

J E S 2 J O B L O G

13.38.46 JOB 955 \$HASP373 COBUCL4 STARTED - INIT 1 - CLASS A - SYS HMVS
13.38.46 JOB 955 IEF403I COBUCL4 - STARTED - TIME=13.38.46
13.38.46 JOB 955 IEC130I SYSLIB DD STATEMENT MISSING
13.38.47 JOB 955 IEFACTRT COB /IKFCBL00/00:00:00.17/00:00:00.24/00004/COBUCL4
13.38.47 JOB 955 IEC130I SYSLIB DD STATEMENT MISSING
13.38.47 JOB 955 IEFACTRT COB /IKFCBL00/00:00:00.06/00:00:00.10/00000/COBUCL4
13.38.47 JOB 955 IEFACTRT ASM /IFOX00 /00:00:00.14/00:00:00.25/00000/COBUCL4
13.38.47 JOB 955 IEFACTRT LKED /IEWL /00:00:00.05/00:00:00.07/00000/COBUCL4
13.38.47 JOB 955 SE 'COBUCL4 (J 955)- COBUC .COB ENDED, CODE 0004, 21.363 13:38:47',USER=(JAY01),LOGON
13.38.47 JOB 955 SE 'COBUCL4 (J 955)- COBUC .COB ENDED, CODE 0000, 21.363 13:38:47',USER=(JAY01),LOGON
13.38.47 JOB 955 SE 'COBUCL4 (J 955)- ASMXCL .ASM ENDED, CODE 0000, 21.363 13:38:47',USER=(JAY01),LOGON
13.38.47 JOB 955 SE 'COBUCL4 (J 955)- ASMXCL .LKED ENDED, CODE 0000, 21.363 13:38:47',USER=(JAY01),LOGON
13.38.47 JOB 955 IEFACTRT COMPCODE/COMPCODE/00:00:00.01/00:00:00.02/00000/COBUCL4
13.38.47 JOB 955 IEF404I COBUCL4 - ENDED - TIME=13.38.47
13.38.47 JOB 955 \$HASP395 COBUCL4 ENDED

----- JES2 JOB STATISTICS -----

29 DEC 21 JOB EXECUTION DATE

27 CARDS READ

1,995 SYSOUT PRINT RECORDS

0 SYSOUT PUNCH RECORDS

0.01 MINUTES EXECUTION TIME

1	//COBUCL4 JOB (001), 'COBOL COMPILE', CLASS=A, MSGCLASS=X	JOB 955
	***	00000201
	*** ***** *	00000301
	*** * COMPILE MAIN PROGRAM -ISUPDT- SUBPROGRAM -SORTNAME- AND *	00000401
	*** * SUBPROGRAM -Y2KGT0A- AND LINK INTO LOAD MODULE -ISUPDT- *	00000501
	*** ***** *	00000601
2	//COBUC EXEC COBUC, CPARM1='NODECK, LOAD, DMAP, SUPMAP'	00000701
3	XXCOBUC PROC CPARM1='DECK, NOLOAD, SUPMAP',	100010000
	XX CPARM2='SIZE=2048K, BUF=1024K'	00020000
4	XXCOB EXEC PGM=IKFCBL00, REGION=4096K,	00040000
	XX PARM='&CPARM1, &CPARM2'	00050000
5	XXSTEPLIB DD DSN=SYSC.LINKLIB, DISP=SHR	00051000
6	XXSYSPRINT DD SYSOUT=*	00060000
7	XXSYSPUNCH DD SYSOUT=B	00070000
8	XXSYSUT1 DD UNIT=SYSDA, SPACE=(460, (700, 100))	00080000
9	XXSYSUT2 DD UNIT=SYSDA, SPACE=(460, (700, 100))	00090000
10	XXSYSUT3 DD UNIT=SYSDA, SPACE=(460, (700, 100))	00100000
11	XXSYSUT4 DD UNIT=SYSDA, SPACE=(460, (700, 100))	00110000
12	//COB.SYSIN DD DISP=SHR, DSN=JAY01.ISAM.COBOL (ISUPDT)	00000801
13	//COB.SYSLIN DD DSN=&LOADSET, DISP=(MOD, PASS), UNIT=SYSDA,	00000901
	// SPACE=(80, (1000, 500))	00001001
14	//COBUC EXEC COBUC, CPARM1='NODECK, LOAD, DMAP, SUPMAP'	00001101
15	XXCOBUC PROC CPARM1='DECK, NOLOAD, SUPMAP',	100010000
	XX CPARM2='SIZE=2048K, BUF=1024K'	00020000
16	XXCOB EXEC PGM=IKFCBL00, REGION=4096K,	00040000
	XX PARM='&CPARM1, &CPARM2'	00050000
17	XXSTEPLIB DD DSN=SYSC.LINKLIB, DISP=SHR	00051000
18	XXSYSPRINT DD SYSOUT=*	00060000
19	XXSYSPUNCH DD SYSOUT=B	00070000
20	XXSYSUT1 DD UNIT=SYSDA, SPACE=(460, (700, 100))	00080000
21	XXSYSUT2 DD UNIT=SYSDA, SPACE=(460, (700, 100))	00090000
22	XXSYSUT3 DD UNIT=SYSDA, SPACE=(460, (700, 100))	00100000
23	XXSYSUT4 DD UNIT=SYSDA, SPACE=(460, (700, 100))	00110000
24	//COB.SYSIN DD DISP=SHR, DSN=JAY01.ISAM.COBOL (SORTNAME)	00001201
25	//COB.SYSLIN DD DSN=&LOADSET, DISP=(MOD, PASS)	00001301
26	//ASMCL EXEC ASMCL, PARM.LKED=(XREF, LET, LIST),	00001401
	// MAC1='SYSC.Y2K.SOURCE'	00001501
27	XXASMCL PROC MAC='SYS1.MACLIB', MAC1='SYS1.MACLIB'	00050000
28	XXASM EXEC PGM=IF0X00, PARM=OBJ, REGION=128K	00100000
29	XXSTEPLIB DD DSN=SYSC.LINKLIB, DISP=SHR	00110000
30	XXSYSLIB DD DSN=&MAC, DISP=SHR	00150000
31	XX DD DSN=&MAC1, DISP=SHR	00200000
32	XXSYSUT1 DD DSN=&&SYSUT1, UNIT=SYSSQ, SPACE=(1700, (600, 100)),	00250000
	XX SEP=(SYSLIB)	00300000
33	XXSYSUT2 DD DSN=&&SYSUT2, UNIT=SYSSQ, SPACE=(1700, (300, 50)),	00350000
	XX SEP=(SYSLIB, SYSUT1)	00400000
34	XXSYSUT3 DD DSN=&&SYSUT3, UNIT=SYSSQ, SPACE=(1700, (300, 50))	00450000
35	//ASM.SYSPRINT DD SYSOUT=*	00001601
	X/SYSPRINT DD SYSOUT=A, DCB=BLKSIZE=1089	00500000
36	XXSYSPUNCH DD SYSOUT=B	00550000
37	//ASM.SYSGO DD DSN=&LOADSET, DISP=(MOD, PASS)	00001701
	X/SYSGO DD DSN=&&OBJSET, UNIT=SYSSQ, SPACE=(80, (200, 50)),	00600000
	XX DISP=(MOD, PASS)	00650000
38	//ASM.SYSIN DD DISP=SHR, DSN=SYSC.Y2K.SOURCE(Y2KGT0A)	00001801
39	XXLKED EXEC PGM=IEWL, PARM=(XREF, LET, LIST, NCAL), REGION=128K,	00700000
	XX COND=(8, LT, ASM)	00750000
40	//LKED.SYSLIN DD DSN=&LOADSET	00001901
	X/SYSLIN DD DSN=&&OBJSET, DISP=(OLD, DELETE)	00800000
41	XX DD DDNAME=SYSIN	00850000
42	//LKED.SYSLMOD DD DISP=MOD, DSN=JAY01.LOAD <<- TARGET	00002000
	X/SYSLMOD DD DSN=&&GOSET(GO), UNIT=SYSDA, SPACE=(1024, (50, 20, 1)),	00900000

43	XX	DISP=(MOD,PASS)	00950000
	XXSYSUT1 DD	DSN=&&SYSUT1,UNIT=(SYSDA,SEP=(SYSLIN,SYSLMOD)),	01000000
	XX	SPACE=(1024,(50,20))	01050000
44	//LKED.SYSPRINT DD	SYSOUT=*	00002101
	X/SYSPRINT DD	SYSOUT=A	01100000
45	//LKED.SYSLIB DD	DISP=SHR,DSN=SYSC.COBLIB	00002201
46	//LKED.SYSIN DD	*	00002301
47	//COMPCODE EXEC	PGM=COMPCODE,COND=EVEN,	00002501
	//	PARM='USER=(JAY01)'	00002601
48	//SYSPRINT DD	SYSOUT=*	00002701

STMT NO. MESSAGE

4 IEF653I SUBSTITUTION JCL - PARM='NODECK,LOAD,DMAP,SUPMAP,SIZE=2048K,BUF=1024K'
 16 IEF653I SUBSTITUTION JCL - PARM='NODECK,LOAD,DMAP,SUPMAP,SIZE=2048K,BUF=1024K'
 30 IEF653I SUBSTITUTION JCL - DSN=SYS1.MACLIB,DISP=SHR
 31 IEF653I SUBSTITUTION JCL - DSN=SYSC.Y2K.SOURCE,DISP=SHR

IEF236I ALLOC. FOR COBUCL4 COB COBUC

IEF237I 253 ALLOCATED TO STEPLIB
 IEF237I 253 ALLOCATED TO SYS00378
 IEF237I JES2 ALLOCATED TO SYSPRINT
 IEF237I JES2 ALLOCATED TO SYSPUNCH
 IEF237I 370 ALLOCATED TO SYSUT1
 IEF237I 251 ALLOCATED TO SYSUT2
 IEF237I 380 ALLOCATED TO SYSUT3
 IEF237I 252 ALLOCATED TO SYSUT4
 IEF237I 184 ALLOCATED TO SYSIN
 IEF237I 180 ALLOCATED TO SYS00380
 IEF237I 251 ALLOCATED TO SYSLIN

IEC130I SYSLIB DD STATEMENT MISSING

IEF142I COBUCL4 COB COBUC - STEP WAS EXECUTED - COND CODE 0004

IEF285I	SYSC.LINKLIB	KEPT	*-----0
IEF285I	VOL SER NOS= SYSCPK.		
IEF285I	UCSYSCPK	KEPT	*-----0
IEF285I	VOL SER NOS= SYSCPK.		
IEF285I	JES2.JOB00955.S00102	SYSOUT	
IEF285I	JES2.JOB00955.S00103	SYSOUT	
IEF285I	SYS21363.T133846.RA000.COBUC4.R0000001	DELETED	*-----6
IEF285I	VOL SER NOS= MVS370.		
IEF285I	SYS21363.T133846.RA000.COBUC4.R0000002	DELETED	*-----6
IEF285I	VOL SER NOS= WORK00.		
IEF285I	SYS21363.T133846.RA000.COBUC4.R0000003	DELETED	*-----12
IEF285I	VOL SER NOS= MVS380.		
IEF285I	SYS21363.T133846.RA000.COBUC4.R0000004	DELETED	*-----5
IEF285I	VOL SER NOS= WORK01.		
IEF285I	JAY01.ISAM.COBOL	KEPT	*-----4
IEF285I	VOL SER NOS= MVS381.		
IEF285I	UCPUB000	KEPT	*-----0
IEF285I	VOL SER NOS= PUB000.		
IEF285I	SYS21363.T133846.RA000.COBUC4.LOADSET	PASSED	*-----231
IEF285I	VOL SER NOS= WORK00.		

IEF373I STEP /COB / START 21363.1338

IEF374I STEP /COB / STOP 21363.1338 CPU 0MIN 00.14SEC SRB 0MIN 00.03SEC VIRT 2076K SYS 240K

**** JOB NAME: COBUCL4 JOBCARD READ 2021/363 13:38:46 370/148 VS2 R03.8 HMVS *****

* STEP NUMBER: 1 USER CORE: 2076K START TIME: 13:38:46 CPU TIME: 00:00:00.17 ACTIVE TIME: 00:00:00.19 *									
* STEP NAME: COB SYSTEM CORE: 240K STOP TIME: 13:38:47 SRB TIME: 00:00:00.03 ALLOC TIME: 13:38:46 *									
* PROGRAM NAME: IKFCBL00 REGION SIZE: 4096K ELAPSED TIME: 00:00:00.24 TCB TIME: 00:00:00.14 PROGRAM LOAD: 13:38:46 *									
* CONDITION CODE: 00004 PERFORMANCE GROUP: 004 *									
* JES2 CARDS: 0 SERVICE UNITS PAGES IN/OUT # SWAPS PAGES SWAP IN/OUT VIO PAGES IN/OUT *									
* 1,545 0 / 0 0 0 / 0 0 / 0 *									
* ADDR/UNIT I/O COUNT ADDR/UNIT I/O COUNT ADDR/UNIT I/O COUNT ADDR/UNIT I/O COUNT ADDR/UNIT I/O COUNT ADDR/UNIT I/O COUNT *									
* 253/D3350 0 253/D3350 0 370/D3375 6 251/D3350 6 380/D3380 12 252/D3350 5 *									
* 184/D3380 4 180/D3380 0 251/D3350 231 *									

IEF236I ALLOC. FOR COBUCL4 COB COBUC

IEF237I 253 ALLOCATED TO STEPLIB
 IEF237I 253 ALLOCATED TO SYS00382
 IEF237I JES2 ALLOCATED TO SYSPRINT
 IEF237I JES2 ALLOCATED TO SYSPUNCH
 IEF237I 380 ALLOCATED TO SYSUT1

IEF237I 370 ALLOCATED TO SYSUT2
IEF237I 252 ALLOCATED TO SYSUT3
IEF237I 370 ALLOCATED TO SYSUT4
IEF237I 184 ALLOCATED TO SYSIN
IEF237I 180 ALLOCATED TO SYS00384
IEF237I 251 ALLOCATED TO SYSLIN
IEC130I SYSLIB DD STATEMENT MISSING
IEF142I COBUCL4 COB COBUC - STEP WAS EXECUTED - COND CODE 0000
IEF285I SYSC.LINKLIB KEPT *-----0
IEF285I VOL SER NOS= SYSCPK.
IEF285I UCSYSCPK KEPT *-----0
IEF285I VOL SER NOS= SYSCPK.
IEF285I JES2.JOB00955.S00104 SYSOUT
IEF285I JES2.JOB00955.S00105 SYSOUT
IEF285I SYS21363.T133846.RA000.COBUCL4.R0000005 DELETED *-----6
IEF285I VOL SER NOS= MVS380.
IEF285I SYS21363.T133846.RA000.COBUCL4.R0000006 DELETED *-----6
IEF285I VOL SER NOS= MVS370.
IEF285I SYS21363.T133846.RA000.COBUCL4.R0000007 DELETED *-----9
IEF285I VOL SER NOS= WORK01.
IEF285I SYS21363.T133846.RA000.COBUCL4.R0000008 DELETED *-----3
IEF285I VOL SER NOS= MVS370.
IEF285I JAY01.ISAM.COBOL KEPT *-----2
IEF285I VOL SER NOS= MVS381.
IEF285I UCPUB000 KEPT *-----0
IEF285I VOL SER NOS= PUB000.
IEF285I SYS21363.T133846.RA000.COBUCL4.LOADSET PASSED *-----29
IEF285I VOL SER NOS= WORK00.
IEF373I STEP /COB / START 21363.1338
IEF374I STEP /COB / STOP 21363.1338 CPU 0MIN 00.04SEC SRB 0MIN 00.02SEC VIRT 2076K SYS 248K

*
* STEP NUMBER: 2 USER CORE: 2076K START TIME: 13:38:47 CPU TIME: 00:00:00.06 ACTIVE TIME: 00:00:00.06 *
* STEP NAME: COB SYSTEM CORE: 248K STOP TIME: 13:38:47 SRB TIME: 00:00:00.02 ALLOC TIME: 13:38:47 *
* PROGRAM NAME: IKFCBL00 REGION SIZE: 4096K ELAPSED TIME: 00:00:00.10 TCB TIME: 00:00:00.04 PROGRAM LOAD: 13:38:47 *
* CONDITION CODE: 00000 PERFORMANCE GROUP: 004 *
* JES2 CARDS: 0 SERVICE UNITS PAGES IN/OUT # SWAPS PAGES SWAP IN/OUT VIO PAGES IN/OUT *
* 344 0 / 0 0 0 / 0 0 / 0 *
*
* ADDR/UNIT I/O COUNT ADDR/UNIT I/O COUNT ADDR/UNIT I/O COUNT ADDR/UNIT I/O COUNT ADDR/UNIT I/O COUNT ADDR/UNIT I/O COUNT *
* 253/D3350 0 253/D3350 0 380/D3380 6 370/D3375 6 252/D3350 9 370/D3375 3 *
* 184/D3380 2 180/D3380 0 251/D3350 29 *

IEF236I ALLOC. FOR COBUCL4 ASM ASMXCL
IEF237I 253 ALLOCATED TO STEPLIB
IEF237I 253 ALLOCATED TO SYS00386
IEF237I 150 ALLOCATED TO SYSLIB
IEF237I 253 ALLOCATED TO
IEF237I 380 ALLOCATED TO SYSUT1
IEF237I 370 ALLOCATED TO SYSUT2
IEF237I 252 ALLOCATED TO SYSUT3
IEF237I JES2 ALLOCATED TO SYSPRINT
IEF237I JES2 ALLOCATED TO SYSPUNCH
IEF237I 251 ALLOCATED TO SYSGO
IEF237I 253 ALLOCATED TO SYSIN
IEF142I COBUCL4 ASM ASMXCL - STEP WAS EXECUTED - COND CODE 0000
IEF285I SYSC.LINKLIB KEPT *-----0
IEF285I VOL SER NOS= SYSCPK.
IEF285I UCSYSCPK KEPT *-----0
IEF285I VOL SER NOS= SYSCPK.
IEF285I SYS1.MACLIB KEPT *-----18

