RTC
BAL 14,PCINIQ1
BAL 14,RFIADR4
MVL DATAFN(44),RTC
BAL 14,VFIIEL
L 14,RFIADR4
BR 14
*
UPDRTD EQU *
ST 14,RFIADR4
PACK RTDLEN(8),NFLD(3)
MP RTDLEN(8),=P'7'
AP RTDLEN(8),=P'5'
CVD 3,RTDLEN
SI 3,RLEN
MVL FICDE,C'1'
BAL 14,MOLPC
MVL DATAFN,C'0'
MVC DATAFN+L(4),FILEID
BAL 14,RFIADR4
LA 7,DATAFN
LH 4,RTD
LX 3,MOLEN
BAL 14,MOLEN
BAL 14,RFIADR4
BAL 14,RFIADR4
L 14,RFIADR4
BR 14
*
```

FILE: DMSYS TEST2 B1

VMASP CONVERSATIONAL MONITOR SY

READR2A EQU \* READ DATA DIC RECORD TYPE A.

```

ST      14,RBTADR4
MVI     FICCE,C'1'
BAL     14,MCIR
MVC     DATAFN(5),=C'A0000'
BAL     14,FCINJ1
BAL     14,REACCL
MVC     NFI(4),D(2)
MVC     NFD(4),SL(2)
LI      14,NBTADR4
BR      14

```

```

*
READDCL ST      14,REIADR3
        PACK    NLENF(8),RL(3)
        LVD     6,RELEFP
        LR      5,6
        LIA     7,DATAIRN+9

```

```

READJ01 BAL     14,REIACOM
        MVC     CCHC(8),O(2)
        LA      4,COMMAND
        C       5,=F'EC'
        BH     REACG2
        LR      3,5
        EX     3,MCVER
        B      RETREA

```

```

READO02 L       3,=F'EC'
        EX     3,MCVER
        S      5,=F'EC'
        LA     7,C(17)
        B      REACG1
RETREA  L       14,RBTADR3
        BR     14

```

```

*
WICX01 ST      14,RBTADR4
        BAL     14,MCVIR
        MVI     KEYREC+35,C' '
        MVC     KEYREC+36(8),DATAIRN
        SR     3,3
        A      3,KEYL
        A      3,KEYL+4
        A      3,KEYL+8
        MVL     FICCE,C' '
        MVC     DATAIRN(35),DATAIRN-1
        MVC     DATAIRN(4),FILEID
        MVL     DATAIRN+4,C'1'
        LIA     7,DATAIRN+5
        LA      4,A
        EX     3,MCVER
        MVI     FICCE,C'3'
        MVI     DATAIRN5,C'A'
        BAL     14,FCINJ1
        MVC     DATAIRN(4+4),KEYREC
        BAL     14,NFJEL
        L       2,RECS
        L       2,RECC

```

WRITE INDEX.

FILE: DMSYS TEST2 31 VMS/SP CONVERSATIONAL MONITOR

```

        LI      14,R#IADR4
        BR     14
*
MOVIK   ST     14,R#IADR5
        ST     5,R#E05
        ST     6,R#E06
        L      6,=F32'          COUNT.
        LIA    2,KEYL
        LA     5,KEYFCS
        LA     7,KEYREL+5
        MVI    FIC#E,C'3'
        BAL    14,M#LIR          MOD IDX DIR.
MOVIK01 LA     4,DATAIR4+9
        LI     3,C(2)          LOAD KEYLEN.
        A      4,B(5)          PUS IN DATAIRN.
        EX     3,M#YER          MOVE KEY VALUE TO KEYREG.
        LIA    5,4(5)          NEXT KEYPUS.
        L      4,B(5)          LOAD VALUE KEYPUS.
        L      4,=F30'
        BE     NCVIR02
        LA     2,4(2)
        AR     7,3          ADD KEYREG WITH KEYLEN.
        BCT   C,M#YIKCL
MOVIK02 MVL    KEYREG(4),FILEID
        MVI    KEYREG+4,C'1'
        L      5,R#E05
        LI     6,R#E06
        L      14,R#IADR5
        BR     14
*
SFLDND  EQU    *          SEARCH FIELD NO.
        ST     14,R#IADR4
        MVI    FIC#E,C'1'
        BAL    14,M#E06
        MVC    DATAIRN(5),=C'80001'
        BAL    14,P#INT01
LCLPS   BAL    14,R#I#E01          READ RTB.
        MVC    RTE(18),0(2)
        LCL   FENAME(8),T#KEN
        BE     SFLIFET
        LCL   RTE,C'2'
        BE     LCLPS
        MVI    R#FL6,C'E'
SFLDKET MVI    FIC#E,C'1'
        MVC    DATAIRN(5),=C'80001'
        BAL    14,P#INT01
        BAL    14,M#LIR
        L      14,R#IADR4
        BR     14
SFILEND EQU    *          SEARCH FILE NO.
        ST     14,R#IADR4
        MVI    FIC#E,C'1'
        BAL    14,M#LIR          MODIFY DATA DIR (DIR ACCESS).
        MVC    DATAIRN(5),=C'80001'
        BAL    14,P#INT01          PRINT 1ST REC OF RTB.
    
