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## 1 FileStat-Msgs

The FileStat-Msgs.cpy copybook contains an EVALUATE statement to translate the two-digit file status codes that may be generated by file I/O statements.

The copybook assumes that the file status data item name is "STATUS" and the error message data item is named "MSG". By using the COPY statement's REPLACING clause, however, you may use the data names you wish, as follows:

```
COPY FileStat-Msgs
REPLACING STATUS BY file-status-data-item-name
MSG BY error-message-data-item-name
```

Here's the current FileStat-Msgs.cpy copybook:

```
EVALUATE STATUS
     WHEN OO MOVE 'SUCCESS
                                           , TO MSG
                                           , TO MSG
     WHEN 02 MOVE 'SUCCESS DUPLICATE
                                           , TO MSG
     WHEN 04 MOVE 'SUCCESS INCOMPLETE
     WHEN 05 MOVE 'SUCCESS OPTIONAL
                                           , TO MSG
     WHEN 06 MOVE 'LS Multiple records
                                          ' TO MSG
                                           , TO MSG
     WHEN 07 MOVE 'SUCCESS NO UNIT
     WHEN 10 MOVE 'END OF FILE
                                           ' TO MSG
                                          , TO MSG
     WHEN 14 MOVE 'OUT OF KEY RANGE
                                           , TO MSG
     WHEN 21 MOVE 'KEY INVALID
     WHEN 22 MOVE 'KEY EXISTS
                                           , TO MSG
     WHEN 23 MOVE 'KEY NOT EXISTS
                                           , TO MSG
     WHEN 24 MOVE 'KEY BOUNDARY VIOLATION ' TO MSG
     WHEN 30 MOVE 'PERMANENT ERROR
                                           , TO MSG
     WHEN 31 MOVE 'INCONSISTENT FILENAME
                                           , TO MSG
     WHEN 34 MOVE 'BOUNDARY VIOLATION
                                           , TO MSG
     WHEN 35 MOVE 'FILE NOT FOUND
                                          ' TO MSG
     WHEN 37 MOVE 'PERMISSION DENIED
                                           , TO MSG
                                           , TO MSG
     WHEN 38 MOVE 'CLOSED WITH LOCK
                                          , TO MSG
     WHEN 39 MOVE 'CONFLICT ATTRIBUTE
     WHEN 41 MOVE 'ALREADY OPEN
                                           , TO MSG
     WHEN 42 MOVE 'NOT OPEN
                                           ' TO MSG
                                           , TO MSG
     WHEN 43 MOVE 'READ NOT DONE
     WHEN 44 MOVE 'RECORD OVERFLOW
                                           , TO MSG
     WHEN 46 MOVE 'READ ERROR
                                           , TO MSG
     WHEN 47 MOVE 'INPUT DENIED
                                           , TO MSG
     WHEN 48 MOVE 'OUTPUT DENIED
                                           , TO MSG
     WHEN 49 MOVE 'I/O DENIED
                                           ' TO MSG
                                           ' TO MSG
     WHEN 51 MOVE 'RECORD LOCKED
     WHEN 52 MOVE 'END-OF-PAGE
                                           , TO MSG
     WHEN 57 MOVE 'I/O LINAGE
                                           , TO MSG
     WHEN 61 MOVE 'FILE SHARING FAILURE ' TO MSG
     WHEN 71 MOVE 'BAD CHARACTER
                                           ' TO MSG
                                        , TO MSG
     WHEN 91 MOVE 'FILE NOT AVAILABLE
     WHEN OTHER MOVE 'UNKNOWN ERROR 'TO MSG
```

END-EVALUATE.

### 2 COBDUMP

COBDUMP is a useful little utility subroutine to produce a formatted hexadecimal and character dump of the data area passed to it.

If you follow the GnuCOBOL forums, you've undoubtedly heard about the CBL\_OC\_DUMP subroutine that was the winning entry in a GnuCOBOL programming contest. It's a great tool for producing data dumps, and it's now included in the official GnuCOBOL distributions.

For now though, I'll keep using my good ol' "COBDUMP" routine. It's been my travelling companion from COBOL job to COBOL job since 1971. Here it is, all tuned up for GnuCOBOL, with new tires and a fresh coat of paint.

In addition to general GnuCOBOL concepts, this program provides a useful demonstration of the following:

- Coding a GnuCOBOL subroutine
- Using USAGE POINTER data items
- Using the ANY LENGTH data item attribute
- Coding for an OPTIONAL subprogram argument
- Using the NUMBER-OF-CALL-PARAMETERS special register
- Using the C\$PRINTABLE built-in system subroutine

The program source and cross-reference listing, produced using the GnuCOBOL Interactive Compiler front-end (GCic.cbl, one of the sample programs included here), begins on the next page.

GNUCOBOL 3.1.2 06MAR202 Source Listing

2022/03/06 COBDUMP.cbl

Page: 1

```
______
           >>SOURCE FORMAT IS FIXED
    1
          IDENTIFICATION DIVISION.
    3
          PROGRAM-ID. COBDUMP.
    4
          5
          *> This is an OpenCOBOL subroutine that will generate a
    6
          *> formatted Hex/Char dump of a storage area. To use this
    7
          *> subroutine, simply CALL it as follows:
                                                                  **
    8
          *>
                                                                  **
          *> CALL "COBDUMP" USING <data-item>
   10
          *>
                              [ <length> ]
   11
          *>
                                                                  **
   12
          *> If specified, the <length> argument specifies how many
                                                                  **
           *> bytes of <data-item> are to be dumped. If absent, all of
           *> <data-item> will be dumped (i.e. LENGTH(<data-item>) will
   14
                                                                  **
          *> be assumed for <length>).
                                                                  **
   15
   16
   17
          *> >>> Note that the subroutine name MUST be specified in <<< **
   18
          *> >>> UPPERCASE
                                                               <<< **
   19
           *>
                                                                  **
   20
           *> The dump is generated to STDERR, so you may pipe it to a
   21
           *> file when you execute your program using "2> file".
                                                                  **
   22
           *>
                                                                  **
   23
           *> AUTHOR:
                         GARY L. CUTLER
   24
   25
          *> NOTE:
                         The author has a sentimental attachment to
   26
                          this subroutine - it's been around since 1971 **
          *>
   27
          *>
                          and it's been converted to and run on 10 dif- **
   28
          *>
                          ferent operating system/compiler environments **
   29
          *>
                                                                  **
   30
          *> DATE-WRITTEN: October 14, 1971
                                                                  **
   31
   32
          *> DATE CHANGE DESCRIPTION
   33
   34
           *> GC1071 Initial coding - Univac Dept. of Defense COBOL '68
   35
   36
           *> GC0577 Converted to Univac ASCII COBOL (ACOB) - COBOL '74
                                                                  **
   37
          *> GC1182 Converted to Univac UTS4000 COBOL - COBOL '74 w/
                                                                  **
                  SCREEN SECTION enhancements
   39
           *> GC0883 Converted to Honeywell/Bull COBOL - COBOL '74
           *> GCO983 Converted to IBM VS COBOL - COBOL '74
   40
                                                                  **
   41
           *> GC0887 Converted to IBM VS COBOL II - COBOL '85
           *> GC1294 Converted to Micro Focus COBOL V3.0 - COBOL '85 w/
   42
   43
                    extensions
   44
          *> GCO703 Converted to Unisys Universal Compiling System (UCS) **
                 COBOL (UCOB) - COBOL '85
   45
          *> GC1204 Converted to Unisys Object COBOL (OCOB) - COBOL 2002 **
   46
   47
          *> GCO609 Converted to OpenCOBOL 1.1 - COBOL '85 w/ some COBOL **
                   2002 features
   48
          *>
                                                                  **
   49
          *> GC0410 Enhanced to make 2nd argument (buffer length)
                                                                  **
   50
           *>
                   optional
                                                                  **
          *> GCO211 Ported to IBM Enterprise COBOL
   51
                                                                  **
   52
          *> GC0612 Updated for OpenCOBOL 2.0
           *> VCO322 Moved lines only with . to end of previous statement **
```

GNUCOBOL 3.1.2 06MAR202 Source Listing

2022/03/06 COBDUMP.cbl

Line	Statement		Page: 2					
===== 54	*>	Fix for bug #816 by making WS						
55	*>	· · · · · · · · · · · · · · · · · · ·						
56	*>*	***********	******					
57	EN	VIRONMENT DIVISION.						
58	CO	NFIGURATION SECTION.						
59	RE	POSITORY.						
60		FUNCTION ALL INTRINSIC.						
61	DA	TA DIVISION.						
62	WO	RKING-STORAGE SECTION.						
63	01	WS-Addr-PTR	USAGE POINTER.					
64	01	WS-Addr-NUM REDEFINES WS-Addr-PTR						
65			USAGE BINARY-LONG.					
66								
67	01	WS-Addr-SUB	USAGE BINARY-CHAR.					
68								
69	01	WS-Addr-Value-NUM	USAGE BINARY-LONG.					
70								
71		WS-Buffer-Byte-CHR.						
72		05 WS-Buffer-Byte-NUM	USAGE BINARY-CHAR					
73		oo ma aarror ay oo non	UNSIGNED.					
74			OND I GIVED !					
75		WS-Buffer-Length-NUM	USAGE BINARY-LONG.					
76		WD Dullet Length Non	ODAGE DINART EGNG.					
77		WS-Buffer-SUB	PIC 9(4) COMP-5.					
78		WS Buller SOB	110 9(4) COM 5.					
79		WS-Hex-Digit-TXT VALUE '0123456789	ARCHEE!					
80		05 WS-Hex-Digit-CHR	OCCURS 16 TIMES					
81		00 WB Hex Digit Cilit	PIC X(1).					
82			FIG A(I).					
83		WS-Nibble-SUB	DIC O(1) COMD_E					
		M2-NIDDI6-20P	PIC 9(1) COMP-5.					
84		UC-Nibble-Left-CUD	PIC 9(1) COMP-5.					
85		WS-Nibble-Left-SUB	PIC 9(1) CUMP-5.					
86		UG Millia Diele GUD	DIG 0(1) GOWD F					
87		WS-Nibble-Right-SUB	PIC 9(1) COMP-5.					
88		11G O						
89		1						
90		05 WS-OD-Addr-TXT.	CONTROL OF THE PLANT					
91		10 WS-OD-Addr-Hex-CHR	OCCURS 8 TIMES PIC X.					
92		05 FILLER	PIC X(1).					
93		05 WS-OD-Relative-Byte-NUM	PIC Z(3)9.					
94		05 FILLER	PIC X(1).					
95		05 WS-OD-Hex-TXT	OCCURS 16 TIMES.					
96		10 WS-OD-Hex-1-CHR	PIC X.					
97		10 WS-OD-Hex-2-CHR	PIC X.					
98		10 FILLER	PIC X.					
99		05 WS-OD-ASCII-Data-TXT.						
100		10 WS-OD-ASCII-CHR	OCCURS 16 TIMES					
101			PIC X.					
102	01	WS-Output-SUB	PIC 9(2) COMP-5.					
103								
104	>>	SOURCE FORMAT IS FREE						
105	01	WS-Output-Header-1-TXT.						
106		05 VALUE '<-Addr-> Byte <	Hexadecimal ''> <					

#### GNUCOBOL 3.1.2 06MAR202 Source Listing

2022/03/06 COBDUMP.cbl

```
Page: 3
______
  107 - Char ---->' PIC X(80).
  109
            01 WS-Output-Header-2-TXT.
            05 VALUE '----- --- --- --- ----
  110
  111 ======= ' PIC X(80).
  112
          >>SOURCE FORMAT IS FIXED
  113
  114
          LINKAGE SECTION.
                                                   PIC X ANY LENGTH.
  115
           01 L-Buffer-TXT
  116
                                                   USAGE BINARY-LONG.
            01 L-Buffer-Length-NUM
  117
  118
  119
            PROCEDURE DIVISION USING L-Buffer-TXT,
  120
                                   OPTIONAL L-Buffer-Length-NUM.
            000-Main SECTION.
  121
  122
                IF NUMBER-OF-CALL-PARAMETERS = 1
  123
                   MOVE LENGTH(L-Buffer-TXT) TO WS-Buffer-Length-NUM
  124
                ELSE
  125
                   MOVE L-Buffer-Length-NUM TO WS-Buffer-Length-NUM
  126
                END-IF
  127
                MOVE SPACES TO WS-Output-Detail-TXT
  128
                SET WS-Addr-PTR TO ADDRESS OF L-Buffer-TXT
  129
                PERFORM 100-Generate-Address
                MOVE O TO WS-Output-SUB
  130
                DISPLAY WS-Output-Header-1-TXT UPON SYSERR
  131
  132
                DISPLAY WS-Output-Header-2-TXT UPON SYSERR
  133
                PERFORM VARYING WS-Buffer-SUB FROM 1 BY 1
  134
                         UNTIL WS-Buffer-SUB > WS-Buffer-Length-NUM
                    ADD 1 TO WS-Output-SUB
  135
                    IF WS-Output-SUB = 1
  136
                       MOVE WS-Buffer-SUB TO WS-OD-Relative-Byte-NUM
  137
  138
                    FND-TF
  139
                   MOVE L-Buffer-TXT (WS-Buffer-SUB : 1)
  140
                     TO WS-OD-ASCII-CHR (WS-Output-SUB)
  141
                        WS-Buffer-Byte-CHR
  142
                    DIVIDE WS-Buffer-Byte-NUM BY 16
  143
                       GIVING WS-Nibble-Left-SUB
  144
                       REMAINDER WS-Nibble-Right-SUB
  145
                    ADD 1 TO WS-Nibble-Left-SUB
  146
                            WS-Nibble-Right-SUB
  147
                    MOVE WS-Hex-Digit-CHR (WS-Nibble-Left-SUB)
  148
                     TO WS-OD-Hex-1-CHR (WS-Output-SUB)
  149
                    MOVE WS-Hex-Digit-CHR (WS-Nibble-Right-SUB)
                     TO WS-OD-Hex-2-CHR (WS-Output-SUB)
  150
                    IF WS-Output-SUB = 16
  151
                       CALL "C$PRINTABLE" USING WS-OD-ASCII-Data-TXT
  152
  153
                       DISPLAY WS-Output-Detail-TXT UPON SYSERR
  154
                       MOVE SPACES TO WS-Output-Detail-TXT
  155
                       MOVE O TO WS-Output-SUB
  156
                       SET WS-Addr-PTR UP BY 16
                       PERFORM 100-Generate-Address
  157
                    END-IF
  158
                END-PERFORM
  159
```

GNUCOBOL 3.1.2 06MAR202 Source Listing

2022/03/06 COBDUMP.cbl

Line	Statement	Page: 4
160		
161	CALL "C\$PRINTABLE" USING WS-OD-ASCII-Data-TXT	
162	DISPLAY WS-Output-Detail-TXT UPON SYSERR	
163	END-IF	
164	EXIT PROGRAM.	
165		
166	100-Generate-Address SECTION.	
167	MOVE 8 TO WS-Addr-SUB	
168	MOVE WS-Addr-NUM TO WS-Addr-Value-NUM	
169	MOVE ALL '0' TO WS-OD-Addr-TXT	
170	PERFORM WITH TEST BEFORE UNTIL WS-Addr-Value-NUM = 0	
171	DIVIDE WS-Addr-Value-NUM BY 16	
172	GIVING WS-Addr-Value-NUM	
173	REMAINDER WS-Nibble-SUB	
174	ADD 1 TO WS-Nibble-SUB	
175	MOVE WS-Hex-Digit-CHR (WS-Nibble-SUB)	
176	TO WS-OD-Addr-Hex-CHR (WS-Addr-SUB)	
177	SUBTRACT 1 FROM WS-Addr-SUB	
178	END-PERFORM	
179		

GNU COBOL 2.1 23NOV2013 Cross-Reference Listing

2014/03/27

PROGRAM-ID	C:/Us Identifier/Register/Function		10/Documents/Pro Where Defined	grams/Samp Reference		DUMP.cbl Page: 5
	== ====================================					-
COBDUMP	000-Main	116	PROCEDURE			
COBDUMP	100-Generate-Address	161	PROCEDURE	124	152	
COBDUMP	L-Buffer-Length-NUM	112	LINKAGE	115	120	
COBDUMP	L-Buffer-TXT	110	LINKAGE	114	118	123
				134		
COBDUMP	NUMBER-OF-CALL-PARAMETERS		PROCEDURE	117		
COBDUMP	WS-Addr-NUM	61	WORKING-STORAGE	163		
COBDUMP	WS-Addr-PTR	60	WORKING-STORAGE	61	123*	151*
COBDUMP	WS-Addr-SUB	64	WORKING-STORAGE	162*	171	172
COBDUMP	WS-Addr-Value-NUM	66	WORKING-STORAGE	163*	165	166
				167*		
COBDUMP	WS-Buffer-Byte-CHR	68	WORKING-STORAGE	136		
COBDUMP	WS-Buffer-Byte-NUM	69	WORKING-STORAGE	137		
COBDUMP	WS-Buffer-Length-NUM		WORKING-STORAGE		120*	129
COBDUMP	WS-Buffer-SUB	73	WORKING-STORAGE	128*	129	132
				134		
COBDUMP	WS-Hex-Digit-CHR	76	WORKING-STORAGE	142	144	170
COBDUMP	WS-Hex-Digit-TXT	75	WORKING-STORAGE			
COBDUMP	WS-Nibble-Left-SUB	81	WORKING-STORAGE	138*	140*	142
COBDUMP	WS-Nibble-Right-SUB	83	WORKING-STORAGE	139*	141*	144
COBDUMP	WS-Nibble-SUB	79	WORKING-STORAGE	168*	169*	170
COBDUMP	WS-OD-Addr-Hex-CHR	87	WORKING-STORAGE	171*		
COBDUMP	WS-OD-Addr-TXT	86	WORKING-STORAGE	164*		
COBDUMP	WS-OD-ASCII-CHR	96	WORKING-STORAGE	135*		
COBDUMP	WS-OD-ASCII-Data-TXT	95	WORKING-STORAGE	147C	156C	
COBDUMP	WS-OD-Hex-1-CHR	92	WORKING-STORAGE	143*		
COBDUMP	WS-OD-Hex-2-CHR	93	WORKING-STORAGE	145*		
COBDUMP	WS-OD-Hex-TXT	91	WORKING-STORAGE			
COBDUMP	WS-OD-Relative-Byte-NUM	89	WORKING-STORAGE	132*		
COBDUMP	WS-Output-Detail-TXT	85	WORKING-STORAGE	122*	148	149*
				157		
COBDUMP	WS-Output-Header-1-TXT	102	WORKING-STORAGE	126		
COBDUMP	WS-Output-Header-2-TXT	105	WORKING-STORAGE	127		
COBDUMP	WS-Output-SUB	99	WORKING-STORAGE	125*	130*	131
	_					

## 3 Colors

Colors is a handy little GnuCOBOL utility program that will produce a screen showing all possible combinations of:

- FOREGROUND-COLOR
- BACKGROUND-COLOR
- BLINKING (or absence of BLINKING)
- HIGHLIGHT, LOWLIGHT or absence of either (i.e. "Normal")
- REVERSE-VIDEO

Here is a sample of the screen generated by this program:



The program source and cross-reference listing, produced using the cobxref, begins on the next page.