IEF285I VOL SER NOS= MVSRES.
IEF285I SYSC.Y2K.SOURCE KEPT *-----4
IEF285I VOL SER NOS= SYSCPK.
IEF285I SYS21363.T133846.RA000.COBUCL4.SYSUT1 DELETED *-----248
IEF285I VOL SER NOS= MVS380.
IEF285I SYS21363.T133846.RA000.COBUCL4.SYSUT2 DELETED *-----63
IEF285I VOL SER NOS= MVS370.
IEF285I SYS21363.T133846.RA000.COBUCL4.SYSUT3 DELETED *-----18
IEF285I VOL SER NOS= WORK01.
IEF285I JES2.JOB00955.S00106 SYSOUT
IEF285I JES2.JOB00955.S00107 SYSOUT
IEF285I SYS21363.T133846.RA000.COBUCL4.LOADSET PASSED *-----16
IEF285I VOL SER NOS= WORK00.
IEF285I SYSC.Y2K.SOURCE KEPT *-----4
IEF285I VOL SER NOS= SYSCPK.
IEF373I STEP /ASM / START 21363.1338
IEF374I STEP /ASM / STOP 21363.1338 CPU 0MIN 00.13SEC SRB 0MIN 00.01SEC VIRT 128K SYS 192K

*
* STEP NUMBER: 3 USER CORE: 128K START TIME: 13:38:47 CPU TIME: 00:00:00.14 ACTIVE TIME: 00:00:00.16 *
* STEP NAME: ASM SYSTEM CORE: 192K STOP TIME: 13:38:47 SRB TIME: 00:00:00.01 ALLOC TIME: 13:38:47 *
* PROGRAM NAME: IFOX00 REGION SIZE: 128K ELAPSED TIME: 00:00:00.25 TCB TIME: 00:00:00.13 PROGRAM LOAD: 13:38:47 *
* CONDITION CODE: 00000 PERFORMANCE GROUP: 004 *
* JES2 CARDS: 0 SERVICE UNITS PAGES IN/OUT # SWAPS PAGES SWAP IN/OUT VIO PAGES IN/OUT *
* 2,021 0 / 0 0 0 / 0 0 / 0 *
*
* ADDR/UNIT I/O COUNT ADDR/UNIT I/O COUNT ADDR/UNIT I/O COUNT ADDR/UNIT I/O COUNT ADDR/UNIT I/O COUNT ADDR/UNIT I/O COUNT *
* 253/D3350 0 253/D3350 0 150/D3350 18 253/D3350 4 380/D3380 248 370/D3375 63 *
* 252/D3350 18 251/D3350 16 253/D3350 4 *

IEF236I ALLOC. FOR COBUCL4 LKED ASMXCL
IEF237I 251 ALLOCATED TO SYSLIN
IEF237I JES2 ALLOCATED TO
IEF237I 180 ALLOCATED TO SYSLMOD
IEF237I 180 ALLOCATED TO SYS00388
IEF237I 370 ALLOCATED TO SYSUT1
IEF237I JES2 ALLOCATED TO SYSPRINT
IEF237I 253 ALLOCATED TO SYSLIB
IEF237I 253 ALLOCATED TO SYS00390
IEF142I COBUCL4 LKED ASMXCL - STEP WAS EXECUTED - COND CODE 0000
IEF285I SYS21363.T133846.RA000.COBUCL4.LOADSET DELETED *-----277
IEF285I VOL SER NOS= WORK00.
IEF285I JES2.JOB00955.SI0101 SYSIN
IEF285I JAY01.LOAD KEPT *-----11
IEF285I VOL SER NOS= PUB000.
IEF285I UCPUB000 KEPT *-----0
IEF285I VOL SER NOS= PUB000.
IEF285I SYS21363.T133846.RA000.COBUCL4.SYSUT1 DELETED *-----0
IEF285I VOL SER NOS= MVS370.
IEF285I JES2.JOB00955.S00108 SYSOUT
IEF285I SYSC.COBLIB KEPT *-----26
IEF285I VOL SER NOS= SYSCPK.
IEF285I UCSYSCPK KEPT *-----0
IEF285I VOL SER NOS= SYSCPK.
IEF373I STEP /LKED / START 21363.1338
IEF374I STEP /LKED / STOP 21363.1338 CPU 0MIN 00.04SEC SRB 0MIN 00.01SEC VIRT 128K SYS 232K

*
* STEP NUMBER: 4 USER CORE: 128K START TIME: 13:38:47 CPU TIME: 00:00:00.05 ACTIVE TIME: 00:00:00.05 *
* STEP NAME: LKED SYSTEM CORE: 232K STOP TIME: 13:38:47 SRB TIME: 00:00:00.01 ALLOC TIME: 13:38:47 *
* PROGRAM NAME: IEWL REGION SIZE: 128K ELAPSED TIME: 00:00:00.07 TCB TIME: 00:00:00.04 PROGRAM LOAD: 13:38:47 *

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*  CONDITION CODE:  00000  PERFORMANCE GROUP: 004  *
*                JES2 CARDS:      0                SERVICE UNITS  PAGES IN/OUT  # SWAPS  PAGES SWAP IN/OUT  VIO PAGES IN/OUT  *
*                                1,612      0 /    0                0                0 /    0                0 /    0  *
*
*  ADDR/UNIT I/O COUNT  ADDR/UNIT I/O COUNT  ADDR/UNIT I/O COUNT  ADDR/UNIT I/O COUNT  ADDR/UNIT I/O COUNT  ADDR/UNIT I/O COUNT  *
*  251/D3350      277  180/D3380      11  180/D3380      0  370/D3375      0  253/D3350      26  253/D3350      0  *
*****
IEF236I ALLOC. FOR COBUCL4 COMPCODE
IEF237I JES2 ALLOCATED TO SYSRINT
IEF142I COBUCL4 COMPCODE - STEP WAS EXECUTED - COND CODE 0000
IEF285I   JES2.JOB00955.S00109                SYSOUT
IEF373I STEP /COMPCODE/ START 21363.1338
IEF374I STEP /COMPCODE/ STOP  21363.1338 CPU      0MIN 00.01SEC SRB      0MIN 00.00SEC VIRT      16K SYS      188K
*****
*
*  STEP NUMBER:      5  USER CORE:      16K  START TIME:   13:38:47      CPU TIME:      00:00:00.01  ACTIVE TIME:  00:00:00.02  *
*  STEP NAME:      COMPCODE  SYSTEM CORE:      188K  STOP TIME:   13:38:47      SRB TIME:      00:00:00.00  ALLOC TIME:   13:38:47  *
*  PROGRAM NAME:  COMPCODE  REGION SIZE:      512K  ELAPSED TIME: 00:00:00.02  TCB TIME:      00:00:00.01  PROGRAM LOAD: 13:38:47  *
*  CONDITION CODE:  00000  PERFORMANCE GROUP: 004                *
*                JES2 CARDS:      0                SERVICE UNITS  PAGES IN/OUT  # SWAPS  PAGES SWAP IN/OUT  VIO PAGES IN/OUT  *
*                                22      0 /    0                0                0 /    0                0 /    0  *
*
*  ADDR/UNIT I/O COUNT  ADDR/UNIT I/O COUNT  ADDR/UNIT I/O COUNT  ADDR/UNIT I/O COUNT  ADDR/UNIT I/O COUNT  ADDR/UNIT I/O COUNT  *
*****
IEF375I JOB /COBUCL4 / START 21363.1338
IEF376I JOB /COBUCL4 / STOP  21363.1338 CPU      0MIN 00.36SEC SRB      0MIN 00.07SEC
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00001 000100 IDENTIFICATION DIVISION.
00002 000200 PROGRAM-ID. ISUPDT.
00003 000300 AUTHOR. JAY MOSELEY.
00004 000400 DATE-WRITTEN. DECEMBER, 2021.
00005 000500 DATE-COMPILED. DEC 29, 2021
00006 000600 REMARKS. READS UPDATE INFORMATION FROM SEQUENTIAL DATASET AND UPDATES
00007 000700          ISAM DATASET, WHICH IS ACCESSED RANDOMLY. UPDATES PROCESSED
00008 000800          INCLUDE SETTING DELETE CODE, CHANGING FIELD VALUES OF EXISTING
00009 000900          RECORDS, AND ADDING NEW RECORDS.
00010 001000*
00011 001100 ENVIRONMENT DIVISION.
00012 001200 CONFIGURATION SECTION.
00013 001300 SOURCE-COMPUTER. IBM-370.
00014 001400 OBJECT-COMPUTER. IBM-370.
00015 001500 INPUT-OUTPUT SECTION.
00016 001600 FILE-CONTROL.
00017 001700*
00018 001800     SELECT UPDATE-FILE
00019 001900     ASSIGN TO UT-S-SYSUT1.
00020 002000*
00021 002100     SELECT ISAM-MASTER
00022 002200     ASSIGN TO DA-I-MASTER
00023 002300     ACCESS IS RANDOM
00024 002400     RECORD KEY IS MR-ID
00025 002500     NOMINAL KEY IS WS-NOMINAL-ID.
00026 002600*
00027 002700     SELECT REPORT-FILE
00028 002800     ASSIGN TO UR-S-REPORT.
00029 002900*
00030 003000 DATA DIVISION.
00031 003100 FILE SECTION.
00032 003200*
00033 003300 FD  UPDATE-FILE
00034 003400     LABEL RECORDS ARE STANDARD
00035 003500     BLOCK CONTAINS 0 RECORDS
00036 003600     RECORD CONTAINS 80 CHARACTERS
00037 003700     DATA RECORD IS UPDATE-RECD.
00038 003800 01  UPDATE-RECD.
00039 003900     02  UPDATE-KEY.
00040 004000         03  UPDATE-ID          PIC X(7).
00041 004100         03  UPDATE-ACTION      PIC X.
00042 004200         88  ACTION-IS-VALID    VALUE 'U' 'A' 'D'.
00043 004300     02  UPDATE-FIELD          PIC X(2).
00044 004400         88  VALID-UPDATE-FIELD VALUE '01' '02' '03'
00045 004500                                     '04' '05' '06'
00046 004600                                     '07' '08' '09'
00047 004700                                     '10'.
00048 004800         88  UPDATE-FIELD-FIRST-NAME VALUE '01'.
00049 004900         88  UPDATE-FIELD-INITIAL  VALUE '02'.
00050 005000         88  UPDATE-FIELD-LAST-NAME VALUE '03'.
00051 005100         88  UPDATE-FIELD-STREET   VALUE '04'.
00052 005200         88  UPDATE-FIELD-CITY     VALUE '05'.
00053 005300         88  UPDATE-FIELD-GENDER   VALUE '06'.
00054 005400         88  UPDATE-FIELD-PHONE    VALUE '07'.

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00055	005500		88	UPDATE-FIELD-DATE1	VALUE '08'.
00056	005600		88	UPDATE-FIELD-DATE2	VALUE '09'.
00057	005700		88	UPDATE-FIELD-DATE3	VALUE '10'.
00058	005800	02		UPDATE-DATA	PIC X(70).
00059	005900	02		UPDATA-DATA-01	REDEFINES UPDATE-DATA.
00060	006000		03	UPDATE-DATA-FIRST-NAME	PIC X(15).
00061	006100		03	FILLER	PIC X(55).
00062	006200	02		UPDATA-DATA-02	REDEFINES UPDATE-DATA.
00063	006300		03	UPDATE-DATA-INITIAL	PIC X.
00064	006400		03	FILLER	PIC X(69).
00065	006500	02		UPDATA-DATA-03	REDEFINES UPDATE-DATA.
00066	006600		03	UPDATE-DATA-LAST-NAME	PIC X(20).
00067	006700		03	FILLER	PIC X(50).
00068	006800	02		UPDATA-DATA-04	REDEFINES UPDATE-DATA.
00069	006900		03	UPDATE-DATA-STREET	PIC X(35).
00070	007000		03	FILLER	PIC X(35).
00071	007100	02		UPDATA-DATA-05	REDEFINES UPDATE-DATA.
00072	007200		03	UPDATE-DATA-CITY	PIC X(35).
00073	007300		03	FILLER	PIC X(35).
00074	007400	02		UPDATA-DATA-06	REDEFINES UPDATE-DATA.
00075	007500		03	UPDATE-DATA-GENDER	PIC X.
00076	007600		03	FILLER	PIC X(69).
00077	007700	02		UPDATA-DATA-07	REDEFINES UPDATE-DATA.
00078	007800		03	UPDATE-DATA-PHONE	PIC X(10).
00079	007900		03	FILLER	PIC X(60).
00080	008000	02		UPDATA-DATA-08-10	REDEFINES UPDATE-DATA.
00081	008100		03	UPDATE-DATA-DATE	PIC X(8).
00082	008200		03	FILLER	PIC X(62).
00083	008300*				
00084	008400	FD		ISAM-MASTER	
00085	008500			LABEL RECORDS ARE STANDARD	
00086	008600			RECORD CONTAINS 200 CHARACTERS	
00087	008700			DATA RECORD IS MASTER-RECD.	
00088	008800	01		MASTER-RECD.	
00089	008900		02	MR-DELETE-CODE	PIC X.
00090	009000		02	MR-ID	PIC 9(7).
00091	009100		02	MR-FIRST-NAME	PIC X(15).
00092	009200		02	MR-INITIAL	PIC X.
00093	009300		02	MR-LAST-NAME	PIC X(20).
00094	009400		02	MR-STREET	PIC X(35).
00095	009500		02	MR-CITY-STATE-ZIP	PIC X(35).
00096	009600		02	MR-GENDER-CODE	PIC X.
00097	009700		02	MR-TELEPHONE	PIC X(10).
00098	009800		02	FILLER	REDEFINES MR-TELEPHONE.
00099	009900		03	MR-TELEPHONE-A	PIC 9(3).
00100	010000		03	MR-TELEPHONE-P	PIC 9(3).
00101	010100		03	MR-TELEPHONE-N	PIC 9(4).
00102	010200	02		MR-DATE-1	PIC X(8).
00103	010300	02		FILLER	REDEFINES MR-DATE-1.
00104	010400		03	MR-DATE-1M	PIC 9(2).
00105	010500		03	MR-DATE-1D	PIC 9(2).
00106	010600		03	MR-DATE-1Y	PIC 9(4).
00107	010700	02		MR-DATE-2	PIC X(8).
00108	010800	02		FILLER	REDEFINES MR-DATE-2.
00109	010900		03	MR-DATE-2M	PIC 9(2).
00110	011000		03	MR-DATE-2D	PIC 9(2).
00111	011100		03	MR-DATE-2Y	PIC 9(4).

00112	011200	02	MR-DATE-3	PIC X(8).
00113	011300	02	FILLER	REDEFINES MR-DATE-3.
00114	011400	03	MR-DATE-3M	PIC 9(2).
00115	011500	03	MR-DATE-3D	PIC 9(2).
00116	011600	03	MR-DATE-3Y	PIC 9(4).
00117	011700	02	MR-SORT-NAME	PIC X(36).
00118	011800	02	FILLER	PIC X(15).
00119	011900*			
00120	012000	FD	REPORT-FILE	
00121	012100		LABEL RECORDS ARE OMITTED	
00122	012200		REPORT IS UPDATE-REPORT.	
00123	012300*			
00124	012400		WORKING-STORAGE SECTION.	
00125	012500	01	SWITCHES-FOR-TESTS.	
00126	012600	02	UPDATE-FILE-END-SWITCH	PIC X VALUE 'N'.
00127	012700	88	UPDATE-FILE-END	VALUE 'Y'.
00128	012800	02	UPDATE-RECORD-VALID-SW	PIC X VALUE 'N'.
00129	012900	88	UPDATE-RECD-VALID	VALUE 'Y'.
00130	013000	02	READ-INVALID-KEY-SW	PIC X VALUE 'N'.
00131	013100	88	READ-INVALID-KEY	VALUE 'Y'.
00132	013200	02	REWRITE-INVALID-KEY-SW	PIC X VALUE 'N'.
00133	013300	88	REWRITE-INVALID-KEY	VALUE 'Y'.
00134	013400	02	WRITE-INVALID-KEY-SW	PIC X VALUE 'N'.
00135	013500	88	WRITE-INVALID-KEY	VALUE 'Y'.
00136	013600*			
00137	013700	01	WS-NOMINAL-ID	PIC X(7).
00138	013800*			
00139	013900	01	WS-ORIGINAL-DELETE-CODE	PIC X.
00140	014000*			
00141	014100	01	DELETE-FLAG-INIT	PIC S9(4) COMP VALUE +255.
00142	014200	01	FILLER	REDEFINES DELETE-FLAG-INIT.
00143	014300	02	FILLER	PIC X.
00144	014400	02	DELETE-FLAG-BYTE	PIC X.
00145	014500*			
00146	014600	01	RECORD-COUNTERS	USAGE IS COMP-3.
00147	014700	02	UPDATE-RECORD-COUNT	PIC S9(5) VALUE +0.
00148	014800	02	ERRONEOUS-UPDATE-COUNT	PIC S9(5) VALUE +0.
00149	014900	02	CHANGED-RECORD-COUNT	PIC S9(5) VALUE +0.
00150	015000	02	DELETED-RECORD-COUNT	PIC S9(5) VALUE +0.
00151	015100	02	ADDED-RECORD-COUNT	PIC S9(5) VALUE +0.
00152	015200	02	UNMATCHED-CHANGE-COUNT	PIC S9(5) VALUE +0.
00153	015300	02	DUPLICATE-ADD-COUNT	PIC S9(5) VALUE +0.
00154	015400*			
00155	015500	01	WS-UPDATE-RECORD	VALUE LOW-VALUES.
00156	015600	02	WSUR-KEY.	
00157	015700	03	WSUR-ID	PIC X(7).
00158	015800	03	WSUR-ACTION	PIC X.
00159	015900	88	ACTION-IS-CHANGE	VALUE 'U'.
00160	016000	88	ACTION-IS-ADD	VALUE 'A'.
00161	016100	88	ACTION-IS-DELETE	VALUE 'D'.
00162	016200	02	WSUR-FIRST-NAME	PIC X(15).
00163	016300	02	WSUR-INITIAL	PIC X.
00164	016400	02	WSUR-LAST-NAME	PIC X(20).
00165	016500	02	WSUR-STREET	PIC X(35).
00166	016600	02	WSUR-CITY	PIC X(35).
00167	016700	02	WSUR-GENDER	PIC X.
00168	016800	02	WSUR-PHONE	PIC X(10).