```

FILE: OMSYS

TEST2 B1

V1/SP CONVERSATIONAL MONITOR SY

```

      MVI      FICCODE,C'1'
      ZAP      KEYP(3),=P'0'
LOSFNO AP      KEYP(3),=P'1'
      JNPK     KEYS(5),KEYP(3)
      GI       KEYS(4),X'FU'
      JLC      KEYS(1(4),NFL
      BE       SFAIL
      MVC      DATAFN(4),KEYS+1
      BAL      14,RB(ADCL
      MVC      RTC(4),D(2)
      CLC      FNAM(18),TOKEN
      BE       SFRET
      B        LCSFAC
SFAIL  MVI      ERF(6),C'E'
SFRET  L        14,RB(ADR4
      BR      14
*
SREC   ST      14,RB(ADR5
SRECO01 BAL     14,L(0)VLB      READ DATA AND MOVE FLD.
      CLC      E(2),C'*.
      BE       SRECO11      CHK DEL BYTE.
      CLC      TOKEN(80),VALUE
      BE       SRECO11
SRECO11 CLC     NR(4),KEYS+1      END OF FILE.
      BE       SRECO02
      AP       HE(1(3),=P'1'
      B        SRECO01
SRECO02 MVC     PAREA(20),=C'ERR----> RECORD NOT FOUND.'
      BAL      14,C(1)IN.
      MVI      ERF(6),C'E'
SRERET L        14,RB(ADR5
      BR      14
*
SRTD   EQU     *              SEARCH FIELD NO. IN RTD.
      ST      14,RB(ADR3
      PACK    FIELDS(8),NFLD(3)
      CVB     E,RT(LEN      REGD=NO. OF FIELDS.
      LA      7,RT(45
SRTD01 CLC      FIELDS(4),D(7)
      BE      SRTD02
      LA      7,7(7)
      BCF     E,S(1)LC1
      MVC     PAREA(42),=C'****ERR FIELD NAME DID NOT DEFINE IN FILE.'
      BAL     14,C(1)IN
      MVI     ERF(6),C'E'
SRTD02 L        14,RB(ADR3
      BR      14
*
MOVRTD EQU     *              MOVE RTD RECORD.
      ST      14,RB(ADR4
      PACK    RIELDS(6),NFLD(3)      NO. OF FIELDS.
      ST      E,RT(5
      ST      C,RE(6
      CVB     E,RIELDS
      LR      5,C

```

FILE: DMSYS TEST2 31

V1/SP CONVERSATIONAL MONITOR SYS

```

      LA      7,FTB
      MVC     C(5,7),O(2)
      LIA     7,5(7)
      LA      2,5(2)
MGRVTD1  MVC     C(7,7),O(2)
      LIA     2,7(2)
      LA      7,7(7)
      BCT     5,MLYFTDL
      L       5,RECE
      LI      6,RECE
      L       14,KEYFLD4
      BR      14
MOVEKEY  EQU     *          MOVE KEY FIELD + LEN.
      ST     14,KEYFLD4
      ST     5,RECE
      ST     6,RECE
      LA     8,KEYFLD
      LA     5,0
      ST     5,KEYFCS
      ST     5,KEYFCS+4
      ST     5,KEYFCS+8
      LA     4,KF1
      PACK   RLENP(2),NFLO(3)
      CVB    5,KLENPP      NO. OF FIELDS.
      LR     6,5
      LR     5,6          COUNT FIELD.
MKEYOU  LA      7,KEYF5
MKEYU1  LCL     C(4,4),O(7)
MKEYU1  BE      MKEYU2      FIND POSITION.
      LA     7,7(7)
      BCT     5,MKEYU1      BRANCH LOOP.
      MVC     PAREA(42),=C'ERK----> KEY FIELD DID NOT DEFINE IN FILE.'
      BAL     14,GFHINT
      MVC     KF1(14),=S'0000'   SET J TO KF1 .
      LA     14,C
      ST     14,KEYPLS
MKEYU2  O       MOVEFFI
      MVC     DATAFN,=O'
      MVC     DATAFN+1(4),O(7)
      MVI     FICDDE,C'.1'
      JAL     14,PRINTO1      PRINT DIC.
      BAL     14,KEYACCL
      MVC     RTB(18),O(2)
      PACK   FCLN1(8),FDLEN(3)
      CVB    3,FCLN1
      ST     3,12(8)
      PACK   FCLN1(8),4(3,7)
      CVB    3,FCLN1
      ST     3,C(8)          KEY PJS.
      LA     8,4(8)          NEXT KEY PJS.
      LA     4,4(4)          NEXT KF.
      JCL     C(4,4),=C'0000'
      CNB    MKEYU1
MOVEKET  L       5,RECE
      L       6,RECE

```

FILE: DMSYS TEST2 BI V4/SP CONVERSATIONAL MONITOR SYS

```

L      14,R#1ADR4
BR     14
POINT01 EQU *      POINT TO REQUIRE REC.
ST     14,R#1ADR3
MVL   FLGRW,C'9'
BAL   14,IGEMSYS
L      14,R#1ADR3
BR     14
READ01 EQU *      READ DATA ,
ST     14,R#1ADR3
MVL   FLGRW,C'3'
BAL   14,IGEMSYS
L      14,R#1ADR3
BR     14
WRIT01 EQU *      WRITE DATA.
ST     14,R#1ADR3
MVL   FLGRW,C'4'
BAL   14,IGEMSYS
L      14,R#1ADR3
BR     14
MOSEQ  EQU *      MOD TO SEQ.
ST     14,R#1ADR3
MVL   FLGRW,C'6'
BAL   14,IGEMSYS
L      14,R#1ADR3
BR     14
MODIK  EQU *      MOD DATA TO DIR ACCESS.
ST     14,R#1ADR3
MVL   FLGRW,C'7'
BAL   14,IGEMSYS
L      14,R#1ADR3
BR     14
MULEN  EQU *      MODIFY KLEN DATA.
ST     14,R#1ADR3
MVL   FLGRW,C'5'
BAL   14,IGEMSYS
L      14,R#1ADR3
BR     14
MUUPD  EQU *      MOD UPD DIR.
ST     14,R#1ADR3
MVL   FLGRW,C'8'
BAL   14,IGEMSYS
L      14,R#1ADR3
BR     14
*
ERAS   ST     14,R#1ADR3
MVL   FLGRW,C'E'
BAL   14,IGEMSYS
L      14,R#1ADR3
BR     14
MOVEK  MVL   L(C,7),O(4)
ERKTR  EQU *
ST     14,R#1ADR3
MVL   FLGRW,C' '
MVL   PAREX(31),=C'ERR----> SYNTAX ERROR *****'

```



FILE: DMSYS TEST2 01

VMS/SP CONVERSATIONAL MONITOR SYSTEM