ACS Cobo	l Xref v2.02.02	D	ictionary 1	File for C	COLORS 0	7/12/2019	16:57:00:16
1	>>SOURC	E FREE					
2	IDENTIFICATION						
3	PROGRAM-ID. co						
4	DATA DIVISION.						
5	WORKING-STORAG	E SECTION.					
6	SCREEN SECTION						
7	01 S-COLORTST-	SCR BACKGRO	UND-COLOR	FOREGROU	JND-COLOR 7	BLANK SCR	EEN.
8	05 LINE 01.						
9	10 COL 1 VALUE	, LOWLIGHT		HIGHLIGHT	C LOWLIGHT		HIGHLIGHT'.
10	05 LINE + 1.						
11	10 COL 1 VALUE	,					'.
12	05 LINE + 1.						
13	10 COL 1 VALUE	,			- REVERSE	REVERSE	REVERSE'.
14	05 LINE + 1.						
15	10 COL 1 VALUE	' 01234567	01234567	01234567	01234567	01234567	01234567'.
16	05 LINE + 1.		_	_		_	
17	10 COL 1 VALUE	,0	0	0	0	0	0 '.
18	05 LINE + 1.						
19	10 COL 1 VALUE	1	1	1	1	1	1 '.
20	05 LINE + 1.	10	0	0	0	0	
21	10 COL 1 VALUE	,2	2	2	2	2	2 '.
22	05 LINE + 1. 10 COL 1 VALUE	, , ,	3 2	3 3	3 4	3 5	3 6 '.
23 24	O5 LINE + 1.	3 1	3 2	3 3	3 4	3 5	3 6 '.
2 <del>4</del> 25	10 COL 1 VALUE	) A	4	4	4	4	4 '.
26	05 LINE + 1.	4	4	4	4	4	•
27	10 COL 1 VALUE	,5	5	5	5	5	5 '.
28	05 LINE + 1.	Ü	Ü	Ü	O	Ü	
29	10 COL 1 VALUE	'6	6	6	6	6	6 ,.
30	05 LINE + 1.		•		· ·		
31	10 COL 1 VALUE	'7	7	7	7	7	7 ,.
32	05 LINE + 1.						
33	10 COL 1 VALUE	, LOWLIGHT		HIGHLIGHT	C LOWLIGHT		HIGHLIGHT'.
34	05 LINE + 1.						
35	10 COL 1 VALUE	, BLINK	BLINK	BLINK	K BLINK	BLINK	BLINK'.
36	05 LINE + 1.						
37	10 COL 1 VALUE	,			- REVERSE	REVERSE	REVERSE'.
38	05 LINE + 1.						
39	10 COL 1 VALUE	' 01234567	01234567	01234567	01234567	01234567	01234567'.
40	05 LINE + 1.						
41	10 COL 1 VALUE	,0	0	0	0	0	0 '.
42	05 LINE + 1.						
43	10 COL 1 VALUE	'1	1	1	1	1	1 '.
44	05 LINE + 1.						
45	10 COL 1 VALUE	'2	2	2	2	2	2 '.
46	05 LINE + 1.			_			
47	10 COL 1 VALUE	'3 7	3 8	3 9	3 10	3 11	3 12 '.
48	05 LINE + 1.	, 1	1	1	4	1	,
49 50	10 COL 1 VALUE	· <b>4</b>	4	4	4	4	4 '.
50 51	05 LINE + 1. 10 COL 1 VALUE	, 5	5	5	5	5	5 ,.
51 52	O5 LINE + 1.	J	J	J	J	J	J ,
52 53	10 COL 1 VALUE	'6	6	6	6	6	6 '.
53 54	05 LINE + 1.	J	J	•	3	J	
0-1	·						

```
Dictionary File for COLORS
ACS Cobol Xref v2.02.02
                                                               07/12/2019 16:57:00:16
                                                                                     ٠.
                                   7
         10 COL 1 VALUE '7
                                                                 7
    56
         *> #1
    57
         05 LINE 05.
    58
         10 COL 2 BACKGROUND-COLOR O FOREGROUND-COLOR O LOWLIGHT VALUE 'X'.
         10 COL + 1 BACKGROUND-COLOR O FOREGROUND-COLOR 1 LOWLIGHT VALUE 'X'.
         10 COL + 1 BACKGROUND-COLOR O FOREGROUND-COLOR 2 LOWLIGHT VALUE 'X'.
         10 COL + 1 BACKGROUND-COLOR O FOREGROUND-COLOR 3 LOWLIGHT VALUE 'X'.
         10 COL + 1 BACKGROUND-COLOR 0 FOREGROUND-COLOR 4 LOWLIGHT VALUE 'X'.
    62
         10 COL + 1 BACKGROUND-COLOR O FOREGROUND-COLOR 5 LOWLIGHT VALUE 'X'.
         10 COL + 1 BACKGROUND-COLOR O FOREGROUND-COLOR 6 LOWLIGHT VALUE 'X'.
    65
         10 COL + 1 BACKGROUND-COLOR O FOREGROUND-COLOR 7 LOWLIGHT VALUE 'X'.
    66
         05 I.TNF. + 1.
         10 COL 2
                  BACKGROUND-COLOR 1 FOREGROUND-COLOR O LOWLIGHT VALUE 'X'.
         10 COL + 1 BACKGROUND-COLOR 1 FOREGROUND-COLOR 1 LOWLIGHT VALUE 'X'.
         10 COL + 1 BACKGROUND-COLOR 1 FOREGROUND-COLOR 2 LOWLIGHT VALUE 'X'.
    69
         10 COL + 1 BACKGROUND-COLOR 1 FOREGROUND-COLOR 3 LOWLIGHT VALUE 'X'.
    70
         10 COL + 1 BACKGROUND-COLOR 1 FOREGROUND-COLOR 4 LOWLIGHT VALUE 'X'.
    71
    72
         10 COL + 1 BACKGROUND-COLOR 1 FOREGROUND-COLOR 5 LOWLIGHT VALUE 'X'.
         10 COL + 1 BACKGROUND-COLOR 1 FOREGROUND-COLOR 6 LOWLIGHT VALUE 'X'.
    74
         10 COL + 1 BACKGROUND-COLOR 1 FOREGROUND-COLOR 7 LOWLIGHT VALUE 'X'.
         05 LINE + 1.
    76
         10 COL 2
                    BACKGROUND-COLOR 2 FOREGROUND-COLOR O LOWLIGHT VALUE 'X'.
    77
         10 COL + 1 BACKGROUND-COLOR 2 FOREGROUND-COLOR 1 LOWLIGHT VALUE 'X'.
    78
         10 COL + 1 BACKGROUND-COLOR 2 FOREGROUND-COLOR 2 LOWLIGHT VALUE 'X'.
         10 COL + 1 BACKGROUND-COLOR 2 FOREGROUND-COLOR 3 LOWLIGHT VALUE 'X'.
         10 COL + 1 BACKGROUND-COLOR 2 FOREGROUND-COLOR 4 LOWLIGHT VALUE 'X'.
    80
         10 COL + 1 BACKGROUND-COLOR 2 FOREGROUND-COLOR 5 LOWLIGHT VALUE 'X'.
    81
         10 COL + 1 BACKGROUND-COLOR 2 FOREGROUND-COLOR 6 LOWLIGHT VALUE 'X'.
    83
         10 COL + 1 BACKGROUND-COLOR 2 FOREGROUND-COLOR 7 LOWLIGHT VALUE 'X'.
         05 LINE + 1.
    84
         10 COL 2
                  BACKGROUND-COLOR 3 FOREGROUND-COLOR O LOWLIGHT VALUE 'X'.
    85
         10 COL + 1 BACKGROUND-COLOR 3 FOREGROUND-COLOR 1 LOWLIGHT VALUE 'X'.
    87
         10 COL + 1 BACKGROUND-COLOR 3 FOREGROUND-COLOR 2 LOWLIGHT VALUE 'X'.
    88
         10 COL + 1 BACKGROUND-COLOR 3 FOREGROUND-COLOR 3 LOWLIGHT VALUE 'X'.
         10 COL + 1 BACKGROUND-COLOR 3 FOREGROUND-COLOR 4 LOWLIGHT VALUE 'X'.
         10 COL + 1 BACKGROUND-COLOR 3 FOREGROUND-COLOR 5 LOWLIGHT VALUE 'X'.
         10 COL + 1 BACKGROUND-COLOR 3 FOREGROUND-COLOR 6 LOWLIGHT VALUE 'X'.
    91
    92
        10 COL + 1 BACKGROUND-COLOR 3 FOREGROUND-COLOR 7 LOWLIGHT VALUE 'X'.
         05 LINE + 1.
    94
         10 COL 2
                    BACKGROUND-COLOR 4 FOREGROUND-COLOR O LOWLIGHT VALUE 'X'.
         10 COL + 1 BACKGROUND-COLOR 4 FOREGROUND-COLOR 1 LOWLIGHT VALUE 'X'.
    95
    96
         10 COL + 1 BACKGROUND-COLOR 4 FOREGROUND-COLOR 2 LOWLIGHT VALUE 'X'.
         10 COL + 1 BACKGROUND-COLOR 4 FOREGROUND-COLOR 3 LOWLIGHT VALUE 'X'.
    98
         10 COL + 1 BACKGROUND-COLOR 4 FOREGROUND-COLOR 4 LOWLIGHT VALUE 'X'.
   99
         10 COL + 1 BACKGROUND-COLOR 4 FOREGROUND-COLOR 5 LOWLIGHT VALUE 'X'.
         10 COL + 1 BACKGROUND-COLOR 4 FOREGROUND-COLOR 6 LOWLIGHT VALUE 'X'.
   100
         10 COL + 1 BACKGROUND-COLOR 4 FOREGROUND-COLOR 7 LOWLIGHT VALUE 'X'.
   101
   102
         05 LINE + 1.
   103
         10 COL 2 BACKGROUND-COLOR 5 FOREGROUND-COLOR 0 LOWLIGHT VALUE 'X'.
         10 COL + 1 BACKGROUND-COLOR 5 FOREGROUND-COLOR 1 LOWLIGHT VALUE 'X'.
   104
   105
         10 COL + 1 BACKGROUND-COLOR 5 FOREGROUND-COLOR 2 LOWLIGHT VALUE 'X'.
         10 COL + 1 BACKGROUND-COLOR 5 FOREGROUND-COLOR 3 LOWLIGHT VALUE 'X'.
   106
         10 COL + 1 BACKGROUND-COLOR 5 FOREGROUND-COLOR 4 LOWLIGHT VALUE 'X'.
   107
         10 COL + 1 BACKGROUND-COLOR 5 FOREGROUND-COLOR 5 LOWLIGHT VALUE 'X'.
```

```
ACS Cobol Xref v2.02.02
                                 Dictionary File for COLORS
                                                                07/12/2019 16:57:00:17
         10 COL + 1 BACKGROUND-COLOR 5 FOREGROUND-COLOR 6 LOWLIGHT VALUE 'X'.
         10 COL + 1 BACKGROUND-COLOR 5 FOREGROUND-COLOR 7 LOWLIGHT VALUE 'X'.
   110
   111
         05 \text{ LINE} + 1.
                    BACKGROUND-COLOR 6 FOREGROUND-COLOR O LOWLIGHT VALUE 'X'.
   112
         10 COL 2
         10 COL + 1 BACKGROUND-COLOR 6 FOREGROUND-COLOR 1 LOWLIGHT VALUE 'X'.
   113
         10 COL + 1 BACKGROUND-COLOR 6 FOREGROUND-COLOR 2 LOWLIGHT VALUE 'X'.
   115
         10 COL + 1 BACKGROUND-COLOR 6 FOREGROUND-COLOR 3 LOWLIGHT VALUE 'X'.
         10 COL + 1 BACKGROUND-COLOR 6 FOREGROUND-COLOR 4 LOWLIGHT VALUE 'X'.
   116
   117
         10 COL + 1 BACKGROUND-COLOR 6 FOREGROUND-COLOR 5 LOWLIGHT VALUE 'X'.
         10 COL + 1 BACKGROUND-COLOR 6 FOREGROUND-COLOR 6 LOWLIGHT VALUE 'X'.
   119
         10 COL + 1 BACKGROUND-COLOR 6 FOREGROUND-COLOR 7 LOWLIGHT VALUE 'X'.
         05 I.TNF. + 1.
   120
   121
         10 COL 2
                   BACKGROUND-COLOR 7 FOREGROUND-COLOR O LOWLIGHT VALUE 'X'.
   122
         10 COL + 1 BACKGROUND-COLOR 7 FOREGROUND-COLOR 1 LOWLIGHT VALUE 'X'.
         10 COL + 1 BACKGROUND-COLOR 7 FOREGROUND-COLOR 2 LOWLIGHT VALUE 'X'.
   123
         10 COL + 1 BACKGROUND-COLOR 7 FOREGROUND-COLOR 3 LOWLIGHT VALUE 'X'.
   124
   125
         10 COL + 1 BACKGROUND-COLOR 7 FOREGROUND-COLOR 4 LOWLIGHT VALUE 'X'.
   126
         10 COL + 1 BACKGROUND-COLOR 7 FOREGROUND-COLOR 5 LOWLIGHT VALUE 'X'.
   127
         10 COL + 1 BACKGROUND-COLOR 7 FOREGROUND-COLOR 6 LOWLIGHT VALUE 'X'.
   128
         10 COL + 1 BACKGROUND-COLOR 7 FOREGROUND-COLOR 7 LOWLIGHT VALUE 'X'.
   129
   130
         05 LINE 05.
         10 COL 12 BACKGROUND-COLOR O FOREGROUND-COLOR O VALUE 'X'.
   131
   132
         10 COL + 1 BACKGROUND-COLOR 0 FOREGROUND-COLOR 1 VALUE 'X'.
         10 COL + 1 BACKGROUND-COLOR O FOREGROUND-COLOR 2 VALUE 'X'.
   133
         10 COL + 1 BACKGROUND-COLOR O FOREGROUND-COLOR 3 VALUE 'X'.
   134
         10 COL + 1 BACKGROUND-COLOR O FOREGROUND-COLOR 4 VALUE 'X'.
   135
   136
         10 COL + 1 BACKGROUND-COLOR O FOREGROUND-COLOR 5 VALUE 'X'.
   137
         10 COL + 1 BACKGROUND-COLOR O FOREGROUND-COLOR 6 VALUE 'X'.
         10 COL + 1 BACKGROUND-COLOR O FOREGROUND-COLOR 7 VALUE 'X'.
   138
   139
         05 LINE + 1.
         10 COL 12 BACKGROUND-COLOR 1 FOREGROUND-COLOR 0 VALUE 'X'.
   140
   141
         10 COL + 1 BACKGROUND-COLOR 1 FOREGROUND-COLOR 1 VALUE 'X'.
         10 COL + 1 BACKGROUND-COLOR 1 FOREGROUND-COLOR 2 VALUE 'X'.
   142
   143
         10 COL + 1 BACKGROUND-COLOR 1 FOREGROUND-COLOR 3 VALUE 'X'.
         10 COL + 1 BACKGROUND-COLOR 1 FOREGROUND-COLOR 4 VALUE 'X'.
   144
   145
         10 COL + 1 BACKGROUND-COLOR 1 FOREGROUND-COLOR 5 VALUE 'X'.
   146
        10 COL + 1 BACKGROUND-COLOR 1 FOREGROUND-COLOR 6 VALUE 'X'.
   147
         10 COL + 1 BACKGROUND-COLOR 1 FOREGROUND-COLOR 7 VALUE 'X'.
   148
         05 LINE + 1.
         10 COL 12 BACKGROUND-COLOR 2 FOREGROUND-COLOR 0 VALUE 'X'.
   149
   150
         10 COL + 1 BACKGROUND-COLOR 2 FOREGROUND-COLOR 1 VALUE 'X'.
         10 COL + 1 BACKGROUND-COLOR 2 FOREGROUND-COLOR 2 VALUE 'X'.
   151
   152
         10 COL + 1 BACKGROUND-COLOR 2 FOREGROUND-COLOR 3 VALUE 'X'.
   153
         10 COL + 1 BACKGROUND-COLOR 2 FOREGROUND-COLOR 4 VALUE 'X'.
         10 COL + 1 BACKGROUND-COLOR 2 FOREGROUND-COLOR 5 VALUE 'X'.
   154
         10 COL + 1 BACKGROUND-COLOR 2 FOREGROUND-COLOR 6 VALUE 'X'.
   155
   156
         10 COL + 1 BACKGROUND-COLOR 2 FOREGROUND-COLOR 7 VALUE 'X'.
   157
         05 I.TNF. + 1.
   158
         10 COL 12 BACKGROUND-COLOR 3 FOREGROUND-COLOR 0 VALUE 'X'.
   159
         10 COL + 1 BACKGROUND-COLOR 3 FOREGROUND-COLOR 1 VALUE 'X'.
         10 COL + 1 BACKGROUND-COLOR 3 FOREGROUND-COLOR 2 VALUE 'X'.
   160
         10 COL + 1 BACKGROUND-COLOR 3 FOREGROUND-COLOR 3 VALUE 'X'.
   161
         10 COL + 1 BACKGROUND-COLOR 3 FOREGROUND-COLOR 4 VALUE 'X'.
```

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ACS Cobol Xref v2.02.02
                                 Dictionary File for COLORS
                                                               07/12/2019 16:57:00:17
         10 COL + 1 BACKGROUND-COLOR 3 FOREGROUND-COLOR 5 VALUE 'X'.
         10 COL + 1 BACKGROUND-COLOR 3 FOREGROUND-COLOR 6 VALUE 'X'.
   164
         10 COL + 1 BACKGROUND-COLOR 3 FOREGROUND-COLOR 7 VALUE 'X'.
   166
         05 LINE + 1.
   167
         10 COL 12 BACKGROUND-COLOR 4 FOREGROUND-COLOR 0 VALUE 'X'.
         10 COL + 1 BACKGROUND-COLOR 4 FOREGROUND-COLOR 1 VALUE 'X'.
   168
   169
         10 COL + 1 BACKGROUND-COLOR 4 FOREGROUND-COLOR 2 VALUE 'X'.
        10 COL + 1 BACKGROUND-COLOR 4 FOREGROUND-COLOR 3 VALUE 'X'.
   170
   171
        10 COL + 1 BACKGROUND-COLOR 4 FOREGROUND-COLOR 4 VALUE 'X'.
         10 COL + 1 BACKGROUND-COLOR 4 FOREGROUND-COLOR 5 VALUE 'X'.
   173
        10 COL + 1 BACKGROUND-COLOR 4 FOREGROUND-COLOR 6 VALUE 'X'.
         10 COL + 1 BACKGROUND-COLOR 4 FOREGROUND-COLOR 7 VALUE 'X'.
   174
   175
         05 LINE + 1.
   176
         10 COL 12 BACKGROUND-COLOR 5 FOREGROUND-COLOR 0 VALUE 'X'.
         10 COL + 1 BACKGROUND-COLOR 5 FOREGROUND-COLOR 1 VALUE 'X'.
   177
         10 COL + 1 BACKGROUND-COLOR 5 FOREGROUND-COLOR 2 VALUE 'X'.
   178
         10 COL + 1 BACKGROUND-COLOR 5 FOREGROUND-COLOR 3 VALUE 'X'.
   179
   180
         10 COL + 1 BACKGROUND-COLOR 5 FOREGROUND-COLOR 4 VALUE 'X'.
   181
         10 COL + 1 BACKGROUND-COLOR 5 FOREGROUND-COLOR 5 VALUE 'X'.
   182
         10 COL + 1 BACKGROUND-COLOR 5 FOREGROUND-COLOR 6 VALUE 'X'.
   183
         10 COL + 1 BACKGROUND-COLOR 5 FOREGROUND-COLOR 7 VALUE 'X'.
   184
         05 LINE + 1.
   185
         10 COL 12 BACKGROUND-COLOR 6 FOREGROUND-COLOR 0 VALUE 'X'.
   186
         10 COL + 1 BACKGROUND-COLOR 6 FOREGROUND-COLOR 1 VALUE 'X'.
         10 COL + 1 BACKGROUND-COLOR 6 FOREGROUND-COLOR 2 VALUE 'X'.
         10 COL + 1 BACKGROUND-COLOR 6 FOREGROUND-COLOR 3 VALUE 'X'.
   188
   189
         10 COL + 1 BACKGROUND-COLOR 6 FOREGROUND-COLOR 4 VALUE 'X'.
   190
         10 COL + 1 BACKGROUND-COLOR 6 FOREGROUND-COLOR 5 VALUE 'X'.
   191
         10 COL + 1 BACKGROUND-COLOR 6 FOREGROUND-COLOR 6 VALUE 'X'.
         10 COL + 1 BACKGROUND-COLOR 6 FOREGROUND-COLOR 7 VALUE 'X'.
   192
   193
         05 LINE + 1.
         10 COL 12 BACKGROUND-COLOR 7 FOREGROUND-COLOR 0 VALUE 'X'.
   195
         10 COL + 1 BACKGROUND-COLOR 7 FOREGROUND-COLOR 1 VALUE 'X'.
   196
         10 COL + 1 BACKGROUND-COLOR 7 FOREGROUND-COLOR 2 VALUE 'X'.
   197
         10 COL + 1 BACKGROUND-COLOR 7 FOREGROUND-COLOR 3 VALUE 'X'.
         10 COL + 1 BACKGROUND-COLOR 7 FOREGROUND-COLOR 4 VALUE 'X'.
   198
         10 COL + 1 BACKGROUND-COLOR 7 FOREGROUND-COLOR 5 VALUE 'X'.
   199
        10 COL + 1 BACKGROUND-COLOR 7 FOREGROUND-COLOR 6 VALUE 'X'.
   200
        10 COL + 1 BACKGROUND-COLOR 7 FOREGROUND-COLOR 7 VALUE 'X'.
   202
         *> #3
   203
        05 LINE 05.
   204
        10 COL 22 BACKGROUND-COLOR O FOREGROUND-COLOR O HIGHLIGHT VALUE 'X'.
         10 COL + 1 BACKGROUND-COLOR 0 FOREGROUND-COLOR 1 HIGHLIGHT VALUE 'X'.
   206
         10 COL + 1 BACKGROUND-COLOR 0 FOREGROUND-COLOR 2 HIGHLIGHT VALUE 'X'.
   207
         10 COL + 1 BACKGROUND-COLOR O FOREGROUND-COLOR 3 HIGHLIGHT VALUE 'X'.
   208
        10 COL + 1 BACKGROUND-COLOR O FOREGROUND-COLOR 4 HIGHLIGHT VALUE 'X'.
   209
         10 COL + 1 BACKGROUND-COLOR O FOREGROUND-COLOR 5 HIGHLIGHT VALUE 'X'.
   210
         10 COL + 1 BACKGROUND-COLOR 0 FOREGROUND-COLOR 6 HIGHLIGHT VALUE 'X'.
         10 COL + 1 BACKGROUND-COLOR O FOREGROUND-COLOR 7 HIGHLIGHT VALUE 'X'.
   211
   212
         05 LINE + 1.
   213
         10 COL 22 BACKGROUND-COLOR 1 FOREGROUND-COLOR 0 HIGHLIGHT VALUE 'X'.
  214
         10 COL + 1 BACKGROUND-COLOR 1 FOREGROUND-COLOR 1 HIGHLIGHT VALUE 'X'.
         10 COL + 1 BACKGROUND-COLOR 1 FOREGROUND-COLOR 2 HIGHLIGHT VALUE 'X'.
   215
         10 COL + 1 BACKGROUND-COLOR 1 FOREGROUND-COLOR 3 HIGHLIGHT VALUE 'X'.
```

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Dictionary File for COLORS
                                                               07/12/2019 16:57:00:17
ACS Cobol Xref v2.02.02
         10 COL + 1 BACKGROUND-COLOR 1 FOREGROUND-COLOR 4 HIGHLIGHT VALUE 'X'.
         10 COL + 1 BACKGROUND-COLOR 1 FOREGROUND-COLOR 5 HIGHLIGHT VALUE 'X'.
   218
         10 COL + 1 BACKGROUND-COLOR 1 FOREGROUND-COLOR 6 HIGHLIGHT VALUE 'X'.
         10 COL + 1 BACKGROUND-COLOR 1 FOREGROUND-COLOR 7 HIGHLIGHT VALUE 'X'.
   220
   221
         05 I.TNF. + 1.
         10 COL 22 BACKGROUND-COLOR 2 FOREGROUND-COLOR 0 HIGHLIGHT VALUE 'X'.
   222
   223
         10 COL + 1 BACKGROUND-COLOR 2 FOREGROUND-COLOR 1 HIGHLIGHT VALUE 'X'.
         10 COL + 1 BACKGROUND-COLOR 2 FOREGROUND-COLOR 2 HIGHLIGHT VALUE 'X'.
   224
         10 COL + 1 BACKGROUND-COLOR 2 FOREGROUND-COLOR 3 HIGHLIGHT VALUE 'X'.
         10 COL + 1 BACKGROUND-COLOR 2 FOREGROUND-COLOR 4 HIGHLIGHT VALUE 'X'.
   227
         10 COL + 1 BACKGROUND-COLOR 2 FOREGROUND-COLOR 5 HIGHLIGHT VALUE 'X'.
         10 COL + 1 BACKGROUND-COLOR 2 FOREGROUND-COLOR 6 HIGHLIGHT VALUE 'X'.
   228
   229
         10 COL + 1 BACKGROUND-COLOR 2 FOREGROUND-COLOR 7 HIGHLIGHT VALUE 'X'.
   230
         05 LINE + 1.
         10 COL 22 BACKGROUND-COLOR 3 FOREGROUND-COLOR 0 HIGHLIGHT VALUE 'X'.
   231
         10 COL + 1 BACKGROUND-COLOR 3 FOREGROUND-COLOR 1 HIGHLIGHT VALUE 'X'.
   232
         10 COL + 1 BACKGROUND-COLOR 3 FOREGROUND-COLOR 2 HIGHLIGHT VALUE 'X'.
   234
         10 COL + 1 BACKGROUND-COLOR 3 FOREGROUND-COLOR 3 HIGHLIGHT VALUE 'X'.
         10 COL + 1 BACKGROUND-COLOR 3 FOREGROUND-COLOR 4 HIGHLIGHT VALUE 'X'.
   235
   236
         10 COL + 1 BACKGROUND-COLOR 3 FOREGROUND-COLOR 5 HIGHLIGHT VALUE
   237
         10 COL + 1 BACKGROUND-COLOR 3 FOREGROUND-COLOR 6 HIGHLIGHT VALUE
   238
         10 COL + 1 BACKGROUND-COLOR 3 FOREGROUND-COLOR 7 HIGHLIGHT VALUE 'X'.
   239
         05 LINE + 1.
   240
         10 COL 22 BACKGROUND-COLOR 4 FOREGROUND-COLOR O HIGHLIGHT VALUE 'X'.
         10 COL + 1 BACKGROUND-COLOR 4 FOREGROUND-COLOR 1 HIGHLIGHT VALUE 'X'.
         10 COL + 1 BACKGROUND-COLOR 4 FOREGROUND-COLOR 2 HIGHLIGHT VALUE 'X'.
   242
   243
         10 COL + 1 BACKGROUND-COLOR 4 FOREGROUND-COLOR 3 HIGHLIGHT VALUE 'X'.
         10 COL + 1 BACKGROUND-COLOR 4 FOREGROUND-COLOR 4 HIGHLIGHT VALUE 'X'.
   245
         10 COL + 1 BACKGROUND-COLOR 4 FOREGROUND-COLOR 5 HIGHLIGHT VALUE 'X'.
         10 COL + 1 BACKGROUND-COLOR 4 FOREGROUND-COLOR 6 HIGHLIGHT VALUE 'X'.
   246
   247
         10 COL + 1 BACKGROUND-COLOR 4 FOREGROUND-COLOR 7 HIGHLIGHT VALUE 'X'.
         05 I.TNF + 1.
   249
         10 COL 22 BACKGROUND-COLOR 5 FOREGROUND-COLOR 0 HIGHLIGHT VALUE 'X'.
   250
         10 COL + 1 BACKGROUND-COLOR 5 FOREGROUND-COLOR 1 HIGHLIGHT VALUE 'X'.
   251
         10 COL + 1 BACKGROUND-COLOR 5 FOREGROUND-COLOR 2 HIGHLIGHT VALUE 'X'.
   252
         10 COL + 1 BACKGROUND-COLOR 5 FOREGROUND-COLOR 3 HIGHLIGHT VALUE 'X'.
   253
         10 COL + 1 BACKGROUND-COLOR 5 FOREGROUND-COLOR 4 HIGHLIGHT VALUE 'X'.
   254
         10 COL + 1 BACKGROUND-COLOR 5 FOREGROUND-COLOR 5 HIGHLIGHT VALUE 'X'.
         10 COL + 1 BACKGROUND-COLOR 5 FOREGROUND-COLOR 6 HIGHLIGHT VALUE 'X'.
   256
         10 COL + 1 BACKGROUND-COLOR 5 FOREGROUND-COLOR 7 HIGHLIGHT VALUE 'X'.
         05 LINE + 1.
   257
   258
         10 COL 22 BACKGROUND-COLOR 6 FOREGROUND-COLOR 0 HIGHLIGHT VALUE 'X'.
         10 COL + 1 BACKGROUND-COLOR 6 FOREGROUND-COLOR 1 HIGHLIGHT VALUE 'X'.
   259
   260
         10 COL + 1 BACKGROUND-COLOR 6 FOREGROUND-COLOR 2 HIGHLIGHT VALUE
   261
         10 COL + 1 BACKGROUND-COLOR 6 FOREGROUND-COLOR 3 HIGHLIGHT VALUE 'X'.
   262
         10 COL + 1 BACKGROUND-COLOR 6 FOREGROUND-COLOR 4 HIGHLIGHT VALUE 'X'.
         10 COL + 1 BACKGROUND-COLOR 6 FOREGROUND-COLOR 5 HIGHLIGHT VALUE 'X'.
   263
   264
         10 COL + 1 BACKGROUND-COLOR 6 FOREGROUND-COLOR 6 HIGHLIGHT VALUE 'X'.
   265
         10 COL + 1 BACKGROUND-COLOR 6 FOREGROUND-COLOR 7 HIGHLIGHT VALUE 'X'.
   266
         05 LINE + 1.
   267
         10 COL 22 BACKGROUND-COLOR 7 FOREGROUND-COLOR 0 HIGHLIGHT VALUE 'X'.
   268
         10 COL + 1 BACKGROUND-COLOR 7 FOREGROUND-COLOR 1 HIGHLIGHT VALUE 'X'.
         10 COL + 1 BACKGROUND-COLOR 7 FOREGROUND-COLOR 2 HIGHLIGHT VALUE 'X'.
   269
         10 COL + 1 BACKGROUND-COLOR 7 FOREGROUND-COLOR 3 HIGHLIGHT VALUE 'X'.
   270
```