00169	016900	02	WSUR-DATE1	PIC X(8).
00170	017000	02	WSUR-DATE2	PIC X(8).
00171	017100	02	WSUR-DATE3	PIC X(8).
00172	017200*			
00173	017300	01	ERROR-MESSAGES.	
00174	017400	02	FILLER	PIC X(50) VALUE
00175	017500		'RECORD ID TO UPDATE NOT NUMERIC'.	
00176	017600	02	FILLER	PIC X(50) VALUE
00177	017700		'UPDATE ACTION NOT VALID (U/A/D)'.	
00178	017800	02	FILLER	PIC X(50) VALUE
00179	017900		'UPDATE FIELD NUMBER NOT VALID (01-10)'.	
00180	018000	02	FILLER	PIC X(50) VALUE
00181	018100		'FIRST NAME MAY NOT BE SPACES'.	
00182	018200	02	FILLER	PIC X(50) VALUE
00183	018300		'LAST NAME MAY NOT BE SPACES'.	
00184	018400	02	FILLER	PIC X(50) VALUE
00185	018500		'STREET MAY NOT BE SPACES'.	
00186	018600	02	FILLER	PIC X(50) VALUE
00187	018700		'CITY, STATE, ZIP MAY NOT BE SPACES'.	
00188	018800	02	FILLER	PIC X(50) VALUE
00189	018900		'GENDER CODE MUST BE "F" OR "M"'.	
00190	019000	02	FILLER	PIC X(50) VALUE
00191	019100		'TELEPHONE NUMBER MUST BE NUMERIC'.	
00192	019200	02	FILLER	PIC X(50) VALUE
00193	019300		'DATE FIELD CONTAINS INVALID CHARACTER'.	
00194	019400	02	FILLER	PIC X(50) VALUE
00195	019500		'YEAR IS NOT VALID FOR DATE'.	
00196	019600	02	FILLER	PIC X(50) VALUE
00197	019700		'MONTH IS NOT VALID FOR DATE'.	
00198	019800	02	FILLER	PIC X(50) VALUE
00199	019900		'DAY IS NOT VALID FOR DATE'.	
00200	020000	02	FILLER	PIC X(50) VALUE
00201	020100		'MASTER RECORD ALREADY EXISTS FOR ADD'.	
00202	020200	02	FILLER	PIC X(50) VALUE
00203	020300		'MASTER RECORD NOT FOUND FOR CHANGE/DELETE'.	
00204	020400	02	FILLER	PIC X(50) VALUE
00205	020500		'INVALID KEY ON REWRITE'.	
00206	020600	02	FILLER	PIC X(50) VALUE
00207	020700		'INVALID KEY ON WRITE'.	
00208	020800	01	ERROR-MESSAGE-TABLE	REDEFINES ERROR-MESSAGES.
00209	020900	02	ERROR-MESSAGE-TEXT	OCCURS 17 TIMES
00210	021000			INDEXED BY EMX
00211	021100			PIC X(50).
00212	021200*			
00213	021300	01	DETAIL-TYPES.	
00214	021400	02	FILLER	PIC X(9) VALUE '-BEFORE- '.
00215	021500	02	FILLER	PIC X(9) VALUE '-AFTER- '.
00216	021600	02	FILLER	PIC X(9) VALUE '-ADDED- '.
00217	021700	02	FILLER	PIC X(9) VALUE '-DELETED- '.
00218	021800	01	DETAIL-TYPES-TABLE	REDEFINES DETAIL-TYPES.
00219	021900	02	DETAIL-TYPE	OCCURS 4 TIMES
00220	022000			INDEXED BY DTX
00221	022100			PIC X(9).
00222	022200*			
00223	022300	01	GTOA-PARAMETERS.	
00224	022400	02	GTOAP-DATE-G	PIC X(8).
00225	022500	02	GTOAP-RETURN-CODE	PIC 9(1).

00226	022600	02	GTOAP-ANUM	PIC S9(7).
00227	022700	02	FILLER	PIC X(26).
00228	022800*			
00229	022900		REPORT SECTION.	
00230	023000	RD	UPDATE-REPORT	
00231	023100		CONTROLS IS FINAL	
00232	023200		PAGE LIMIT IS 60 LINES	
00233	023300		FIRST DETAIL 3	
00234	023400		LAST DETAIL 55.	
00235	023500*			
00236	023600	01	HEADING-ON-PAGE	TYPE IS PAGE HEADING.
00237	023700	02	LINE 1.	
00238	023800*			
00239	023900	01	VALIDATE-ERROR-DETAIL	TYPE IS DETAIL.
00240	024000	02	LINE PLUS 1.	
00241	024100	03	COLUMN 01	PIC X(60)
00242	024200			SOURCE IS UPDATE-RECD.
00243	024300	03	COLUMN 50	PIC X(50)
00244	024400			SOURCE IS
00245	024500		ERROR-MESSAGE-TEXT (EMX).	
00246	024600	02	LINE PLUS 1.	
00247	024700*			
00248	024800	01	RECORD-FIELDS-DETAIL	TYPE IS DETAIL.
00249	024900	02	LINE PLUS 1.	
00250	025000	03	COLUMN 01	PIC X
00251	025100			SOURCE IS MR-DELETE-CODE.
00252	025200	03	COLUMN 03	PIC 9(7)
00253	025300			SOURCE IS MR-ID.
00254	025400	03	COLUMN 11	PIC X(15)
00255	025500			SOURCE IS MR-FIRST-NAME.
00256	025600	03	COLUMN 27	PIC X
00257	025700			SOURCE IS MR-INITIAL.
00258	025800	03	COLUMN 29	PIC X(20)
00259	025900			SOURCE IS MR-LAST-NAME.
00260	026000	03	COLUMN 50	PIC X(35)
00261	026100			SOURCE IS MR-STREET.
00262	026200	03	COLUMN 86	PIC X
00263	026300			SOURCE IS MR-GENDER-CODE.
00264	026400	03	COLUMN 88	PIC X
00265	026500			VALUE '('.
00266	026600	03	COLUMN 89	PIC 9(3)
00267	026700			SOURCE IS MR-TELEPHONE-A.
00268	026800	03	COLUMN 92	PIC X
00269	026900			VALUE ')'.
00270	027000	03	COLUMN 93	PIC 9(3)
00271	027100			SOURCE IS MR-TELEPHONE-P.
00272	027200	03	COLUMN 96	PIC X
00273	027300			VALUE '-'.
00274	027400	03	COLUMN 97	PIC 9(4)
00275	027500			SOURCE IS MR-TELEPHONE-N.
00276	027600	03	COLUMN 102	PIC 9(2)
00277	027700			SOURCE IS MR-DATE-1M.
00278	027800	03	COLUMN 104	PIC X
00279	027900			VALUE '/'.
00280	028000	03	COLUMN 105	PIC 9(2)
00281	028100			SOURCE IS MR-DATE-1D.
00282	028200	03	COLUMN 107	PIC X

00283	028300			VALUE '/'.
00284	028400	03	COLUMN 108	PIC 9(4)
00285	028500			SOURCE IS MR-DATE-1Y.
00286	028600	03	COLUMN 113	PIC 9(2)
00287	028700			SOURCE IS MR-DATE-2M.
00288	028800	03	COLUMN 115	PIC X
00289	028900			VALUE '/'.
00290	029000	03	COLUMN 116	PIC 9(2)
00291	029100			SOURCE IS MR-DATE-2D.
00292	029200	03	COLUMN 118	PIC X
00293	029300			VALUE '/'.
00294	029400	03	COLUMN 119	PIC 9(4)
00295	029500			SOURCE IS MR-DATE-2Y.
00296	029600	03	COLUMN 124	PIC X(9)
00297	029700			SOURCE IS DETAIL-TYPE (DTX).
00298	029800	02	LINE PLUS 1.	
00299	029900	03	COLUMN 11	PIC X(36)
00300	030000			SOURCE IS MR-SORT-NAME.
00301	030100	03	COLUMN 50	PIC X(35)
00302	030200			SOURCE IS MR-CITY-STATE-ZIP.
00303	030300	03	COLUMN 102	PIC 9(2)
00304	030400			SOURCE IS MR-DATE-3M.
00305	030500	03	COLUMN 104	PIC X
00306	030600			VALUE '/'.
00307	030700	03	COLUMN 105	PIC 9(2)
00308	030800			SOURCE IS MR-DATE-3D.
00309	030900	03	COLUMN 107	PIC X
00310	031000			VALUE '/'.
00311	031100	03	COLUMN 108	PIC 9(4)
00312	031200			SOURCE IS MR-DATE-3Y.
00313	031300	02	LINE PLUS 1.	
00314	031400*			
00315	031500	01	WRITE-ERROR-DETAIL	TYPE IS DETAIL.
00316	031600	02	LINE PLUS 2.	
00317	031700	03	COLUMN 01	PIC X(7)
00318	031800			SOURCE IS MR-ID.
00319	031900	03	COLUMN 10	PIC X(50)
00320	032000			SOURCE IS
00321	032100		ERROR-MESSAGE-TEXT (EMX).	
00322	032200	02	LINE PLUS 1.	
00323	032300*			
00324	032400	01	REPORT-FOOTING	TYPE IS CONTROL FOOTING FINAL.
00325	032500	02	LINE NEXT PAGE.	
00326	032600	03	COLUMN 01	PIC ZZ,ZZ9
00327	032700			SOURCE IS UPDATE-RECORD-COUNT.
00328	032800	03	COLUMN 08	PIC X(50)
00329	032900			VALUE
00330	033000		'UPDATE RECORDS READ'.	
00331	033100	02	LINE PLUS 1.	
00332	033200	03	COLUMN 01	PIC ZZ,ZZ9
00333	033300			SOURCE IS ERRONEOUS-UPDATE-COUNT.
00334	033400	03	COLUMN 08	PIC X(50)
00335	033500			VALUE
00336	033600		'UPDATE RECORDS WITH INVALID DATA'.	
00337	033700	02	LINE PLUS 2.	
00338	033800	03	COLUMN 01	PIC ZZ,ZZ9
00339	033900			SOURCE IS CHANGED-RECORD-COUNT.

00340	034000	03	COLUMN 08	PIC X(50)
00341	034100			VALUE
00342	034200		'MASTER RECORDS UPDATED'.	
00343	034300	02	LINE PLUS 1.	
00344	034400	03	COLUMN 01	PIC ZZ,ZZ9
00345	034500			SOURCE IS DELETED-RECORD-COUNT.
00346	034600	03	COLUMN 08	PIC X(50)
00347	034700			VALUE
00348	034800		'MASTER RECORDS DELETED'.	
00349	034900	02	LINE PLUS 1.	
00350	035000	03	COLUMN 01	PIC ZZ,ZZ9
00351	035100			SOURCE IS ADDED-RECORD-COUNT.
00352	035200	03	COLUMN 08	PIC X(50)
00353	035300			VALUE
00354	035400		'MASTER RECORDS ADDED'.	
00355	035500	02	LINE PLUS 2.	
00356	035600	03	COLUMN 01	PIC ZZ,ZZ9
00357	035700			SOURCE IS UNMATCHED-CHANGE-COUNT.
00358	035800	03	COLUMN 08	PIC X(50)
00359	035900			VALUE
00360	036000		'ATTEMPTED UPDATES/DELETES WITH NO MATCHING MASTER'.	
00361	036100	02	LINE PLUS 1.	
00362	036200	03	COLUMN 01	PIC ZZ,ZZ9
00363	036300			SOURCE IS DUPLICATE-ADD-COUNT.
00364	036400	03	COLUMN 08	PIC X(50)
00365	036500			VALUE
00366	036600		'ATTEMPTED ADDS WITH DUPLICATE MASTER'.	
00367	036700*			
00368	036800		PROCEDURE DIVISION.	
00369	036900*			
00370	037000		OPEN-FILES.	
00371	037100*			
00372	037200		OPEN INPUT UPDATE-FILE,	
00373	037300		I-O ISAM-MASTER,	
00374	037400		OUTPUT REPORT-FILE.	
00375	037500*			
00376	037600		INITIATE UPDATE-REPORT.	
00377	037700		PERFORM PROCESS-UPDATE-FILE	
00378	037800		THRU PROCESS-UPDATE-FILE-EXIT	
00379	037900		UNTIL UPDATE-FILE-END.	
00380	038000		IF WSUR-KEY NOT = LOW-VALUES	
00381	038100		PERFORM PROCESS-UPDATE-SET	
00382	038200		THRU PROCESS-UPDATE-SET-EXIT.	
00383	038300		TERMINATE UPDATE-REPORT.	
00384	038400*			
00385	038500		CLOSE UPDATE-FILE,	
00386	038600		ISAM-MASTER,	
00387	038700		REPORT-FILE.	
00388	038800*			
00389	038900		GOBACK.	
00390	039000*			
00391	039100		PROCESS-UPDATE-FILE.	
00392	039200*			
00393	039300		READ UPDATE-FILE	
00394	039400		AT END	
00395	039500		MOVE 'Y' TO UPDATE-FILE-END-SWITCH	
00396	039600		.	

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00397 039700      IF NOT UPDATE-FILE-END
00398 039800          ADD 1 TO UPDATE-RECORD-COUNT
00399 039900          PERFORM PROCESS-UPDATE-RECORD
00400 040000              THRU PROCESS-UPDATE-RECORD-EXIT
00401 040100      .
00402 040200*
00403 040300 PROCESS-UPDATE-FILE-EXIT.
00404 040400      EXIT.
00405 040500*
00406 040600 PROCESS-UPDATE-RECORD.
00407 040700*
00408 040800      IF WSUR-KEY = LOW-VALUES
00409 040900          MOVE UPDATE-KEY TO WSUR-KEY
00410 041000          MOVE WSUR-ID TO WS-NOMINAL-ID
00411 041100          PERFORM READ-ISAM-MASTER
00412 041200              THRU READ-ISAM-MASTER-EXIT
00413 041300      ELSE
00414 041400          IF UPDATE-KEY NOT = WSUR-KEY
00415 041500              PERFORM PROCESS-UPDATE-SET
00416 041600                  THRU PROCESS-UPDATE-SET-EXIT
00417 041700              MOVE LOW-VALUES TO WS-UPDATE-RECORD
00418 041800              MOVE UPDATE-KEY TO WSUR-KEY
00419 041900              MOVE WSUR-ID TO WS-NOMINAL-ID
00420 042000              PERFORM READ-ISAM-MASTER
00421 042100                  THRU READ-ISAM-MASTER-EXIT
00422 042200      .
00423 042300*
00424 042400      MOVE 'Y' TO UPDATE-RECORD-VALID-SW.
00425 042500*
00426 042600      IF UPDATE-ID IS NOT NUMERIC
00427 042700          SET EMX TO 1
00428 042800          GENERATE VALIDATE-ERROR-DETAIL
00429 042900          MOVE 'N' TO UPDATE-RECORD-VALID-SW
00430 043000      .
00431 043100*
00432 043200      IF NOT ACTION-IS-VALID
00433 043300          SET EMX TO 2
00434 043400          GENERATE VALIDATE-ERROR-DETAIL
00435 043500          MOVE 'N' TO UPDATE-RECORD-VALID-SW
00436 043600      .
00437 043700*
00438 043800      IF ACTION-IS-CHANGE
00439 043900      OR ACTION-IS-ADD
00440 044000          IF NOT VALID-UPDATE-FIELD
00441 044100              SET EMX TO 3
00442 044200              GENERATE VALIDATE-ERROR-DETAIL
00443 044300              MOVE 'N' TO UPDATE-RECORD-VALID-SW
00444 044400      .
00445 044500*
00446 044600      IF UPDATE-RECD-VALID AND
00447 044700          (ACTION-IS-CHANGE OR ACTION-IS-ADD)
00448 044800          PERFORM VALIDATE-UPDATE-DATA
00449 044900              THRU VALIDATE-UPDATE-DATA-EXIT
00450 045000      .
00451 045100      IF ACTION-IS-CHANGE
00452 045200      OR ACTION-IS-DELETE
00453 045300          IF READ-INVALID-KEY

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00454 045400      SET EMX TO 15
00455 045500      GENERATE VALIDATE-ERROR-DETAIL
00456 045600      ADD 1 TO UNMATCHED-CHANGE-COUNT
00457 045700      MOVE 'N' TO UPDATE-RECORD-VALID-SW
00458 045800      ELSE
00459 045900          NEXT SENTENCE
00460 046000      ELSE
00461 046100          IF NOT READ-INVALID-KEY
00462 046200              SET EMX TO 14
00463 046300              GENERATE VALIDATE-ERROR-DETAIL
00464 046400              ADD 1 TO DUPLICATE-ADD-COUNT
00465 046500              MOVE 'N' TO UPDATE-RECORD-VALID-SW
00466 046600          ELSE
00467 046700              NEXT SENTENCE
00468 046800      .
00469 046900*
00470 047000      IF NOT UPDATE-RECD-VALID
00471 047100          ADD 1 TO ERRONEOUS-UPDATE-COUNT
00472 047200      .
00473 047300*
00474 047400      PROCESS-UPDATE-RECORD-EXIT.
00475 047500      EXIT.
00476 047600*
00477 047700      VALIDATE-UPDATE-DATA.
00478 047800*
00479 047900      IF UPDATE-FIELD-FIRST-NAME
00480 048000          PERFORM VALIDATE-FIRST-NAME
00481 048100          THRU VALIDATE-FIRST-NAME-EXIT
00482 048200      .
00483 048300      IF UPDATE-FIELD-INITIAL
00484 048400          MOVE UPDATE-DATA-INITIAL TO WSUR-INITIAL
00485 048500      .
00486 048600      IF UPDATE-FIELD-LAST-NAME
00487 048700          PERFORM VALIDATE-LAST-NAME
00488 048800          THRU VALIDATE-LAST-NAME-EXIT
00489 048900      .
00490 049000      IF UPDATE-FIELD-STREET
00491 049100          PERFORM VALIDATE-STREET
00492 049200          THRU VALIDATE-STREET-EXIT
00493 049300      .
00494 049400      IF UPDATE-FIELD-CITY
00495 049500          PERFORM VALIDATE-CITY
00496 049600          THRU VALIDATE-CITY-EXIT
00497 049700      .
00498 049800      IF UPDATE-FIELD-GENDER
00499 049900          PERFORM VALIDATE-GENDER
00500 050000          THRU VALIDATE-GENDER-EXIT
00501 050100      .
00502 050200      IF UPDATE-FIELD-PHONE
00503 050300          PERFORM VALIDATE-PHONE
00504 050400          THRU VALIDATE-PHONE-EXIT
00505 050500      .
00506 050600      IF UPDATE-FIELD-DATE1
00507 050700      OR UPDATE-FIELD-DATE2
00508 050800      OR UPDATE-FIELD-DATE3
00509 050900          PERFORM VALIDATE-DATE
00510 051000          THRU VALIDATE-DATE-EXIT