```

      BAL      14,CFFINT
      MVI      ERFLG,C'F'          SET ERROR FLAG.
      L        14,MBACKL
      BR      14
*
ENDPROC EQU *
      L        13,SAVE*
      RETURN (14,12)
SAVE     DS     1EF
*        END EQU
*
      LIDRC
      DS      CF
      DC      C' '
PAKEAL  DS     CCL123
RECIT   DS     CL10
RNUM    DS     CL4
      DC      9C' '
DATAP   DS     CL10
      JS     CF
PRIAREA DS     CCL134          PRINT WORK AREA.
FLGTRN  DS     CL1
      DC      CL9' '
BLANK   JC     C' '
PAREA   DS     CL123
HEAD1   DS     CCL123
      DC     100'-'
      DC     CL13'ENMSYS LISTING'
      DC     100'-'
      DC     CL50' '
      DS     GF
HEAD2   DS     CCL123
      DC     CL5'FIELD'
      DC     CL10' '
      DC     CL6'LENGTH'
      DC     CL10' '
      DC     CL4'TYPE'
      DC     CL80' '
      DS     GF
VALU    DS     GF
FLOPUS  DC     F'0'
LFLO    DC     F'0'
KEYPUS  DC     3F'0'
KEYL    DC     3F'0'
KETADR  DS     F
KETADR1 DS     F
KETADR2 DS     F
KETADR3 DS     F
KETADR4 DS     F
KETADR5 DS     F
KEG2    DS     F
KEG3    DS     F
KEG4    DS     F
KEG5    DS     F
KEG6    DS     F
KEG7    DS     F

```

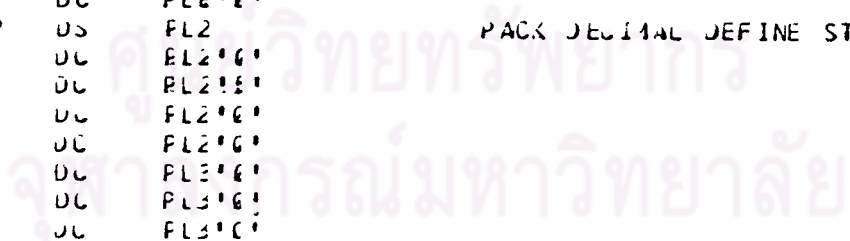
PARAMETER LIST SEND TO SUBROUTINE.

---

	DS	F
	DS	F
	DS	F
FLGRW	DC	C' '
FICODE	DC	C' '
DATATRN	DS	CL1CCE
CUMD	DS	CC1E1
EOJFLG	DC	C' '
CUMMAND	DS	CLEC
BLKT	DC	C' '
TOKEN	DS	CLEC
COM	DS	CLE
FLGCI	DC	C' '
ERFLG	DC	C' '
	DS	CF
ZERU	DC	CL8'C'
NFI	DC	CL4' '
NFD	DC	CL4' '
UNFD	DS	CL5
	DS	CL
NFIP	DC	PL8'G'
FOLNT	DC	PL8'G'
NFDP	DC	FL8'G'
RTDLEN	DC	PL8'G'
KLENPP	DC	PL8'G'
FULENP	DS	FL2
NFP	DC	FL2'G'
AURP	DC	PL2'G'
KLENP	DC	FL2'G'
Z	DC	PL2'G'
NRP	DC	PL3'G'
RTLNU	DC	PL3'G'
KECNU	DC	FL3'G'
CPACK	DC	PL3'G'
APP	DC	PL3'G'
NFLUN	DC	PL3'G'
NKECLEN	DC	PL3'G'
NKBCNU	DC	PL3'G'
KEYP	DC	FL3'G'
KYP	DC	PL3'G'
KEYS	DC	CL5' '
UNP	DS	CL5
ADR	DS	CL3
ADR1	DS	CL3
ADR2	DS	CL3
	DS	CF
A	DC	CLEC'A'

PACK DECIMAL DEFINE STORAGE.

# OF NEW FIELD  
NEW REC LEN



FILE: DMSYS TEST2 01

V.I/SP CONVERSATIONAL MONITOR SYSTEM

```

DC C' '
BBB DS EDC' '
DS CF
RTD DS CL1005
NRD DS CL1005
NDATATRN DS CL1005
*
RFE DS CCL1E
TB DS CL1
FIELDN DS CL4
DC C' '
FDNAME DS CL6
FDLEN DS CL3
TY DS CL1
*
LINE1 DC 440'-'
*
DC C' '
KEYREC DS CL44
DC C' '
RTC DS CCL44
T DS CL1
FILEID DS CL4
DELB DC C' '
FNAME DS CL6
KF1 DC CL4' '
KF2 DC CL4' '
KF3 DC CL4' '
RESV DC CL4' '
NFLD DS CL3
RL DS CL3
NR DC CL4'6000'
NDR DC CL4'6000'
DS CF
LOCAREA DS CCL6
FIID DC CL4' '
RECID DC CL4' '
*

```



ศูนย์วิทยทรัพยากร  
 ภาลงกรณ์มหาวิทยาลัย

```

DS CF
*
-----
SUBT
ENTRY PR1A
-----
*
PR1A SAVE (14,12)
BALB 9,C
JSINC 4,9
ST 15,SAVEB+4
LA 15,SAVEB
MVC TRANS(134),J(1)
CL1 FLC,C'1'.
DL CPEB
CL1 FLC,C'2'.
BE CLEB
PUT PRINT,PROUT
MVC PR1A(132),BLNK

```