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Dictionary File for COLORS
                                                               07/12/2019 16:57:00:18
ACS Cobol Xref v2.02.02
         10 COL + 1 BACKGROUND-COLOR 7 FOREGROUND-COLOR 4 HIGHLIGHT VALUE 'X'.
        10 COL + 1 BACKGROUND-COLOR 7 FOREGROUND-COLOR 5 HIGHLIGHT VALUE 'X'.
        10 COL + 1 BACKGROUND-COLOR 7 FOREGROUND-COLOR 6 HIGHLIGHT VALUE 'X'.
         10 COL + 1 BACKGROUND-COLOR 7 FOREGROUND-COLOR 7 HIGHLIGHT VALUE 'X'.
   274
   275
        *> #4
   276
         05 LINE 05.
         10 COL 32 BACKGROUND-COLOR O FOREGROUND-COLOR O LOWLIGHT REVERSE-VIDEO VALUE 'X'.
   277
        10 COL + 1 BACKGROUND-COLOR O FOREGROUND-COLOR 1 LOWLIGHT REVERSE-VIDEO VALUE 'X'.
   278
        10 COL + 1 BACKGROUND-COLOR O FOREGROUND-COLOR 2 LOWLIGHT REVERSE-VIDEO VALUE 'X'.
        10 COL + 1 BACKGROUND-COLOR O FOREGROUND-COLOR 3 LOWLIGHT REVERSE-VIDEO VALUE 'X'.
   281
        10 COL + 1 BACKGROUND-COLOR O FOREGROUND-COLOR 4 LOWLIGHT REVERSE-VIDEO VALUE 'X'.
        10 COL + 1 BACKGROUND-COLOR O FOREGROUND-COLOR 5 LOWLIGHT REVERSE-VIDEO VALUE 'X'.
   282
         10 COL + 1 BACKGROUND-COLOR O FOREGROUND-COLOR 6 LOWLIGHT REVERSE-VIDEO VALUE 'X'.
   284
         10 COL + 1 BACKGROUND-COLOR O FOREGROUND-COLOR 7 LOWLIGHT REVERSE-VIDEO VALUE 'X'.
   285
         05 LINE + 1.
        10 COL 32 BACKGROUND-COLOR 1 FOREGROUND-COLOR 0 LOWLIGHT REVERSE-VIDEO VALUE 'X'.
   286
         10 COL + 1 BACKGROUND-COLOR 1 FOREGROUND-COLOR 1 LOWLIGHT REVERSE-VIDEO VALUE 'X'.
   288
         10 COL + 1 BACKGROUND-COLOR 1 FOREGROUND-COLOR 2 LOWLIGHT REVERSE-VIDEO VALUE 'X'.
         10 COL + 1 BACKGROUND-COLOR 1 FOREGROUND-COLOR 3 LOWLIGHT REVERSE-VIDEO VALUE 'X'.
   289
   290
         10 COL + 1 BACKGROUND-COLOR 1 FOREGROUND-COLOR 4 LOWLIGHT REVERSE-VIDEO VALUE 'X'.
         10 COL + 1 BACKGROUND-COLOR 1 FOREGROUND-COLOR 5 LOWLIGHT REVERSE-VIDEO VALUE 'X'.
   292
         10 COL + 1 BACKGROUND-COLOR 1 FOREGROUND-COLOR 6 LOWLIGHT REVERSE-VIDEO VALUE 'X'.
   293
        10 COL + 1 BACKGROUND-COLOR 1 FOREGROUND-COLOR 7 LOWLIGHT REVERSE-VIDEO VALUE 'X'.
   294
        05 LINE + 1.
        10 COL 32 BACKGROUND-COLOR 2 FOREGROUND-COLOR O LOWLIGHT REVERSE-VIDEO VALUE 'X'.
         10 COL + 1 BACKGROUND-COLOR 2 FOREGROUND-COLOR 1 LOWLIGHT REVERSE-VIDEO VALUE 'X'.
   296
   297
         10 COL + 1 BACKGROUND-COLOR 2 FOREGROUND-COLOR 2 LOWLIGHT REVERSE-VIDEO VALUE 'X'.
   298
         10 COL + 1 BACKGROUND-COLOR 2 FOREGROUND-COLOR 3 LOWLIGHT REVERSE-VIDEO VALUE 'X'.
   299
         10 COL + 1 BACKGROUND-COLOR 2 FOREGROUND-COLOR 4 LOWLIGHT REVERSE-VIDEO VALUE 'X'.
         10 COL + 1 BACKGROUND-COLOR 2 FOREGROUND-COLOR 5 LOWLIGHT REVERSE-VIDEO VALUE 'X'.
   300
   301
         10 COL + 1 BACKGROUND-COLOR 2 FOREGROUND-COLOR 6 LOWLIGHT REVERSE-VIDEO VALUE 'X'.
         10 COL + 1 BACKGROUND-COLOR 2 FOREGROUND-COLOR 7 LOWLIGHT REVERSE-VIDEO VALUE 'X'.
   302
   303
        05 LINE + 1.
   304
        10 COL 32 BACKGROUND-COLOR 3 FOREGROUND-COLOR 0 LOWLIGHT REVERSE-VIDEO VALUE 'X'.
         10 COL + 1 BACKGROUND-COLOR 3 FOREGROUND-COLOR 1 LOWLIGHT REVERSE-VIDEO VALUE 'X'.
         10 COL + 1 BACKGROUND-COLOR 3 FOREGROUND-COLOR 2 LOWLIGHT REVERSE-VIDEO VALUE 'X'.
   306
         10 COL + 1 BACKGROUND-COLOR 3 FOREGROUND-COLOR 3 LOWLIGHT REVERSE-VIDEO VALUE 'X'.
   307
   308
        10 COL + 1 BACKGROUND-COLOR 3 FOREGROUND-COLOR 4 LOWLIGHT REVERSE-VIDEO VALUE 'X'.
        10 COL + 1 BACKGROUND-COLOR 3 FOREGROUND-COLOR 5 LOWLIGHT REVERSE-VIDEO VALUE 'X'.
   310
        10 COL + 1 BACKGROUND-COLOR 3 FOREGROUND-COLOR 6 LOWLIGHT REVERSE-VIDEO VALUE 'X'.
        10 COL + 1 BACKGROUND-COLOR 3 FOREGROUND-COLOR 7 LOWLIGHT REVERSE-VIDEO VALUE 'X'.
   311
   312
         05 LINE + 1.
         10 COL 32 BACKGROUND-COLOR 4 FOREGROUND-COLOR 0 LOWLIGHT REVERSE-VIDEO VALUE 'X'.
   314
         10 COL + 1 BACKGROUND-COLOR 4 FOREGROUND-COLOR 1 LOWLIGHT REVERSE-VIDEO VALUE 'X'.
   315
         10 COL + 1 BACKGROUND-COLOR 4 FOREGROUND-COLOR 2 LOWLIGHT REVERSE-VIDEO VALUE 'X'.
        10 COL + 1 BACKGROUND-COLOR 4 FOREGROUND-COLOR 3 LOWLIGHT REVERSE-VIDEO VALUE 'X'.
   316
         10 COL + 1 BACKGROUND-COLOR 4 FOREGROUND-COLOR 4 LOWLIGHT REVERSE-VIDEO VALUE 'X'.
   318
         10 COL + 1 BACKGROUND-COLOR 4 FOREGROUND-COLOR 5 LOWLIGHT REVERSE-VIDEO VALUE 'X'.
         10 COL + 1 BACKGROUND-COLOR 4 FOREGROUND-COLOR 6 LOWLIGHT REVERSE-VIDEO VALUE 'X'.
   319
         10 COL + 1 BACKGROUND-COLOR 4 FOREGROUND-COLOR 7 LOWLIGHT REVERSE-VIDEO VALUE 'X'.
   320
   321
         05 LINE + 1.
   322
        10 COL 32 BACKGROUND-COLOR 5 FOREGROUND-COLOR 0 LOWLIGHT REVERSE-VIDEO VALUE 'X'.
   323
         10 COL + 1 BACKGROUND-COLOR 5 FOREGROUND-COLOR 1 LOWLIGHT REVERSE-VIDEO VALUE 'X'.
         10 COL + 1 BACKGROUND-COLOR 5 FOREGROUND-COLOR 2 LOWLIGHT REVERSE-VIDEO VALUE 'X'.
```

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Dictionary File for COLORS
                                                               07/12/2019 16:57:00:18
ACS Cobol Xref v2.02.02
         10 COL + 1 BACKGROUND-COLOR 5 FOREGROUND-COLOR 3 LOWLIGHT REVERSE-VIDEO VALUE 'X'.
   325
   326
         10 COL + 1 BACKGROUND-COLOR 5 FOREGROUND-COLOR 4 LOWLIGHT REVERSE-VIDEO VALUE 'X'.
         10 COL + 1 BACKGROUND-COLOR 5 FOREGROUND-COLOR 5 LOWLIGHT REVERSE-VIDEO VALUE 'X'.
   327
   328
         10 COL + 1 BACKGROUND-COLOR 5 FOREGROUND-COLOR 6 LOWLIGHT REVERSE-VIDEO VALUE 'X'.
   329
         10 COL + 1 BACKGROUND-COLOR 5 FOREGROUND-COLOR 7 LOWLIGHT REVERSE-VIDEO VALUE 'X'.
   330
         05 I.TNF. + 1.
   331
         10 COL 32 BACKGROUND-COLOR 6 FOREGROUND-COLOR 0 LOWLIGHT REVERSE-VIDEO VALUE 'X'.
         10 COL + 1 BACKGROUND-COLOR 6 FOREGROUND-COLOR 1 LOWLIGHT REVERSE-VIDEO VALUE 'X'.
   332
   333
        10 COL + 1 BACKGROUND-COLOR 6 FOREGROUND-COLOR 2 LOWLIGHT REVERSE-VIDEO VALUE 'X'.
         10 COL + 1 BACKGROUND-COLOR 6 FOREGROUND-COLOR 3 LOWLIGHT REVERSE-VIDEO VALUE 'X'.
   335
         10 COL + 1 BACKGROUND-COLOR 6 FOREGROUND-COLOR 4 LOWLIGHT REVERSE-VIDEO VALUE 'X'.
         10 COL + 1 BACKGROUND-COLOR 6 FOREGROUND-COLOR 5 LOWLIGHT REVERSE-VIDEO VALUE 'X'.
   336
         10 COL + 1 BACKGROUND-COLOR 6 FOREGROUND-COLOR 6 LOWLIGHT REVERSE-VIDEO VALUE 'X'.
   338
         10 COL + 1 BACKGROUND-COLOR 6 FOREGROUND-COLOR 7 LOWLIGHT REVERSE-VIDEO VALUE 'X'.
   339
         05 LINE + 1.
   340
         10 COL 32 BACKGROUND-COLOR 7 FOREGROUND-COLOR 0 LOWLIGHT REVERSE-VIDEO VALUE 'X'.
         10 COL + 1 BACKGROUND-COLOR 7 FOREGROUND-COLOR 1 LOWLIGHT REVERSE-VIDEO VALUE 'X'.
   341
   342
         10 COL + 1 BACKGROUND-COLOR 7 FOREGROUND-COLOR 2 LOWLIGHT REVERSE-VIDEO VALUE 'X'.
         10 COL + 1 BACKGROUND-COLOR 7 FOREGROUND-COLOR 3 LOWLIGHT REVERSE-VIDEO VALUE 'X'.
   343
   344
         10 COL + 1 BACKGROUND-COLOR 7 FOREGROUND-COLOR 4 LOWLIGHT REVERSE-VIDEO VALUE 'X'.
         10 COL + 1 BACKGROUND-COLOR 7 FOREGROUND-COLOR 5 LOWLIGHT REVERSE-VIDEO VALUE
   346
         10 COL + 1 BACKGROUND-COLOR 7 FOREGROUND-COLOR 6 LOWLIGHT REVERSE-VIDEO VALUE 'X'.
   347
         10 COL + 1 BACKGROUND-COLOR 7 FOREGROUND-COLOR 7 LOWLIGHT REVERSE-VIDEO VALUE 'X'.
   348
         *> #5
         05 LINE 05.
         10 COL 42 BACKGROUND-COLOR O FOREGROUND-COLOR O REVERSE-VIDEO VALUE 'X'.
   350
         10 COL + 1 BACKGROUND-COLOR 0 FOREGROUND-COLOR 1 REVERSE-VIDEO VALUE 'X'.
   351
         10 COL + 1 BACKGROUND-COLOR O FOREGROUND-COLOR 2 REVERSE-VIDEO VALUE 'X'.
   353
         10 COL + 1 BACKGROUND-COLOR O FOREGROUND-COLOR 3 REVERSE-VIDEO VALUE 'X'.
         10 COL + 1 BACKGROUND-COLOR O FOREGROUND-COLOR 4 REVERSE-VIDEO VALUE 'X'.
   354
   355
         10 COL + 1 BACKGROUND-COLOR O FOREGROUND-COLOR 5 REVERSE-VIDEO VALUE 'X'.
         10 COL + 1 BACKGROUND-COLOR O FOREGROUND-COLOR 6 REVERSE-VIDEO VALUE 'X'.
   356
   357
         10 COL + 1 BACKGROUND-COLOR O FOREGROUND-COLOR 7 REVERSE-VIDEO VALUE 'X'.
   358
         05 LINE + 1.
   359
         10 COL 42 BACKGROUND-COLOR 1 FOREGROUND-COLOR O REVERSE-VIDEO VALUE 'X'.
   360
         10 COL + 1 BACKGROUND-COLOR 1 FOREGROUND-COLOR 1 REVERSE-VIDEO VALUE 'X'.
         10 COL + 1 BACKGROUND-COLOR 1 FOREGROUND-COLOR 2 REVERSE-VIDEO VALUE 'X'.
   361
        10 COL + 1 BACKGROUND-COLOR 1 FOREGROUND-COLOR 3 REVERSE-VIDEO VALUE 'X'.
   362
         10 COL + 1 BACKGROUND-COLOR 1 FOREGROUND-COLOR 4 REVERSE-VIDEO VALUE 'X'.
   364
         10 COL + 1 BACKGROUND-COLOR 1 FOREGROUND-COLOR 5 REVERSE-VIDEO VALUE 'X'.
         10 COL + 1 BACKGROUND-COLOR 1 FOREGROUND-COLOR 6 REVERSE-VIDEO VALUE 'X'.
   365
   366
         10 COL + 1 BACKGROUND-COLOR 1 FOREGROUND-COLOR 7 REVERSE-VIDEO VALUE 'X'.
         05 LINE + 1.
   368
         10 COL 42 BACKGROUND-COLOR 2 FOREGROUND-COLOR O REVERSE-VIDEO VALUE 'X'.
   369
         10 COL + 1 BACKGROUND-COLOR 2 FOREGROUND-COLOR 1 REVERSE-VIDEO VALUE 'X'.
   370
         10 COL + 1 BACKGROUND-COLOR 2 FOREGROUND-COLOR 2 REVERSE-VIDEO VALUE 'X'.
   371
         10 COL + 1 BACKGROUND-COLOR 2 FOREGROUND-COLOR 3 REVERSE-VIDEO VALUE 'X'.
   372
         10 COL + 1 BACKGROUND-COLOR 2 FOREGROUND-COLOR 4 REVERSE-VIDEO VALUE 'X'.
   373
         10 COL + 1 BACKGROUND-COLOR 2 FOREGROUND-COLOR 5 REVERSE-VIDEO VALUE 'X'.
         10 COL + 1 BACKGROUND-COLOR 2 FOREGROUND-COLOR 6 REVERSE-VIDEO VALUE 'X'.
   374
   375
         10 COL + 1 BACKGROUND-COLOR 2 FOREGROUND-COLOR 7 REVERSE-VIDEO VALUE 'X'.
   376
         05 I.TNF. + 1.
   377
         10 COL 42 BACKGROUND-COLOR 3 FOREGROUND-COLOR O REVERSE-VIDEO VALUE 'X'.
         10 COL + 1 BACKGROUND-COLOR 3 FOREGROUND-COLOR 1 REVERSE-VIDEO VALUE 'X'.
```