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00511 051100 .
00512 051200*
00513 051300 VALIDATE-UPDATE-DATA-EXIT.
00514 051400 EXIT.
00515 051500*
00516 051600 VALIDATE-FIRST-NAME.
00517 051700*
00518 051800 IF UPDATE-DATA-FIRST-NAME = SPACES
00519 051900 SET EMX TO 4
00520 052000 GENERATE VALIDATE-ERROR-DETAIL
00521 052100 MOVE 'N' TO UPDATE-RECORD-VALID-SW
00522 052200 ELSE
00523 052300 MOVE UPDATE-DATA-FIRST-NAME TO WSUR-FIRST-NAME
00524 052400 .
00525 052500*
00526 052600 VALIDATE-FIRST-NAME-EXIT.
00527 052700 EXIT.
00528 052800*
00529 052900 VALIDATE-LAST-NAME.
00530 053000*
00531 053100 IF UPDATE-DATA-LAST-NAME = SPACES
00532 053200 SET EMX TO 5
00533 053300 GENERATE VALIDATE-ERROR-DETAIL
00534 053400 MOVE 'N' TO UPDATE-RECORD-VALID-SW
00535 053500 ELSE
00536 053600 MOVE UPDATE-DATA-LAST-NAME TO WSUR-LAST-NAME
00537 053700 .
00538 053800*
00539 053900 VALIDATE-LAST-NAME-EXIT.
00540 054000 EXIT.
00541 054100*
00542 054200 VALIDATE-STREET.
00543 054300*
00544 054400 IF UPDATE-DATA-STREET = SPACES
00545 054500 SET EMX TO 6
00546 054600 GENERATE VALIDATE-ERROR-DETAIL
00547 054700 MOVE 'N' TO UPDATE-RECORD-VALID-SW
00548 054800 ELSE
00549 054900 MOVE UPDATE-DATA-STREET TO WSUR-STREET
00550 055000 .
00551 055100*
00552 055200 VALIDATE-STREET-EXIT.
00553 055300 EXIT.
00554 055400*
00555 055500 VALIDATE-CITY.
00556 055600*
00557 055700 IF UPDATE-DATA-CITY = SPACES
00558 055800 SET EMX TO 7
00559 055900 GENERATE VALIDATE-ERROR-DETAIL
00560 056000 MOVE 'N' TO UPDATE-RECORD-VALID-SW
00561 056100 ELSE
00562 056200 MOVE UPDATE-DATA-CITY TO WSUR-CITY
00563 056300 .
00564 056400*
00565 056500 VALIDATE-CITY-EXIT.
00566 056600 EXIT.
00567 056700*
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00568 056800 VALIDATE-GENDER.
00569 056900*
00570 057000     IF UPDATE-DATA-GENDER = 'M'
00571 057100     OR UPDATE-DATA-GENDER = 'F'
00572 057200         MOVE UPDATE-DATA-GENDER TO WSUR-GENDER
00573 057300     ELSE
00574 057400         SET EMX TO 8
00575 057500         GENERATE VALIDATE-ERROR-DETAIL
00576 057600         MOVE 'N' TO UPDATE-RECORD-VALID-SW
00577 057700     .
00578 057800*
00579 057900 VALIDATE-GENDER-EXIT.
00580 058000     EXIT.
00581 058100*
00582 058200 VALIDATE-PHONE.
00583 058300*
00584 058400     IF UPDATE-DATA-PHONE IS NOT NUMERIC
00585 058500         SET EMX TO 9
00586 058600         GENERATE VALIDATE-ERROR-DETAIL
00587 058700         MOVE 'N' TO UPDATE-RECORD-VALID-SW
00588 058800     ELSE
00589 058900         MOVE UPDATE-DATA-PHONE TO WSUR-PHONE
00590 059000     .
00591 059100*
00592 059200 VALIDATE-PHONE-EXIT.
00593 059300     EXIT.
00594 059400*
00595 059500 VALIDATE-DATE.
00596 059600*
00597 059700     MOVE UPDATE-DATA-DATE TO GTOAP-DATE-G.
00598 059800     CALL 'Y2KGTOA' USING GTOA-PARAMETERS.
00599 059900     IF GTOAP-RETURN-CODE = 2
00600 060000         SET EMX TO 10
00601 060100         GENERATE VALIDATE-ERROR-DETAIL
00602 060200         MOVE 'N' TO UPDATE-RECORD-VALID-SW
00603 060300     .
00604 060400     IF GTOAP-RETURN-CODE = 4
00605 060500         SET EMX TO 11
00606 060600         GENERATE VALIDATE-ERROR-DETAIL
00607 060700         MOVE 'N' TO UPDATE-RECORD-VALID-SW
00608 060800     .
00609 060900     IF GTOAP-RETURN-CODE = 6
00610 061000         SET EMX TO 12
00611 061100         GENERATE VALIDATE-ERROR-DETAIL
00612 061200         MOVE 'N' TO UPDATE-RECORD-VALID-SW
00613 061300     .
00614 061400     IF GTOAP-RETURN-CODE = 8
00615 061500         SET EMX TO 13
00616 061600         GENERATE VALIDATE-ERROR-DETAIL
00617 061700         MOVE 'N' TO UPDATE-RECORD-VALID-SW
00618 061800     .
00619 061900     IF GTOAP-RETURN-CODE = 0
00620 062000     AND UPDATE-FIELD-DATE1
00621 062100         MOVE UPDATE-DATA-DATE TO WSUR-DATE1.
00622 062200     IF GTOAP-RETURN-CODE = 0
00623 062300     AND UPDATE-FIELD-DATE2
00624 062400         MOVE UPDATE-DATA-DATE TO WSUR-DATE2.
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00625 062500 IF GTOAP-RETURN-CODE = 0
00626 062600 AND UPDATE-FIELD-DATE3
00627 062700 MOVE UPDATE-DATA-DATE TO WSUR-DATE3.
00628 062800*
00629 062900 VALIDATE-DATE-EXIT.
00630 063000 EXIT.
00631 063100*
00632 063200 PROCESS-UPDATE-SET.
00633 063300*
00634 063400 IF ACTION-IS-CHANGE
00635 063500 OR ACTION-IS-DELETE
00636 063600 IF NOT READ-INVALID-KEY
00637 063700 PERFORM APPLY-UPDATES-TO-MASTER
00638 063800 THRU APPLY-UPDATES-TO-MASTER-EXIT
00639 063900 ELSE
00640 064000 NEXT SENTENCE
00641 064100* NO ACTION, BECAUSE THIS IS AN ERROR WHICH HAS
00642 064200* ALREADY BEEN REPORTED
00643 064300 ELSE
00644 064400 IF ACTION-IS-ADD
00645 064500 IF READ-INVALID-KEY
00646 064600 PERFORM ADD-NEW-MASTER
00647 064700 THRU ADD-NEW-MASTER-EXIT
00648 064800 ELSE
00649 064900 NEXT SENTENCE
00650 065000* NO ACTION, BECAUSE THIS IS AN ERROR WHICH HAS
00651 065100* ALREADY BEEN REPORTED
00652 065200 .
00653 065300*
00654 065400 PROCESS-UPDATE-SET-EXIT.
00655 065500 EXIT.
00656 065600*
00657 065700 APPLY-UPDATES-TO-MASTER.
00658 065800*
00659 065900 SET DTX TO 1.
00660 066000 GENERATE RECORD-FIELDS-DETAIL.
00661 066100
00662 066200 IF ACTION-IS-DELETE
00663 066300 MOVE DELETE-FLAG-BYTE TO MR-DELETE-CODE
00664 066400 ELSE
00665 066500 PERFORM UPDATE-ISAM-MASTER-FIELDS
00666 066600 THRU UPDATE-ISAM-MASTER-FIELDS-EXIT
00667 066700 .
00668 066800 IF WS-ORIGINAL-DELETE-CODE NOT = MR-DELETE-CODE
00669 066900 SET DTX TO 4
00670 067000 ELSE
00671 067100 SET DTX TO 2
00672 067200 .
00673 067300 GENERATE RECORD-FIELDS-DETAIL.
00674 067400 PERFORM REWRITE-ISAM-MASTER
00675 067500 THRU REWRITE-ISAM-MASTER-EXIT.
00676 067600*
00677 067700 APPLY-UPDATES-TO-MASTER-EXIT.
00678 067800 EXIT.
00679 067900*
00680 068000 ADD-NEW-MASTER.
00681 068100*

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00682 068200 MOVE SPACES TO MASTER-RECD.
00683 068300 MOVE ZEROS TO MR-TELEPHONE, MR-DATE-1,
00684 068400 MR-DATE-2, MR-DATE-3
00685 068500 MOVE WSUR-ID TO MR-ID
00686 068600 PERFORM UPDATE-ISAM-MASTER-FIELDS
00687 068700 THRU UPDATE-ISAM-MASTER-FIELDS-EXIT.
00688 068800 SET DTX TO 3.
00689 068900 GENERATE RECORD-FIELDS-DETAIL.
00690 069000 PERFORM WRITE-ISAM-MASTER
00691 069100 THRU WRITE-ISAM-MASTER-EXIT.
00692 069200*
00693 069300 ADD-NEW-MASTER-EXIT.
00694 069400 EXIT.
00695 069500*
00696 069600 READ-ISAM-MASTER.
00697 069700*
00698 069800 MOVE SPACE TO WS-ORIGINAL-DELETE-CODE.
00699 069900 MOVE 'N' TO READ-INVALID-KEY-SW.
00700 070000 READ ISAM-MASTER
00701 070100 INVALID KEY
00702 070200 MOVE 'Y' TO READ-INVALID-KEY-SW
00703 070300 MOVE LOW-VALUES TO MASTER-RECD
00704 070400 .
00705 070500 IF NOT READ-INVALID-KEY
00706 070600 MOVE MR-DELETE-CODE TO WS-ORIGINAL-DELETE-CODE.
00707 070700*
00708 070800 READ-ISAM-MASTER-EXIT.
00709 070900 EXIT.
00710 071000*
00711 071100 REWRITE-ISAM-MASTER.
00712 071200*
00713 071300 MOVE 'N' TO REWRITE-INVALID-KEY-SW.
00714 071400 REWRITE MASTER-RECD
00715 071500 INVALID KEY
00716 071600 MOVE 'Y' TO REWRITE-INVALID-KEY-SW
00717 071700 SET EMX TO 16
00718 071800 GENERATE WRITE-ERROR-DETAIL
00719 071900 .
00720 072000 IF NOT REWRITE-INVALID-KEY
00721 072100 IF WS-ORIGINAL-DELETE-CODE NOT = MR-DELETE-CODE
00722 072200 ADD 1 TO DELETED-RECORD-COUNT
00723 072300 ELSE
00724 072400 ADD 1 TO CHANGED-RECORD-COUNT
00725 072500 .
00726 072600*
00727 072700 REWRITE-ISAM-MASTER-EXIT.
00728 072800 EXIT.
00729 072900*
00730 073000 WRITE-ISAM-MASTER.
00731 073100*
00732 073200 MOVE 'N' TO WRITE-INVALID-KEY-SW.
00733 073300 WRITE MASTER-RECD
00734 073400 INVALID KEY
00735 073500 MOVE 'Y' TO WRITE-INVALID-KEY-SW
00736 073600 SET EMX TO 17
00737 073700 GENERATE WRITE-ERROR-DETAIL
00738 073800 .

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00739 073900 IF NOT WRITE-INVALID-KEY
00740 074000 ADD 1 TO ADDED-RECORD-COUNT
00741 074100 .
00742 074200*
00743 074300 WRITE-ISAM-MASTER-EXIT.
00744 074400 EXIT.
00745 074500*
00746 074600 UPDATE-ISAM-MASTER-FIELDS.
00747 074700*
00748 074800 IF WSUR-FIRST-NAME NOT = LOW-VALUES
00749 074900 MOVE WSUR-FIRST-NAME TO MR-FIRST-NAME.
00750 075000 IF WSUR-INITIAL NOT = LOW-VALUES
00751 075100 MOVE WSUR-INITIAL TO MR-INITIAL.
00752 075200 IF WSUR-LAST-NAME NOT = LOW-VALUES
00753 075300 MOVE WSUR-LAST-NAME TO MR-LAST-NAME.
00754 075400 CALL 'SORTNAME' USING MR-FIRST-NAME, MR-LAST-NAME,
00755 075500 MR-INITIAL, MR-SORT-NAME.
00756 075600 IF WSUR-STREET NOT = LOW-VALUES
00757 075700 MOVE WSUR-STREET TO MR-STREET.
00758 075800 IF WSUR-CITY NOT = LOW-VALUES
00759 075900 MOVE WSUR-CITY TO MR-CITY-STATE-ZIP.
00760 076000 IF WSUR-GENDER NOT = LOW-VALUES
00761 076100 MOVE WSUR-GENDER TO MR-GENDER-CODE.
00762 076200 IF WSUR-PHONE NOT = LOW-VALUES
00763 076300 MOVE WSUR-PHONE TO MR-TELEPHONE.
00764 076400 IF WSUR-DATE1 NOT = LOW-VALUES
00765 076500 MOVE WSUR-DATE1 TO MR-DATE-1.
00766 076600 IF WSUR-DATE2 NOT = LOW-VALUES
00767 076700 MOVE WSUR-DATE2 TO MR-DATE-2.
00768 076800 IF WSUR-DATE3 NOT = LOW-VALUES
00769 076900 MOVE WSUR-DATE3 TO MR-DATE-3.
00770 077000*
00771 077100 UPDATE-ISAM-MASTER-FIELDS-EXIT.
00772 077200 EXIT.
00773 077300*
00774 077400* END OF PROGRAM ISUPDT.
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INTRNL NAME	LVL	SOURCE NAME	BASE	DISPL	INTRNL NAME	DEFINITION	USAGE	R	O	Q	M
DNM=3-000	FD	UPDATE-FILE	DCB=01		DNM=3-000		QSAM				F
DNM=3-027	01	UPDATE-RECD	BL=1	000	DNM=3-027	DS 0CL80	GROUP				
DNM=3-051	02	UPDATE-KEY	BL=1	000	DNM=3-051	DS 0CL8	GROUP				
DNM=3-074	03	UPDATE-ID	BL=1	000	DNM=3-074	DS 7C	DISP				
DNM=3-093	03	UPDATE-ACTION	BL=1	007	DNM=3-093	DS 1C	DISP				
DNM=3-119	88	ACTION-IS-VALID			DNM=3-119						
DNM=3-144	02	UPDATE-FIELD	BL=1	008	DNM=3-144	DS 2C	DISP				
DNM=3-169	88	VALID-UPDATE-FIELD			DNM=3-169						
DNM=3-197	88	UPDATE-FIELD-FIRST-NAME			DNM=3-197						
DNM=3-232	88	UPDATE-FIELD-INITIAL			DNM=3-232						
DNM=3-264	88	UPDATE-FIELD-LAST-NAME			DNM=3-264						
DNM=3-298	88	UPDATE-FIELD-STREET			DNM=3-298						
DNM=3-329	88	UPDATE-FIELD-CITY			DNM=3-329						
DNM=3-358	88	UPDATE-FIELD-GENDER			DNM=3-358						
DNM=3-389	88	UPDATE-FIELD-PHONE			DNM=3-389						
DNM=3-422	88	UPDATE-FIELD-DATE1			DNM=3-422						
DNM=3-455	88	UPDATE-FIELD-DATE2			DNM=3-455						
DNM=4-000	88	UPDATE-FIELD-DATE3			DNM=4-000						
DNM=4-030	02	UPDATE-DATA	BL=1	00A	DNM=4-030	DS 70C	DISP				
DNM=4-051	02	UPDATA-DATA-01	BL=1	00A	DNM=4-051	DS 0CL70	GROUP	R			
DNM=4-078	03	UPDATE-DATA-FIRST-NAME	BL=1	00A	DNM=4-078	DS 15C	DISP				
DNM=4-110	03	FILLER	BL=1	019	DNM=4-110	DS 55C	DISP				
DNM=4-126	02	UPDATA-DATA-02	BL=1	00A	DNM=4-126	DS 0CL70	GROUP	R			
DNM=4-153	03	UPDATE-DATA-INITIAL	BL=1	00A	DNM=4-153	DS 1C	DISP				
DNM=4-182	03	FILLER	BL=1	00B	DNM=4-182	DS 69C	DISP				
DNM=4-201	02	UPDATA-DATA-03	BL=1	00A	DNM=4-201	DS 0CL70	GROUP	R			
DNM=4-228	03	UPDATE-DATA-LAST-NAME	BL=1	00A	DNM=4-228	DS 20C	DISP				
DNM=4-259	03	FILLER	BL=1	01E	DNM=4-259	DS 50C	DISP				
DNM=4-278	02	UPDATA-DATA-04	BL=1	00A	DNM=4-278	DS 0CL70	GROUP	R			
DNM=4-305	03	UPDATE-DATA-STREET	BL=1	00A	DNM=4-305	DS 35C	DISP				
DNM=4-336	03	FILLER	BL=1	02D	DNM=4-336	DS 35C	DISP				
DNM=4-355	02	UPDATA-DATA-05	BL=1	00A	DNM=4-355	DS 0CL70	GROUP	R			
DNM=4-382	03	UPDATE-DATA-CITY	BL=1	00A	DNM=4-382	DS 35C	DISP				
DNM=4-408	03	FILLER	BL=1	02D	DNM=4-408	DS 35C	DISP				
DNM=4-427	02	UPDATA-DATA-06	BL=1	00A	DNM=4-427	DS 0CL70	GROUP	R			
DNM=4-457	03	UPDATE-DATA-GENDER	BL=1	00A	DNM=4-457	DS 1C	DISP				
DNM=4-485	03	FILLER	BL=1	00B	DNM=4-485	DS 69C	DISP				
DNM=5-000	02	UPDATA-DATA-07	BL=1	00A	DNM=5-000	DS 0CL70	GROUP	R			
DNM=5-027	03	UPDATE-DATA-PHONE	BL=1	00A	DNM=5-027	DS 10C	DISP				
DNM=5-054	03	FILLER	BL=1	014	DNM=5-054	DS 60C	DISP				
DNM=5-073	02	UPDATA-DATA-08-10	BL=1	00A	DNM=5-073	DS 0CL70	GROUP	R			
DNM=5-106	03	UPDATE-DATA-DATE	BL=1	00A	DNM=5-106	DS 8C	DISP				
DNM=5-132	03	FILLER	BL=1	012	DNM=5-132	DS 62C	DISP				
DNM=5-151	FD	ISAM-MASTER	DCB=02	DEC=01	DNM=5-151		BISAM				F
DNM=5-178	01	MASTER-RECD	BL=2	000	DNM=5-178	DS 0CL200	GROUP				
DNM=5-202	02	MR-DELETE-CODE	BL=2	000	DNM=5-202	DS 1C	DISP				
DNM=5-226	02	MR-ID	BL=2	001	DNM=5-226	DS 7C	DISP-NM				
DNM=5-241	02	MR-FIRST-NAME	BL=2	008	DNM=5-241	DS 15C	DISP				
DNM=5-264	02	MR-INITIAL	BL=2	017	DNM=5-264	DS 1C	DISP				
DNM=5-284	02	MR-LAST-NAME	BL=2	018	DNM=5-284	DS 20C	DISP				
DNM=5-306	02	MR-STREET	BL=2	02C	DNM=5-306	DS 35C	DISP				
DNM=5-325	02	MR-CITY-STATE-ZIP	BL=2	04F	DNM=5-325	DS 35C	DISP				
DNM=5-355	02	MR-GENDER-CODE	BL=2	072	DNM=5-355	DS 1C	DISP				
DNM=5-379	02	MR-TELEPHONE	BL=2	073	DNM=5-379	DS 10C	DISP				
DNM=5-404	02	FILLER	BL=2	073	DNM=5-404	DS 0CL10	GROUP	R			