```

PRINT ROUTINE.
-----
1 OPEN PRINT FILE.
2 CLOSE PRINT FILE.
PRINT OUTPUT.
CLEAR PRINT BUFFER.

```

FILE: OMSYS TEST2 BI

V4/SP CONVERSATIONAL MONITOR SYSTEM

```

      B      RETF      RETURN.
OPENP  OPEN  (FRJN1,(OUTPUT))
      B      RETF
CLCSEP  CLOSE PRINT
RETP   L      13,SAVEB+4      LOAD ADDRESS OF SAVE AREA
      RETURN (14,14)
      FILE  PRINT
SAVEB  DS      18F
TRANF  DS      CCL134
FLG    UC      C' '
BLNK   UC      C' '
PRODT  JS      CCL132
*
*

```

```

-----
USBJCT
ENTRY  READC      READ COMMAND.
-----
*
READC  SAVE  (14,12)
      BACH  S,C
      JSINC #,S
      ST    13,SAVEB+4
      LA    13,SAVEB
      MVC   FLG(11),0(1)      SET READ CODE.
      CLI   FLCC,C'1'        1   OPEN CARD FILE.
      BE    LPEND
      CLI   FLCC,C'2'        2   CLOSE CARD FILE.
      BE    CLCSEC
      GET   CARD,CARD1      READ CARD FILE.
      B     RETF
OPENC  OPEN  (CARD,)
      B     RETF
EUFKIN  MVD  FLCC,C'E'      SET END FLAG.
      B     RETF
CLCSEC  CLOSE (CARD)
RETR   LA    2,FLCC
      L     13,SAVEB+4
      LA    14,1,12(L3)
      LA    3,12,32(L3)
      BR    14
      FILE  CARD
SAVEB  DS      18F
FLCC   JS      CCL131
      UC      C' '
CARD1  JS      CCL130
*
*

```

-----  
 \* THIS ROUTINE USE FOR READ AND WRITE DATA  
 \* -----

```

USBJCT
ENTRY  REWR
REWR   SAVE  (14,12)
      BACH  S,C
      JSINC CCL131,S,L0,11,12
      LA    10,12,CCL131
      B     CCL131

```



FILE: DMSYS TEST2 B1 M/SP CONVERSATIONAL MONITOR SYST

```

BUICT1 DS CF
        DC A(ED)CT+0096,SDICT+8192,SDIUT+12288)
DICO1  ST 13,SAVECLC+4
        LA 13,SAVECLC
        LR 2,1
    
```

\* TEST -----

```

MVC WORKKIC(256),WORKKIC-1
MVC WORKKA(256),WORKKA-1
MVC WORKKIX(40),WORKKIX-1
*     L 15,=1(PRTA)
*     LIA 1,DEFMES
*     BAL 14,15
    
```

\*TEST -----

```

LM 3,6,6(12)
MVC DICCE(1),16(2)          SET CODE FOR DATAIC.
MVC ECCCE(1),17(2)          FILE ID CODE.
LA 2,16(12)                 GET ADDRESS OF TRANSFER DATA.
CLI DICCE,C'1'              1  OPEN FILE.
DE LPENCL
CLL DICCE,C'2'              2  CLOSE FILE.
DE CLESBLIC
CLI DICCE,C'3'              3  READ DATA FILE.
DE READA1
CLL DICCE,C'4'              4  WRITE DATA FILE.
DE WRTEA1
CLL DICCE,C'5'              5  MODIFY RECORD LENGTH.
DE MLEN
CLL DICCE,C'6'              6  MOD. DCB (KEY SEQ NUP)
DE MKS
CLL DICCE,C'7'              7  MOD. DCB (KEY DIR NUP).
DE MKD
CLL DICCE,C'8'              8  MOD. DCB (KEY DIR UPD)
DE MKU
CLI DICCE,C'9'              9  FIND RECORD BY KEY (POINT).
DE FCINF
CLL DICCE,C'E'
DE ERSPIN
MVC MESS(32),DICERM          ERROR CODE.
O PERREIC                   PRINT ERROR MESSAGE.
POINTR CLL FCLE,C'1'
DE FCINIL                   DATA DIC.
CLL FCLE,C'2'
DE FCINGA
MVC KEYD(35),0(2)           POINT INDEX FILE.
POINT RFL=>FILE
C 15,=F'0'
DE RWRD
DAL 14,SHLLD
DAL 14,SHLCA
O PCINEM
PGINDIC MVC KEYD(35),0(2)   POINT DATA DIC FILE.
POINT RFL=>AIDIC
C 15,=F'0'
DE RWRD
DAL 14,SHLLD
    
```

FILE: UMSYS TEST2 BL V4/SP CONVERSATIONAL MONITOR SYSTEM

```

C      15,=F'0'
BE     RRRR1
BAL   14,SBTCUN
BAL   14,SBICX
B      REDEF
READIC MVC  KEYC3(15),0(2)
GET   RPL=BAIICL      READ JIC. FILE.
ST    15,REGE
LA    2,MLFRKIC
L     15,RFCE
C     15,=F'0'          TEST
BE     RRRR1
BAL   14,SBTCUN          TEST
BAL   14,SBICL
B      REDEF
READA  MVC  KEYLA1E).0(2)
GET   RPL=BAI      READ DATA FILE.
LA    2,MLFRKDA
C     15,=F'0'
BE     RRRR1
BAL   14,SBTCUN
BAL   14,SBICA
B      REDEF
WRTDAT LA  6,2D6          WRITE FILE.
CLL   FCCL1,C'1'
BE     WRTIC1
CLL   FCCL2,C'2'
BE     WRTIC2
CLL   FCCL3,C'4'
BE     WRTIC3
CLL   FCCL4,C'5'
BE     WRTIC4
MVC   WLFK1)(4),0(2)
PUT   RPL=BAIICL      INDEX.
C     15,=F'0'
BE     RRRR1
BAL   14,SBTCUN
BAL   14,SBICX
B      REDEF
WRTDIC LA  7,MLFRKIC
BAL   14,MLVLAT
PUT   RPL=BAIICL      JIC.
C     15,=F'0'
BE     RRRR1
BAL   14,SBTCUN
BAL   14,SBICL
B      WRTICR
WRTDA  LA  7,MLFRKDA
BAL   14,MLVLAT
PUT   RPL=BAI      DATA.
C     15,=F'0'
BE     RRRR1
BAL   14,SBTCUN
BAL   14,SBICL
B      WRTICR

```

FILE: DMSYS TEST2 BL

M/SP CONVERSATIONAL MONITOR SYS