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Dictionary File for COLORS
                                                               07/12/2019 16:57:00:18
ACS Cobol Xref v2.02.02
         10 COL + 1 BACKGROUND-COLOR 3 FOREGROUND-COLOR 2 REVERSE-VIDEO VALUE 'X'.
        10 COL + 1 BACKGROUND-COLOR 3 FOREGROUND-COLOR 3 REVERSE-VIDEO VALUE 'X'.
         10 COL + 1 BACKGROUND-COLOR 3 FOREGROUND-COLOR 4 REVERSE-VIDEO VALUE 'X'.
   382
         10 COL + 1 BACKGROUND-COLOR 3 FOREGROUND-COLOR 5 REVERSE-VIDEO VALUE 'X'.
   383
         10 COL + 1 BACKGROUND-COLOR 3 FOREGROUND-COLOR 6 REVERSE-VIDEO VALUE 'X'.
         10 COL + 1 BACKGROUND-COLOR 3 FOREGROUND-COLOR 7 REVERSE-VIDEO VALUE 'X'.
   384
   385
         05 LINE + 1.
        10 COL 42 BACKGROUND-COLOR 4 FOREGROUND-COLOR 0 REVERSE-VIDEO VALUE 'X'.
   386
        10 COL + 1 BACKGROUND-COLOR 4 FOREGROUND-COLOR 1 REVERSE-VIDEO VALUE 'X'.
        10 COL + 1 BACKGROUND-COLOR 4 FOREGROUND-COLOR 2 REVERSE-VIDEO VALUE 'X'.
   389
        10 COL + 1 BACKGROUND-COLOR 4 FOREGROUND-COLOR 3 REVERSE-VIDEO VALUE 'X'.
        10 COL + 1 BACKGROUND-COLOR 4 FOREGROUND-COLOR 4 REVERSE-VIDEO VALUE 'X'.
   390
         10 COL + 1 BACKGROUND-COLOR 4 FOREGROUND-COLOR 5 REVERSE-VIDEO VALUE 'X'.
   392
         10 COL + 1 BACKGROUND-COLOR 4 FOREGROUND-COLOR 6 REVERSE-VIDEO VALUE 'X'.
         10 COL + 1 BACKGROUND-COLOR 4 FOREGROUND-COLOR 7 REVERSE-VIDEO VALUE 'X'.
   393
   394
         05 LINE + 1.
         10 COL 42 BACKGROUND-COLOR 5 FOREGROUND-COLOR 0 REVERSE-VIDEO VALUE 'X'.
   396
         10 COL + 1 BACKGROUND-COLOR 5 FOREGROUND-COLOR 1 REVERSE-VIDEO VALUE 'X'.
         10 COL + 1 BACKGROUND-COLOR 5 FOREGROUND-COLOR 2 REVERSE-VIDEO VALUE 'X'.
   397
   398
         10 COL + 1 BACKGROUND-COLOR 5 FOREGROUND-COLOR 3 REVERSE-VIDEO VALUE 'X'.
   399
         10 COL + 1 BACKGROUND-COLOR 5 FOREGROUND-COLOR 4 REVERSE-VIDEO VALUE 'X'.
   400
         10 COL + 1 BACKGROUND-COLOR 5 FOREGROUND-COLOR 5 REVERSE-VIDEO VALUE 'X'.
         10 COL + 1 BACKGROUND-COLOR 5 FOREGROUND-COLOR 6 REVERSE-VIDEO VALUE 'X'.
   401
   402
        10 COL + 1 BACKGROUND-COLOR 5 FOREGROUND-COLOR 7 REVERSE-VIDEO VALUE 'X'.
   403
         10 COL 42 BACKGROUND-COLOR 6 FOREGROUND-COLOR O REVERSE-VIDEO VALUE 'X'.
   404
   405
         10 COL + 1 BACKGROUND-COLOR 6 FOREGROUND-COLOR 1 REVERSE-VIDEO VALUE 'X'.
   406
         10 COL + 1 BACKGROUND-COLOR 6 FOREGROUND-COLOR 2 REVERSE-VIDEO VALUE 'X'.
   407
         10 COL + 1 BACKGROUND-COLOR 6 FOREGROUND-COLOR 3 REVERSE-VIDEO VALUE 'X'.
         10 COL + 1 BACKGROUND-COLOR 6 FOREGROUND-COLOR 4 REVERSE-VIDEO VALUE 'X'.
   408
   409
         10 COL + 1 BACKGROUND-COLOR 6 FOREGROUND-COLOR 5 REVERSE-VIDEO VALUE 'X'.
         10 COL + 1 BACKGROUND-COLOR 6 FOREGROUND-COLOR 6 REVERSE-VIDEO VALUE 'X'.
   411
         10 COL + 1 BACKGROUND-COLOR 6 FOREGROUND-COLOR 7 REVERSE-VIDEO VALUE 'X'.
   412
         05 LINE + 1.
   413
         10 COL 42 BACKGROUND-COLOR 7 FOREGROUND-COLOR 0 REVERSE-VIDEO VALUE 'X'.
         10 COL + 1 BACKGROUND-COLOR 7 FOREGROUND-COLOR 1 REVERSE-VIDEO VALUE 'X'.
   414
         10 COL + 1 BACKGROUND-COLOR 7 FOREGROUND-COLOR 2 REVERSE-VIDEO VALUE 'X'.
   415
        10 COL + 1 BACKGROUND-COLOR 7 FOREGROUND-COLOR 3 REVERSE-VIDEO VALUE 'X'.
   416
         10 COL + 1 BACKGROUND-COLOR 7 FOREGROUND-COLOR 4 REVERSE-VIDEO VALUE 'X'.
   418
         10 COL + 1 BACKGROUND-COLOR 7 FOREGROUND-COLOR 5 REVERSE-VIDEO VALUE 'X'.
         10 COL + 1 BACKGROUND-COLOR 7 FOREGROUND-COLOR 6 REVERSE-VIDEO VALUE 'X'.
   419
   420
         10 COL + 1 BACKGROUND-COLOR 7 FOREGROUND-COLOR 7 REVERSE-VIDEO VALUE 'X'.
   421
         *> #6
   422
         05 LINE 05.
         10 COL 52 BACKGROUND-COLOR O FOREGROUND-COLOR O HIGHLIGHT REVERSE-VIDEO VALUE 'X'.
   423
         10 COL + 1 BACKGROUND-COLOR O FOREGROUND-COLOR 1 HIGHLIGHT REVERSE-VIDEO VALUE 'X'.
   424
         10 COL + 1 BACKGROUND-COLOR O FOREGROUND-COLOR 2 HIGHLIGHT REVERSE-VIDEO VALUE 'X'.
   425
   426
         10 COL + 1 BACKGROUND-COLOR O FOREGROUND-COLOR 3 HIGHLIGHT REVERSE-VIDEO VALUE 'X'.
   427
         10 COL + 1 BACKGROUND-COLOR O FOREGROUND-COLOR 4 HIGHLIGHT REVERSE-VIDEO VALUE 'X'.
         10 COL + 1 BACKGROUND-COLOR O FOREGROUND-COLOR 5 HIGHLIGHT REVERSE-VIDEO VALUE 'X'.
   428
   429
         10 COL + 1 BACKGROUND-COLOR O FOREGROUND-COLOR 6 HIGHLIGHT REVERSE-VIDEO VALUE 'X'.
         10 COL + 1 BACKGROUND-COLOR O FOREGROUND-COLOR 7 HIGHLIGHT REVERSE-VIDEO VALUE 'X'.
   430
   431
         05 LINE + 1.
         10 COL 52 BACKGROUND-COLOR 1 FOREGROUND-COLOR 0 HIGHLIGHT REVERSE-VIDEO VALUE 'X'.
   432
```

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Dictionary File for COLORS
                                                               07/12/2019 16:57:00:19
ACS Cobol Xref v2.02.02
         10 COL + 1 BACKGROUND-COLOR 1 FOREGROUND-COLOR 1 HIGHLIGHT REVERSE-VIDEO VALUE 'X'.
   433
   434
         10 COL + 1 BACKGROUND-COLOR 1 FOREGROUND-COLOR 2 HIGHLIGHT REVERSE-VIDEO VALUE 'X'.
         10 COL + 1 BACKGROUND-COLOR 1 FOREGROUND-COLOR 3 HIGHLIGHT REVERSE-VIDEO VALUE 'X'.
   435
   436
         10 COL + 1 BACKGROUND-COLOR 1 FOREGROUND-COLOR 4 HIGHLIGHT REVERSE-VIDEO VALUE 'X'.
   437
         10 COL + 1 BACKGROUND-COLOR 1 FOREGROUND-COLOR 5 HIGHLIGHT REVERSE-VIDEO VALUE 'X'.
         10 COL + 1 BACKGROUND-COLOR 1 FOREGROUND-COLOR 6 HIGHLIGHT REVERSE-VIDEO VALUE 'X'.
   438
   439
         10 COL + 1 BACKGROUND-COLOR 1 FOREGROUND-COLOR 7 HIGHLIGHT REVERSE-VIDEO VALUE 'X'.
   440
         05 I.TNF. + 1.
   441
         10 COL 52 BACKGROUND-COLOR 2 FOREGROUND-COLOR 0 HIGHLIGHT REVERSE-VIDEO VALUE 'X'.
         10 COL + 1 BACKGROUND-COLOR 2 FOREGROUND-COLOR 1 HIGHLIGHT REVERSE-VIDEO VALUE 'X'.
   443
         10 COL + 1 BACKGROUND-COLOR 2 FOREGROUND-COLOR 2 HIGHLIGHT REVERSE-VIDEO VALUE 'X'.
         10 COL + 1 BACKGROUND-COLOR 2 FOREGROUND-COLOR 3 HIGHLIGHT REVERSE-VIDEO VALUE 'X'.
   444
         10 COL + 1 BACKGROUND-COLOR 2 FOREGROUND-COLOR 4 HIGHLIGHT REVERSE-VIDEO VALUE 'X'.
   446
         10 COL + 1 BACKGROUND-COLOR 2 FOREGROUND-COLOR 5 HIGHLIGHT REVERSE-VIDEO VALUE 'X'.
         10 COL + 1 BACKGROUND-COLOR 2 FOREGROUND-COLOR 6 HIGHLIGHT REVERSE-VIDEO VALUE 'X'.
   447
         10 COL + 1 BACKGROUND-COLOR 2 FOREGROUND-COLOR 7 HIGHLIGHT REVERSE-VIDEO VALUE 'X'.
   448
   449
   450
         10 COL 52 BACKGROUND-COLOR 3 FOREGROUND-COLOR 0 HIGHLIGHT REVERSE-VIDEO VALUE 'X'.
         10 COL + 1 BACKGROUND-COLOR 3 FOREGROUND-COLOR 1 HIGHLIGHT REVERSE-VIDEO VALUE 'X'.
   451
   452
         10 COL + 1 BACKGROUND-COLOR 3 FOREGROUND-COLOR 2 HIGHLIGHT REVERSE-VIDEO VALUE 'X'.
   453
         10 COL + 1 BACKGROUND-COLOR 3 FOREGROUND-COLOR 3 HIGHLIGHT REVERSE-VIDEO VALUE 'X'.
   454
         10 COL + 1 BACKGROUND-COLOR 3 FOREGROUND-COLOR 4 HIGHLIGHT REVERSE-VIDEO VALUE 'X'.
   455
         10 COL + 1 BACKGROUND-COLOR 3 FOREGROUND-COLOR 5 HIGHLIGHT REVERSE-VIDEO VALUE 'X'.
   456
         10 COL + 1 BACKGROUND-COLOR 3 FOREGROUND-COLOR 6 HIGHLIGHT REVERSE-VIDEO VALUE 'X'.
         10 COL + 1 BACKGROUND-COLOR 3 FOREGROUND-COLOR 7 HIGHLIGHT REVERSE-VIDEO VALUE 'X'.
   457
   458
         05 LINE + 1.
   459
         10 COL 52 BACKGROUND-COLOR 4 FOREGROUND-COLOR 0 HIGHLIGHT REVERSE-VIDEO VALUE 'X'.
   460
         10 COL + 1 BACKGROUND-COLOR 4 FOREGROUND-COLOR 1 HIGHLIGHT REVERSE-VIDEO VALUE 'X'.
   461
         10 COL + 1 BACKGROUND-COLOR 4 FOREGROUND-COLOR 2 HIGHLIGHT REVERSE-VIDEO VALUE 'X'.
         10 COL + 1 BACKGROUND-COLOR 4 FOREGROUND-COLOR 3 HIGHLIGHT REVERSE-VIDEO VALUE 'X'.
   462
   463
         10 COL + 1 BACKGROUND-COLOR 4 FOREGROUND-COLOR 4 HIGHLIGHT REVERSE-VIDEO VALUE 'X'.
         10 COL + 1 BACKGROUND-COLOR 4 FOREGROUND-COLOR 5 HIGHLIGHT REVERSE-VIDEO VALUE 'X'.
   465
         10 COL + 1 BACKGROUND-COLOR 4 FOREGROUND-COLOR 6 HIGHLIGHT REVERSE-VIDEO VALUE 'X'.
   466
         10 COL + 1 BACKGROUND-COLOR 4 FOREGROUND-COLOR 7 HIGHLIGHT REVERSE-VIDEO VALUE 'X'.
   467
         05 LINE + 1.
   468
         10 COL 52 BACKGROUND-COLOR 5 FOREGROUND-COLOR 0 HIGHLIGHT REVERSE-VIDEO VALUE 'X'.
         10 COL + 1 BACKGROUND-COLOR 5 FOREGROUND-COLOR 1 HIGHLIGHT REVERSE-VIDEO VALUE 'X'.
   469
         10 COL + 1 BACKGROUND-COLOR 5 FOREGROUND-COLOR 2 HIGHLIGHT REVERSE-VIDEO VALUE 'X'.
   470
         10 COL + 1 BACKGROUND-COLOR 5 FOREGROUND-COLOR 3 HIGHLIGHT REVERSE-VIDEO VALUE 'X'.
   471
   472
         10 COL + 1 BACKGROUND-COLOR 5 FOREGROUND-COLOR 4 HIGHLIGHT REVERSE-VIDEO VALUE 'X'.
         10 COL + 1 BACKGROUND-COLOR 5 FOREGROUND-COLOR 5 HIGHLIGHT REVERSE-VIDEO VALUE 'X'.
   473
   474
         10 COL + 1 BACKGROUND-COLOR 5 FOREGROUND-COLOR 6 HIGHLIGHT REVERSE-VIDEO VALUE 'X'.
         10 COL + 1 BACKGROUND-COLOR 5 FOREGROUND-COLOR 7 HIGHLIGHT REVERSE-VIDEO VALUE 'X'.
   475
   476
         05 LINE + 1.
         10 COL 52 BACKGROUND-COLOR 6 FOREGROUND-COLOR 0 HIGHLIGHT REVERSE-VIDEO VALUE 'X'.
   477
   478
         10 COL + 1 BACKGROUND-COLOR 6 FOREGROUND-COLOR 1 HIGHLIGHT REVERSE-VIDEO VALUE 'X'.
         10 COL + 1 BACKGROUND-COLOR 6 FOREGROUND-COLOR 2 HIGHLIGHT REVERSE-VIDEO VALUE 'X'.
   479
   480
         10 COL + 1 BACKGROUND-COLOR 6 FOREGROUND-COLOR 3 HIGHLIGHT REVERSE-VIDEO VALUE 'X'.
   481
         10 COL + 1 BACKGROUND-COLOR 6 FOREGROUND-COLOR 4 HIGHLIGHT REVERSE-VIDEO VALUE 'X'.
         10 COL + 1 BACKGROUND-COLOR 6 FOREGROUND-COLOR 5 HIGHLIGHT REVERSE-VIDEO VALUE 'X'.
   482
   483
         10 COL + 1 BACKGROUND-COLOR 6 FOREGROUND-COLOR 6 HIGHLIGHT REVERSE-VIDEO VALUE 'X'.
   484
         10 COL + 1 BACKGROUND-COLOR 6 FOREGROUND-COLOR 7 HIGHLIGHT REVERSE-VIDEO VALUE 'X'.
   485
         05 I.TNF. + 1.
         10 COL 52 BACKGROUND-COLOR 7 FOREGROUND-COLOR 0 HIGHLIGHT REVERSE-VIDEO VALUE 'X'.
```

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ACS Cobol Xref v2.02.02
                                 Dictionary File for COLORS
                                                               07/12/2019 16:57:00:19
         10 COL + 1 BACKGROUND-COLOR 7 FOREGROUND-COLOR 1 HIGHLIGHT REVERSE-VIDEO VALUE 'X'.
   487
   488
         10 COL + 1 BACKGROUND-COLOR 7 FOREGROUND-COLOR 2 HIGHLIGHT REVERSE-VIDEO VALUE 'X'.
         10 COL + 1 BACKGROUND-COLOR 7 FOREGROUND-COLOR 3 HIGHLIGHT REVERSE-VIDEO VALUE 'X'.
   489
   490
         10 COL + 1 BACKGROUND-COLOR 7 FOREGROUND-COLOR 4 HIGHLIGHT REVERSE-VIDEO VALUE 'X'.
   491
         10 COL + 1 BACKGROUND-COLOR 7 FOREGROUND-COLOR 5 HIGHLIGHT REVERSE-VIDEO VALUE 'X'.
         10 COL + 1 BACKGROUND-COLOR 7 FOREGROUND-COLOR 6 HIGHLIGHT REVERSE-VIDEO VALUE 'X'.
   492
   493
         10 COL + 1 BACKGROUND-COLOR 7 FOREGROUND-COLOR 7 HIGHLIGHT REVERSE-VIDEO VALUE 'X'.
   494
         *> #7
   495
        05 LINE 17.
        10 COL 02 BACKGROUND-COLOR O FOREGROUND-COLOR O LOWLIGHT BLINK VALUE 'X'.
   496
        10 COL + 1 BACKGROUND-COLOR O FOREGROUND-COLOR 1 LOWLIGHT BLINK VALUE 'X'.
   497
        10 COL + 1 BACKGROUND-COLOR O FOREGROUND-COLOR 2 LOWLIGHT BLINK VALUE 'X'.
   498
         10 COL + 1 BACKGROUND-COLOR O FOREGROUND-COLOR 3 LOWLIGHT BLINK VALUE 'X'.
   500
         10 COL + 1 BACKGROUND-COLOR O FOREGROUND-COLOR 4 LOWLIGHT BLINK VALUE 'X'.
         10 COL + 1 BACKGROUND-COLOR O FOREGROUND-COLOR 5 LOWLIGHT BLINK VALUE 'X'.
   501
         10 COL + 1 BACKGROUND-COLOR 0 FOREGROUND-COLOR 6 LOWLIGHT BLINK VALUE 'X'.
   502
         10 COL + 1 BACKGROUND-COLOR O FOREGROUND-COLOR 7 LOWLIGHT BLINK VALUE 'X'.
   504
         05 LINE + 1.
         10 COL 02 BACKGROUND-COLOR 1 FOREGROUND-COLOR 0 LOWLIGHT BLINK VALUE 'X'.
   505
   506
         10 COL + 1 BACKGROUND-COLOR 1 FOREGROUND-COLOR 1 LOWLIGHT BLINK VALUE 'X'.
         10 COL + 1 BACKGROUND-COLOR 1 FOREGROUND-COLOR 2 LOWLIGHT BLINK VALUE
   508
         10 COL + 1 BACKGROUND-COLOR 1 FOREGROUND-COLOR 3 LOWLIGHT BLINK VALUE 'X'.
         10 COL + 1 BACKGROUND-COLOR 1 FOREGROUND-COLOR 4 LOWLIGHT BLINK VALUE 'X'.
   509
   510
         10 COL + 1 BACKGROUND-COLOR 1 FOREGROUND-COLOR 5 LOWLIGHT BLINK VALUE 'X'.
         10 COL + 1 BACKGROUND-COLOR 1 FOREGROUND-COLOR 6 LOWLIGHT BLINK VALUE 'X'.
         10 COL + 1 BACKGROUND-COLOR 1 FOREGROUND-COLOR 7 LOWLIGHT BLINK VALUE 'X'.
   512
         05 LINE + 1.
   513
         10 COL 02 BACKGROUND-COLOR 2 FOREGROUND-COLOR 0 LOWLIGHT BLINK VALUE 'X'.
   515
         10 COL + 1 BACKGROUND-COLOR 2 FOREGROUND-COLOR 1 LOWLIGHT BLINK VALUE 'X'.
         10 COL + 1 BACKGROUND-COLOR 2 FOREGROUND-COLOR 2 LOWLIGHT BLINK VALUE 'X'.
   516
         10 COL + 1 BACKGROUND-COLOR 2 FOREGROUND-COLOR 3 LOWLIGHT BLINK VALUE 'X'.
   517
         10 COL + 1 BACKGROUND-COLOR 2 FOREGROUND-COLOR 4 LOWLIGHT BLINK VALUE 'X'.
   519
         10 COL + 1 BACKGROUND-COLOR 2 FOREGROUND-COLOR 5 LOWLIGHT BLINK VALUE 'X'.
   520
         10 COL + 1 BACKGROUND-COLOR 2 FOREGROUND-COLOR 6 LOWLIGHT BLINK VALUE 'X'.
   521
         10 COL + 1 BACKGROUND-COLOR 2 FOREGROUND-COLOR 7 LOWLIGHT BLINK VALUE 'X'.
   522
         05 LINE + 1.
        10 COL 02 BACKGROUND-COLOR 3 FOREGROUND-COLOR 0 LOWLIGHT BLINK VALUE 'X'.
   523
        10 COL + 1 BACKGROUND-COLOR 3 FOREGROUND-COLOR 1 LOWLIGHT BLINK VALUE 'X'.
   524
        10 COL + 1 BACKGROUND-COLOR 3 FOREGROUND-COLOR 2 LOWLIGHT BLINK VALUE 'X'.
   526
         10 COL + 1 BACKGROUND-COLOR 3 FOREGROUND-COLOR 3 LOWLIGHT BLINK VALUE 'X'.
         10 COL + 1 BACKGROUND-COLOR 3 FOREGROUND-COLOR 4 LOWLIGHT BLINK VALUE 'X'.
   527
   528
         10 COL + 1 BACKGROUND-COLOR 3 FOREGROUND-COLOR 5 LOWLIGHT BLINK VALUE 'X'.
         10 COL + 1 BACKGROUND-COLOR 3 FOREGROUND-COLOR 6 LOWLIGHT BLINK VALUE 'X'.
   530
         10 COL + 1 BACKGROUND-COLOR 3 FOREGROUND-COLOR 7 LOWLIGHT BLINK VALUE 'X'.
   531
         05 LINE + 1.
   532
        10 COL O2 BACKGROUND-COLOR 4 FOREGROUND-COLOR O LOWLIGHT BLINK VALUE 'X'.
   533
         10 COL + 1 BACKGROUND-COLOR 4 FOREGROUND-COLOR 1 LOWLIGHT BLINK VALUE 'X'.
         10 COL + 1 BACKGROUND-COLOR 4 FOREGROUND-COLOR 2 LOWLIGHT BLINK VALUE 'X'.
   534
   535
         10 COL + 1 BACKGROUND-COLOR 4 FOREGROUND-COLOR 3 LOWLIGHT BLINK VALUE 'X'.
         10 COL + 1 BACKGROUND-COLOR 4 FOREGROUND-COLOR 4 LOWLIGHT BLINK VALUE 'X'.
   536
   537
         10 COL + 1 BACKGROUND-COLOR 4 FOREGROUND-COLOR 5 LOWLIGHT BLINK VALUE 'X'.
   538
         10 COL + 1 BACKGROUND-COLOR 4 FOREGROUND-COLOR 6 LOWLIGHT BLINK VALUE 'X'.
   539
         10 COL + 1 BACKGROUND-COLOR 4 FOREGROUND-COLOR 7 LOWLIGHT BLINK VALUE 'X'.
   540
         05 I.TNF + 1.
```

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Dictionary File for COLORS
                                                               07/12/2019 16:57:00:19
ACS Cobol Xref v2.02.02
         10 COL 02 BACKGROUND-COLOR 5 FOREGROUND-COLOR 0 LOWLIGHT BLINK VALUE 'X'.
   541
   542
         10 COL + 1 BACKGROUND-COLOR 5 FOREGROUND-COLOR 1 LOWLIGHT BLINK VALUE 'X'.
         10 COL + 1 BACKGROUND-COLOR 5 FOREGROUND-COLOR 2 LOWLIGHT BLINK VALUE 'X'.
   543
         10 COL + 1 BACKGROUND-COLOR 5 FOREGROUND-COLOR 3 LOWLIGHT BLINK VALUE 'X'.
   544
   545
         10 COL + 1 BACKGROUND-COLOR 5 FOREGROUND-COLOR 4 LOWLIGHT BLINK VALUE 'X'.
         10 COL + 1 BACKGROUND-COLOR 5 FOREGROUND-COLOR 5 LOWLIGHT BLINK VALUE 'X'.
   546
   547
         10 COL + 1 BACKGROUND-COLOR 5 FOREGROUND-COLOR 6 LOWLIGHT BLINK VALUE 'X'.
         10 COL + 1 BACKGROUND-COLOR 5 FOREGROUND-COLOR 7 LOWLIGHT BLINK VALUE 'X'.
   548
   549
         05 LINE + 1.
         10 COL 02 BACKGROUND-COLOR 6 FOREGROUND-COLOR 0 LOWLIGHT BLINK VALUE 'X'.
   550
   551
         10 COL + 1 BACKGROUND-COLOR 6 FOREGROUND-COLOR 1 LOWLIGHT BLINK VALUE 'X'.
         10 COL + 1 BACKGROUND-COLOR 6 FOREGROUND-COLOR 2 LOWLIGHT BLINK VALUE 'X'.
   552
         10 COL + 1 BACKGROUND-COLOR 6 FOREGROUND-COLOR 3 LOWLIGHT BLINK VALUE 'X'.
   554
         10 COL + 1 BACKGROUND-COLOR 6 FOREGROUND-COLOR 4 LOWLIGHT BLINK VALUE
   555
         10 COL + 1 BACKGROUND-COLOR 6 FOREGROUND-COLOR 5 LOWLIGHT BLINK VALUE 'X'.
         10 COL + 1 BACKGROUND-COLOR 6 FOREGROUND-COLOR 6 LOWLIGHT BLINK VALUE 'X'.
   556
         10 COL + 1 BACKGROUND-COLOR 6 FOREGROUND-COLOR 7 LOWLIGHT BLINK VALUE 'X'.
   558
         05 LINE + 1.
         10 COL 02 BACKGROUND-COLOR 7 FOREGROUND-COLOR 0 LOWLIGHT BLINK VALUE 'X'.
   559
   560
         10 COL + 1 BACKGROUND-COLOR 7 FOREGROUND-COLOR 1 LOWLIGHT BLINK VALUE
   561
         10 COL + 1 BACKGROUND-COLOR 7 FOREGROUND-COLOR 2 LOWLIGHT BLINK VALUE
   562
         10 COL + 1 BACKGROUND-COLOR 7 FOREGROUND-COLOR 3 LOWLIGHT BLINK VALUE 'X'.
   563
         10 COL + 1 BACKGROUND-COLOR 7 FOREGROUND-COLOR 4 LOWLIGHT BLINK VALUE 'X'.
   564
         10 COL + 1 BACKGROUND-COLOR 7 FOREGROUND-COLOR 5 LOWLIGHT BLINK VALUE 'X'.
         10 COL + 1 BACKGROUND-COLOR 7 FOREGROUND-COLOR 6 LOWLIGHT BLINK VALUE 'X'.
   566
         10 COL + 1 BACKGROUND-COLOR 7 FOREGROUND-COLOR 7 LOWLIGHT BLINK VALUE 'X'.
   567
         *> #8
   568
         05 LINE 17.
   569
         10 COL 12 BACKGROUND-COLOR O FOREGROUND-COLOR O BLINK VALUE 'X'.
         10 COL + 1 BACKGROUND-COLOR O FOREGROUND-COLOR 1 BLINK VALUE 'X'.
   570
         10 COL + 1 BACKGROUND-COLOR O FOREGROUND-COLOR 2 BLINK VALUE 'X'.
   571
         10 COL + 1 BACKGROUND-COLOR O FOREGROUND-COLOR 3 BLINK VALUE 'X'.
   573
         10 COL + 1 BACKGROUND-COLOR O FOREGROUND-COLOR 4 BLINK VALUE 'X'.
         10 COL + 1 BACKGROUND-COLOR O FOREGROUND-COLOR 5 BLINK VALUE 'X'.
   574
   575
         10 COL + 1 BACKGROUND-COLOR O FOREGROUND-COLOR 6 BLINK VALUE 'X'.
   576
         10 COL + 1 BACKGROUND-COLOR O FOREGROUND-COLOR 7 BLINK VALUE 'X'.
   577
         05 LINE + 1.
        10 COL 12 BACKGROUND-COLOR 1 FOREGROUND-COLOR 0 BLINK VALUE 'X'.
   578
         10 COL + 1 BACKGROUND-COLOR 1 FOREGROUND-COLOR 1 BLINK VALUE 'X'.
   580
         10 COL + 1 BACKGROUND-COLOR 1 FOREGROUND-COLOR 2 BLINK VALUE 'X'.
         10 COL + 1 BACKGROUND-COLOR 1 FOREGROUND-COLOR 3 BLINK VALUE 'X'.
   581
   582
         10 COL + 1 BACKGROUND-COLOR 1 FOREGROUND-COLOR 4 BLINK VALUE 'X'.
         10 COL + 1 BACKGROUND-COLOR 1 FOREGROUND-COLOR 5 BLINK VALUE 'X'.
   584
         10 COL + 1 BACKGROUND-COLOR 1 FOREGROUND-COLOR 6 BLINK VALUE 'X'.
   585
         10 COL + 1 BACKGROUND-COLOR 1 FOREGROUND-COLOR 7 BLINK VALUE 'X'.
   586
         05 LINE + 1.
   587
         10 COL 12 BACKGROUND-COLOR 2 FOREGROUND-COLOR 0 BLINK VALUE 'X'.
   588
         10 COL + 1 BACKGROUND-COLOR 2 FOREGROUND-COLOR 1 BLINK VALUE 'X'.
   589
         10 COL + 1 BACKGROUND-COLOR 2 FOREGROUND-COLOR 2 BLINK VALUE 'X'.
         10 COL + 1 BACKGROUND-COLOR 2 FOREGROUND-COLOR 3 BLINK VALUE 'X'.
   590
   591
         10 COL + 1 BACKGROUND-COLOR 2 FOREGROUND-COLOR 4 BLINK VALUE 'X'.
   592
         10 COL + 1 BACKGROUND-COLOR 2 FOREGROUND-COLOR 5 BLINK VALUE 'X'.
   593
         10 COL + 1 BACKGROUND-COLOR 2 FOREGROUND-COLOR 6 BLINK VALUE 'X'.
         10 COL + 1 BACKGROUND-COLOR 2 FOREGROUND-COLOR 7 BLINK VALUE 'X'.
   594
```