INTRNL NAME	LVL	SOURCE NAME	BASE	DISPL	INTRNL NAME	DEFINITION	USAGE	R	O	Q	M
DNM=5-426	03	MR-TELEPHONE-A	BL=2	073	DNM=5-426	DS 3C	DISP-NM				
DNM=5-450	03	MR-TELEPHONE-P	BL=2	076	DNM=5-450	DS 3C	DISP-NM				
DNM=5-474	03	MR-TELEPHONE-N	BL=2	079	DNM=5-474	DS 4C	DISP-NM				
DNM=6-000	02	MR-DATE-1	BL=2	07D	DNM=6-000	DS 8C	DISP				
DNM=6-019	02	FILLER	BL=2	07D	DNM=6-019	DS 0CL8	GROUP	R			
DNM=6-041	03	MR-DATE-1M	BL=2	07D	DNM=6-041	DS 2C	DISP-NM				
DNM=6-064	03	MR-DATE-1D	BL=2	07F	DNM=6-064	DS 2C	DISP-NM				
DNM=6-084	03	MR-DATE-1Y	BL=2	081	DNM=6-084	DS 4C	DISP-NM				
DNM=6-104	02	MR-DATE-2	BL=2	085	DNM=6-104	DS 8C	DISP				
DNM=6-126	02	FILLER	BL=2	085	DNM=6-126	DS 0CL8	GROUP	R			
DNM=6-148	03	MR-DATE-2M	BL=2	085	DNM=6-148	DS 2C	DISP-NM				
DNM=6-168	03	MR-DATE-2D	BL=2	087	DNM=6-168	DS 2C	DISP-NM				
DNM=6-188	03	MR-DATE-2Y	BL=2	089	DNM=6-188	DS 4C	DISP-NM				
DNM=6-208	02	MR-DATE-3	BL=2	08D	DNM=6-208	DS 8C	DISP				
DNM=6-227	02	FILLER	BL=2	08D	DNM=6-227	DS 0CL8	GROUP	R			
DNM=6-249	03	MR-DATE-3M	BL=2	08D	DNM=6-249	DS 2C	DISP-NM				
DNM=6-269	03	MR-DATE-3D	BL=2	08F	DNM=6-269	DS 2C	DISP-NM				
DNM=6-289	03	MR-DATE-3Y	BL=2	091	DNM=6-289	DS 4C	DISP-NM				
DNM=6-309	02	MR-SORT-NAME	BL=2	095	DNM=6-309	DS 36C	DISP				
DNM=6-331	02	FILLER	BL=2	0B9	DNM=6-331	DS 15C	DISP				
DNM=6-350	FD	REPORT-FILE	DCB=03		DNM=6-350		QSAM			F	
DNM=6-374	01	-0001	BL=3	000	DNM=6-374	DS 133C	DISP				
DNM=6-389	01	SWITCHES-FOR-TESTS	BL=4	000	DNM=6-389	DS 0CL5	GROUP				
DNM=6-420	02	UPDATE-FILE-END-SWITCH	BL=4	000	DNM=6-420	DS 1C	DISP				
DNM=6-455	88	UPDATE-FILE-END			DNM=6-455						
DNM=7-000	02	UPDATE-RECORD-VALID-SW	BL=4	001	DNM=7-000	DS 1C	DISP				
DNM=7-035	88	UPDATE-RECD-VALID			DNM=7-035						
DNM=7-063	02	READ-INVALID-KEY-SW	BL=4	002	DNM=7-063	DS 1C	DISP				
DNM=7-095	88	READ-INVALID-KEY			DNM=7-095						
DNM=7-122	02	REWRITE-INVALID-KEY-SW	BL=4	003	DNM=7-122	DS 1C	DISP				
DNM=7-157	88	REWRITE-INVALID-KEY			DNM=7-157						
DNM=7-187	02	WRITE-INVALID-KEY-SW	BL=4	004	DNM=7-187	DS 1C	DISP				
DNM=7-220	88	WRITE-INVALID-KEY			DNM=7-220						
DNM=7-248	01	WS-NOMINAL-ID	BL=4	008	DNM=7-248	DS 7C	DISP				
DNM=7-274	01	WS-ORIGINAL-DELETE-CODE	BL=4	010	DNM=7-274	DS 1C	DISP				
DNM=7-307	01	DELETE-FLAG-INIT	BL=4	018	DNM=7-307	DS 2C	COMP				
DNM=7-333	01	FILLER	BL=4	018	DNM=7-333	DS 0CL2	GROUP	R			
DNM=7-355	02	FILLER	BL=4	018	DNM=7-355	DS 1C	DISP				
DNM=7-374	02	DELETE-FLAG-BYTE	BL=4	019	DNM=7-374	DS 1C	DISP				
DNM=7-400	01	RECORD-COUNTERS	BL=4	020	DNM=7-400	DS 0CL21	GROUP				
DNM=7-428	02	UPDATE-RECORD-COUNT	BL=4	020	DNM=7-428	DS 3P	COMP-3				
DNM=7-457	02	ERRONEOUS-UPDATE-COUNT	BL=4	023	DNM=7-457	DS 3P	COMP-3				
DNM=8-000	02	CHANGED-RECORD-COUNT	BL=4	026	DNM=8-000	DS 3P	COMP-3				
DNM=8-033	02	DELETED-RECORD-COUNT	BL=4	029	DNM=8-033	DS 3P	COMP-3				
DNM=8-063	02	ADDED-RECORD-COUNT	BL=4	02C	DNM=8-063	DS 3P	COMP-3				
DNM=8-091	02	UNMATCHED-CHANGE-COUNT	BL=4	02F	DNM=8-091	DS 3P	COMP-3				
DNM=8-123	02	DUPLICATE-ADD-COUNT	BL=4	032	DNM=8-123	DS 3P	COMP-3				
DNM=8-152	01	WS-UPDATE-RECORD	BL=4	038	DNM=8-152	DS 0CL149	GROUP				
DNM=8-181	02	WSUR-KEY	BL=4	038	DNM=8-181	DS 0CL8	GROUP				
DNM=8-202	03	WSUR-ID	BL=4	038	DNM=8-202	DS 7C	DISP				
DNM=8-219	03	WSUR-ACTION	BL=4	03F	DNM=8-219	DS 1C	DISP				
DNM=8-243	88	ACTION-IS-CHANGE			DNM=8-243						
DNM=8-273	88	ACTION-IS-ADD			DNM=8-273						
DNM=8-300	88	ACTION-IS-DELETE			DNM=8-300						
DNM=8-327	02	WSUR-FIRST-NAME	BL=4	040	DNM=8-327	DS 15C	DISP				

INTRNL NAME	LVL	SOURCE NAME	BASE	DISPL	INTRNL NAME	DEFINITION	USAGE	R	O	Q	M
DNM=8-352	02	WSUR-INITIAL	BL=4	04F	DNM=8-352	DS 1C	DISP				
DNM=8-374	02	WSUR-LAST-NAME	BL=4	050	DNM=8-374	DS 20C	DISP				
DNM=8-401	02	WSUR-STREET	BL=4	064	DNM=8-401	DS 35C	DISP				
DNM=8-422	02	WSUR-CITY	BL=4	087	DNM=8-422	DS 35C	DISP				
DNM=8-441	02	WSUR-GENDER	BL=4	0AA	DNM=8-441	DS 1C	DISP				
DNM=8-465	02	WSUR-PHONE	BL=4	0AB	DNM=8-465	DS 10C	DISP				
DNM=8-485	02	WSUR-DATE1	BL=4	0B5	DNM=8-485	DS 8C	DISP				
DNM=9-000	02	WSUR-DATE2	BL=4	0BD	DNM=9-000	DS 8C	DISP				
DNM=9-020	02	WSUR-DATE3	BL=4	0C5	DNM=9-020	DS 8C	DISP				
DNM=9-040	01	ERROR-MESSAGES	BL=4	0D0	DNM=9-040	DS 0CL850	GROUP				
DNM=9-067	02	FILLER	BL=4	0D0	DNM=9-067	DS 50C	DISP				
DNM=9-086	02	FILLER	BL=4	102	DNM=9-086	DS 50C	DISP				
DNM=9-105	02	FILLER	BL=4	134	DNM=9-105	DS 50C	DISP				
DNM=9-124	02	FILLER	BL=4	166	DNM=9-124	DS 50C	DISP				
DNM=9-143	02	FILLER	BL=4	198	DNM=9-143	DS 50C	DISP				
DNM=9-162	02	FILLER	BL=4	1CA	DNM=9-162	DS 50C	DISP				
DNM=9-181	02	FILLER	BL=4	1FC	DNM=9-181	DS 50C	DISP				
DNM=9-200	02	FILLER	BL=4	22E	DNM=9-200	DS 50C	DISP				
DNM=9-219	02	FILLER	BL=4	260	DNM=9-219	DS 50C	DISP				
DNM=9-238	02	FILLER	BL=4	292	DNM=9-238	DS 50C	DISP				
DNM=9-257	02	FILLER	BL=4	2C4	DNM=9-257	DS 50C	DISP				
DNM=9-276	02	FILLER	BL=4	2F6	DNM=9-276	DS 50C	DISP				
DNM=9-295	02	FILLER	BL=4	328	DNM=9-295	DS 50C	DISP				
DNM=9-314	02	FILLER	BL=4	35A	DNM=9-314	DS 50C	DISP				
DNM=9-333	02	FILLER	BL=4	38C	DNM=9-333	DS 50C	DISP				
DNM=9-352	02	FILLER	BL=4	3BE	DNM=9-352	DS 50C	DISP				
DNM=9-371	02	FILLER	BL=4	3F0	DNM=9-371	DS 50C	DISP				
DNM=9-390	01	ERROR-MESSAGE-TABLE	BL=4	0D0	DNM=9-390	DS 0CL850	GROUP	R			
DNM=9-422		EMX			DNM=9-422		INDEX-NM				
DNM=9-432	02	ERROR-MESSAGE-TEXT	BL=4	0D0	DNM=9-432	DS 50C	DISP		0		
DNM=9-460	01	DETAIL-TYPES	BL=4	428	DNM=9-460	DS 0CL36	GROUP				
DNM=9-485	02	FILLER	BL=4	428	DNM=9-485	DS 9C	DISP				
DNM=10-000	02	FILLER	BL=4	431	DNM=10-000	DS 9C	DISP				
DNM=10-019	02	FILLER	BL=4	43A	DNM=10-019	DS 9C	DISP				
DNM=10-038	02	FILLER	BL=4	443	DNM=10-038	DS 9C	DISP				
DNM=10-057	01	DETAIL-TYPES-TABLE	BL=4	428	DNM=10-057	DS 0CL36	GROUP	R			
DNM=10-088		DTX			DNM=10-088		INDEX-NM				
DNM=10-098	02	DETAIL-TYPE	BL=4	428	DNM=10-098	DS 9C	DISP		0		
DNM=10-119	01	GTOA-PARAMETERS	BL=4	450	DNM=10-119	DS 0CL42	GROUP				
DNM=10-147	02	GTOAP-DATE-G	BL=4	450	DNM=10-147	DS 8C	DISP				
DNM=10-172	02	GTOAP-RETURN-CODE	BL=4	458	DNM=10-172	DS 1C	DISP-NM				
DNM=10-202	02	GTOAP-ANUM	BL=4	459	DNM=10-202	DS 7C	DISP-NM				
DNM=10-222	02	FILLER	BL=4	460	DNM=10-222	DS 26C	DISP				
DNM=10-241	01	PRINT-SWITCH	BL=4	480	DNM=10-241	DS 1C	DISP-NM				
DNM=10-266	RD	UPDATE-REPORT			DNM=10-266						
DNM=10-291	01	CTL.LVL	BL=4	488	DNM=10-291	DS 2P	COMP-3				
DNM=10-308	01	TER.COD	BL=4	490	DNM=10-308	DS 1C	DISP				
DNM=10-325	01	FRS.GEN	BL=4	498	DNM=10-325	DS 1C	DISP				
DNM=10-342	01	LIN.SAV	BL=4	4A0	DNM=10-342	DS 2C	COMP				
DNM=10-359	01	FRS.GRP	BL=4	4A8	DNM=10-359	DS 1C	DISP				
DNM=10-379	01	ABS.LIN	BL=4	4B0	DNM=10-379	DS 2C	COMP				
DNM=10-396	01	LIN.NUM	BL=4	4B8	DNM=10-396	DS 2P	COMP-3				
DNM=10-416	01	LINE-COUNTER	BL=4	4C0	DNM=10-416	DS 3P	COMP-3				
DNM=10-438	01	PAGE-COUNTER	BL=4	4C8	DNM=10-438	DS 3P	COMP-3				
DNM=10-460	01	RPT.RCD	BL=4	4D0	DNM=10-460	DS 0CL133	GROUP				