```

      BAL 14,SEDC
      B   FCINB
PUINDA MVL KEYCA(8),0(2) POINT DATA FILE.
      POINT RPL=GA]
      C   15,=6'0'
      BE  FWRB]
      BAL 14,SB]CON
      BAL 14,SECA
      B   FCINB
OPENDIC CLI FCLLF,C'1' OPEN DIC. FILE.
      BE  CCIC
      CLI FCLLF,C'2'
      BE  CCA
      CLI FCLLF,C'4'
      BE  CCAE
      CLI FCLLF,C'5'
      BE  CCICB
      OPEN FILE3
      B   CFC
ODIC    UPEN FILE1
      B   CFC
ODA     UPEN FILE2
      B   CFC
ODAB    UPEN FILE4
      B   CFC
ODICB   UPEN FILE5
CHU     LA 14,CFLICR
      B   CFCCL
CLOSEDIC CLI FCLLF,C'1' CLOSE DIC. FILE.
      BE  CCIC
      CLI FCLLF,C'2'
      BE  CCA
      CLI FCLLF,C'4'
      BE  CCAE
      CLI FCLLF,C'5'
      BE  CCICB
      CLOSE FILE3
      B   CFC
CDAB    CLOSE FILE4
      B   CFC
CDICB   CLOSE FILE5
      B   CFC
CDIC    CLOSE FILE1
      B   CFC
CDA     CLOSE FILE2
CHC     LA 14,CFLICR
      C   CFCCL
*
READAT  CLI FCLLF,C'1'
      BE  REAL]C
      CLI FCLLF,C'2'
      BE  REAL]A
      MVL KEY]](35),0(2)
      GET RPL=]X]FILE READ INDEX FILE.
      LA 2,CFL]X

```

FILE: DMSYS TEST2 BL V4/SP CONVERSATIONAL MONITOR SYS

```

WRIDAB  LA 7,MCFKIDAB          BACK DATA
        BAL 14,MEVDAT
        PJF FPL=DATE
        L 15,=F'0'
        BE RAREI
        BAL 14,SBTCN
        BAL 14,SHCA
        B WRICBF
WRIDICB LA 7,MCFKIDCB
        BAL 14,MEVDAT
        PJF FPL=DATE-CB
        L 15,=F'0'
        BE RAREI
        BAL 14,SBTCN
        BAL 14,SHCA
        B WRICBF
MOV DAT EQU *
LOADIC  LR 3,B                IS RELEN > 256.
        BH LCCJCI
        EX 3,MCVEDIC
        BR 14
LOADIC1 EX 8,MCVEDIC
        SR 3,B
        LA 2,256(2)          ADD REG2 WITH 256.
        LA 7,256(7)
        B LCCJCI
MOVEDIC MVG C(C,2J,OL2)
MLEN    CLI FCCB,C'1'
        BE MLENDIC
        CLI FCCB,C'2'
        BE MLENDAB
        CLI FCCB,C'4'
        BE MLENDAB
        CLI FCCB,C'5'
        BE MLENDICB
        MUDCB RPL=)FILE,RELEN=(3)    MODIFY RELEN.
        B MCCJCI                    INDEX.
MLENDIC MUDCB RPL=DATE,C,RELEN=(3)  DATA DIC.
        B MCCJCI
MLENDAB MUDCB RPL=DATE,RELEN=(3)    DATA FILE.
        B MCLLI
MLENDICB MUDCB RPL=DATE,CB,RELEN=(3)
        B MCLLI)C
MKS      CLI FCCB,C'1'
        BE MKSDIC
        CLI FCCB,C'2'
        BE MSKDA
        MUDCB RPL=)FILE,OPTCD=(KEY,SEJ,IJP)  MODIFY ECB.
        B MCCJCI                    INDEX.
MKSDIC  MUDCB RPL=DATE,C,OPTCD=(KEY,SEJ,IJP)  DIC.
        B MCLLI
MSKDA   MUDCB RPL=DATE,OPTCD=(KEY,SEJ,IJP)  DATA.
        B MCLLI

```



FILE: DMSYS TEST2 B1

VA/SP CONVERSATIONAL MONITOR SY