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Dictionary File for COLORS
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ACS Cobol Xref v2.02.02
   595
         05 LINE + 1.
   596
        10 COL 12 BACKGROUND-COLOR 3 FOREGROUND-COLOR 0 BLINK VALUE 'X'.
         10 COL + 1 BACKGROUND-COLOR 3 FOREGROUND-COLOR 1 BLINK VALUE 'X'.
         10 COL + 1 BACKGROUND-COLOR 3 FOREGROUND-COLOR 2 BLINK VALUE 'X'.
   598
   599
         10 COL + 1 BACKGROUND-COLOR 3 FOREGROUND-COLOR 3 BLINK VALUE 'X'.
         10 COL + 1 BACKGROUND-COLOR 3 FOREGROUND-COLOR 4 BLINK VALUE 'X'.
   600
   601
         10 COL + 1 BACKGROUND-COLOR 3 FOREGROUND-COLOR 5 BLINK VALUE 'X'.
        10 COL + 1 BACKGROUND-COLOR 3 FOREGROUND-COLOR 6 BLINK VALUE 'X'.
   602
   603
        10 COL + 1 BACKGROUND-COLOR 3 FOREGROUND-COLOR 7 BLINK VALUE 'X'.
   605
        10 COL 12 BACKGROUND-COLOR 4 FOREGROUND-COLOR 0 BLINK VALUE 'X'.
        10 COL + 1 BACKGROUND-COLOR 4 FOREGROUND-COLOR 1 BLINK VALUE 'X'.
   606
         10 COL + 1 BACKGROUND-COLOR 4 FOREGROUND-COLOR 2 BLINK VALUE 'X'.
   608
         10 COL + 1 BACKGROUND-COLOR 4 FOREGROUND-COLOR 3 BLINK VALUE 'X'.
         10 COL + 1 BACKGROUND-COLOR 4 FOREGROUND-COLOR 4 BLINK VALUE 'X'.
   609
         10 COL + 1 BACKGROUND-COLOR 4 FOREGROUND-COLOR 5 BLINK VALUE 'X'.
   610
         10 COL + 1 BACKGROUND-COLOR 4 FOREGROUND-COLOR 6 BLINK VALUE 'X'.
   611
   612
         10 COL + 1 BACKGROUND-COLOR 4 FOREGROUND-COLOR 7 BLINK VALUE 'X'.
   613
         05 LINE + 1.
   614
         10 COL 12 BACKGROUND-COLOR 5 FOREGROUND-COLOR 0 BLINK VALUE 'X'.
         10 COL + 1 BACKGROUND-COLOR 5 FOREGROUND-COLOR 1 BLINK VALUE 'X'.
   616
         10 COL + 1 BACKGROUND-COLOR 5 FOREGROUND-COLOR 2 BLINK VALUE 'X'.
   617
         10 COL + 1 BACKGROUND-COLOR 5 FOREGROUND-COLOR 3 BLINK VALUE 'X'.
   618
        10 COL + 1 BACKGROUND-COLOR 5 FOREGROUND-COLOR 4 BLINK VALUE 'X'.
         10 COL + 1 BACKGROUND-COLOR 5 FOREGROUND-COLOR 5 BLINK VALUE 'X'.
         10 COL + 1 BACKGROUND-COLOR 5 FOREGROUND-COLOR 6 BLINK VALUE 'X'.
   620
   621
         10 COL + 1 BACKGROUND-COLOR 5 FOREGROUND-COLOR 7 BLINK VALUE 'X'.
   622
         05 LINE + 1.
   623
         10 COL 12 BACKGROUND-COLOR 6 FOREGROUND-COLOR 0 BLINK VALUE 'X'.
         10 COL + 1 BACKGROUND-COLOR 6 FOREGROUND-COLOR 1 BLINK VALUE 'X'.
   624
   625
         10 COL + 1 BACKGROUND-COLOR 6 FOREGROUND-COLOR 2 BLINK VALUE 'X'.
         10 COL + 1 BACKGROUND-COLOR 6 FOREGROUND-COLOR 3 BLINK VALUE 'X'.
   627
         10 COL + 1 BACKGROUND-COLOR 6 FOREGROUND-COLOR 4 BLINK VALUE 'X'.
   628
         10 COL + 1 BACKGROUND-COLOR 6 FOREGROUND-COLOR 5 BLINK VALUE 'X'.
   629
         10 COL + 1 BACKGROUND-COLOR 6 FOREGROUND-COLOR 6 BLINK VALUE 'X'.
   630
         10 COL + 1 BACKGROUND-COLOR 6 FOREGROUND-COLOR 7 BLINK VALUE 'X'.
   631
        05 LINE + 1.
        10 COL 12 BACKGROUND-COLOR 7 FOREGROUND-COLOR 0 BLINK VALUE 'X'.
   632
        10 COL + 1 BACKGROUND-COLOR 7 FOREGROUND-COLOR 1 BLINK VALUE 'X'.
   634
         10 COL + 1 BACKGROUND-COLOR 7 FOREGROUND-COLOR 2 BLINK VALUE 'X'.
         10 COL + 1 BACKGROUND-COLOR 7 FOREGROUND-COLOR 3 BLINK VALUE 'X'.
   635
   636
         10 COL + 1 BACKGROUND-COLOR 7 FOREGROUND-COLOR 4 BLINK VALUE 'X'.
         10 COL + 1 BACKGROUND-COLOR 7 FOREGROUND-COLOR 5 BLINK VALUE 'X'.
   638
         10 COL + 1 BACKGROUND-COLOR 7 FOREGROUND-COLOR 6 BLINK VALUE 'X'.
         10 COL + 1 BACKGROUND-COLOR 7 FOREGROUND-COLOR 7 BLINK VALUE 'X'.
   639
   640
         *> #9
   641
         10 COL 22 BACKGROUND-COLOR O FOREGROUND-COLOR O HIGHLIGHT BLINK VALUE 'X'.
   642
   643
         10 COL + 1 BACKGROUND-COLOR O FOREGROUND-COLOR 1 HIGHLIGHT BLINK VALUE 'X'.
         10 COL + 1 BACKGROUND-COLOR O FOREGROUND-COLOR 2 HIGHLIGHT BLINK VALUE 'X'.
   644
   645
         10 COL + 1 BACKGROUND-COLOR O FOREGROUND-COLOR 3 HIGHLIGHT BLINK VALUE 'X'.
   646
         10 COL + 1 BACKGROUND-COLOR O FOREGROUND-COLOR 4 HIGHLIGHT BLINK VALUE 'X'.
         10 COL + 1 BACKGROUND-COLOR O FOREGROUND-COLOR 5 HIGHLIGHT BLINK VALUE 'X'.
   647
         10 COL + 1 BACKGROUND-COLOR O FOREGROUND-COLOR 6 HIGHLIGHT BLINK VALUE 'X'.
```

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Dictionary File for COLORS
                                                               07/12/2019 16:57:00:20
ACS Cobol Xref v2.02.02
         10 COL + 1 BACKGROUND-COLOR O FOREGROUND-COLOR 7 HIGHLIGHT BLINK VALUE 'X'.
   649
   650
         05 LINE + 1.
         10 COL 22 BACKGROUND-COLOR 1 FOREGROUND-COLOR 0 HIGHLIGHT BLINK VALUE 'X'.
   651
   652
         10 COL + 1 BACKGROUND-COLOR 1 FOREGROUND-COLOR 1 HIGHLIGHT BLINK VALUE 'X'.
   653
         10 COL + 1 BACKGROUND-COLOR 1 FOREGROUND-COLOR 2 HIGHLIGHT BLINK VALUE 'X'.
         10 COL + 1 BACKGROUND-COLOR 1 FOREGROUND-COLOR 3 HIGHLIGHT BLINK VALUE 'X'.
   654
   655
         10 COL + 1 BACKGROUND-COLOR 1 FOREGROUND-COLOR 4 HIGHLIGHT BLINK VALUE 'X'.
         10 COL + 1 BACKGROUND-COLOR 1 FOREGROUND-COLOR 5 HIGHLIGHT BLINK VALUE 'X'.
   656
   657
         10 COL + 1 BACKGROUND-COLOR 1 FOREGROUND-COLOR 6 HIGHLIGHT BLINK VALUE 'X'.
         10 COL + 1 BACKGROUND-COLOR 1 FOREGROUND-COLOR 7 HIGHLIGHT BLINK VALUE 'X'.
   658
         05 LINE + 1.
   659
   660
         10 COL 22 BACKGROUND-COLOR 2 FOREGROUND-COLOR 0 HIGHLIGHT BLINK VALUE 'X'.
   661
         10 COL + 1 BACKGROUND-COLOR 2 FOREGROUND-COLOR 1 HIGHLIGHT BLINK VALUE 'X'.
   662
         10 COL + 1 BACKGROUND-COLOR 2 FOREGROUND-COLOR 2 HIGHLIGHT BLINK VALUE 'X'.
         10 COL + 1 BACKGROUND-COLOR 2 FOREGROUND-COLOR 3 HIGHLIGHT BLINK VALUE 'X'.
   663
         10 COL + 1 BACKGROUND-COLOR 2 FOREGROUND-COLOR 4 HIGHLIGHT BLINK VALUE 'X'.
   664
         10 COL + 1 BACKGROUND-COLOR 2 FOREGROUND-COLOR 5 HIGHLIGHT BLINK VALUE 'X'.
   665
   666
         10 COL + 1 BACKGROUND-COLOR 2 FOREGROUND-COLOR 6 HIGHLIGHT BLINK VALUE 'X'.
         10 COL + 1 BACKGROUND-COLOR 2 FOREGROUND-COLOR 7 HIGHLIGHT BLINK VALUE 'X'.
   667
   668
         05 LINE + 1.
   669
         10 COL 22 BACKGROUND-COLOR 3 FOREGROUND-COLOR 0 HIGHLIGHT BLINK VALUE 'X'.
   670
         10 COL + 1 BACKGROUND-COLOR 3 FOREGROUND-COLOR 1 HIGHLIGHT BLINK VALUE 'X'.
         10 COL + 1 BACKGROUND-COLOR 3 FOREGROUND-COLOR 2 HIGHLIGHT BLINK VALUE 'X'.
   671
   672
         10 COL + 1 BACKGROUND-COLOR 3 FOREGROUND-COLOR 3 HIGHLIGHT BLINK VALUE 'X'.
         10 COL + 1 BACKGROUND-COLOR 3 FOREGROUND-COLOR 4 HIGHLIGHT BLINK VALUE 'X'.
   673
         10 COL + 1 BACKGROUND-COLOR 3 FOREGROUND-COLOR 5 HIGHLIGHT BLINK VALUE 'X'.
   674
   675
         10 COL + 1 BACKGROUND-COLOR 3 FOREGROUND-COLOR 6 HIGHLIGHT BLINK VALUE 'X'.
   676
         10 COL + 1 BACKGROUND-COLOR 3 FOREGROUND-COLOR 7 HIGHLIGHT BLINK VALUE 'X'.
   677
         05 LINE + 1.
         10 COL 22 BACKGROUND-COLOR 4 FOREGROUND-COLOR 0 HIGHLIGHT BLINK VALUE 'X'.
   678
         10 COL + 1 BACKGROUND-COLOR 4 FOREGROUND-COLOR 1 HIGHLIGHT BLINK VALUE 'X'.
   679
         10 COL + 1 BACKGROUND-COLOR 4 FOREGROUND-COLOR 2 HIGHLIGHT BLINK VALUE 'X'.
   681
         10 COL + 1 BACKGROUND-COLOR 4 FOREGROUND-COLOR 3 HIGHLIGHT BLINK VALUE 'X'.
   682
         10 COL + 1 BACKGROUND-COLOR 4 FOREGROUND-COLOR 4 HIGHLIGHT BLINK VALUE 'X'.
   683
         10 COL + 1 BACKGROUND-COLOR 4 FOREGROUND-COLOR 5 HIGHLIGHT BLINK VALUE 'X'.
         10 COL + 1 BACKGROUND-COLOR 4 FOREGROUND-COLOR 6 HIGHLIGHT BLINK VALUE 'X'.
   684
         10 COL + 1 BACKGROUND-COLOR 4 FOREGROUND-COLOR 7 HIGHLIGHT BLINK VALUE 'X'.
   685
   686
         05 LINE + 1.
         10 COL 22 BACKGROUND-COLOR 5 FOREGROUND-COLOR O HIGHLIGHT BLINK VALUE 'X'.
   688
         10 COL + 1 BACKGROUND-COLOR 5 FOREGROUND-COLOR 1 HIGHLIGHT BLINK VALUE 'X'.
         10 COL + 1 BACKGROUND-COLOR 5 FOREGROUND-COLOR 2 HIGHLIGHT BLINK VALUE 'X'.
   689
   690
         10 COL + 1 BACKGROUND-COLOR 5 FOREGROUND-COLOR 3 HIGHLIGHT BLINK VALUE 'X'.
         10 COL + 1 BACKGROUND-COLOR 5 FOREGROUND-COLOR 4 HIGHLIGHT BLINK VALUE 'X'.
   691
   692
         10 COL + 1 BACKGROUND-COLOR 5 FOREGROUND-COLOR 5 HIGHLIGHT BLINK VALUE 'X'.
   693
         10 COL + 1 BACKGROUND-COLOR 5 FOREGROUND-COLOR 6 HIGHLIGHT BLINK VALUE 'X'.
   694
         10 COL + 1 BACKGROUND-COLOR 5 FOREGROUND-COLOR 7 HIGHLIGHT BLINK VALUE 'X'.
   695
         05 LINE + 1.
   696
         10 COL 22 BACKGROUND-COLOR 6 FOREGROUND-COLOR 0 HIGHLIGHT BLINK VALUE 'X'.
         10 COL + 1 BACKGROUND-COLOR 6 FOREGROUND-COLOR 1 HIGHLIGHT BLINK VALUE 'X'.
   697
         10 COL + 1 BACKGROUND-COLOR 6 FOREGROUND-COLOR 2 HIGHLIGHT BLINK VALUE 'X'.
   698
   699
         10 COL + 1 BACKGROUND-COLOR 6 FOREGROUND-COLOR 3 HIGHLIGHT BLINK VALUE 'X'.
   700
         10 COL + 1 BACKGROUND-COLOR 6 FOREGROUND-COLOR 4 HIGHLIGHT BLINK VALUE 'X'.
         10 COL + 1 BACKGROUND-COLOR 6 FOREGROUND-COLOR 5 HIGHLIGHT BLINK VALUE 'X'.
   701
         10 COL + 1 BACKGROUND-COLOR 6 FOREGROUND-COLOR 6 HIGHLIGHT BLINK VALUE 'X'.
   702
```

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Dictionary File for COLORS
                                                               07/12/2019 16:57:00:20
ACS Cobol Xref v2.02.02
         10 COL + 1 BACKGROUND-COLOR 6 FOREGROUND-COLOR 7 HIGHLIGHT BLINK VALUE 'X'.
   703
   704
         05 LINE + 1.
   705
         10 COL 22 BACKGROUND-COLOR 7 FOREGROUND-COLOR 0 HIGHLIGHT BLINK VALUE 'X'.
   706
         10 COL + 1 BACKGROUND-COLOR 7 FOREGROUND-COLOR 1 HIGHLIGHT BLINK VALUE 'X'.
   707
         10 COL + 1 BACKGROUND-COLOR 7 FOREGROUND-COLOR 2 HIGHLIGHT BLINK VALUE 'X'.
         10 COL + 1 BACKGROUND-COLOR 7 FOREGROUND-COLOR 3 HIGHLIGHT BLINK VALUE 'X'.
   708
         10 COL + 1 BACKGROUND-COLOR 7 FOREGROUND-COLOR 4 HIGHLIGHT BLINK VALUE 'X'.
   709
        10 COL + 1 BACKGROUND-COLOR 7 FOREGROUND-COLOR 5 HIGHLIGHT BLINK VALUE 'X'.
   710
   711
        10 COL + 1 BACKGROUND-COLOR 7 FOREGROUND-COLOR 6 HIGHLIGHT BLINK VALUE 'X'.
        10 COL + 1 BACKGROUND-COLOR 7 FOREGROUND-COLOR 7 HIGHLIGHT BLINK VALUE 'X'.
   713
        *> #10
        05 LINE 17.
   714
   715
         10 COL 32 BACKGROUND-COLOR O FOREGROUND-COLOR O LOWLIGHT BLINK REVERSE-VIDEO VALUE 'X'.
   716
         10 COL + 1 BACKGROUND-COLOR O FOREGROUND-COLOR 1 LOWLIGHT BLINK REVERSE-VIDEO VALUE 'X'.
         10 COL + 1 BACKGROUND-COLOR O FOREGROUND-COLOR 2 LOWLIGHT BLINK REVERSE-VIDEO VALUE 'X'.
   717
        10 COL + 1 BACKGROUND-COLOR O FOREGROUND-COLOR 3 LOWLIGHT BLINK REVERSE-VIDEO VALUE 'X'.
   718
         10 COL + 1 BACKGROUND-COLOR O FOREGROUND-COLOR 4 LOWLIGHT BLINK REVERSE-VIDEO VALUE 'X'.
   720
         10 COL + 1 BACKGROUND-COLOR O FOREGROUND-COLOR 5 LOWLIGHT BLINK REVERSE-VIDEO VALUE 'X'.
         10 COL + 1 BACKGROUND-COLOR O FOREGROUND-COLOR 6 LOWLIGHT BLINK REVERSE-VIDEO VALUE 'X'.
   721
   722
         10 COL + 1 BACKGROUND-COLOR O FOREGROUND-COLOR 7 LOWLIGHT BLINK REVERSE-VIDEO VALUE 'X'.
   723
   724
         10 COL 32 BACKGROUND-COLOR 1 FOREGROUND-COLOR O LOWLIGHT BLINK REVERSE-VIDEO VALUE 'X'.
         10 COL + 1 BACKGROUND-COLOR 1 FOREGROUND-COLOR 1 LOWLIGHT BLINK REVERSE-VIDEO VALUE 'X'.
   725
   726
        10 COL + 1 BACKGROUND-COLOR 1 FOREGROUND-COLOR 2 LOWLIGHT BLINK REVERSE-VIDEO VALUE 'X'.
   727
         10 COL + 1 BACKGROUND-COLOR 1 FOREGROUND-COLOR 3 LOWLIGHT BLINK REVERSE-VIDEO VALUE 'X'.
         10 COL + 1 BACKGROUND-COLOR 1 FOREGROUND-COLOR 4 LOWLIGHT BLINK REVERSE-VIDEO VALUE 'X'.
   728
   729
         10 COL + 1 BACKGROUND-COLOR 1 FOREGROUND-COLOR 5 LOWLIGHT BLINK REVERSE-VIDEO VALUE 'X'.
   730
         10 COL + 1 BACKGROUND-COLOR 1 FOREGROUND-COLOR 6 LOWLIGHT BLINK REVERSE-VIDEO VALUE 'X'.
   731
         10 COL + 1 BACKGROUND-COLOR 1 FOREGROUND-COLOR 7 LOWLIGHT BLINK REVERSE-VIDEO VALUE 'X'.
   732
         05 I.TNF + 1.
   733
        10 COL 32 BACKGROUND-COLOR 2 FOREGROUND-COLOR O LOWLIGHT BLINK REVERSE-VIDEO VALUE 'X'.
         10 COL + 1 BACKGROUND-COLOR 2 FOREGROUND-COLOR 1 LOWLIGHT BLINK REVERSE-VIDEO VALUE 'X'.
   735
         10 COL + 1 BACKGROUND-COLOR 2 FOREGROUND-COLOR 2 LOWLIGHT BLINK REVERSE-VIDEO VALUE 'X'.
   736
         10 COL + 1 BACKGROUND-COLOR 2 FOREGROUND-COLOR 3 LOWLIGHT BLINK REVERSE-VIDEO VALUE 'X'.
   737
         10 COL + 1 BACKGROUND-COLOR 2 FOREGROUND-COLOR 4 LOWLIGHT BLINK REVERSE-VIDEO VALUE 'X'.
   738
         10 COL + 1 BACKGROUND-COLOR 2 FOREGROUND-COLOR 5 LOWLIGHT BLINK REVERSE-VIDEO VALUE 'X'.
   739
         10 COL + 1 BACKGROUND-COLOR 2 FOREGROUND-COLOR 6 LOWLIGHT BLINK REVERSE-VIDEO VALUE 'X'.
   740
        10 COL + 1 BACKGROUND-COLOR 2 FOREGROUND-COLOR 7 LOWLIGHT BLINK REVERSE-VIDEO VALUE 'X'.
   741
         05 LINE + 1.
   742
        10 COL 32 BACKGROUND-COLOR 3 FOREGROUND-COLOR 0 LOWLIGHT BLINK REVERSE-VIDEO VALUE 'X'.
        10 COL + 1 BACKGROUND-COLOR 3 FOREGROUND-COLOR 1 LOWLIGHT BLINK REVERSE-VIDEO VALUE 'X'.
   743
   744
         10 COL + 1 BACKGROUND-COLOR 3 FOREGROUND-COLOR 2 LOWLIGHT BLINK REVERSE-VIDEO VALUE 'X'.
         10 COL + 1 BACKGROUND-COLOR 3 FOREGROUND-COLOR 3 LOWLIGHT BLINK REVERSE-VIDEO VALUE 'X'.
   746
         10 COL + 1 BACKGROUND-COLOR 3 FOREGROUND-COLOR 4 LOWLIGHT BLINK REVERSE-VIDEO VALUE 'X'.
   747
         10 COL + 1 BACKGROUND-COLOR 3 FOREGROUND-COLOR 5 LOWLIGHT BLINK REVERSE-VIDEO VALUE 'X'.
   748
         10 COL + 1 BACKGROUND-COLOR 3 FOREGROUND-COLOR 6 LOWLIGHT BLINK REVERSE-VIDEO VALUE 'X'.
   749
         10 COL + 1 BACKGROUND-COLOR 3 FOREGROUND-COLOR 7 LOWLIGHT BLINK REVERSE-VIDEO VALUE 'X'.
   750
         05 LINE + 1.
   751
         10 COL 32 BACKGROUND-COLOR 4 FOREGROUND-COLOR 0 LOWLIGHT BLINK REVERSE-VIDEO VALUE 'X'.
         10 COL + 1 BACKGROUND-COLOR 4 FOREGROUND-COLOR 1 LOWLIGHT BLINK REVERSE-VIDEO VALUE 'X'.
   752
   753
         10 COL + 1 BACKGROUND-COLOR 4 FOREGROUND-COLOR 2 LOWLIGHT BLINK REVERSE-VIDEO VALUE 'X'.
         10 COL + 1 BACKGROUND-COLOR 4 FOREGROUND-COLOR 3 LOWLIGHT BLINK REVERSE-VIDEO VALUE 'X'.
   754
   755
         10 COL + 1 BACKGROUND-COLOR 4 FOREGROUND-COLOR 4 LOWLIGHT BLINK REVERSE-VIDEO VALUE 'X'.
         10 COL + 1 BACKGROUND-COLOR 4 FOREGROUND-COLOR 5 LOWLIGHT BLINK REVERSE-VIDEO VALUE 'X'.
```

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Dictionary File for COLORS
                                                               07/12/2019 16:57:00:20
ACS Cobol Xref v2.02.02
         10 COL + 1 BACKGROUND-COLOR 4 FOREGROUND-COLOR 6 LOWLIGHT BLINK REVERSE-VIDEO VALUE 'X'.
   758
         10 COL + 1 BACKGROUND-COLOR 4 FOREGROUND-COLOR 7 LOWLIGHT BLINK REVERSE-VIDEO VALUE 'X'.
   759
         05 \text{ LINE} + 1.
   760
         10 COL 32 BACKGROUND-COLOR 5 FOREGROUND-COLOR 0 LOWLIGHT BLINK REVERSE-VIDEO VALUE 'X'.
   761
         10 COL + 1 BACKGROUND-COLOR 5 FOREGROUND-COLOR 1 LOWLIGHT BLINK REVERSE-VIDEO VALUE 'X'.
         10 COL + 1 BACKGROUND-COLOR 5 FOREGROUND-COLOR 2 LOWLIGHT BLINK REVERSE-VIDEO VALUE 'X'.
   763
         10 COL + 1 BACKGROUND-COLOR 5 FOREGROUND-COLOR 3 LOWLIGHT BLINK REVERSE-VIDEO VALUE 'X'.
         10 COL + 1 BACKGROUND-COLOR 5 FOREGROUND-COLOR 4 LOWLIGHT BLINK REVERSE-VIDEO VALUE 'X'.
   764
         10 COL + 1 BACKGROUND-COLOR 5 FOREGROUND-COLOR 5 LOWLIGHT BLINK REVERSE-VIDEO VALUE 'X'.
         10 COL + 1 BACKGROUND-COLOR 5 FOREGROUND-COLOR 6 LOWLIGHT BLINK REVERSE-VIDEO VALUE 'X'.
   767
         10 COL + 1 BACKGROUND-COLOR 5 FOREGROUND-COLOR 7 LOWLIGHT BLINK REVERSE-VIDEO VALUE 'X'.
         05 LINE + 1.
   768
   769
         10 COL 32 BACKGROUND-COLOR 6 FOREGROUND-COLOR O LOWLIGHT BLINK REVERSE-VIDEO VALUE 'X'.
   770
         10 COL + 1 BACKGROUND-COLOR 6 FOREGROUND-COLOR 1 LOWLIGHT BLINK REVERSE-VIDEO VALUE
         10 COL + 1 BACKGROUND-COLOR 6 FOREGROUND-COLOR 2 LOWLIGHT BLINK REVERSE-VIDEO VALUE 'X'.
   771
         10 COL + 1 BACKGROUND-COLOR 6 FOREGROUND-COLOR 3 LOWLIGHT BLINK REVERSE-VIDEO VALUE 'X'.
   772
         10 COL + 1 BACKGROUND-COLOR 6 FOREGROUND-COLOR 4 LOWLIGHT BLINK REVERSE-VIDEO VALUE 'X'.
   773
   774
         10 COL + 1 BACKGROUND-COLOR 6 FOREGROUND-COLOR 5 LOWLIGHT BLINK REVERSE-VIDEO VALUE 'X'.
   775
         10 COL + 1 BACKGROUND-COLOR 6 FOREGROUND-COLOR 6 LOWLIGHT BLINK REVERSE-VIDEO VALUE 'X'.
   776
         10 COL + 1 BACKGROUND-COLOR 6 FOREGROUND-COLOR 7 LOWLIGHT BLINK REVERSE-VIDEO VALUE 'X'.
   778
         10 COL 32 BACKGROUND-COLOR 7 FOREGROUND-COLOR 0 LOWLIGHT BLINK REVERSE-VIDEO VALUE 'X'.
         10 COL + 1 BACKGROUND-COLOR 7 FOREGROUND-COLOR 1 LOWLIGHT BLINK REVERSE-VIDEO VALUE 'X'.
   779
   780
         10 COL + 1 BACKGROUND-COLOR 7 FOREGROUND-COLOR 2 LOWLIGHT BLINK REVERSE-VIDEO VALUE 'X'.
         10 COL + 1 BACKGROUND-COLOR 7 FOREGROUND-COLOR 3 LOWLIGHT BLINK REVERSE-VIDEO VALUE 'X'.
         10 COL + 1 BACKGROUND-COLOR 7 FOREGROUND-COLOR 4 LOWLIGHT BLINK REVERSE-VIDEO VALUE 'X'.
   782
   783
         10 COL + 1 BACKGROUND-COLOR 7 FOREGROUND-COLOR 5 LOWLIGHT BLINK REVERSE-VIDEO VALUE 'X'.
         10 COL + 1 BACKGROUND-COLOR 7 FOREGROUND-COLOR 6 LOWLIGHT BLINK REVERSE-VIDEO VALUE 'X'.
   785
         10 COL + 1 BACKGROUND-COLOR 7 FOREGROUND-COLOR 7 LOWLIGHT BLINK REVERSE-VIDEO VALUE 'X'.
   786
         *> #11
   787
         05 LINE 17.
         10 COL 42 BACKGROUND-COLOR O FOREGROUND-COLOR O BLINK REVERSE-VIDEO VALUE 'X'.
   788
   789
         10 COL + 1 BACKGROUND-COLOR O FOREGROUND-COLOR 1 BLINK REVERSE-VIDEO VALUE 'X'.
   790
         10 COL + 1 BACKGROUND-COLOR O FOREGROUND-COLOR 2 BLINK REVERSE-VIDEO VALUE 'X'.
   791
         10 COL + 1 BACKGROUND-COLOR O FOREGROUND-COLOR 3 BLINK REVERSE-VIDEO VALUE 'X'.
   792
         10 COL + 1 BACKGROUND-COLOR O FOREGROUND-COLOR 4 BLINK REVERSE-VIDEO VALUE 'X'.
         10 COL + 1 BACKGROUND-COLOR O FOREGROUND-COLOR 5 BLINK REVERSE-VIDEO VALUE 'X'.
   793
         10 COL + 1 BACKGROUND-COLOR O FOREGROUND-COLOR 6 BLINK REVERSE-VIDEO VALUE 'X'.
   794
         10 COL + 1 BACKGROUND-COLOR O FOREGROUND-COLOR 7 BLINK REVERSE-VIDEO VALUE 'X'.
   796
   797
         10 COL 42 BACKGROUND-COLOR 1 FOREGROUND-COLOR 0 BLINK REVERSE-VIDEO VALUE 'X'.
   798
         10 COL + 1 BACKGROUND-COLOR 1 FOREGROUND-COLOR 1 BLINK REVERSE-VIDEO VALUE 'X'.
         10 COL + 1 BACKGROUND-COLOR 1 FOREGROUND-COLOR 2 BLINK REVERSE-VIDEO VALUE 'X'.
   800
         10 COL + 1 BACKGROUND-COLOR 1 FOREGROUND-COLOR 3 BLINK REVERSE-VIDEO VALUE 'X'.
   801
         10 COL + 1 BACKGROUND-COLOR 1 FOREGROUND-COLOR 4 BLINK REVERSE-VIDEO VALUE 'X'.
   802
         10 COL + 1 BACKGROUND-COLOR 1 FOREGROUND-COLOR 5 BLINK REVERSE-VIDEO VALUE 'X'.
   803
         10 COL + 1 BACKGROUND-COLOR 1 FOREGROUND-COLOR 6 BLINK REVERSE-VIDEO VALUE 'X'.
   804
         10 COL + 1 BACKGROUND-COLOR 1 FOREGROUND-COLOR 7 BLINK REVERSE-VIDEO VALUE 'X'.
   805
         05 I.TNF. + 1.
         10 COL 42 BACKGROUND-COLOR 2 FOREGROUND-COLOR O BLINK REVERSE-VIDEO VALUE 'X'.
   806
   807
         10 COL + 1 BACKGROUND-COLOR 2 FOREGROUND-COLOR 1 BLINK REVERSE-VIDEO VALUE 'X'.
   808
         10 COL + 1 BACKGROUND-COLOR 2 FOREGROUND-COLOR 2 BLINK REVERSE-VIDEO VALUE 'X'.
   809
         10 COL + 1 BACKGROUND-COLOR 2 FOREGROUND-COLOR 3 BLINK REVERSE-VIDEO VALUE 'X'.
         10 COL + 1 BACKGROUND-COLOR 2 FOREGROUND-COLOR 4 BLINK REVERSE-VIDEO VALUE 'X'.
   810
```