INTRNL NAME	LVL	SOURCE NAME	BASE	DISPL	INTRNL NAME	DEFINITION	USAGE	R	O	Q	M
DNM=10-480	02	CTL.CHR	BL=4	4D0	DNM=10-480	DS 1C	DISP				
DNM=11-000	02	RPT.LIN	BL=4	4D1	DNM=11-000	DS 132C	DISP				
DNM=11-017	02	E.0001	BL=4	4D1	DNM=11-017	DS 60C	DISP	R			
DNM=11-036	02	E.0002	BL=4	502	DNM=11-036	DS 50C	DISP	R			
DNM=11-052	02	E.0003	BL=4	4D1	DNM=11-052	DS 1C	DISP	R			
DNM=11-071	02	E.0004	BL=4	4D3	DNM=11-071	DS 7C	DISP-NM	R			
DNM=11-090	02	E.0005	BL=4	4DB	DNM=11-090	DS 15C	DISP	R			
DNM=11-106	02	E.0006	BL=4	4EB	DNM=11-106	DS 1C	DISP	R			
DNM=11-122	02	E.0007	BL=4	4ED	DNM=11-122	DS 20C	DISP	R			
DNM=11-138	02	E.0008	BL=4	502	DNM=11-138	DS 35C	DISP	R			
DNM=11-154	02	E.0009	BL=4	526	DNM=11-154	DS 1C	DISP	R			
DNM=11-170	02	E.0010	BL=4	528	DNM=11-170	DS 1C	DISP	R			
DNM=11-186	02	E.0011	BL=4	529	DNM=11-186	DS 3C	DISP-NM	R			
DNM=11-205	02	E.0012	BL=4	52C	DNM=11-205	DS 1C	DISP	R			
DNM=11-221	02	E.0013	BL=4	52D	DNM=11-221	DS 3C	DISP-NM	R			
DNM=11-237	02	E.0014	BL=4	530	DNM=11-237	DS 1C	DISP	R			
DNM=11-253	02	E.0015	BL=4	531	DNM=11-253	DS 4C	DISP-NM	R			
DNM=11-272	02	E.0016	BL=4	536	DNM=11-272	DS 2C	DISP-NM	R			
DNM=11-288	02	E.0017	BL=4	538	DNM=11-288	DS 1C	DISP	R			
DNM=11-304	02	E.0018	BL=4	539	DNM=11-304	DS 2C	DISP-NM	R			
DNM=11-320	02	E.0019	BL=4	53B	DNM=11-320	DS 1C	DISP	R			
DNM=11-339	02	E.0020	BL=4	53C	DNM=11-339	DS 4C	DISP-NM	R			
DNM=11-355	02	E.0021	BL=4	541	DNM=11-355	DS 2C	DISP-NM	R			
DNM=11-371	02	E.0022	BL=4	543	DNM=11-371	DS 1C	DISP	R			
DNM=11-387	02	E.0023	BL=4	544	DNM=11-387	DS 2C	DISP-NM	R			
DNM=11-406	02	E.0024	BL=4	546	DNM=11-406	DS 1C	DISP	R			
DNM=11-422	02	E.0025	BL=4	547	DNM=11-422	DS 4C	DISP-NM	R			
DNM=11-438	02	E.0026	BL=4	54C	DNM=11-438	DS 9C	DISP	R			
DNM=11-454	02	E.0027	BL=4	4DB	DNM=11-454	DS 36C	DISP	R			
DNM=11-470	02	E.0028	BL=4	502	DNM=11-470	DS 35C	DISP	R			
DNM=11-486	02	E.0029	BL=4	536	DNM=11-486	DS 2C	DISP-NM	R			
DNM=12-000	02	E.0030	BL=4	538	DNM=12-000	DS 1C	DISP	R			
DNM=12-016	02	E.0031	BL=4	539	DNM=12-016	DS 2C	DISP-NM	R			
DNM=12-035	02	E.0032	BL=4	53B	DNM=12-035	DS 1C	DISP	R			
DNM=12-054	02	E.0033	BL=4	53C	DNM=12-054	DS 4C	DISP-NM	R			
DNM=12-070	02	E.0034	BL=4	4D1	DNM=12-070	DS 7C	DISP	R			
DNM=12-086	02	E.0035	BL=4	4DA	DNM=12-086	DS 50C	DISP	R			
DNM=12-102	02	E.0036	BL=4	4D1	DNM=12-102	DS 6C	NM-EDIT	R			
DNM=12-129	02	E.0037	BL=4	4D8	DNM=12-129	DS 50C	DISP	R			
DNM=12-148	02	E.0038	BL=4	4D1	DNM=12-148	DS 6C	NM-EDIT	R			
DNM=12-175	02	E.0039	BL=4	4D8	DNM=12-175	DS 50C	DISP	R			
DNM=12-194	02	E.0040	BL=4	4D1	DNM=12-194	DS 6C	NM-EDIT	R			
DNM=12-224	02	E.0041	BL=4	4D8	DNM=12-224	DS 50C	DISP	R			
DNM=12-240	02	E.0042	BL=4	4D1	DNM=12-240	DS 6C	NM-EDIT	R			
DNM=12-267	02	E.0043	BL=4	4D8	DNM=12-267	DS 50C	DISP	R			
DNM=12-286	02	E.0044	BL=4	4D1	DNM=12-286	DS 6C	NM-EDIT	R			
DNM=12-316	02	E.0045	BL=4	4D8	DNM=12-316	DS 50C	DISP	R			
DNM=12-332	02	E.0046	BL=4	4D1	DNM=12-332	DS 6C	NM-EDIT	R			
DNM=12-359	02	E.0047	BL=4	4D8	DNM=12-359	DS 50C	DISP	R			
DNM=12-378	02	E.0048	BL=4	4D1	DNM=12-378	DS 6C	NM-EDIT	R			
DNM=12-405	02	E.0049	BL=4	4D8	DNM=12-405	DS 50C	DISP	R			
DNM=12-424	01	N.0001	BL=4	558	DNM=12-424	DS 2C	COMP				
DNM=12-440	01	N.0002	BL=4	560	DNM=12-440	DS 2C	COMP				
DNM=12-459	01	N.0003	BL=4	568	DNM=12-459	DS 2C	COMP				
DNM=12-478	01	GRP.IND	BL=4	570	DNM=12-478	DS 0CL1	GROUP				


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*STATISTICS*      SOURCE RECORDS =   774      DATA DIVISION STATEMENTS =   156      PROCEDURE DIVISION STATEMENTS =   222
*OPTIONS IN EFFECT*  SIZE = 2097152  BUF = 1048576  LINECNT = 57  SPACE1, FLAGW,   SEQ,   SOURCE
*OPTIONS IN EFFECT*      DMAP, NOPMAP, NOCLIST,   SUPMAP, NOXREF,   LOAD, NODECK, APOST, NOTRUNC, NOLIB, NOVERB
*OPTIONS IN EFFECT*      ZWB
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CARD ERROR MESSAGE

396	IKF1080I-W	PERIOD PRECEDED BY SPACE. ASSUME END OF SENTENCE.
401	IKF1080I-W	PERIOD PRECEDED BY SPACE. ASSUME END OF SENTENCE.
422	IKF1080I-W	PERIOD PRECEDED BY SPACE. ASSUME END OF SENTENCE.
430	IKF1080I-W	PERIOD PRECEDED BY SPACE. ASSUME END OF SENTENCE.
436	IKF1080I-W	PERIOD PRECEDED BY SPACE. ASSUME END OF SENTENCE.
444	IKF1080I-W	PERIOD PRECEDED BY SPACE. ASSUME END OF SENTENCE.
450	IKF1080I-W	PERIOD PRECEDED BY SPACE. ASSUME END OF SENTENCE.
468	IKF1080I-W	PERIOD PRECEDED BY SPACE. ASSUME END OF SENTENCE.
472	IKF1080I-W	PERIOD PRECEDED BY SPACE. ASSUME END OF SENTENCE.
482	IKF1080I-W	PERIOD PRECEDED BY SPACE. ASSUME END OF SENTENCE.
485	IKF1080I-W	PERIOD PRECEDED BY SPACE. ASSUME END OF SENTENCE.
489	IKF1080I-W	PERIOD PRECEDED BY SPACE. ASSUME END OF SENTENCE.
493	IKF1080I-W	PERIOD PRECEDED BY SPACE. ASSUME END OF SENTENCE.
497	IKF1080I-W	PERIOD PRECEDED BY SPACE. ASSUME END OF SENTENCE.
501	IKF1080I-W	PERIOD PRECEDED BY SPACE. ASSUME END OF SENTENCE.
505	IKF1080I-W	PERIOD PRECEDED BY SPACE. ASSUME END OF SENTENCE.
511	IKF1080I-W	PERIOD PRECEDED BY SPACE. ASSUME END OF SENTENCE.
524	IKF1080I-W	PERIOD PRECEDED BY SPACE. ASSUME END OF SENTENCE.
537	IKF1080I-W	PERIOD PRECEDED BY SPACE. ASSUME END OF SENTENCE.
550	IKF1080I-W	PERIOD PRECEDED BY SPACE. ASSUME END OF SENTENCE.
563	IKF1080I-W	PERIOD PRECEDED BY SPACE. ASSUME END OF SENTENCE.
577	IKF1080I-W	PERIOD PRECEDED BY SPACE. ASSUME END OF SENTENCE.
590	IKF1080I-W	PERIOD PRECEDED BY SPACE. ASSUME END OF SENTENCE.
603	IKF1080I-W	PERIOD PRECEDED BY SPACE. ASSUME END OF SENTENCE.
608	IKF1080I-W	PERIOD PRECEDED BY SPACE. ASSUME END OF SENTENCE.
613	IKF1080I-W	PERIOD PRECEDED BY SPACE. ASSUME END OF SENTENCE.
618	IKF1080I-W	PERIOD PRECEDED BY SPACE. ASSUME END OF SENTENCE.
652	IKF1080I-W	PERIOD PRECEDED BY SPACE. ASSUME END OF SENTENCE.
667	IKF1080I-W	PERIOD PRECEDED BY SPACE. ASSUME END OF SENTENCE.
672	IKF1080I-W	PERIOD PRECEDED BY SPACE. ASSUME END OF SENTENCE.
704	IKF1080I-W	PERIOD PRECEDED BY SPACE. ASSUME END OF SENTENCE.
719	IKF1080I-W	PERIOD PRECEDED BY SPACE. ASSUME END OF SENTENCE.
725	IKF1080I-W	PERIOD PRECEDED BY SPACE. ASSUME END OF SENTENCE.
738	IKF1080I-W	PERIOD PRECEDED BY SPACE. ASSUME END OF SENTENCE.
741	IKF1080I-W	PERIOD PRECEDED BY SPACE. ASSUME END OF SENTENCE.

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00001 000100 IDENTIFICATION DIVISION.
00002 000200 PROGRAM-ID. SORTNAME.
00003 000300 AUTHOR. JAY MOSELEY.
00004 000400 DATE-WRITTEN. DECEMBER, 2021.
00005 000500 DATE-COMPILED. DEC 29, 2021
00006 000600 REMARKS. BUILDS SORT NAME FIELD FROM PASSED FIRST NAME,
00007 000700          LAST NAME, MIDDLE INITIAL.
00008 000800*
00009 000900 ENVIRONMENT DIVISION.
00010 001000 CONFIGURATION SECTION.
00011 001100 SOURCE-COMPUTER. IBM-370.
00012 001200 OBJECT-COMPUTER. IBM-370.
00013 001300 INPUT-OUTPUT SECTION.
00014 001400 FILE-CONTROL.
00015 001500*
00016 001600 DATA DIVISION.
00017 001700 FILE SECTION.
00018 001800*
00019 001900 WORKING-STORAGE SECTION.
00020 002000 01  WS-FIRST-NAME          PIC X(16).
00021 002100 01  FILLER                REDEFINES WS-FIRST-NAME.
00022 002200      02  WS-FIRST-CHAR        OCCURS 16 TIMES
00023 002300                                INDEXED BY FN-X
00024 002400                                PIC X.
00025 002500 01  WS-LAST-NAME            PIC X(21).
00026 002600 01  FILLER                REDEFINES WS-LAST-NAME.
00027 002700      02  WS-LAST-CHAR        OCCURS 21 TIMES
00028 002800                                INDEXED BY LN-X
00029 002900                                PIC X.
00030 003000*
00031 003100 LINKAGE SECTION.
00032 003200 01  FIRST-NAME              PIC X(15).
00033 003300 01  LAST-NAME               PIC X(20).
00034 003400 01  MIDDLE-INITIAL          PIC X.
00035 003500 01  SORT-NAME              PIC X(36).
00036 003600 01  FILLER                REDEFINES SORT-NAME.
00037 003700      02  SN-CHAR            OCCURS 36 TIMES
00038 003800                                INDEXED BY SN-X
00039 003900                                PIC X.
00040 004000*
00041 004100 PROCEDURE DIVISION USING FIRST-NAME, LAST-NAME,
00042 004200                        MIDDLE-INITIAL, SORT-NAME.
00043 004300*
00044 004400 BUILD-SORT-NAME.
00045 004500*
00046 004600     MOVE FIRST-NAME TO WS-FIRST-NAME.
00047 004700     MOVE LAST-NAME TO WS-LAST-NAME.
00048 004800     MOVE SPACES TO SORT-NAME.
00049 004900     SET LN-X, FN-X, SN-X TO 1.
00050 005000     PERFORM MOVE-LAST-NAME
00051 005100           THRU MOVE-LAST-NAME-EXIT
00052 005200           UNTIL WS-LAST-CHAR (LN-X) = SPACE
00053 005300           AND WS-LAST-CHAR (LN-X + 1) = SPACE.
00054 005400     PERFORM MOVE-FIRST-NAME
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00055 005500      THRU MOVE-FIRST-NAME-EXIT
00056 005600      UNTIL WS-FIRST-CHAR (FN-X) = SPACE
00057 005700      AND WS-FIRST-CHAR (FN-X + 1) = SPACE.
00058 005800      MOVE MIDDLE-INITIAL TO SN-CHAR (SN-X).
00059 005900*
00060 006000      GOBACK.
00061 006100*
00062 006200 MOVE-LAST-NAME.
00063 006300*
00064 006400      MOVE WS-LAST-CHAR (LN-X) TO SN-CHAR (SN-X).
00065 006500      SET LN-X, SN-X UP BY 1.
00066 006600*
00067 006700 MOVE-LAST-NAME-EXIT.
00068 006800      EXIT.
00069 006900*
00070 007000 MOVE-FIRST-NAME.
00071 007100*
00072 007200      MOVE WS-FIRST-CHAR (FN-X) TO SN-CHAR (SN-X).
00073 007300      SET FN-X, SN-X UP BY 1.
00074 007400*
00075 007500 MOVE-FIRST-NAME-EXIT.
00076 007600      EXIT.
00077 007700*
00078 007800* END OF PROGRAM SORTNAME.
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INTRNL NAME	LVL	SOURCE NAME	BASE	DISPL	INTRNL NAME	DEFINITION	USAGE	R	O	Q	M
DNM=1-150	01	WS-FIRST-NAME	BL=1	000	DNM=1-150	DS 16C	DISP				
DNM=1-173	01	FILLER	BL=1	000	DNM=1-173	DS 0CL16	GROUP	R			
DNM=1-192		FN-X			DNM=1-192		INDEX-NM				
DNM=1-203	02	WS-FIRST-CHAR	BL=1	000	DNM=1-203	DS 1C	DISP		0		
DNM=1-226	01	WS-LAST-NAME	BL=1	010	DNM=1-226	DS 21C	DISP				
DNM=1-248	01	FILLER	BL=1	010	DNM=1-248	DS 0CL21	GROUP	R			
DNM=1-270		LN-X			DNM=1-270		INDEX-NM				
DNM=1-284	02	WS-LAST-CHAR	BL=1	010	DNM=1-284	DS 1C	DISP		0		
DNM=1-306	01	FIRST-NAME	BLL=3	000	DNM=1-306	DS 15C	DISP				
DNM=1-326	01	LAST-NAME	BLL=4	000	DNM=1-326	DS 20C	DISP				
DNM=1-345	01	MIDDLE-INITIAL	BLL=5	000	DNM=1-345	DS 1C	DISP				
DNM=1-369	01	SORT-NAME	BLL=6	000	DNM=1-369	DS 36C	DISP				
DNM=1-391	01	FILLER	BLL=6	000	DNM=1-391	DS 0CL36	GROUP	R			
DNM=1-413		SN-X			DNM=1-413		INDEX-NM				
DNM=1-424	02	SN-CHAR	BLL=6	000	DNM=1-424	DS 1C	DISP		0		

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*STATISTICS*      SOURCE RECORDS =      78      DATA DIVISION STATEMENTS =      12      PROCEDURE DIVISION STATEMENTS =      14
*OPTIONS IN EFFECT*  SIZE = 2097152  BUF = 1048576  LINECNT = 57  SPACE1, FLAGW,  SEQ,  SOURCE
*OPTIONS IN EFFECT*      DMAP, NOPMAP, NOCLIST,  SUPMAP, NOXREF,  LOAD, NODECK, APOST, NOTRUNC, NOLIB, NOVERB
*OPTIONS IN EFFECT*      ZWB
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SYMBOL	TYPE	ID	ADDR	LENGTH	LDID	ASM 0201 13.38 12/29/21
Y2KGTOA	SD	0001	000000	0002DF		

LOC	OBJECT CODE	ADDR1	ADDR2	STMT	SOURCE STATEMENT	ASM 0201 13.38 12/29/21
2	*					* 00020000
3	*	YY	YY	222	KK KK GGGGG TTTTTTTT 00000 A	* 00030000
4	*	YY	YY	2 2	KK KK GG GG TT 00 00 AAA	* 00040000
5	*	YY	YY	2	KK KK GG GG TT 00 00 AA AA	* 00050000
6	*	YY	YY	2	KKKK GG TT 00 00 AA AA	* 00060000
7	*	YYY		222	KKKK GG GGG TT 00 00 AA AA	* 00070000
8	*	YY		2	KK KK GG GG TT 00 00 AAAAAA	* 00080000
9	*	YY		2	KK KK GG GG TT 00 00 AA AA	* 00090000
10	*	YY		22222	KK KK GGGGG TT 00000 AA AA	* 00100000
11	*					* 00110000
12	*	*****				* 00120000
13	*	*****				* 00130000
14	*	THIS SUBROUTINE COMPUTES THE ASTRONOMICAL NUMBER FOR A				* 00140000
15	*	GIVEN GREGORIAN DATE (MMDDYYYY)				* 00150000
16	*					* 00160000
17	*	1. VALID INPUT YEARS FOR THIS ROUTINE ARE THE YEARS 1601				* 00170000
18	*	THROUGH 3399 A. D. (INCLUSIVE)				* 00180000
19	*					* 00190000
20	*	2. VALID INPUT MONTH VALUES FOR THIS ROUTINE ARE 01 THROUGH 12.				* 00200000
21	*					* 00210000
22	*	3. VALID INPUT DAY VALUES FOR THIS ROUTINE ARE 01 THROUGH 31				* 00220000
23	*	WITH EXCEPTIONS FOR THE MONTHS LISTED:				* 00230000
24	*	MONTH MAXIMUM DAY VALUE				* 00240000
25	*	04 30				* 00250000
26	*	06 30				* 00260000
27	*	09 30				* 00270000
28	*	11 30				* 00280000
29	*	02 28				* 00290000
30	*	02 DURING LEAP YEAR 29				* 00300000
31	*					* 00310000
32	*	4. THE DATE FORMAT MUST BE MMDDYYYY, WHERE MM = THE 2 DIGIT				* 00320000
33	*	MONTH VALUE, DD = THE 2 DIGIT DAY VALUE, AND YYYY = THE				* 00330000
34	*	4 DIGIT YEAR VALUE.				* 00340000
35	*					* 00350000
36	*	5. THREE FIELDS ARE PASSED AS PARAMETERS TO THE ROUTINE:				* 00360000
37	*	1) AN 8 BYTE FIELD CONTAINING THE DATE (IN ZONED-				* 00370000
38	*	DECIMAL FORMAT) FOR WHICH THE ASTRONOMICAL NUMBER IS				* 00380000
39	*	TO BE CALCULATED,				* 00390000
40	*	2) A 1 BYTE ZONED-DECIMAL RETURN CODE, AND				* 00400000
41	*	3) A 7 BYTE FIELD WHICH WILL RECEIVE THE ASTRONOMICAL				* 00410000
42	*	NUMBER (IN ZONED-DECIMAL FORMAT).				* 00420000
43	*	THE ROUTINE WILL NOT ALTER THE DATE PASSED TO IT.				* 00430000
44	*					* 00440000
45	*	SUGGESTED CALLING SYNTAX FOR ALC CALLERS:				* 00450000
46	*					* 00460000
47	*	CALL Y2KGT0A, (DATE)				* 00470000
48	*					* 00480000
49	*	DATE	DS	ZL8'01011997'		* 00490000
50	*	RC	DS	ZL1'0'		* 00500000
51	*	ANUM	DS	ZL7'00000000'		* 00510000
52	*					* 00520000
53	*	SUGGESTED CALLING SYNTAX FOR COBOL CALLERS:				* 00530000
54	*					* 00540000
55	*	01 GTOA-PARAMETERS.				* 00550000
56	*	02 DATE PIC 9(8) VALUE 01011997.				* 00560000