```

MKD      CLI  FCCE1,C'1'
         BE  MKCC1C
         CLI  FCCE1,C'2'
         BE  MKCC1
         MODCE RPL=JXFILE,OPTCD=(KEY,DIR,JPJ)  MODIFY DCB.
         B   MCCEJX                               INDEX.
MKCC1C   MODCE RPL=JATDLC,OPTCD=(KEY,DIR,JPJ)
         B   MCCEJC                               DIC.
MKDDA    MODCE RPL=JAI,OPTCD=(KEY,DIR,JPJ)
         B   MCCEA                               DATA.
MKU      CLI  FCCE1,C'1'
         BE  MKCC1C
         CLI  FCCE1,C'2'
         BE  MKCC1
         MODCE RPL=JXFILE,OPTCD=(KEY,DIR,JPJ)  MODIFY DCB.
MODD10X  EQU  *                               INDEX.
         C   15,=E'0'
         BE  RWRE1
         BAL  14,SBTCO
         BAL  14,SBIDX
         B   MCCEBF
MKUDIC   MODCE RPL=JATDLC,OPTCD=(KEY,DIR,JPJ)
         C   15,=E'0'                               DIC
         BE  RWRE1
         BAL  14,SBTCO
         BAL  14,SBIDC
         B   MCCEBF
MODD1CB  L    15,=E'0'
         BE  RWRE1
         BAL  14,SBTCO
         BAL  14,SBIDC
         B   MCCEBF
MODDA6   C    15,=E'0'
         BE  RWRE1
         BAL  14,SBTCO
         BAL  14,SBIAE
         B   MCCEBF
MKUUA    MODCE RPL=JAI,OPTCD=(KEY,DIR,JPJ)
MUDDA    EQU  *
         C   15,=E'0'
         BE  RWRE1
         BAL  14,SBTCO
         BAL  14,SBIA
         B   MCCEBF
EKSRIN   EQU  *
         CLI  FCCE1,C'1'
         BE  EKSL1C
         CLI  FCCE1,C'2'
         BE  EKSL1
         ERASE RPL=JXFILE
         B   RWRE1
EKSD1C   ERASE RPL=JATDLC
         B   RWRE1
EKSDA    ERASE RPL=JAI
         B   RWRE1

```

FILE: DMSYS TEST2 BL VASP CONVERSATIONAL MONITOR SYS

```

SEICON  ST  14,FBCE
        C  15,=F'4'
        BE  CCCC4
        C  15,=F'8'
        BE  CCCC8
        MVC MESC(C+3L(9),=C'CODE XJ*')
        B   SDIC
CODD04  MVC MESC(C+3L(9),=C'CODE XJ*')
        B   SDIC
CODD08  MVC MESC(C+3L(9),=C'CODE XJ3*')
SDIC    L   14,R#GE
        BR  14
SHDIB   EQU  *
        ST  14,R#GE
        SHOWC RPL=LATD,IC,AREA=RPLDER,LENGTH=+,
        FIELDS=(FDBK)
        L   6,RPLDER
        CVD  6,PACKS
        UNPK ERD(C(5),PACKS+5(3))
        JI   ERD(C(5)+4,X'F0')
        MVC  MESC(C+42(13),=C'ERROR CODE = ')
        MVC  MESC(C+55(5),ERD(C(5)))
        L   14,R#CE
        BR  14
SHDIB8  ST  14,R#GE
        SHOWC RPL=LATD,IC8,AREA=RPLDER,LENGTH=4,
        FIELDS=(FDBK)
        LI  6,RPLDER
        CVD  6,PACKS
        UNPK ERD(C(5),PACKS+5(3))
        JI   ERD(C(5)+4,X'F0')
        MVC  MESC(C+42(13),=C'ERROR CODE = ')
        MVC  MESC(C+55(5),ERD(C(5)))
        L   14,R#CE
        BR  14
SHDA    ST  14,FBCE
        SHOWC RPL=LAI,FIELDS=FDBK,LENGTH=+,
        AREA=RPLDER
        L   6,RPLDER
        CVD  6,PACKS
        UNPK ERD(C(5),PACKS+5(3))
        JI   ERD(C(5)+4,X'F0')
        MVC  MESC(C+42(13),=C'ERROR CODE = ')
        MVC  MESC(C+55(5),ERD(C(5)))
        LI  14,R#CE
        BR  14
SHDAB   ST  14,FBCE
        SHOWC RPL=LAI8,FIELDS=FDBK,LENGTH=+,
        AREA=RPLDER
        L   6,RPLDER
        CVD  6,PACKS
        UNPK ERD(C(5),PACKS+5(3))
        JI   ERD(C(5)+4,X'F0')
        MVC  MESC(C+42(13),=C'ERROR CODE = ')
        MVC  MESC(C+55(5),ERD(C(5)))

```

FILE: DMSYS TEST2 B1 V1/SP CONVERSATIONAL MONITOR SYSTEM

```

L      14,RICE
BK     14
SHIDX  SJ      14,RICE
SHOWCB KPL=IXFILE,FIELDS=FD&K,LENGTH=+,
        AREA=FPLIDX
L      6,RPLIX
LVD    6,PACKIX
UNRK   ERD1(CD(5),PACKIX+5(3))
J1     ERD1(CD+4,X'F0')
MVC    MESC1(142(13),=C'ERROR CODE = '
MVC    MESC1(55(5),ERD1(CD)
L      14,RICE
BK     14
CHKCUD C      15,='4'
      BE     CCL4
      C      15,='E'
      BE     CCE8
      C      15,='C'
      BE     RAKE1
      B      CCL12
COD4   MVC    MESC1(C+3L(9),=C'CODE XJ+*'
      B      C(14)
COD8   MVC    MESC1(C+3L(9),=C'CODE XJ3*'
      B      C(14)
COD12  MVC    MESC1(C+3L(9),=C'CODE X12*'
      B      C(14)
PGINER MVC    MESC1(3L),POERM
      B      PERK1C
OPDGER MVC    MESC1(3L),OPDERM
      B      EERR1C
CLDGER MVC    MESC1(3L),CLDERM
      B      PERK1C
REDER  MVC    MESC1(3L),REDERM
      B      FERK1C
WRIDER MVC    MESC1(3L),WRTOERM
      B      PERK1C
MODDER MVC    MESC1(3L),MODDERM
PERK1C L      15,=B(FR1A)
LA     1,DEFMES
SI     14,LJCRETIA
BALF   14,15
MVC    MESC1(60),MESC1C-1
LI     14,LJCRETIA
ENDIC  EQU    *
ENDDA  EQU    *
ENDIX  EQU    *
ENDLIC EQU    *
ENDDAB EQU    *
K&RET  L      15,SAVEDIC+4
      LM     14,1,12(13)
      LM     3,12,32(13)
      BK     14
SAVEDIC DS    18F
RPLDAER DC    F'0'
RPLIDX  DC    F'0'

```



X

= X12

PRINT ROUTINE.  
 SJRE RETURN ADDRESS.

FILE: UMSYS TEST2 B1 VMS/SP CONVERSATIONAL MONITOR SYSTEM