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Dictionary File for COLORS
ACS Cobol Xref v2.02.02
                                                               07/12/2019 16:57:00:21
         10 COL + 1 BACKGROUND-COLOR 2 FOREGROUND-COLOR 5 BLINK REVERSE-VIDEO VALUE 'X'.
        10 COL + 1 BACKGROUND-COLOR 2 FOREGROUND-COLOR 6 BLINK REVERSE-VIDEO VALUE 'X'.
        10 COL + 1 BACKGROUND-COLOR 2 FOREGROUND-COLOR 7 BLINK REVERSE-VIDEO VALUE 'X'.
   814
         05 LINE + 1.
   815
         10 COL 42 BACKGROUND-COLOR 3 FOREGROUND-COLOR O BLINK REVERSE-VIDEO VALUE 'X'.
         10 COL + 1 BACKGROUND-COLOR 3 FOREGROUND-COLOR 1 BLINK REVERSE-VIDEO VALUE 'X'.
   816
   817
         10 COL + 1 BACKGROUND-COLOR 3 FOREGROUND-COLOR 2 BLINK REVERSE-VIDEO VALUE 'X'.
        10 COL + 1 BACKGROUND-COLOR 3 FOREGROUND-COLOR 3 BLINK REVERSE-VIDEO VALUE 'X'.
   818
   819
        10 COL + 1 BACKGROUND-COLOR 3 FOREGROUND-COLOR 4 BLINK REVERSE-VIDEO VALUE 'X'.
        10 COL + 1 BACKGROUND-COLOR 3 FOREGROUND-COLOR 5 BLINK REVERSE-VIDEO VALUE 'X'.
   821
        10 COL + 1 BACKGROUND-COLOR 3 FOREGROUND-COLOR 6 BLINK REVERSE-VIDEO VALUE 'X'.
   822
        10 COL + 1 BACKGROUND-COLOR 3 FOREGROUND-COLOR 7 BLINK REVERSE-VIDEO VALUE 'X'.
   823
         05 LINE + 1.
   824
         10 COL 42 BACKGROUND-COLOR 4 FOREGROUND-COLOR O BLINK REVERSE-VIDEO VALUE 'X'.
         10 COL + 1 BACKGROUND-COLOR 4 FOREGROUND-COLOR 1 BLINK REVERSE-VIDEO VALUE 'X'.
   825
        10 COL + 1 BACKGROUND-COLOR 4 FOREGROUND-COLOR 2 BLINK REVERSE-VIDEO VALUE 'X'.
   826
         10 COL + 1 BACKGROUND-COLOR 4 FOREGROUND-COLOR 3 BLINK REVERSE-VIDEO VALUE 'X'.
   828
         10 COL + 1 BACKGROUND-COLOR 4 FOREGROUND-COLOR 4 BLINK REVERSE-VIDEO VALUE 'X'.
   829
         10 COL + 1 BACKGROUND-COLOR 4 FOREGROUND-COLOR 5 BLINK REVERSE-VIDEO VALUE 'X'.
   830
         10 COL + 1 BACKGROUND-COLOR 4 FOREGROUND-COLOR 6 BLINK REVERSE-VIDEO VALUE 'X'.
         10 COL + 1 BACKGROUND-COLOR 4 FOREGROUND-COLOR 7 BLINK REVERSE-VIDEO VALUE 'X'.
   832
         05 LINE + 1.
         10 COL 42 BACKGROUND-COLOR 5 FOREGROUND-COLOR 0 BLINK REVERSE-VIDEO VALUE 'X'.
   833
   834
        10 COL + 1 BACKGROUND-COLOR 5 FOREGROUND-COLOR 1 BLINK REVERSE-VIDEO VALUE 'X'.
         10 COL + 1 BACKGROUND-COLOR 5 FOREGROUND-COLOR 2 BLINK REVERSE-VIDEO VALUE 'X'.
         10 COL + 1 BACKGROUND-COLOR 5 FOREGROUND-COLOR 3 BLINK REVERSE-VIDEO VALUE 'X'.
   836
   837
         10 COL + 1 BACKGROUND-COLOR 5 FOREGROUND-COLOR 4 BLINK REVERSE-VIDEO VALUE 'X'.
   838
         10 COL + 1 BACKGROUND-COLOR 5 FOREGROUND-COLOR 5 BLINK REVERSE-VIDEO VALUE 'X'.
   839
         10 COL + 1 BACKGROUND-COLOR 5 FOREGROUND-COLOR 6 BLINK REVERSE-VIDEO VALUE 'X'.
         10 COL + 1 BACKGROUND-COLOR 5 FOREGROUND-COLOR 7 BLINK REVERSE-VIDEO VALUE 'X'.
   840
   841
         05 LINE + 1.
         10 COL 42 BACKGROUND-COLOR 6 FOREGROUND-COLOR O BLINK REVERSE-VIDEO VALUE 'X'.
   842
   843
         10 COL + 1 BACKGROUND-COLOR 6 FOREGROUND-COLOR 1 BLINK REVERSE-VIDEO VALUE 'X'.
         10 COL + 1 BACKGROUND-COLOR 6 FOREGROUND-COLOR 2 BLINK REVERSE-VIDEO VALUE 'X'.
   844
   845
         10 COL + 1 BACKGROUND-COLOR 6 FOREGROUND-COLOR 3 BLINK REVERSE-VIDEO VALUE 'X'.
         10 COL + 1 BACKGROUND-COLOR 6 FOREGROUND-COLOR 4 BLINK REVERSE-VIDEO VALUE 'X'.
   846
         10 COL + 1 BACKGROUND-COLOR 6 FOREGROUND-COLOR 5 BLINK REVERSE-VIDEO VALUE 'X'.
   847
        10 COL + 1 BACKGROUND-COLOR 6 FOREGROUND-COLOR 6 BLINK REVERSE-VIDEO VALUE 'X'.
   848
        10 COL + 1 BACKGROUND-COLOR 6 FOREGROUND-COLOR 7 BLINK REVERSE-VIDEO VALUE 'X'.
   850
   851
        10 COL 42 BACKGROUND-COLOR 7 FOREGROUND-COLOR 0 BLINK REVERSE-VIDEO VALUE 'X'.
   852
         10 COL + 1 BACKGROUND-COLOR 7 FOREGROUND-COLOR 1 BLINK REVERSE-VIDEO VALUE 'X'.
         10 COL + 1 BACKGROUND-COLOR 7 FOREGROUND-COLOR 2 BLINK REVERSE-VIDEO VALUE 'X'.
   854
         10 COL + 1 BACKGROUND-COLOR 7 FOREGROUND-COLOR 3 BLINK REVERSE-VIDEO VALUE 'X'.
         10 COL + 1 BACKGROUND-COLOR 7 FOREGROUND-COLOR 4 BLINK REVERSE-VIDEO VALUE 'X'.
   855
   856
         10 COL + 1 BACKGROUND-COLOR 7 FOREGROUND-COLOR 5 BLINK REVERSE-VIDEO VALUE 'X'.
   857
         10 COL + 1 BACKGROUND-COLOR 7 FOREGROUND-COLOR 6 BLINK REVERSE-VIDEO VALUE 'X'.
   858
         10 COL + 1 BACKGROUND-COLOR 7 FOREGROUND-COLOR 7 BLINK REVERSE-VIDEO VALUE 'X'.
   859
        *> #12
   860
         05 LINE 17.
   861
         10 COL 52 BACKGROUND-COLOR O FOREGROUND-COLOR O HIGHLIGHT BLINK REVERSE-VIDEO VALUE 'X'.
         10 COL + 1 BACKGROUND-COLOR O FOREGROUND-COLOR 1 HIGHLIGHT BLINK REVERSE-VIDEO VALUE 'X'.
   862
   863
         10 COL + 1 BACKGROUND-COLOR O FOREGROUND-COLOR 2 HIGHLIGHT BLINK REVERSE-VIDEO VALUE 'X'.
         10 COL + 1 BACKGROUND-COLOR O FOREGROUND-COLOR 3 HIGHLIGHT BLINK REVERSE-VIDEO VALUE 'X'.
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Dictionary File for COLORS
                                                               07/12/2019 16:57:00:21
ACS Cobol Xref v2.02.02
         10 COL + 1 BACKGROUND-COLOR O FOREGROUND-COLOR 4 HIGHLIGHT BLINK REVERSE-VIDEO VALUE 'X'.
   865
   866
         10 COL + 1 BACKGROUND-COLOR O FOREGROUND-COLOR 5 HIGHLIGHT BLINK REVERSE-VIDEO VALUE 'X'.
         10 COL + 1 BACKGROUND-COLOR O FOREGROUND-COLOR 6 HIGHLIGHT BLINK REVERSE-VIDEO VALUE 'X'.
   868
         10 COL + 1 BACKGROUND-COLOR O FOREGROUND-COLOR 7 HIGHLIGHT BLINK REVERSE-VIDEO VALUE 'X'.
   869
         05 I.TNF. + 1.
         10 COL 52 BACKGROUND-COLOR 1 FOREGROUND-COLOR O HIGHLIGHT BLINK REVERSE-VIDEO VALUE 'X'.
   870
   871
         10 COL + 1 BACKGROUND-COLOR 1 FOREGROUND-COLOR 1 HIGHLIGHT BLINK REVERSE-VIDEO VALUE 'X'.
         10 COL + 1 BACKGROUND-COLOR 1 FOREGROUND-COLOR 2 HIGHLIGHT BLINK REVERSE-VIDEO VALUE 'X'.
   872
   873
         10 COL + 1 BACKGROUND-COLOR 1 FOREGROUND-COLOR 3 HIGHLIGHT BLINK REVERSE-VIDEO VALUE 'X'.
         10 COL + 1 BACKGROUND-COLOR 1 FOREGROUND-COLOR 4 HIGHLIGHT BLINK REVERSE-VIDEO VALUE 'X'.
   874
   875
         10 COL + 1 BACKGROUND-COLOR 1 FOREGROUND-COLOR 5 HIGHLIGHT BLINK REVERSE-VIDEO VALUE 'X'.
   876
         10 COL + 1 BACKGROUND-COLOR 1 FOREGROUND-COLOR 6 HIGHLIGHT BLINK REVERSE-VIDEO VALUE 'X'.
   877
         10 COL + 1 BACKGROUND-COLOR 1 FOREGROUND-COLOR 7 HIGHLIGHT BLINK REVERSE-VIDEO VALUE 'X'.
   878
         05 LINE + 1.
         10 COL 52 BACKGROUND-COLOR 2 FOREGROUND-COLOR 0 HIGHLIGHT BLINK REVERSE-VIDEO VALUE 'X'.
   879
         10 COL + 1 BACKGROUND-COLOR 2 FOREGROUND-COLOR 1 HIGHLIGHT BLINK REVERSE-VIDEO VALUE 'X'.
   880
         10 COL + 1 BACKGROUND-COLOR 2 FOREGROUND-COLOR 2 HIGHLIGHT BLINK REVERSE-VIDEO VALUE 'X'.
   882
         10 COL + 1 BACKGROUND-COLOR 2 FOREGROUND-COLOR 3 HIGHLIGHT BLINK REVERSE-VIDEO VALUE 'X'.
   883
         10 COL + 1 BACKGROUND-COLOR 2 FOREGROUND-COLOR 4 HIGHLIGHT BLINK REVERSE-VIDEO VALUE 'X'.
   884
         10 COL + 1 BACKGROUND-COLOR 2 FOREGROUND-COLOR 5 HIGHLIGHT BLINK REVERSE-VIDEO VALUE 'X'.
   885
         10 COL + 1 BACKGROUND-COLOR 2 FOREGROUND-COLOR 6 HIGHLIGHT BLINK REVERSE-VIDEO VALUE 'X'.
   886
         10 COL + 1 BACKGROUND-COLOR 2 FOREGROUND-COLOR 7 HIGHLIGHT BLINK REVERSE-VIDEO VALUE 'X'.
   887
         05 LINE + 1.
   888
         10 COL 52 BACKGROUND-COLOR 3 FOREGROUND-COLOR 0 HIGHLIGHT BLINK REVERSE-VIDEO VALUE 'X'.
         10 COL + 1 BACKGROUND-COLOR 3 FOREGROUND-COLOR 1 HIGHLIGHT BLINK REVERSE-VIDEO VALUE 'X'.
         10 COL + 1 BACKGROUND-COLOR 3 FOREGROUND-COLOR 2 HIGHLIGHT BLINK REVERSE-VIDEO VALUE 'X'.
   890
         10 COL + 1 BACKGROUND-COLOR 3 FOREGROUND-COLOR 3 HIGHLIGHT BLINK REVERSE-VIDEO VALUE 'X'.
   891
   892
         10 COL + 1 BACKGROUND-COLOR 3 FOREGROUND-COLOR 4 HIGHLIGHT BLINK REVERSE-VIDEO VALUE 'X'.
   893
         10 COL + 1 BACKGROUND-COLOR 3 FOREGROUND-COLOR 5 HIGHLIGHT BLINK REVERSE-VIDEO VALUE 'X'.
         10 COL + 1 BACKGROUND-COLOR 3 FOREGROUND-COLOR 6 HIGHLIGHT BLINK REVERSE-VIDEO VALUE 'X'.
  894
   895
         10 COL + 1 BACKGROUND-COLOR 3 FOREGROUND-COLOR 7 HIGHLIGHT BLINK REVERSE-VIDEO VALUE 'X'.
   896
   897
         10 COL 52 BACKGROUND-COLOR 4 FOREGROUND-COLOR 0 HIGHLIGHT BLINK REVERSE-VIDEO VALUE 'X'.
   898
         10 COL + 1 BACKGROUND-COLOR 4 FOREGROUND-COLOR 1 HIGHLIGHT BLINK REVERSE-VIDEO VALUE 'X'.
   899
         10 COL + 1 BACKGROUND-COLOR 4 FOREGROUND-COLOR 2 HIGHLIGHT BLINK REVERSE-VIDEO VALUE 'X'.
         10 COL + 1 BACKGROUND-COLOR 4 FOREGROUND-COLOR 3 HIGHLIGHT BLINK REVERSE-VIDEO VALUE 'X'.
   900
         10 COL + 1 BACKGROUND-COLOR 4 FOREGROUND-COLOR 4 HIGHLIGHT BLINK REVERSE-VIDEO VALUE 'X'.
   901
   902
         10 COL + 1 BACKGROUND-COLOR 4 FOREGROUND-COLOR 5 HIGHLIGHT BLINK REVERSE-VIDEO VALUE 'X'.
         10 COL + 1 BACKGROUND-COLOR 4 FOREGROUND-COLOR 6 HIGHLIGHT BLINK REVERSE-VIDEO VALUE 'X'.
   904
         10 COL + 1 BACKGROUND-COLOR 4 FOREGROUND-COLOR 7 HIGHLIGHT BLINK REVERSE-VIDEO VALUE 'X'.
   905
         05 LINE + 1.
   906
         10 COL 52 BACKGROUND-COLOR 5 FOREGROUND-COLOR O HIGHLIGHT BLINK REVERSE-VIDEO VALUE 'X'.
         10 COL + 1 BACKGROUND-COLOR 5 FOREGROUND-COLOR 1 HIGHLIGHT BLINK REVERSE-VIDEO VALUE 'X'.
   908
         10 COL + 1 BACKGROUND-COLOR 5 FOREGROUND-COLOR 2 HIGHLIGHT BLINK REVERSE-VIDEO VALUE 'X'.
   909
         10 COL + 1 BACKGROUND-COLOR 5 FOREGROUND-COLOR 3 HIGHLIGHT BLINK REVERSE-VIDEO VALUE 'X'.
         10 COL + 1 BACKGROUND-COLOR 5 FOREGROUND-COLOR 4 HIGHLIGHT BLINK REVERSE-VIDEO VALUE 'X'.
   910
         10 COL + 1 BACKGROUND-COLOR 5 FOREGROUND-COLOR 5 HIGHLIGHT BLINK REVERSE-VIDEO VALUE 'X'.
   912
         10 COL + 1 BACKGROUND-COLOR 5 FOREGROUND-COLOR 6 HIGHLIGHT BLINK REVERSE-VIDEO VALUE 'X'.
         10 COL + 1 BACKGROUND-COLOR 5 FOREGROUND-COLOR 7 HIGHLIGHT BLINK REVERSE-VIDEO VALUE 'X'.
   913
   914
         05 LINE + 1.
   915
         10 COL 52 BACKGROUND-COLOR 6 FOREGROUND-COLOR 0 HIGHLIGHT BLINK REVERSE-VIDEO VALUE 'X'.
         10 COL + 1 BACKGROUND-COLOR 6 FOREGROUND-COLOR 1 HIGHLIGHT BLINK REVERSE-VIDEO VALUE 'X'.
   916
         10 COL + 1 BACKGROUND-COLOR 6 FOREGROUND-COLOR 2 HIGHLIGHT BLINK REVERSE-VIDEO VALUE 'X'.
   917
         10 COL + 1 BACKGROUND-COLOR 6 FOREGROUND-COLOR 3 HIGHLIGHT BLINK REVERSE-VIDEO VALUE 'X'.
```

```
ACS Cobol Xref v2.02.02
                                 Dictionary File for COLORS
                                                              07/12/2019 16:57:00:21
        10 COL + 1 BACKGROUND-COLOR 6 FOREGROUND-COLOR 4 HIGHLIGHT BLINK REVERSE-VIDEO VALUE 'X'.
   920
        10 COL + 1 BACKGROUND-COLOR 6 FOREGROUND-COLOR 5 HIGHLIGHT BLINK REVERSE-VIDEO VALUE 'X'.
        10 COL + 1 BACKGROUND-COLOR 6 FOREGROUND-COLOR 6 HIGHLIGHT BLINK REVERSE-VIDEO VALUE 'X'.
        10 COL + 1 BACKGROUND-COLOR 6 FOREGROUND-COLOR 7 HIGHLIGHT BLINK REVERSE-VIDEO VALUE 'X'.
   922
   923
        05 LINE + 1.
   924
        10 COL 52 BACKGROUND-COLOR 7 FOREGROUND-COLOR 0 HIGHLIGHT BLINK REVERSE-VIDEO VALUE 'X'.
   925
        10 COL + 1 BACKGROUND-COLOR 7 FOREGROUND-COLOR 1 HIGHLIGHT BLINK REVERSE-VIDEO VALUE 'X'.
        10 COL + 1 BACKGROUND-COLOR 7 FOREGROUND-COLOR 2 HIGHLIGHT BLINK REVERSE-VIDEO VALUE 'X'.
  926
        10 COL + 1 BACKGROUND-COLOR 7 FOREGROUND-COLOR 3 HIGHLIGHT BLINK REVERSE-VIDEO VALUE 'X'.
   927
       10 COL + 1 BACKGROUND-COLOR 7 FOREGROUND-COLOR 4 HIGHLIGHT BLINK REVERSE-VIDEO VALUE 'X'.
   929
        10 COL + 1 BACKGROUND-COLOR 7 FOREGROUND-COLOR 5 HIGHLIGHT BLINK REVERSE-VIDEO VALUE 'X'.
        10 COL + 1 BACKGROUND-COLOR 7 FOREGROUND-COLOR 6 HIGHLIGHT BLINK REVERSE-VIDEO VALUE 'X'.
   930
   931
        10 COL + 1 BACKGROUND-COLOR 7 FOREGROUND-COLOR 7 HIGHLIGHT BLINK REVERSE-VIDEO VALUE 'X'.
   932
        PROCEDURE DIVISION.
        000-Main SECTION.
   933
        DISPLAY S-COLORTST-SCR.
   934
   935
         STOP RUN.
   936
             *>>>Info: Total Copy Depth Used = 01
```

ACS Cobol Xref v2.02.02 Dictionary File for COLORS 07/12/2019 16:57:00:22 Symbols of Module: COLORS (COLORS)

\_\_\_\_\_

Data Section (SCREEN) Defn Locations

S-COLORTST-SCR 000007S 000934

ACS Cobol Xref v2.02.02 Dictionary File for COLORS 07/12/2019 16:57:00:22 Symbols of Module: COLORS (COLORS)

Procedure Defn Locations

-----

None

ACS Cobol Xref v2.02.02 Dictionary File for COLORS 07/12/2019 16:57:00:22

Symbols of Module: COLORS (COLORS)
----Unreferenced Working Storage Symbols

None

ACS Cobol Xref v2.02.02 Dictionary File for COLORS 07/12/2019 16:57:00:22

Symbols of Module: COLORS (COLORS)

\_\_\_\_\_

Unreferenced Procedures

None

## 4 DAY-FROM-DATE

DAY-FROM-DATE is a user-defined function that accepts a single numeric USAGE DISPLAY argument  $-\infty$  either a 7-digit Julian date in the form yyyyddd or an 8-digit Gregorian date in the form yyyymmdd. This argument may be supplied either as a PIC 9(n) USAGE DISPLAY data item (n=7 or 8) or as a 7- or 8-digit numeric literal.

The subroutine will determine if the supplied date is a valid date in the year range 0000 through 9999 and what day of the week that date fell on.

The value returned will be zero if the date argument was invalid or an integer in the range 1-7, representing Sunday through Saturday.

In addition to general GnuCOBOL concepts, this program provides a useful demonstration of the following:

- Coding a GnuCOBOL user-defined function
- Using the ANY LENGTH data item attribute
- Using the RETURNING option in a subprogram
- Using the DATE-OF-INTEGER intrinsic function
- Using the C\$PARAMSIZE built-in system subroutine

The program source and cross-reference listing, produced using the GnuCOBOL Interactive Compiler front-end (GCic.cbl, one of the sample programs included here), begins on the next page.

GNU COBOL 2.1 23NOV2013 Source Listing

2014/03/27

C:/Users/tda010/Documents/Programs/Samples/DAY-FROM-DATE.cbl