LOC	OBJECT CODE	ADDR1	ADDR2	STMT	SOURCE STATEMENT	ASM 0201 13.38 12/29/21
57	*				02 RC PIC 9(1) VALUE 0.	* 00570000
58	*				02 ANUM PIC 9(7) VALUE 0.	* 00580000
59	*				CALL 'Y2KGT0A' USING GTOA-PARAMETERS.	* 00590000
60	*					* 00600000
61	*			6.	THE POSSIBLE VALUES FOR THE RETURN CODE FIELD ARE:	* 00610000
62	*					* 00620000
63	*				0 INDICATES SUCCESSFUL EXECUTION OF THE ROUTINE.	* 00630000
64	*					* 00640000
65	*				2 INDICATES INVALID DATA WAS FOUND IN THE DATE FIELD.	* 00650000
66	*				INVALID DATA ARE DETERMINED IF THE FIELD'S LOW ORDER	* 00660000
67	*				BYTE'S ZONE CONTAINS AN INVALID SIGN, (NOT ONE OF	* 00670000
68	*				X'C', X'D' OR X'F'), OR IF THE PRECEDING BYTES' ZONES	* 00680000
69	*				ARE OTHER THAN X'F', OR IF ANY BYTE'S LOW ORDER NIBBLE	* 00690000
70	*				CONTAINS A VALUE GREATER THAN X'9'.	* 00700000
71	*					* 00710000
72	*				4 INDICATES THE VALUE OF THE YEAR SPECIFIED WAS NOT IN	* 00720000
73	*				THE RANGE SPECIFIED IN 1 (ABOVE).	* 00730000
74	*					* 00740000
75	*				6 INDICATES THE VALUE OF THE MONTH SPECIFIED WAS NOT IN	* 00750000
76	*				THE RANGE SPECIFIED IN 2 (ABOVE).	* 00760000
77	*					* 00770000
78	*				8 INDICATES THE VALUE OF THE DAY SPECIFIED WAS NOT IN	* 00780000
79	*				THE RANGE SPECIFIED IN 3 (ABOVE).	* 00790000
80	*					* 00800000
81	*			7.	UPON SUCCESSFUL EXECUTION, THE ASTRONOMICAL NUMBER FOR THE	* 00810000
82	*				DATE WILL BE PLACED IN THE 3RD PARAMETER FIELD (ANUM). IF	* 00820000
83	*				THE RETURN CODE IS A NON-ZERO VALUE (UNSUCCESSFUL	* 00830000
84	*				EXECUTION), THE ANUM FIELD WILL CONTAIN ZEROS.	* 00840000
85	*				-----	* 00850000
86	*				CHANGE LOG:	* 00860000
87	*			0.1	04/17/2008 - CHANGED METHOD OF DETERMINING LEAP YEAR AT THE	* 00870000
88	*				SUGGESTION OF ANGEL LUIS DOMINGUEZ. TESTS ARE	* 00880000
89	*				NOW DONE ON BINARY FORM OF YEAR, ELIMINATING THE	* 00890000
90	*				USE OF PACKED DECIMAL INSTRUCTIONS. TESTS ON MY	* 00900000
91	*				EMULATED HARDWARE SHOW A SAVINGS OF 3.13 SECONDS	* 00910000
92	*				ON 500,000 ITERATIONS.	* 00920000
93	*				*****	* 00930000
94	*				*****	* 00940000

LOC	OBJECT CODE	ADDR1	ADDR2	STMT	SOURCE	STATEMENT	ASM 0201 13.38 12/29/21
000000				96	Y2KGT0A	CSECT	00960000
				97		PRINT GEN	00970000
				98	EYEC	'RETURN ASTRO NUMBER FOR GREGORIAN DATE'	00980000
000000	47F0 F044	00044		99+	EC\$\$B	B EC\$\$L(,R15) BRANCH AROUND EYECATCHER	00030000
000004	3F			100+		DC AL1(EC\$\$E-EC\$\$V) LENGTH OF VERSION INFO	00040000
000005	E8F2D2C7E3D6C140			101+	EC\$\$V	DC C'Y2KGT0A ' CSECT NAME	00050000
00000D	F1F261F2F961F2F1			102+		DC C'12/29/21 13.38 - ' WHEN ASSEMBLED	00060000
00001E	D9C5E3E4D9D540C1			103+		DC C'RETURN ASTRO NUMBER FOR GREGORIAN DATE'	00080000
000044				104+	EC\$\$E	DS 0H	00100000
		00044		105+	EC\$\$L	EQU (*-EC\$\$B) LENGTH OF EYECATCHER FIELDS	00110000
				106	*		00990000
				107		SAVE (14,12) SAVE CALLER'S REGISTERS	01000000
000044				108+		DS 0H	01650000
000044	90EC D00C	0000C		109+		STM 14,12,12(13) SAVE REGISTERS	02950000
				110	*		01010000
000048	18CF			111		LR R12,R15 LOAD BASE WITH ENTRY ADDRESS	01020000
		00000		112		USING Y2KGT0A,R12 ESTABLISH ADDRESSABILITY	01030000
				113	*		01040000
00004A	58B0 1000	00000		114		L R11,0(,R1) LOAD A(PARAMETERS)	01050000
		00000		115		USING \$PARMS,R11 ESTABLISH ADDRESSABILITY	01060000
				116	*		01070000
				117		GETMAIN R,LV=\$DYNLEN GETMAIN DYNAMIC WORKAREA	01080000
00004E	0700			118+		CNOP 0,4	
000050	4510 C058	00058		119+		BAL 1,*+8 BRANCH AROUND LENGTH	
000054	000000AE			120+		DC A(\$DYNLEN) LENGTH	
000058	5800 1000	00000		121+		L 0,0(0,1) LOAD LENGTH	
00005C	0A0A			122+		SVC 10 ISSUE GETMAIN SVC	
00005E	18A1			123		LR R10,R1 SAVE A(MEMORY)	01090000
				124	*		01100000
000060	50D0 A004	00004		125		ST R13,4(,R10) STORE A(CALLER'S SAVE AREA)	01110000
000064	50A0 D008	00008		126		ST R10,8(,R13) BACK CHAIN A(MY SAVE AREA)	01120000
000068	18DA			127		LR R13,R10 SET A(MY SAVE AREA)	01130000
		00000		128		USING \$DYNMEM,R13 ESTABLISH ADDRESSABILITY	01140000
				129	*		01150000
				130	*	INSERT EYECATCHER MARKS AT BEGIN/END OF GETMAIN'D AREA.	01160000
				131	*		01170000
00006A	D217 D048 C288	00048	00288	132		MVC TOPFLAG,=C'Y2KGT0A GETMAIN BEGINS->'	01180000
000070	D215 D098 C2AC	00098	002AC	133		MVC BOTFLAG,=C'<-Y2KGT0A GETMAIN ENDS'	01190000
				134	*		01200000
				135	*	INITIALIZE RETURN CODE AND ANUM PARAMETER FIELDS.	01210000
				136	*		01220000
000076	92F0 B008	00008		137		MVI PRC,C'0' ASSUME GOOD RETURN	01230000
00007A	D206 B009 B008	00009	00008	138		MVC PRC+1(7),PRC NULL ASTRONOMICAL NUMBER	01240000
				139	*		01250000
				140	*	TEST DATE FOR INVALID CHARACTER	01260000
				141	*		01270000
000080	4120 B000	00000		142		LA R2,PDATE ADDRESS PASSED DATE	01280000
000084	4130 0007	00007		143		LA R3,7 LENGTH MINUS 1	01290000
000088	95F0 2000	00000		144	P1VLOOP	CLI 0(R2),X'F0' TEST LESS THAN C'0'	01300000
00008C	4740 C0CE	000CE		145		BL P1ERR1 IF YES, DATE CONTAINS BAD DATA	01310000
000090	95F9 2000	00000		146		CLI 0(R2),X'F9' TEST GREATER THAN C'9'	01320000
000094	4720 C0CE	000CE		147		BH P1ERR1 IF YES, DATE CONTAINS BAD DATA	01330000
000098	4120 2001	00001		148		LA R2,1(0,R2) ADDRESS NEXT BYTE	01340000
00009C	4630 C088	00088		149		BCT R3,P1VLOOP CONTINUE TESTING	01350000
0000A0	4330 2000	00000		150		IC R3,0(,R2) LOAD RIGHT-MOST CHARACTER	01360000

LOC	OBJECT	CODE	ADDR1	ADDR2	STMT	SOURCE	STATEMENT	ASM 0201 13.38	12/29/21	
0000A4	1843				151	LR	R4,R3	COPY INTO R4	01370000	
0000A6	5430	C2A0	002A0		152	N	R3,=F'15'	ISOLATE DIGIT PORTION	01380000	
0000AA	4930	C2C2	002C2		153	CH	R3,=H'9'	TEST GREATER THAN 9	01390000	
0000AE	4720	C0CE	000CE		154	BH	P1ERR1	IF YES, DATE CONTAINS BAD DATA	01400000	
0000B2	8840	0004	00004		155	SRL	R4,4	ISOLATE ZONE PORTION	01410000	
0000B6	4940	C2C4	002C4		156	CH	R4,=H'12'	TEST FOR 'C' ZONE	01420000	
0000BA	4780	C0D6	000D6		157	BE	P10K1	IF YES, DATE IS VALID NUMERIC	01430000	
0000BE	4940	C2C6	002C6		158	CH	R4,=H'13'	TEST FOR 'D' ZONE	01440000	
0000C2	4780	C0D6	000D6		159	BE	P10K1	IF YES, DATE IS VALID NUMERIC	01450000	
0000C6	4940	C2C8	002C8		160	CH	R4,=H'15'	TEST FOR 'F' ZONE	01460000	
0000CA	4780	C0D6	000D6		161	BE	P10K1	IF YES, DATE IS VALID NUMERIC	01470000	
					162	*			01480000	
					163	*	DATE CONTAINED AN INVALID CHARACTER		01490000	
					164	*			01500000	
0000CE	92F2	B008	00008		165	P1ERR1	MVI PRC,C'2'	INDICATE BAD DATA	01510000	
0000D2	47F0	C238	00238		166	B	RETURN	AND RETURN TO CALLER	01520000	
					167	*			01530000	
					168	*	TEST YEAR FOR VALID RANGE		01540000	
					169	*			01550000	
0000D6	F233	D064	B004	00064	00004	170	P10K1	PACK YEAR(4),PDATE+4(4)	PACK PASSED YEAR	01560000
0000DC	F932	D064	C2D0	00064	002D0	171	CP	YEAR(4),=P'1601'	IS YEAR PRIOR TO 1601?	01570000
0000E2	4740	C0F0		000F0		172	BL	P1ERR2	IF YES, YEAR NOT VALID	01580000
0000E6	F932	D064	C2D3	00064	002D3	173	CP	YEAR(4),=P'3399'	IS YEAR AFTER 3399?	01590000
0000EC	47D0	C0F8		000F8		174	BNH	P10K2	IF NOT, YEAR IS VALID	01600000
					175	*			01610000	
					176	*	YEAR CONTAINED AN INVALID VALUE (OUT OF RANGE)		01620000	
					177	*			01630000	
0000F0	92F4	B008	00008		178	P1ERR2	MVI PRC,C'4'	INDICATE BAD VALUE	01640000	
0000F4	47F0	C238	00238		179	B	RETURN	AND RETURN TO CALLER	01650000	
					180	*			01660000	
					181	*	TEST MONTH FOR VALID RANGE		01670000	
					182	*			01680000	
0000F8	F211	D060	B000	00060	00000	183	P10K2	PACK MONTH(2),PDATE(2)	PACK PASSED MONTH	01690000
0000FE	F910	D060	C2D6	00060	002D6	184	CP	MONTH(2),=P'1'	IS MONTH ZERO?	01700000
000104	4740	C112		00112		185	BL	P1ERR3	IF YES, MONTH NOT VALID	01710000
000108	F911	D060	C2CA	00060	002CA	186	CP	MONTH(2),=P'12'	IS MONTH GREATER THAN 12?	01720000
00010E	47D0	C11A		0011A		187	BNH	P10K3	IF NOT, MONTH IS VALID	01730000
					188	*			01740000	
					189	*	MONTH CONTAINED AN INVALID VALUE (OUT OF RANGE)		01750000	
					190	*			01760000	
000112	92F6	B008	00008		191	P1ERR3	MVI PRC,C'6'	INDICATE BAD VALUE	01770000	
000116	47F0	C238	00238		192	B	RETURN	AND RETURN TO CALLER	01780000	
					193	*			01790000	
					194	*	DETERMINE LEAP YEAR STATUS		01800000	
					195	*			01810000	
00011A	92F0	D08B		0008B		196	P10K3	MVI LEAP,C'0'	ASSUME NOT A LEAP YEAR	01820000
00011E	F122	D068	D065	00068	00065	197	MVO	B3(3),YEAR+1(3)	DROP SIGN	0.1 01830000
000124	9101	D069		00069		198	TM	B3+1,X'01'	ODD YEAR?	0.1 01840000
000128	4710	C150		00150		199	BO	P1CON4	IF YES, IT IS *NOT* LEAP YEAR	0.1 01850000
00012C	9112	D069		00069		200	TM	B3+1,X'12'	EVENLY DIVISIBLE BY 4?	0.1 01860000
000130	4740	C150		00150		201	BM	P1CON4	IF NO, IT IS *NOT* LEAP YEAR	0.1 01870000
000134	9500	D069		00069		202	CLI	B3+1,X'00'	DOES YEAR END IN 00?	0.1 01880000
000138	4770	C14C		0014C		203	BNE	ISLEAP	IF YES, IT IS A LEAP YEAR	0.1 01890000
00013C	9101	D068		00068		204	TM	B3,X'01'	IS CENTURY ODD?	0.1 01900000
000140	4710	C150		00150		205	BO	P1CON4	IF YES, IT IS *NOT* LEAP YEAR	0.1 01910000

LOC	OBJECT	CODE	ADDR1	ADDR2	STMT	SOURCE	STATEMENT	ASM	0201	13.38	12/29/21
000144	9112	D068	00068		206	TM	B3,X'12'	EVENLY DIVISIBLE BY 400?	0.1	01920000	
000148	4740	C150	00150		207	BM	P1CON4	IF NO, IT IS *NOT* LEAP YEAR	0.1	01930000	
					208	*		ELSE IT IS A LEAP YEAR	0.1	01940000	
					209	*				01950000	
					210	*	TEST FOR LEAP YEAR SUCCEEDED, RESET LEAP INDICATOR.			01960000	
					211	*				01970000	
00014C	92F1	D08B	0008B		212	ISLEAP	MVI LEAP,C'1'	INDICATE LEAP YEAR		01980000	
					213	*				01990000	
					214	*	DETERMINE MAXIMUM DAYS FOR GIVEN MONTH			02000000	
					215	*				02010000	
000150	4140	C252	00252		216	P1CON4	LA R4,DIM	GET ADDRESS OF DAY TABLE		02020000	
000154	95F0	D08B	0008B		217		CLI LEAP,C'0'	IS THIS LEAP YEAR?		02030000	
000158	4780	C160	00160		218		BE P1CON4A	IF NOT, ADDRESS IS OK		02040000	
00015C	4140	4002	00002		219		LA R4,2(,R4)	ELSE ADJUST TO LEAP ENTRY		02050000	
000160	F871	D090	D060 00090	00060	220	P1CON4A	ZAP DWORK(8),MONTH	GET MONTH INTO DOUBLEWORD		02060000	
000166	4F30	D090	00090		221		CVB R3,DWORK	CONVERT TO BINARY		02070000	
00016A	0630				222		BCTR R3,0	DECREMENT BY 1 (ZERO BASE)		02080000	
00016C	8930	0002	00002		223		SLL R3,2	MULTIPLY BY TABLE ENTRY LENGTH		02090000	
000170	4143	4000	00000		224		LA R4,0(R3,R4)	LOAD ENTRY ADDRESS INTO R4		02100000	
					225	*				02110000	
					226	*	TEST DAY FOR VALID RANGE			02120000	
					227	*				02130000	
000174	F211	D062	B002 00062	00002	228		PACK DAY(2),PDATE+2(2)	PACK PASSED DAY		02140000	
00017A	F811	D062	D062 00062	00062	229		ZAP DAY,DAY	CONVERT SIGN OF DAY TO X'C'		02150000	
000180	F910	D062	C2D6 00062	002D6	230		CP DAY(2),=P'1'	IS DAY ZERO?		02160000	
000186	4740	C194	00194		231		BL P1ERR4	IF YES, DAY NOT VALID		02170000	
00018A	D501	D062	4000 00062	00000	232		CLC DAY(2),0(R4)	IS DAY GREATER THAN MAX?		02180000	
000190	47D0	C19C	0019C		233		BNH P10K4	IF NOT, MONTH IS VALID		02190000	
					234	*				02200000	
					235	*	DAY CONTAINED AN INVALID VALUE (OUT OF RANGE)			02210000	
					236	*				02220000	
000194	92F8	B008	00008		237	P1ERR4	MVI PRC,C'8'	INDICATE BAD VALUE		02230000	
000198	47F0	C238	00238		238		B RETURN	AND RETURN TO CALLER		02240000	
					239	*				02250000	
					240	*	COMPUTE ASTRONOMICAL NUMBER			02260000	
					241	*				02270000	
00019C	F910	D060	C2D7 00060	002D7	242	P10K4	CP MONTH(2),=P'2'	IS MONTH GREATER THAN 2?		02280000	
0001A2	4720	C1B6	001B6		243		BH COMP001	YES		02290000	
					244	*				02300000	
0001A6	FA10	D060	C2D8 00060	002D8	245		AP MONTH(2),=P'9'	INCREMENT MONTH BY 9		02310000	
0001AC	FB30	D064	C2D6 00064	002D6	246		SP YEAR(4),=P'1'	DECREMENT YEAR BY 1		02320000	
0001B2	47F0	C1BC	001BC		247		B COMP002	PROCEED WITH CONVERSION		02330000	
					248	*				02340000	
0001B6	FB10	D060	C2D9 00060	002D9	249	COMP001	SP MONTH(2),=P'3'	DECREMENT MONTH BY 3		02350000	
					250	*				02360000	
0001BC	FD31	D064	C2CC 00064	002CC	251	COMP002	DP YEAR,=P'100'	DIVIDE BY 100		02370000	
0001C2	F871	D06B	D064 0006B	00064	252		ZAP TA,YEAR(2)	SAVE QUOTIENT IN TA		02380000	
0001C8	F871	D073	D066 00073	00066	253		ZAP TB,YEAR+2(2)	SAVE REMAINDER IN TB		02390000	
0001CE	FC73	D06B	C2A4 0006B	002A4	254		MP TA,=P'146097'	MULTIPLY BY 146097		02400000	
0001D4	FD70	D06B	C2DA 0006B	002DA	255		DP TA,=P'4'	DIVIDE BY 4		02410000	
0001DA	F876	D06B	D06B 0006B	0006B	256		ZAP TA,TA(7)	SHIFT QUOTIENT OVER REMAINDER		02420000	
					257	*				02430000	
0001E0	FC72	D073	C2DB 00073	002DB	258		MP TB,=P'1461'	MULTIPLY BY 1461		02440000	
0001E6	FD70	D073	C2DA 00073	002DA	259		DP TB,=P'4'	DIVIDE BY 4		02450000	
0001EC	F876	D073	D073 00073	00073	260		ZAP TB,TB(7)	SHIFT QUOTIENT OVER REMAINDER		02460000	