```

REGF      DS      F
DICRETA   DS      F
REGE      DS      F
RPLDER    DC      F'0'
          DS      6D
PACKS     DC      PL8'0'
PACKDA    DC      PL8'0'
PACKIX    DC      PL8'0'
DICODE    DC      C' '
FCODE     DC      C' '
          DS      CF
BLNKD     DC      C' '
WORKDIC   DS      CCL16C5
KEYDIC    DS      CL5
DATAD     DS      CL10CC
          DC      C' '
WORKDAB   DS      CCL16C8
KEYDAB    DS      CL8
DDATB     DS      CL10CC
          DC      C' '
WORKDICB  DS      CCL16C5
KEYDICB   DS      CL5
DATA DB   DS      CL10CC
BLAKDA    DC      C' '
WORKDA    JS      CCL16C8
KEYDA     JS      CL8
DDAT      DS      CL10CC
BLNKX     DC      C' '
WORKKIX   JS      CCL43
KEYIX     DS      CL35
DATAIX    JS      CL8
ERBICUD   DS      CL5
          DS      CF
*
* ERKCK MESSAGE.
DERMES    JS      CCL134
          DC      CL12' '
MESDIC    JS      CL8C
          DC      CL42' '
*
POERM     DC      CL31'ER--> WHILE POINT MACRO **** !
OPERM     DC      CL31'ER--> WHILE OPEN MACRO **** !
CLDERM    DC      CL31'ER--> WHILE CLOSE MACRO **** !
REDERM    DC      CL31'ER--> WHILE READ MACRO **** !
WRITERM   DC      CL31'ER--> WHILE WRITE MACRO **** !
MODDERM   DC      CL31'ER--> WHILE MODCS MACRO **** !
DIDERM    DC      CL31'ER--> ERROR FUNCTION CODE .!
*
FILE1     ACB     CLNAME=CLC,
          MACH=(KEY,SEQ,DIR,UDI),
          EXLST=EXT1,
          STRN=1
DATUIC    <PL    ACB=FILE1,
          CPTC=(KEY,SEQ,NUP),
          AREA=WORKDIC,
          AREALEN=LJUD,

```

X  
X  
X  
X  
X  
X  
X

FILE: DMSYS TEST2 B1 V4/SP CONVERSATIONAL MONITOR SYSTEM

```

                FECLLN=50,
                ARG=KEYDLC,
                KEYLEN=5
EXT1           EXLST ECLDAB=ENDDLC
FILES          ACB   LCNABE=CLCB,
                MACRF=(KEY,SEQ,DIR,OUT),
                EXLST=EXT5,
                STRNG=1
DATDLCB       RPL   ACB=FILES,
                CPTCC=(KEY,SEQ,NUP),
                AREA=NLRGDLCB,
                AREALEN=1005,
                RECLLN=50,
                ARC=KEYDLCB,
                KEYLEN=5
EXT5           EXLST ECLDAB=ENDDLCB
FILE2          ACB   LCNABE=DATA,
                MACRF=(KEY,SEQ,DIR,OUT),
                EXLST=EXT2,
                STRNG=1
DAT           RPL   ACB=FILE2,
                CPTCC=(KEY,SEQ,NUP),
                AREA=CRKDA,
                AREALEN=1008,
                FECLLN=100,
                ARG=KEYDA,
                KEYLEN=8
FILE4          ACB   LCNABE=DATA3,
                MACRF=(KEY,SEQ,DIR,OUT),
                EXLST=EXT4,
                STRNG=1
DATB          RPL   ACB=FILE4,
                CPTCC=(KEY,SEQ,NUP),
                AREA=CRKDA3,
                AREALEN=1008,
                FECLLN=100,
                ARC=KEYLAB,
                KEYLEN=8
EXT4           EXLST ECLDAB=ENDDAB
EXT2           EXLST ECLDAB=ENDDAB
FILES          ACB   LCNABE=INUX,
                MACRF=(KEY,SEQ,DIR,OUT),
                EXLST=EXT3,
                STRNG=1
IXFILE        RPL   ACB=FILES,
                CPTCC=(KEY,SEQ,NUP),
                AREA=CRKIX,
                AREALEN=43,
                FECLLN=42,
                ARC=KEYIX,
                KEYLEN=33
EXT3           EXLST ECLDAB=ENDIX
                LITUNC
                END   ECLID
    
```

## ภาคผนวก ข.

การเขียน เจซีแอล และคำสั่งในการกำหนด วิแชม คาท้า เซ็ท

```

//ZJAU00P2      JOB      ....
//JOB CAT       DD       DSN=CU1UCAT1,DISP=OLD
//STEP1        DD       PGM=IDCAMS
//DSPACE       DD       VOL=SER=VS1CU1,UNIT=3340,DISP=OLD
//SYS PRINT     DD       SYSOUT=A
//SYS IN       DD       *
                DEFINE   CLUSTER(NAME(DATADIC.DMS))-
                        VOL(VS1CU1) -
                        FILE(DSPACE) -
                        RECORDSIZE(100 1000) -
                        KEY(5 0) -
                        FREESPACE(40 40))-
                DATA   (NAME(DATADIC.DMS) -
                        MASTERPW(KRIRK) -
                        CYL(3 1) -
                        CISZ(2048)) -
                INDEX  (IDIC.DIC) -
                CATALOG (CU1UCAT1/MRPWU01)