```
_____
          >>SOURCE FORMAT IS FIXED
         IDENTIFICATION DIVISION.
         FUNCTION-ID. DAY-FROM-DATE.
         *>*******************
   4
         *> This GNU COBOL user-defined function converts a Gregorian or **
   6
         *> Julian date into a numeric day of the week.
         7
   8
         *> Arguments:
   10
        *> Calendar-Date A PIC 9 data item or numeric literal which **
                         will be treated as a calendar date as fol- **
   11
         *>
   12
                          lows:
         *>
                                                             **
   13
                          7-digit value: Interpreted as a Julian date **
   14
         *>
                                     in the form yyyyddd **
  15
         *>
  16
                          8-digit value: Interpreted as a Gregorian
   17
         *>
                                      date in the form yyyymmdd
   18
         *>
                                                             **
   19
         *> The result returned will be one of the following:
                                                             **
   20
         *>
   21
         *> 0: The supplied date is invalid
         *> 1:
   22
               The supplied date is a Sunday
         *> 2: The supplied date is a Monday
   23
         *> .
   25
   26
                                                             **
         *> .
   27
         *> 7: The supplied date is a Saturday
   28
         29
         ENVIRONMENT DIVISION.
         CONFIGURATION SECTION.
   30
         REPOSITORY.
   31
   32
             FUNCTION ALL INTRINSIC.
        DATA DIVISION.
   33
         WORKING-STORAGE SECTION.
   34
   35
          01 WS-Input-Date-DT.
                                            PIC 9(4).
   36
             05 WS-ID-YYYY-NUM
                                            PIC 9(2).
   37
             05 WS-ID-MM-NUM
                                            PIC 9(2).
             05 WS-ID-DD-NUM
        01 WS-Y-NUM
   39
                                            BINARY-LONG.
   40
         01 WS-M-NUM
                                            BINARY-LONG.
         01 WS-Temp-NUM
   41
                                            BINARY-LONG.
          LINKAGE SECTION.
   42
   43
          01 L-Input-Date-DT
                                            PIC 9 ANY LENGTH.
          01 L-Output-Day-NUM
   44
                                            USAGE BINARY-LONG
   45
                                            SIGNED.
   46
          PROCEDURE DIVISION USING L-Input-Date-DT
   47
                      RETURNING L-Output-Day-NUM.
          000-Main SECTION.
   48
              CALL "C$PARAMSIZE" USING 1
```

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Page: 1

GNU COBOL 2.1 23NOV2013 Source Listing

2014/03/27

C:/Users/tda010/Documents/Programs/Samples/DAY-FROM-DATE.cbl

```
_____
               EVALUATE RETURN-CODE
   50
              WHEN 7
   52
                    IF TEST-DAY-YYYYDDD(L-Input-Date-DT) > 0
                       MOVE O TO L-Output-Day-NUM
   53
   54
                        GOBACK
   55
                    END-IF
                    MOVE DATE-OF-INTEGER(INTEGER-OF-DAY(L-Input-Date-DT))
   56
   57
                     TO WS-Input-Date-DT
                WHEN 8
   59
                    IF TEST-DATE-YYYYMMDD(L-Input-Date-DT) > 0
   60
                       MOVE O TO L-Output-Day-NUM
   61
                        GOBACK
                    END-IF
   62
                    MOVE L-Input-Date-DT TO WS-Input-Date-DT
   63
   64
                WHEN OTHER
   65
                    MOVE 0 TO L-Output-Day-NUM
   66
                    GOBACK
   67
                END-EVALUATE
   68
           *> IF january OR february
           *> y = year - 1
*> m = month + 1
   69
   70
                 m = month + 10
   71
           *> ELSE
           *> y = year
*> m = month - 2
   72
   73
           *> END-IF
   74
   75
           *> For Gregorian calendar:
                 result = (day + y + y/4 - y/100 + y/400 + (31*m)/12) \mod 7
   76
   77
           *> (All divisions are integer divisions, discarding any remainder)
   78
                IF WS-ID-MM-NUM = 1 OR 2
   79
                    SUBTRACT 1 FROM WS-ID-YYYY-NUM GIVING WS-Y-NUM
                    ADD WS-ID-MM-NUM, 10 GIVING WS-M-NUM
   81
                FLSE.
   82
                    MOVE WS-ID-YYYY-NUM TO WS-Y-NUM
   83
                    SUBTRACT 2 FROM WS-ID-MM-NUM GIVING WS-M-NUM
   84
                END-IF
                COMPUTE L-Output-Day-NUM =
   85
   86
                   WS-ID-DD-NUM
                  + WS-Y-NUM
   88
                  + INTEGER(WS-Y-NUM/4)
   89
                  - INTEGER(WS-Y-NUM/100)
   90
                 + INTEGER(WS-Y-NUM/400)
   91
                  + INTEGER((31*WS-M-NUM)/12)
   92
                DIVIDE L-Output-Day-NUM BY 7
   93
                   GIVING WS-Temp-NUM
                    REMAINDER L-Output-Day-NUM
   94
   95
                ADD 1 TO L-Output-Day-NUM
   96
                GOBACK
   97
   98
```

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GNU COBOL 2.1 23NOV2013 Cross-Reference Listing

2014/03/27

	C:/Users/tda	a010/Doc	uments/Programs/	Samples/DAY-	-FROM-	DATE.cbl
PROGRAM-ID	Identifier/Register/Function	Defn	Where Defined	References		Page: 3
						======
DAY-FROM-DATE	000-Main	48	PROCEDURE			
DAY-FROM-DATE	L-Input-Date-DT	43	LINKAGE	46	52	56
				59	63	
DAY-FROM-DATE	L-Output-Day-NUM	44	LINKAGE	47	53*	60*
				65*	85*	92
				94*	95*	
DAY-FROM-DATE	RETURN-CODE		PROCEDURE	50		
DAY-FROM-DATE	WS-ID-DD-NUM	38	WORKING-STORAGE	86		
DAY-FROM-DATE	WS-ID-MM-NUM	37	WORKING-STORAGE	78	80	83
DAY-FROM-DATE	WS-ID-YYYY-NUM	36	WORKING-STORAGE	79	82	
DAY-FROM-DATE	WS-Input-Date-DT	35	WORKING-STORAGE	57*	63*	
DAY-FROM-DATE	WS-M-NUM	40	WORKING-STORAGE	80*	83*	91
DAY-FROM-DATE	WS-Temp-NUM	41	WORKING-STORAGE	93*		
DAY-FROM-DATE	WS-Y-NUM	39	WORKING-STORAGE	79*	82*	87
				88	89	90

------

## 5 GCic

This is MUCH more than a mere demonstration program – it's also a very practical utility! The "GCic" (GnuCOBOL Interactive Compiler) is a TUI (Textual User Interface) program that may be used as a full-screen interface to the "cobc" compiler. In addition, GCic can produce neat, concise and useful cross-reference listings of GnuCOBOL programs, showing not only where user-defined names and built-in registers and intrinsic functions are referenced, but also where user-defined data items ARE MODIFIED by program code!

The program is well documented (IMHO) and you should find it fairly easy to follow. The GCic.cbl program was written to work with a native Windows or Windows/MinGW build of GnuCOBOL as well as a Windows/Cygwin, UNIX or OS X build.

Source listings generated by GCic will show the original source code of your programs, with all indentation and comments preserved. Additionally, any COPYed code will be included in the listing immediately (in compressed form) following the COPY statement that triggered its inclusion into your program.

Cross-reference listings will show all user-defined data items and procedures as well as intrinsic function and special register references. In addition to showing the line numbers at which items were defined and referenced, those references that MODIFY the contents of the data item will have an asterisk appended to them.

In addition to general GnuCOBOL concepts, this program provides a useful demonstration of the following:

- Creating a GnuCOBOL compilation unit that consists of multiple programs
- Using CDF conditional compilation facilities
- Using the SCREEN SECTION and associated ACCEPT and DISPLAY statements
- Using DECLARATIVES to trap file I/O errors
- Using FILE-STATUS
- Using the REPLACING clause on a CDF COPY statement
- Using the following statements:
  - o ACCEPT FROM COMMAND-LINE statement
  - o ACCEPT FROM DATE/TIME statement
  - o ACCEPT FROM ENVIRONMENT statement
  - o EXIT PERFORM statement
  - o EXIT SECTION statement
  - o INSPECT statement
  - o PERFORM FOREVER statement
  - o SEARCH ALL statement
  - o SET ENVIRONMENT statement
  - o SORT statement
  - o STRING statement
  - o UNSTRING statement
- Using the following built-in subroutines:
  - o C\$JUSTIFY built-in system subroutine
  - o C\$SLEEP built-in system subroutine
  - o CBL\_CHANGE\_DIR built-in system subroutine
  - o CBL\_CHECK\_FILE\_EXIST built-in system subroutine

- o  $\ensuremath{\mathsf{CBL\_DELETE\_FILE}}$  built-in system subroutine
- o SYSTEM built-in system subroutine
- Using the following intrinsic functions:
  - o CONCATENATE intrinsic function
  - o LENGTH intrinsic function
  - o LOWER-CASE intrinsic function
  - o NUMVAL intrinsic function
  - o TRIM intrinsic function
  - o UPPER-CASE intrinsic function
- Using the COB-CRT-STATUS, Special Registers special register
- Programmatically producing a report destined for either portrait or landscape printing

Here is a sample of the screen generated by this program:



The program source and cross-reference listing, generated by cobxref, begins on the next page.

```
ACS Cobol Xref v2.02.04
                                Dictionary File for GCIC
                                                           06/03/2022 23:09:10:96 Page
                                                                                             1
             >>SOURCE FORMAT IS FIXED
    2
             *> CONFIGURATION SETTINGS: adjust const-set-1.cpy before
             *> compiling GCic to adjust the way it works.
    3
             *copy "const-set-1.cpy".
    5
             *> CONFIGURATION SETTINGS: Set these switches before compiling:
     6
             *>
             *> Set these 2 for the compiler version.
    8
             >>DEFINE CONSTANT COMP-VERS AS 'GNUCOBOL 3.1.2 06MAR2022'
    g
    10
             >>DEFINE CONSTANT COMP-YEAR AS '2022'
   11
   12
             *> LINEDRAW Set to:
   13
             *> 0 To use spaces (no lines)
                  1 To use the line-drawing characterset (PC codepage 437)
   14
             *>
   15
             *>
                  2 To use conventional ASCII characters (+, -, |)
             *>
   16
             *>
   17
                       OSX USERS - To use the linedrawing characterset,
                                     set your 'terminal' font to 'Lucida Console'
   18
             *>
   19
             *>
             *> OS
   20
                         Set to one of the following:
                         'CYGWIN' For a Windows/Cygwin version
   21
             *>
   22
             *>
                         'MINGW'
                                    For a Windows/MinGW version
   23
             *>
                         'OSX'
                                    For a Macintosh OSX version
                         'UNIX'
                                    For a Unix/Linux version
   24
             *>
                         'WINDOWS' For a Native Windows version
   25
             *>
   26
   27
             \star\!\!\!> SELCHAR Set to the desired single character to be used as the red
   28
             *>
                        'feature selected' character on the screen.
   29
             *>
                        SUGGESTIONS: '>', '*', '=', '+'
   30
             *>
             *> LPP
                       Set to maximum printable lines per page when the listing
   31
                        should be generated for LANDSCAPE orientation (can be over-
   32
             *>
                        ridden at execution time using the GCXREF_LINES environment
   33
             *>
   34
             *>
                        variable.
   35
             *>
                      Set to maximum printable lines per page when the listing
   36
             *> LPPP
    37
             *>
                         should be generated for PORTRAIT orientation (can be over-
                         ridden at execution time using the GCXREF_LINES_PORT
   38
             *>
   39
             *>
                         environment variable.
   40
    41 GCO712 >>DEFINE CONSTANT LINEDRAW AS 2
                                        AS 'UNIX'
   42 GCO712 >>DEFINE CONSTANT OS
   43 GCO712 >>DEFINE CONSTANT SELCHAR AS '>'
   44 GC1213 >>DEFINE CONSTANT LPP AS 50 *> LANDSCAPE (GCXREF_LINES)
45 GC1213 >>DEFINE CONSTANT LPPP AS 60 *> PORTRAIT (GCXREF_LINES_PORT)
             *> -----
   46
             *> Now set these switches to establish initial (default) settings
   47
             *> for the various on-screen options. Set them to a value of
   48
   49
             *> 0 if they are to be 'OFF' and 1 if they are to be 'ON'
   50 GC1213*> (for F5, 1=0N (Landscape), 2=0N (Portrait))
   51
             *>
   52 GCO712 >> DEFINE CONSTANT F1 AS 0 *> Assume WITH DEBUGGING MODE
   53 GCO712 >>DEFINE CONSTANT F2 AS 0 *> Procedure+Statement Trace
   54 GCO712 >> DEFINE CONSTANT F3 AS 0 *> Make A Library (DLL)
```

```
ACS Cobol Xref v2.02.04
                                                      06/03/2022 23:09:10:96 Page
                             Dictionary File for GCIC
   55 GC0712 >>DEFINE CONSTANT F4 AS 0 *> Execute If Compilation OK
   56 GC1213 >>DEFINE CONSTANT F5 AS 0 *> Listings
   57 GCO712 >> DEFINE CONSTANT F6 AS 1 *> "FUNCTION" Is Optional
   58 GCO712 >>DEFINE CONSTANT F7 AS 1 *> Enable All Warnings
   59 GCO712 >>DEFINE CONSTANT F8 AS 1 *> Source Is Free-Format
   60 GC0712 >> DEFINE CONSTANT F9 AS 1 *> No COMP/BINARY Truncation
   61 GCO712 >> DEFINE CONSTANT F12 AS 4 *> Default config file (1-7):
   62
                                        1 = BS2000
            *>
   63
            *>
                                        2 = COBOL85
                                        3 = COBOL2002
   65
            *>
                                        4 = DEFAULT
   66
                                        5 = TBM
            *>
   67
            *>
                                        6 = MF (i.e. Microfocus)
   68
            *>
                                        7 = MVS
   69
   70
           IDENTIFICATION DIVISION.
           PROGRAM-ID. GCic.
   71
   72
            >NOTE< >NOTE< >NOTE< >NOTE< >NOTE<
   73
            *>
   74
            *>
   75
            *> If this program is compiled with '-fdebugging-line', you
   76
            *> will need to pipe SYSERR to a text file when executing GCic **
            *> (by adding the text '2> filename' to the end of the GCic
   77
            \ast\!\!> command). You may also need to press the ENTER key when
   78
            *> GCic is finished.
   80
            *>***********************
            *> This program provides a Textual User Interface (TUI) to the **
   81
   82
            *> process of compiling and (optionally) executing a GNU COBOL **
   83
   84
            *>
                                                                     **
   85
            *> This programs execution syntax is as follows:
                                                                     **
   87
            *> GCic cprogram-path-and-filename> [ <switch>... ]
   88
            *>
                                                                     **
   89
            *> Once executed, a display screen will be presented showing
                                                                     **
            *> the compilation options that will be used. The user will
   90
            *> have the opportunity to change options, specify new ones
   91
                                                                     **
   92
            *> and specify any program execution arguments to be used if
            *> you select the 'Execute' option. When you press the Enter **
   94
            *> key the program will be compiled.
   95
            *>
                                                                     **
            96
                                                                     **
   97
   98
            *> The '010-Parse-Args' section in the PROCEDURE DIVISION has **
   99
            *> documentation on switches and their function.
            *>**********************
  100
  101
            *>
            *> AUTHOR:
  102
                         GARY L. CUTLER
                           Copyright (C) 2009-2018, Gary L. Cutler, GPL **
  103
            *>
            *> Updated by Vincent B Coen, 2018-2020+.
  104
  105
            *>
                                                                     **
            *> DATE-WRITTEN: June 14, 2009
  106
                                                                     **
  107
            *>
  108
```

```
ACS Cobol Xref v2.02.04
                                 Dictionary File for GCIC
                                                             06/03/2022 23:09:10:96
                                                                                       Page
             *> DATE CHANGE DESCRIPTION
              110
              *> GC0609 Don't display compiler messages file if compilation
   111
   112
             *>
                      Is successful. Also don't display messages if the
   113
             *>
                        output file is busy (just put a message on the
                                                                             **
   114
             *>
                        screen, leave the OC screen up & let the user fix
   115
              *>
                        the problem & resubmit.
             *> GC0709 When 'EXECUTE' is selected, a 'FILE BUSY' error will **
   116
   117
             *> CLC still cause the (old) executable to be launched.
                                                                             **
                        Also, the 'EXTRA SWITCHES' field is being ignored.
   118
   119
             *>
                        Changed the title bar to lowlighted reverse video &
   120
             *>
                        the message area to highlighted reverse-video.
                                                                             **
             *> GC0809 Add a SPACE in front of command-line args when
   121
                                                                             **
   122
                        executing users program. Add a SPACE after the
   123
             *>
                        -ftraceall switch when building cobc command.
             *> GC0909 Convert to work on Cygwin/Linux as well as MinGW
   124
   125
              *> GCO310 Virtualized the key codes for S-F1 thru S-F7 as they **
                        differ depending upon whether PDCurses or NCurses is **
   126
   127
             *>
                        being used.
             \star\!\!\!> GCO410 Introduced the cross-reference and source listing
   128
                                                                             **
   129
              *>
                       features. Also fixed a bug in EXTRA switch proces-
   130
              *>
                        sing where garbage will result if more than the
                                                                             **
   131
              *>
                        EXTRA switch is specified.
                                                                             **
   132
              *> GC1010 Corrected several problems reported by Vince Coen:
   133
                      1) Listing/Xref wouldn't work if '-I' additional
   134
              *>
                           cobc switch specified.
                                                                             **
   135
              *>
                        2) Programs coded with lowercase reserved words did
                                                                             **
   136
              *>
                          not get parsed properly when generating listing
                                                                             **
   137
              *>
                           and/or xref reports.
                                                                             **
                        3) Reliance on a TEMP environment variable caused
   138
              *>
                                                                             **
   139
              *>
                          non-recoverable errors when generating listing
                                                                             **
   140
              *>
                           and/or xref reports in a session that lacks a
   141
              *>
                           TEMP variable.
                                                                             **
   142
             *>
                        As a result of this change, GCic no longer runs a
                                                                             **
   143
                       second 'cobc' when generating listing and/or xref
             *>
                                                                             **
                        reports. A '-save-temps' (without '=dir') specified
   144
              *>
   145
              *>
                        in the EXTRA options field will be ignored. A
                                                                             **
                        '-save-temps=dir' specified in the EXTRA options
   146
              *>
   147
              *>
                        field will negate both the XREF and SOURCE opts,
              *>
   148
                        if specified.
              *> GC0711 Tailored for 29APR2011 version of GNU COBOL 2.0
   149
                                                                             **
   150
              *> GC0712 Replaced all switches with configuration settings;
                                                                             **
                        Tailored for 11FEB2012 version of GNU COBOL 2.0;
   151
              *>
   152
              *>
                        Reformatted screen layout to fit a 24x80 screen
   153
              *>
                        rather than a 25x81 screen and to accommodate shell
                        environments having only F1-F12 (like 'terminal' in
   154
              *>
                        OSX); Fully tested under OSX (required a few altera-
   155
              *>
   156
              *>
                        tions); Expanded both extra-options and runtime-
   157
              *>
                        arguments areas to TWO lines (152 chars total) each; **
   158
              *>
                        Added support for MF/IBM/BS2000 listing-control
   159
              *>
                        directives EJECT, SKIP1, SKIP2, SKIP3 (any of these in
   160
              *>
                        copybooks will be ignored)
                                                                             **
              *> GC0313 Expand the source code record from 80 chars to 256
   161
                                                                             **
                        to facilitate looking for "LINKAGE SECTION" in a
   162
```

```
06/03/2022 23:09:10:96
ACS Cobol Xref v2.02.04
                              Dictionary File for GCIC
                                                                                 Page
  163
                      free-format file.
             *> GC1113 Edited to support the change of "OpenCOBOL" to "GNU **
  164
             *> GLC COBOL"
            *> GC1213 Updated for 23NOV2013 version of GNU COBOL 2.1
  166
                                                                        **
  167
            *> GC0114 Introduce a "Press ENTER to Close" action after run- **
  168
            *> GLC ning the compiled program in the compiler window (F4)**
  169
             *> VC0617 Remove the Blinking in meny screen as uncomfortable **
            *> VBC Update version printed to 2.2 30JUN2017.
  170
                     Move the system constant settings to a copy file
  171
            *>
                                                                        **
                    const-set-1.cpy in case GCic is updated.
  172
                    Added SET ENVIRONMENT "COB_EXIT_WAIT" TO "O" to
  173
            *>
  174
            *>
                     100-Initialization section.
                                                                        **
  175
            *> VCO717 Replaced compile param instrinsic=all with
                                                                        **
             176
  177
             *>
                      from GCL to GLC.
                                                                        **
                     Update version printed to 2.2 20JUL2017.
  178
            *>
                                                                        **
  179
             *>
                     Should really get this from the compiler if avail?
  180
             *> VC1217 Update compiler version to v3.0 24DEC2017.
  181
            *>
                     and copyright to 2018 (in 3 places).
                                                                        **
            *> VCO811 Updated compiler to 3.1 July2020 and the copyright.
  182
  183
             *> VC0322 Update compiler version to v3.1.2 06MAR2022.
  184
             *>*********************
  185
             *>
  186
            ENVIRONMENT DIVISION.
  187
             CONFIGURATION SECTION.
  188
             REPOSITORY.
  189
                FUNCTION ALL INTRINSIC.
  190
             INPUT-OUTPUT SECTION.
  191
             FILE-CONTROL.
  192 GC1010 SELECT F-Cobc-Output-FILE ASSIGN TO WS-Listing-Filename-TXT
                                            ORGANIZATION IS LINE SEQUENTIAL.
  193
  194
  195
                 SELECT F-Source-Code-FILE ASSIGN TO WS-File-Name-TXT
  196
                                            ORGANIZATION IS LINE SEQUENTIAL
  197
                                            FILE STATUS IS WS-FSM-Status-CD.
  198
             DATA DIVISION.
  199
             FILE SECTION.
  200
  201
             FD F-Cobc-Output-FILE.
  202
             01 F-Cobc-Output-REC
                                                     PIC X(256).
  203
  204
             FD F-Source-Code-FILE.
                                                     PIC X(256).
  205 GC0313 01 F-Source-Code-REC
  206
  207
             WORKING-STORAGE SECTION.
  208
             >>source free
  209 *>C
                 COPY screenio.
  210 *> Copyright (C) 2008-2012, 2015-2016 Free Software Foundation, Inc.
  211 *> Written by Roger While
  212
  213 *> This file is part of GnuCOBOL.
  214 *>
  215 \star> The GnuCOBOL compiler is free software: you can redistribute
  216 *> it and/or modify it under the terms of the GNU General Public
```

5