LOC	OBJECT	CODE	ADDR1	ADDR2	STMT	SOURCE	STATEMENT	ASM 0201 13.38 12/29/21
					261 *			02470000
0001F2	F871	D07B	D060	0007B	00060	262	ZAP TC, MONTH	02480000
0001F8	FC71	D07B	C2CE	0007B	002CE	263	MP TC, =P'153'	02490000
0001FE	FA70	D07B	C2D7	0007B	002D7	264	AP TC, =P'2'	02500000
000204	FD70	D07B	C2DE	0007B	002DE	265	DP TC, =P'5'	02510000
00020A	F876	D07B	D07B	0007B	0007B	266	ZAP TC, TC(7)	02520000
000210	FA71	D07B	D062	0007B	00062	267	AP TC, DAY	02530000
000216	FA73	D07B	C2A8	0007B	002A8	268	AP TC, =P'1721119'	02540000
					269 *			02550000
00021C	F877	D083	D06B	00083	0006B	270	ZAP TX, TA	02560000
000222	FA77	D083	D073	00083	00073	271	AP TX, TB	02570000
000228	FA77	D083	D07B	00083	0007B	272	AP TX, TC	02580000
					273 *			02590000
00022E	F363	B009	D087	00009	00087	274	UNPK PANUM(7), TX+4(4)	02600000
000234	96F0	B00F		0000F		275	OI PANUM+6, X'F0'	02610000
					276 *			02620000
					277 *	RESTORE REGISTERS, FREE STORAGE, AND RETURN		02630000
					278 *			02640000
000238	181D				279	RETURN LR R1, R13	LOAD ADDRESS OF GETMAINED AREA	02650000
00023A	58D0	D004		00004	280	L R13, 4(, R13)	RELOAD PREVIOUS SAVE AREA	02660000
00023E	4100	00AE		000AE	281	LA R0, \$DYNLEN	LOAD LENGTH OF GETMAINED AREA	02670000
					282	FREEMAIN R, LV=(0), A=(1)	FREE GETMAINED AREA	02680000
					283+*	OS/VS2 RELEASE 3 VERSION -- 10/25/74		00001603
000242	4110	1000		00000	284+	LA 1, 0(0, 1)	CLEAR HI ORDER BYTE	00150802
000246	0A0A				285+	SVC 10	ISSUE FREEMAIN SVC	00311202
					286	RETURN (14, 12), RC=0	RETURN TO CALLER WITH RC=0	02690000
000248	98EC	D00C		0000C	287+	LM 14, 12, 12(13)	RESTORE THE REGISTERS	00650000
00024C	41F0	0000		00000	288+	LA 15, 0(0, 0)	LOAD RETURN CODE	01750000
000250	07FE				289+	BR 14	RETURN	02000000

LOC	OBJECT CODE	ADDR1	ADDR2	STMT	SOURCE STATEMENT	ASM 0201 13.38 12/29/21
				291	* *****	* 02710000
				292	* ***** CONSTANTS *****	* 02720000
				293	* *****	* 02730000
				294	*	02740000
				295	* MAXIMUM DAYS IN MONTHS ... EACH ENTRY HAS 2 VALUES, THE 1ST FOR	02750000
				296	* A NORMAL (NON-LEAP) YEAR AND THE 2ND FOR A LEAP YEAR	02760000
				297	*	02770000
000252	031C031C			298	DIM DC PL2'31',PL2'31' JANUARY	02780000
000256	028C029C			299	DC PL2'28',PL2'29' FEBRUARY	02790000
00025A	031C031C			300	DC PL2'31',PL2'31' MARCH	02800000
00025E	030C030C			301	DC PL2'30',PL2'30' APRIL	02810000
000262	031C031C			302	DC PL2'31',PL2'31' MAY	02820000
000266	030C030C			303	DC PL2'30',PL2'30' JUNE	02830000
00026A	031C031C			304	DC PL2'31',PL2'31' JULY	02840000
00026E	031C031C			305	DC PL2'31',PL2'31' AUGUST	02850000
000272	030C030C			306	DC PL2'30',PL2'30' SEPTEMBER	02860000
000276	031C031C			307	DC PL2'31',PL2'31' OCTOBER	02870000
00027A	030C030C			308	DC PL2'30',PL2'30' NOVEMBER	02880000
00027E	031C031C			309	DC PL2'31',PL2'31' DECEMBER	02890000
				310	* *****	* 02900000
000288				311	LTORG	02910000
000288	E8F2D2C7E3D6C140			312	=C'Y2KGT0A GETMAIN BEGINS->'	
0002A0	0000000F			313	=F'15'	
0002A4	0146097C			314	=P'146097'	
0002A8	1721119C			315	=P'1721119'	
0002AC	4C60E8F2D2C7E3D6			316	=C'<-Y2KGT0A GETMAIN ENDS'	
0002C2	0009			317	=H'9'	
0002C4	000C			318	=H'12'	
0002C6	000D			319	=H'13'	
0002C8	000F			320	=H'15'	
0002CA	012C			321	=P'12'	
0002CC	100C			322	=P'100'	
0002CE	153C			323	=P'153'	
0002D0	01601C			324	=P'1601'	
0002D3	03399C			325	=P'3399'	
0002D6	1C			326	=P'1'	
0002D7	2C			327	=P'2'	
0002D8	9C			328	=P'9'	
0002D9	3C			329	=P'3'	
0002DA	4C			330	=P'4'	
0002DB	01461C			331	=P'1461'	
0002DE	5C			332	=P'5'	

LOC	OBJECT CODE	ADDR1	ADDR2	STMT	SOURCE STATEMENT	ASM 0201 13.38 12/29/21
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				334	* *****	* 02930000
				335	* ***** EQUATES *****	* 02940000
				336	* *****	* 02950000
				337	YREGS	02960000

00000	339+R0	EQU	0
00001	340+R1	EQU	1
00002	341+R2	EQU	2
00003	342+R3	EQU	3
00004	343+R4	EQU	4
00005	344+R5	EQU	5
00006	345+R6	EQU	6
00007	346+R7	EQU	7
00008	347+R8	EQU	8
00009	348+R9	EQU	9
0000A	349+R10	EQU	10
0000B	350+R11	EQU	11
0000C	351+R12	EQU	12
0000D	352+R13	EQU	13
0000E	353+R14	EQU	14
0000F	354+R15	EQU	15

				356	* *****	* 02970000
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LOC	OBJECT CODE	ADDR1	ADDR2	STMT	SOURCE STATEMENT	ASM 0201 13.38 12/29/21
				358	* *****	* 02990000
				359	* ***** DSECTS *****	* 03000000
				360	* *****	* 03010000
000000				361	\$DYNMEM DSECT DYNAMICALLY ALLOCATED MEMORY	03020000
000000				362	SAVEAREA DS 18F REGISTER SAVE AREA	03030000
000048				363	TOPFLAG DS CL24 EYECATCHER	03040000
000060				364	MONTH DS PL2 GREGORIAN MONTH	03050000
000062				365	DAY DS PL2 GREGORIAN DAY	03060000
000064				366	YEAR DS PL4 GREGORIAN YEAR	03070000
000068				367	B3 DS XL3 WORK AREA FOR BINARY YEAR 0.1	03080000
00006B				368	TA DS PL8 INTERMEDIATE ANSWER	03090000
000073				369	TB DS PL8 INTERMEDIATE ANSWER	03100000
00007B				370	TC DS PL8 INTERMEDIATE ANSWER	03110000
000083				371	TX DS PL8 INTERMEDIATE ANSWER	03120000
00008B				372	LEAP DS CL1 LEAP STATUS	03130000
000090				373	DWORK DS D DOUBLEWORD WORK FIELD	03140000
000098				374	BOTFLAG DS CL22 EYECATCHER	03150000
				375	*	03160000
		000AE		376	\$DYNLEN EQU (*-\$DYNMEM) LENGTH OF GETMAIN'D AREA	03170000
				377	*	03180000
000000				378	\$PARMS DSECT PARAMETERS FROM/TO CALLER	03190000
000000				379	PDATE DS CL8 DATE TO BE PROCESSED	03200000
000008				380	PRC DS CL1 RETURN CODE (0/2/4/6/8)	03210000
000009				381	PANUM DS ZL7 ASTRONOMICAL NUMBER	03220000
				382	* *****	* 03230000
				383	END	03240000

SYMBOL	LEN	VALUE	DEFN	REFERENCES	ASM 0201 13.38 12/29/21
\$DYNLEN	00001	0000000AE	00376	00120 00281	
\$DYNMEM	00001	000000000	00361	00128 00376	
\$PARMS	00001	000000000	00378	00115	
BOTFLAG	00022	000000098	00374	00133	
B3	00003	000000068	00367	00197 00198 00200 00202 00204 00206	
COMP001	00006	000001B6	00249	00243	
COMP002	00006	000001BC	00251	00247	
DAY	00002	000000062	00365	00228 00229 00229 00230 00232 00267	
DIM	00002	00000252	00298	00216	
DWORK	00008	000000090	00373	00220 00221	
EC\$\$B	00004	000000000	00099	00105	
EC\$\$E	00002	000000044	00104	00100	
EC\$\$L	00001	000000044	00105	00099	
EC\$\$V	00008	000000005	00101	00100	
ISLEAP	00004	0000014C	00212	00203	
LEAP	00001	00000008B	00372	00196 00212 00217	
MONTH	00002	000000060	00364	00183 00184 00186 00220 00242 00245 00249 00262	
PANUM	00007	000000009	00381	00274 00275	
PDATE	00008	000000000	00379	00142 00170 00183 00228	
PRC	00001	000000008	00380	00137 00138 00138 00165 00178 00191 00237	
P1CON4	00004	00000150	00216	00199 00201 00205 00207	
P1CON4A	00006	00000160	00220	00218	
P1ERR1	00004	0000000CE	00165	00145 00147 00154	
P1ERR2	00004	0000000F0	00178	00172	
P1ERR3	00004	00000112	00191	00185	
P1ERR4	00004	00000194	00237	00231	
P10K1	00006	0000000D6	00170	00157 00159 00161	
P10K2	00006	0000000F8	00183	00174	
P10K3	00004	0000011A	00196	00187	
P10K4	00006	0000019C	00242	00233	
P1VLOOP	00004	000000088	00144	00149	
RETURN	00002	00000238	00279	00166 00179 00192 00238	
R0	00001	000000000	00339	00281	
R1	00001	000000001	00340	00114 00123 00279	
R10	00001	00000000A	00349	00123 00125 00126 00127	
R11	00001	00000000B	00350	00114 00115	
R12	00001	00000000C	00351	00111 00112	
R13	00001	00000000D	00352	00125 00126 00127 00128 00279 00280 00280	
R15	00001	00000000F	00354	00099 00111	
R2	00001	000000002	00341	00142 00144 00146 00148 00148 00150	
R3	00001	000000003	00342	00143 00149 00150 00151 00152 00153 00221 00222 00223 00224	
R4	00001	000000004	00343	00151 00155 00156 00158 00160 00216 00219 00219 00224 00224 00232	
TA	00008	00000006B	00368	00252 00254 00255 00256 00256 00270	
TB	00008	000000073	00369	00253 00258 00259 00260 00260 00271	
TC	00008	00000007B	00370	00262 00263 00264 00265 00266 00266 00267 00268 00272	
TOPFLAG	00024	000000048	00363	00132	
TX	00008	000000083	00371	00270 00271 00272 00274	
YEAR	00004	000000064	00366	00170 00171 00173 00197 00246 00251 00252 00253	
Y2KGTOA	00001	000000000	00096	00112	

SYMBOL LEN VALUE DEFN REFERENCES ASM 0201 13.38 12/29/21

=C'Y2KGTOA GETMAIN BEGINS->'

00024 00000288 00312 00132

=F'15' 00004 000002A0 00313 00152

=P'146097'

00004 000002A4 00314 00254

=P'1721119'

00004 000002A8 00315 00268

=C'<-Y2KGTOA GETMAIN ENDS'

00022 000002AC 00316 00133

=H'9' 00002 000002C2 00317 00153

=H'12' 00002 000002C4 00318 00156

=H'13' 00002 000002C6 00319 00158

=H'15' 00002 000002C8 00320 00160

=P'12' 00002 000002CA 00321 00186

=P'100' 00002 000002CC 00322 00251

=P'153' 00002 000002CE 00323 00263

=P'1601' 00003 000002D0 00324 00171

=P'3399' 00003 000002D3 00325 00173

=P'1' 00001 000002D6 00326 00184 00230 00246

=P'2' 00001 000002D7 00327 00242 00264

=P'9' 00001 000002D8 00328 00245

=P'3' 00001 000002D9 00329 00249

=P'4' 00001 000002DA 00330 00255 00259

=P'1461' 00003 000002DB 00331 00258

=P'5' 00001 000002DE 00332 00265

ASM 0201 13.38 12/29/21

NO STATEMENTS FLAGGED IN THIS ASSEMBLY

HIGHEST SEVERITY WAS 0

OPTIONS FOR THIS ASSEMBLY

ALIGN, ALOGIC, BUFSIZE(STD), NODECK, ESD, FLAG(0), LINECOUNT(55), LIST, NOMCALL, YFLAG, WORKSIZE(2097152)
NOMLOGIC, NONUMBER, OBJECT, NORENT, RLD, NOSTMT, NOLIBMAC, NOTERMINAL, NOTEST, XREF(SHORT)
SYSPARM()

WORK FILE BUFFER SIZE/NUMBER = 2558/ 1

TOTAL RECORDS READ FROM SYSTEM INPUT	324
TOTAL RECORDS READ FROM SYSTEM LIBRARY	1658
TOTAL RECORDS PUNCHED	16
TOTAL RECORDS PRINTED	490

F64-LEVEL LINKAGE EDITOR OPTIONS SPECIFIED XREF,LET,LIST
DEFAULT OPTION(S) USED - SIZE=(98304,55296)
IEW0000NAME ISUPDT(R)00002401

CROSS REFERENCE TABLE

CONTROL SECTION			ENTRY							
NAME	ORIGIN	LENGTH	NAME	LOCATION	NAME	LOCATION	NAME	LOCATION	NAME	LOCATION
ISUPDT	00	2812								
SORTNAME	2818	5B2								
Y2KGTOA	2DD0	2DF								
ILBOERR0*	30B0	22C								
			ILBOERR1	30B0	ILBOERR2	30F2	ILBOERR4	3120	ILBOERR3	3146
			ILBOERR5	31AE	ILBOERR6	31DA				
ILBOSPA0*	32E0	2D8								
ILBOSTP0*	35B8	35								
			ILBOSTP1	35CE						
ILBOWTB0*	35F0	100								
LOCATION	REFERS TO	SYMBOL	IN CONTROL SECTION		LOCATION	REFERS TO	SYMBOL	IN CONTROL SECTION		
188		ILBOERR5	ILBOERR0		CF0		ILBOSTP0	ILBOSTP0		
CF4		ILBOSPA0	ILBOSPA0		CF8		ILBOSTP1	ILBOSTP0		
CFC		ILBOWTB0	ILBOWTB0		D00		Y2KGTOA	Y2KGTOA		
D04		SORTNAME	SORTNAME		2AC8		ILBOSTP0	ILBOSTP0		
2ACC		ILBOSTP1	ILBOSTP0							
ENTRY ADDRESS		00								
TOTAL LENGTH		36F0								
****ISUPDT	NOW REPLACED IN DATA SET									
AUTHORIZATION CODE IS		0.								

COBUCL4	(J 955) -	COBUC	.COB	ENDED,	CODE 0004,	21.363	13:38:47
COBUCL4	(J 955) -	COBUC	.COB	ENDED,	CODE 0000,	21.363	13:38:47
COBUCL4	(J 955) -	ASMCL	.ASM	ENDED,	CODE 0000,	21.363	13:38:47
COBUCL4	(J 955) -	ASMCL	.LKED	ENDED,	CODE 0000,	21.363	13:38:47