/*
//

```

## ภาคผนวก ค.

การเขียนเจ็ชแอล และคำสั่งที่ใช้ในการ ลบ ดาต้าเซ็ท

```
//ZJAU00.      JOB      ...
//JOB CAT      DD      DSN=CU1UCAT1,DISP,OLD
//STEP1       EXEC     PGM=IDCAMS
//DIC         DD      DSN=DATADIC      ,DISP=OLD
//SYS PRINT    DD      SYSOUT=A
//SYSIN       DD      *

DELETE -
(DATADIC/KRIRK) -
PURGE -
CATALOG(CU1UCAT1/MRPWU01)

/*
//
```

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## ภาคผนวก ง.

การเขียนเจ็ทแอส และคำสั่งที่ใช้ในการโหลด ข้อมูล

```
//ZJAU00      JOB      ...
//JOB CAT     DD       DSN=CU1UCAT1,DISP=OLD
//STEP1      EXEC     PGM=IDCAMS
//DSPAC E    DD       DSN=DATDIC.DMS,DISP=OLD
//DSPAC E1   DD       DSN=DATDICB.DMS,DISP=OLD
//SYS PRINT   DD       SYSOUT=A
//SYSIN      DD       *
              REPRO   INFILE(DSPACE) -
              OUTFILE(DSPACE1) -
              CATALOG(CU1UCAT1/MRPWU01)
/*
//
```

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## ภาพผนวก จ.

แสดงการใส่คำสั่งและผลการทำงานของคำสั่ง

## CPSYS LISTING

INIT

```

DEFINE FIELD -
  ICDC,6,C -
  NAME,30,C -
  SEX,1,C -
  AGE,2,N -
  MARSTUS,10,C -
  SALARY,5,N ;
DEFINE FILE PERSONAL -
  (ICDC,NAME,SEX,AGE,MARSTUS,SALARY);

```

```

DISPLAY
FILE STRUCTURE.
FILE NAME       : PERSONAL
RECORD LENGTH  : 054
NO. OF FIELD   : 006
NO. OF RECORD  : 0000

```

FIELD	LENGTH	TYPE
ICDC	006	C
NAME	030	C
SEX	001	C
AGE	002	N
MARSTUS	010	C
SALARY	005	N

```

WRITE PERSONAL -
DATA
A000C9SUREE BCOVYANUPONG      F30MARRIAGE 03750
A000C7CHLSAK                   M25SINGLE    03500
A000C5RAJANAFGRV TATANJN      F30SINGLE    03370
A000C2KKIRKSAK BUONVANUPONG   M33MARRIAGE 04315
A12350SGMPCNC CHEEVASON       M37MARRIAGE 09323
A77777JEERAPERN SEEVATANANUKJLI F31MARRIAGE 04375
END DATA

```



## M/SP CONVERSATIONAL MONITOR SYSTEM

TYPE PERSONAL  
TYPE DATA.

FILE NAME : PERSONAL  
RECORD LENGTH : 054  
NO. OF FIELD : 006  
NO. OF RECORD : 0006

RECORD NO.0001	A00009SJREE BUJNYANUPONG	F30MARRIAGE	03750
RECORD NO.0002	A00007CHUSAK	M25SINGLE	03500
RECORD NO.0003	A00005KATANAPORN TATANUN	F30SINGLE	03376
RECORD NO.0004	A00002KIRKSAK BUJNYANUPONG	M33MARRIAGE	04315
RECORD NO.0005	A12350SJMPUNG CHEEVASUN	M39MARRIAGE	05323
RECORD NO.0006	A77777JEEKAPORN SEEVATANANUKULKIT	F31MARRIAGE	04375

LOCATE PERSONAL -  
RECNO 0001

LIST

RECORD NO.0001	A00009SJREE BUJNYANUPONG	F30MARRIAGE	03750
----------------	--------------------------	-------------	-------

LOCATE PERSONAL -  
RECNO 0004

LIST

RECORD NO.0004	A00002KIRKSAK BUJNYANUPONG	M33MARRIAGE	04315
----------------	----------------------------	-------------	-------

LOCATE PERSONAL -  
RECNO 0002

DELETE RECORD

TYPE PERSONAL

TYPE DATA.

FILE NAME : PERSONAL  
RECORD LENGTH : 054  
NO. OF FIELD : 006  
NO. OF RECORD : 0005

RECORD NO.0001	A00009SJREE BUJNYANUPONG	F30MARRIAGE	03750
RECORD NO.0002	*A00007CHUSAK	M25SINGLE	03500
RECORD NO.0003	A00005KATANAPORN TATANUN	F30SINGLE	03376
RECORD NO.0004	A00002KIRKSAK BUJNYANUPONG	M33MARRIAGE	04315
RECORD NO.0005	A12350SJMPUNG CHEEVASUN	M39MARRIAGE	05323
RECORD NO.0006	A77777JEEKAPORN SEEVATANANUKULKIT	F31MARRIAGE	04375

จุฬาลงกรณ์มหาวิทยาลัย

## ประวัติผู้เขียน

นายเกริกศักดิ์ บุญญาหงษ์ เกิดวันที่ 28 เมษายน พ.ศ. 2495 ที่จังหวัด นครศรีธรรมราช สำเร็จการศึกษาปริญญาวิทยาศาสตรบัณฑิต(สังคมวิทยาและมานุษยวิทยา) จากมหาวิทยาลัยเชียงใหม่ พ.ศ. 2518 และเข้าศึกษาต่อในระดับปริญามหาบัณฑิตของ ภาควิชาวิศวกรรมคอมพิวเตอร์ คณะวิศวกรรมศาสตร์ จุฬาลงกรณ์มหาวิทยาลัย ในปี พ.ศ. 2524



ศูนย์วิทยทรัพยากร  
จุฬาลงกรณ์มหาวิทยาลัย