```
ACS Cobol Xref v2.02.04
                                Dictionary File for GCIC
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                                                                                     Page
           License as published by the Free Software Foundation, either
  218 *> version 3 of the License, or (at your option) any later
  219 *> version.
  220 *>
  221 *>
           GnuCOBOL is distributed in the hope that it will be useful,
           but WITHOUT ANY WARRANTY; without even the implied warranty of
  222
  223
           MERCHANTABILITY or FITNESS FOR A PARTICULAR PURPOSE. See the
  224
       *> GNU General Public License for more details.
  225 *>
  226 *> You should have received a copy of the GNU General Public
  227 *> License along with GnuCOBOL.
  228 *> If not, see <a href="http://www.gnu.org/licenses/">http://www.gnu.org/licenses/>.</a>
  229
       *>
  230
       *>
            Colors
  231 *>
        78 cob-color-black
  232
                                value 0.
  233
        78 COB-COLOR-BLUE
                                VALUE 1.
  234
        78 COB-COLOR-GREEN
                                VALUE 2.
  235
        78 COB-COLOR-CYAN
                                VALUE 3.
        78 COB-COLOR-RED
  236
                                VALUE 4.
  237
        78 COB-COLOR-MAGENTA
                                VALUE 5.
  238
        78 COB-COLOR-YELLOW
                                VALUE 6.
  239
        78 COB-COLOR-WHITE
                                VALUE 7.
  240
  241 *> Values that may be returned in CRT STATUS (or COB-CRT-STATUS)
  242 *> Normal return - Value 0000
        78 COB-SCR-OK
  243
                           VALUE O.
  244
       *> Function keys - Values 1xxx
  245
        78 COB-SCR-F1
                               VALUE 1001.
        78 COB-SCR-F2
  246
                               VALUE 1002.
  247
        78 COB-SCR-F3
                               VALUE 1003.
                               VALUE 1004.
  248
        78 COB-SCR-F4
  249
        78 COB-SCR-F5
                               VALUE 1005.
                               VALUE 1006.
  250
        78 COB-SCR-F6
  251
        78 COB-SCR-F7
                               VALUE 1007.
  252
        78 COB-SCR-F8
                                VALUE 1008.
  253
        78 COB-SCR-F9
                               VALUE 1009.
        78 COB-SCR-F10
                               VALUE 1010.
  254
  255
        78 COB-SCR-F11
                               VALUE 1011.
  256
        78 COB-SCR-F12
                               VALUE 1012.
  257
        78 COB-SCR-F13
                               VALUE 1013.
  258
        78 COB-SCR-F14
                                VALUE 1014.
  259
                                VALUE 1015.
        78 COB-SCR-F15
  260
        78 COB-SCR-F16
                                VALUE 1016.
        78 COB-SCR-F17
  261
                                VALUE 1017.
  262
        78 COB-SCR-F18
                               VALUE 1018.
  263
        78 COB-SCR-F19
                               VALUE 1019.
                               VALUE 1020.
  264
        78 COB-SCR-F20
                               VALUE 1021.
  265
        78 COB-SCR-F21
                                VALUE 1022.
  266
        78 COB-SCR-F22
  267
        78 COB-SCR-F23
                                VALUE 1023.
        78 COB-SCR-F24
  268
                               VALUE 1024.
  269
        78 COB-SCR-F25
                               VALUE 1025.
        78 COB-SCR-F26
                              VALUE 1026.
  270
```

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                                                                                      6
  271
        78 COB-SCR-F27
                              VALUE 1027.
  272
        78 COB-SCR-F28
                             VALUE 1028.
  273
        78 COB-SCR-F29
                            VALUE 1029.
        78 COB-SCR-F30
                            VALUE 1030.
  274
                            VALUE 1031.
        78 COB-SCR-F31
  275
        78 COB-SCR-F32
  276
                             VALUE 1032.
                            VALUE 1033.
  277
        78 COB-SCR-F33
                            VALUE 1034.
        78 COB-SCR-F34
  278
  279
       78 COB-SCR-F35
                            VALUE 1035.
       78 COB-SCR-F36
                            VALUE 1036.
  280
  281
       78 COB-SCR-F37
                            VALUE 1037.
                            VALUE 1038.
  282
       78 COB-SCR-F38
  283
        78 COB-SCR-F39
                             VALUE 1039.
  284
        78 COB-SCR-F40
                             VALUE 1040.
                            VALUE 1041.
        78 COB-SCR-F41
  285
  286
        78 COB-SCR-F42
                            VALUE 1042.
  287
        78 COB-SCR-F43
                            VALUE 1043.
  288
        78 COB-SCR-F44
                            VALUE 1044.
  289
        78 COB-SCR-F45
                            VALUE 1045.
        78 COB-SCR-F46
  290
                             VALUE 1046.
  291
        78 COB-SCR-F47
                             VALUE 1047.
  292
        78 COB-SCR-F48
                             VALUE 1048.
                            VALUE 1049.
        78 COB-SCR-F49
  293
        78 COB-SCR-F50
  294
                            VALUE 1050.
  295
        78 COB-SCR-F51
                            VALUE 1051.
                            VALUE 1052.
  296
        78 COB-SCR-F52
  297
        78 COB-SCR-F53
                             VALUE 1053.
        78 COB-SCR-F54
  298
                             VALUE 1054.
                             VALUE 1055.
  299
        78 COB-SCR-F55
        78 COB-SCR-F56
                             VALUE 1056.
  300
  301
       78 COB-SCR-F57
                            VALUE 1057.
       78 COB-SCR-F58
                            VALUE 1058.
  302
  303
       78 COB-SCR-F59
                            VALUE 1059.
                            VALUE 1060.
  304
       78 COB-SCR-F60
       78 COB-SCR-F61
                            VALUE 1061.
  305
  306
        78 COB-SCR-F62
                             VALUE 1062.
                             VALUE 1063.
        78 COB-SCR-F63
  307
  308
       78 COB-SCR-F64
                            VALUE 1064.
  309 *> Exception keys - Values 2xxx
  310
      78 COB-SCR-PAGE-UP VALUE 2001.
  311
       78 Cob-Scr-Page_Up
                             value 2001.
  312
       78 COB-SCR-PAGE-DOWN VALUE 2002.
  313
        78 Cob-Scr-Page_Down value 2002.
  314
        78 COB-SCR-KEY-UP
                              VALUE 2003.
        78 COB-SCR-KEY_UP
  315
                             VALUE 2003.
        78 COB-SCR-KEY-DOWN VALUE 2004.
  316
  317
        78 COB-SCR-KEY_DOWN VALUE 2004.
  318
       78 COB-SCR-ESC VALUE 2005.
                        VALUE 2006.
  319
       78 COB-SCR-PRINT
  320
        78 COB-SCR-TAB
                             VALUE 2007.
  321
        78 COB-SCR-BACK-TAB
                             VALUE 2008.
        78 COB-SCR-KEY-LEFT
  322
                             VALUE 2009.
       78 COB-SCR-KEY-RIGHT VALUE 2010.
  323
  324 *> The following exception keys are currently *only* returned
```

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   325 *> on ACCEPT OMITTED
   326
         78 COB-SCR-INSERT
                                  VALUE 2011.
         78 COB-SCR-DELETE
                                  VALUE 2012.
   327
   328
         78 COB-SCR-BACKSPACE VALUE 2013.
   329
         78 COB-SCR-KEY-HOME VALUE 2014.
                                 VALUE 2015.
   330
        78 COB-SCR-KEY-END
        *> Input validation - Values 8xxx
   331
        78 COB-SCR-NO-FIELD VALUE 8000.
   332
        78 COB-SCR-TIME-OUT VALUE 8001.
   333
   334 *> Other errors - Values 9xxx
   335 78 COB-SCR-FATAL VALUE 9000.
   336
        78 COB-SCR-MAX-FIELD VALUE 9001.
   337
              >>source fixed
   338 GC0712 01 WS-Compilation-Switches-TXT.
   339 GC0712
                   05 WS-CS-Args-TXT VALUE SPACES.
                   10 WS-CS-Arg-H1-TXT
   340 GC0712
                                                           PIC X(76).
                     10 WS-CS-Arg-H2-TXT
                                                           PIC X(76).
   341 GC0712
   342 GC0712 05 WS-CS-Filenames-TXT.
  343 GC0712 10 VALUE 'BS2000'
344 GC0712 10 VALUE 'COBOL85'
345 GC0712 10 VALUE 'COBOL200'
346 GC0712 10 VALUE 'DEFAULT'
347 GC0712 10 VALUE 'IBM'
348 GC0712 10 VALUE 'MF'
349 GC0712 10 VALUE 'MF'
                                                           PIC X(9).
                      10 VALUE 'COBOL85'
                                                           PIC X(9).
                      10 VALUE 'COBOL2002'
                                                           PIC X(9).
                      10 VALUE 'DEFAULT'
                                                          PIC X(9).
                                                          PIC X(9).
                                                           PIC X(9).
                                                           PIC X(9).
   350 GCO712 05 WS-CS-Filenames-Table-TXT REDEFINES WS-CS-Filenames-TXT.
   351 GC0712
                  10 WS-CS-Filename-TXT
                                                           OCCURS 7 TIMES
   352 GC0712
                                                           PIC X(9).
   353 GC0712 >>IF F12 < 1
   354 GCO712 05 WS-CS-Config-NUM
                                             VALUE 4
                                                           PIC 9(1).
   355 GC0712 >>ELIF F12 > 7
   356 GC0712 05 WS-CS-Config-NUM
                                             VALUE 4
                                                           PIC 9(1).
   357 GC0712 >>ELSE
   358 GC0712 05 WS-CS-Config-NUM
                                             VALUE F12
                                                           PIC 9(1).
   359 GC0712 >>END-IF
   360 GC0712 05 WS-CS-Extra-TXT VALUE SPACES.
361 GC0712 10 WS-CS-Extra-H1-TXT
                  10 WS-CS-Extra-H1-TXT
10 WS-CS-Extra-H2-TXT
                                                           PIC X(76).
   362 GC0712
                                                           PIC X(76).
   363 GC0712 05 WS-CS-Switch-Defaults-TXT.
                  10 VALUE F1
   364 GC0712
                                                           PIC 9(1). *> WS-CS-DEBUG-CHR
   365 GC0712
                    10 VALUE F4
                                                           PIC 9(1). *> WS-CS-EXECUTE-CHR
   366 GC0712
                      10 VALUE F8
                                                           PIC 9(1). *> WS-CS-FREE-CHR
   367 GC0712
                      10 VALUE F3
                                                           PIC 9(1). *> WS-CS-LIBRARY-CHR
   368 GC0712
                      10 VALUE F5
                                                           PIC 9(1). *> WS-CS-LISTING-CHR
   369 GC0712
                                                           PIC 9(1). *> WS-CS-NOFUNC-CHR
                      10 VALUE F6
   370 GC0712
                     10 VALUE F9
                                                           PIC 9(1). *> WS-CS-NOTRUNC-CHR
                  10 VALUE F2
10 VALUE F7
   371 GC0712
                                                           PIC 9(1). *> WS-CS-TRACEALL-CHR
   372 GC0712 10 VALUE F7
373 GC0712 05 WS-CS-All-Switches-TXT REDEFINES
                                                           PIC 9(1). *> WS-CS-WARNALL-CHR
   374 GC0712
                                              WS-CS-Switch-Defaults-TXT.
                   10 WS-CS-DEBUG-CHR
10 WS-CS-EXECUTE-CHR
10 WS-CS-FREE-CHR
   375 GC0712
                                                           PIC X(1).
   376 GC0712
                                                           PIC X(1).
   377 GC0712
                                                          PIC X(1).
                    10 WS-CS-LIBRARY-CHR
   378 GC0712
                                                          PIC X(1).
```

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                    10 WS-CS-LISTING-CHR
  379 GC0712
                                                       PIC X(1).
  380 GC0712
                   10 WS-CS-NOFUNC-CHR
                                                      PIC X(1).
                  10 WS-CS-NOTRUNC-CHR
10 WS-CS-TRACEALL-CHR
  381 GC0712
                                                      PIC X(1).
  382 GC0712
383 GC0712
                                                      PIC X(1).
                   10 WS-CS-WARNALL-CHR
                                                      PIC X(1).
  384
  385 GC0909 01 WS-Cmd-TXT
                                                       PIC X(512).
  386
  387 GC0712 01 WS-Cmd-Args-TXT
                                                       PIC X(256).
  388
  389 GC0712 01 WS-Cmd-End-Quote-CHR
                                                       PIC X(1).
  390
  391 GC0712 01 WS-Cmd-SUB
                                                       USAGE BINARY-LONG.
  392
              01 WS-Cobc-Cmd-TXT
                                                       PIC X(256).
  393
  394
              01 WS-Config-Fn-TXT
  395
                                                       PIC X(12).
  396
  397 GC1113 O1 WS-Delete-Fn-TXT
                                                       PIC X(256).
  398
  399
              01 WS-File-Name-TXT.
  400
                  05 WS-FN-CHR
                                                       OCCURS 256 TIMES
  401
                                                       PIC X(1).
  402
              01 WS-File-Status-Message-TXT.
                  05 VALUE 'Status Code: '
                                                      PIC X(13).
  404
                  05 WS-FSM-Status-CD
                                                       PIC 9(2).
  405
                  05 VALUE ', Meaning: '
  406
                                                       PIC X(11).
  407
                  05 WS-FSM-Msg-TXT
                                                      PIC X(25).
  408
  409 GC0909 01 WS-Horizontal-Line-TXT
                                                      PIC X(80).
  410 GC0909
  411
              01 WS-I-SUB
                                                       USAGE BINARY-LONG.
  412
             01 WS-J-SUB
  413
                                                       USAGE BINARY-LONG.
  414
  415 GC1213 01 WS-Listing-CD VALUE F5
                                                       PIC 9(1).
  416
  417 GCO712 01 WS-Listing-Filename-TXT
                                                       PIC X(256).
  418
  419 GC1213 01 WS-Listing-TXT VALUE SPACES
                                                       PIC X(27).
  420
                                                       PIC XXXX/XX/XXBXX/XX.
  421
              01 WS-OC-Compile-DT
  422
  423 GC0712 >>IF OS = 'CYGWIN'
  424 GC0712 01 WS-OS-Dir-CHR
                                       VALUE '/'
                                                       PIC X(1).
  425 GC0712 78 WS-OS-Exe-Ext-CONST VALUE '.exe'.
  426 GCO712 78 WS-OS-Lib-Ext-CONST VALUE '.dll'.
  427 GCO712 78 WS-OS-Lib-Type-CONST VALUE 'DLL)'.
                                       VALUE 2
  428 GC0712 01 WS-OS-Type-CD
                                                       PIC 9(1).
  429 GC0712 >>ELIF OS = 'MINGW'
  430 GC0712 01 WS-OS-Dir-CHR
                                                       PIC X(1).
                                       VALUE '\'
  431 GCO712 78 WS-OS-Exe-Ext-CONST VALUE '.exe'.
  432 GCO712 78 WS-OS-Lib-Ext-CONST VALUE '.dll'.
```

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ACS Cobol Xref v2.02.04
                                 Dictionary File for GCIC
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   433 GCO712 78 WS-OS-Lib-Type-CONST VALUE 'DLL)'.
   434 GC0712 01 WS-OS-Type-CD
                                         VALUE 5
                                                         PIC 9(1).
   435 GC0712 >>ELIF OS = 'OSX'
                                        VALUE '/'
   436 GC0712 01 WS-OS-Dir-CHR
                                                         PIC X(1).
  437 GCO712 78 WS-OS-Exe-Ext-CONST VALUE ' . . 438 GCO712 78 WS-OS-Lib-Ext-CONST VALUE '.dylib'. 439 GCO712 78 WS-OS-Lib-Type-CONST VALUE 'DYLIB)'.
   440 GC0712 01 WS-OS-Type-CD
                                         VALUE 4
                                                         PIC 9(1).
   441 GCO712 >>ELIF OS = 'UNIX'
   442 GC0712 01 WS-OS-Dir-CHR
                                         VALUE '/'
                                                         PIC X(1).
   443 GC0712 78 WS-OS-Exe-Ext-CONST VALUE, ,.
   444 GCO712 78 WS-OS-Lib-Ext-CONST VALUE '.so'.
   445 GCO712 78 WS-OS-Lib-Type-CONST VALUE 'SO)'.
   446 GC0712 01 WS-OS-Type-CD
                                         VALUE 3
                                                         PIC 9(1).
   447 GCO712 >>ELIF OS = 'WINDOWS'
   448 GC0712 01 WS-OS-Dir-CHR
                                         VALUE '\'
                                                         PIC X(1).
   449 GCO712 78 WS-OS-Exe-Ext-CONST VALUE '.exe'.
   450 GCO712 78 WS-OS-Lib-Ext-CONST VALUE '.dll'.
   451 GCO712 78 WS-OS-Lib-Type-CONST VALUE 'DLL)'.
   452 GC0712 01 WS-OS-Type-CD
                                         VALUE 1
                                                         PIC 9(1).
   453 GC0712 >>END-IF
   454 GC0909
                  88 WS-OS-Windows-BOOL VALUE 1, 5.
                   88 WS-OS-Cygwin-BOOL VALUE 2.
   455 GC0909
   456 GC0712
                  88 WS-OS-UNIX-BOOL
                                         VALUE 3, 4.
   457 GC0712 88 WS-OS-OSX-BOOL
                                         VALUE 4.
   458
   459
              01 WS-OS-Type-FILLER-TXT.
   460
                   05 VALUE 'Windows'
                                                         PIC X(14).
                   05 VALUE 'Windows/Cygwin'
   461
                                                         PIC X(14).
                   05 VALUE 'UNIX/Linux'
                                                         PIC X(14).
   462
                   O5 VALUE 'OSX'
                                                         PIC X(14).
   463
                   05 VALUE 'Windows/MinGW'
   464
                                                         PIC X(14).
   465
              01 WS-OS-Types-TXT REDEFINES WS-OS-Type-FILLER-TXT.
                   05 WS-OS-Type-TXT
   466
                                                         OCCURS 5 TIMES
   467
                                                         PIC X(14).
   468
              01 WS-Output-Msg-TXT
                                                         PIC X(80).
   469
   470
   471
               01 WS-Path-Delimiter-CHR
                                                         PIC X(1).
   472
               01 WS-Prog-Extension-TXT
                                                         PIC X(256).
   473
   474
               01 WS-Prog-Folder-TXT
   475
                                                         PIC X(256).
   476
   477
       GCO712 01 WS-Prog-File-Name-TXT.
   478 GC0712
                   05 WS-PFN-CHR
                                                         OCCURS 256 TIMES
        GC0712
                                                         PIC X(1).
   479
   480
   481 GC0712 01 WS-Pgm-Nm-TXT
                                                         PIC X(31).
   482
   483
               01 WS-Runtime-Switches-TXT.
   484
                                                         PIC X(1).
                   05 WS-RS-Compile-OK-CHR
   485
                      88 WS-RS-Compile-OK-BOOL
                                                         VALUE 'Y'.
   486 GC0909
                      88 WS-RS-Compile-OK-Warn-BOOL
                                                         VALUE 'W'.
```

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                                                                                     10
                   88 WS-RS-Compile-Failed-BOOL
  487
                                                 VALUE 'N'.
               WS-RS-Quote-CHR

88 WS-RS-Double CHR

88 WS-RS-Quote-CHR

88 WS-RS-Double CHR

88 WS-RS-Double CHR

88 WS-RS-Double CHR
  488 GC0609 05 WS-RS-Complete-CHR
  489 GC0609
  490 GC0609
  491 GC0712 05 WS-RS-Quote-CHR
492 GC0712 88 WS-RS-Double-
493 GC0809 05 WS-RS-IDENT-DIV-
                05 WS-RS-Quote-CHR PIC X(1).
88 WS-RS-Double-Quote-Used-BOOL VALUE 'Y' FALSE 'N'.
05 WS-RS-IDENT-DIV-CHR PIC X(1).
               05 WS-RS-IDENT-DIV-CHR

88 WS-RS-1st-Prog-Complete-BOOL VALUE 'Y'.

88 WS-RS-More-To-1st-Prog-BOOL VALUE 'N'.

PIC X(1).
  494 GC0809
  495 GC0809
               05 WS-RS-No-Switch-Chgs-CHR
  497
                 88 WS-RS-No-Switch-Changes-BOOL VALUE 'Y'.
  498
                   88 WS-RS-Switch-Changes-BOOL VALUE 'N'.
  499 GC0709
              05 WS-RS-Output-File-Busy-CHR
                                                  PIC X(1).
                88 WS-RS-Output-File-Busy-BOOL VALUE 'Y'.
88 WS-RS-Output-File-Avail-BOOL VALUE 'N'.
  500 GC0709
  501 GC0709
              05 WS-RS-Source-Record-Type-CHR
  502 GC0809
                                                 PIC X(1).
                88 WS-RS-Source-Rec-Linkage-BOOL VALUE 'L'.
  503 GC0809
                88 WS-RS-Source-Rec-Ident-BOOL VALUE 'I'.
  504 GC0809
  505 GC0712
                  88 WS-RS-Source-Rec-Ignored-BOOL VALUE ''.
          05 WS-RS-Switch-Error-CHR PIC X(1).
88 WS-RS-Switch-Is-Bad-BOOL VALUE 'Y'
  506
  507
                                                   VALUE 'Y'.
                   88 WS-RS-Switch-Is-Bad-BUOL VALUE 'Y'.
88 WS-RS-Switch-Is-Good-BOOL VALUE 'N'.
  508
  509
  510
             01 WS-Tally-QTY
                                                   USAGE BINARY-LONG.
  511
             SCREEN SECTION.
  512
  513
            *>
  514
            *> Here is the layout of the GCic screen.
  515
            *> The sample screen below shows how the screen would look if the LINEDRAW
  516
           *> configuration setting is set to a value of 2
  517
  518
  519
           *> The following sample screen layout shows how the screen looks with line-drawing
           *> characters disabled.
  520
  521
            *>
                                  3 4 5
  522
            523
            524
  525 VC 01 *> GCic (2020/08/11 23:00) - GNU COBOL V3.1 01July2020 Interactive Compilation
         02 *>+-----
         03 *>| Folder: E:\GNU COBOL\Samples
  527
  528
         04 *>| Filename: GCic.cbl
  529
  530
         06 *> Set/Clr Switches Via F1-F9; Set Config Via F12; ENTER Key Compiles; ESC Quits
         07 *>+-----
  531
         08 *>| F1 Assume WITH DEBUGGING MODE F6 "FUNCTION" Is Optional | Current |
  532
         09 *>| F2 Procedure+Statement Trace F7 Enable All Warnings | Config: |
10 *>| F3 Make A Library (DLL) F8 Source Is Free-Format | XXXXXXXXXX |
  534
         11 *>| F4 Execute If Compilation OK F9 No COMP/BINARY Truncation |
  535
  536
         12 *>| F5 >Produce Listing (Landscape)
         13 *>+-----
  537
         14 *> Extra "cobc" Switches, If Any ("-save-temps=xxx" Prevents Listings):
  538
         15 *>+-----+
  539
         16 *>| ______|
  540
```

```
Dictionary File for GCIC
                                                06/03/2022 23:09:10:97
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                                                                             11
         17 *>| ______ |
  542
        19 *> Program Execution Arguments, If Any:
        20 *>+-----
  544
  545
        21 *>| ______ |
  546
  547
         23 *>+-----+
  548 VC 24 *> GCic Copyright (C) 2009-2022, Gary L. Cutler, GPL
  549
          *>12345678901234567890123456789012345678901234567890123456789012345678901234567890
  551
           *>
               1 2 3 4 5 6 7
  552
           *>
  553
           *> If this program is run on Windows, it must run with codepage 437 activated to
  554
           *> display the line-drawing characters. With a native Windows build or a
           *> Windows/MinGW build, one could use the command 'chcp 437' to set that codepage
  555
           *> for display within a Windows console window (that should be the default though).
  556
  557
           *> With a Windows/Cygwin build, set the environment variable CYGWIN to a value of
  558
           *> 'codepage:oem' (this cannot be done from within the program though - you will
  559
           *> have to use the 'Computer/Advanced System Settings/Environment Variables' (Vista
  560
           *> or Windows 7) function to define the variable. XP Users: use 'My Computer/
  561
           *> Properties/Advanced/Environment Variables'.
  562
           *>
  563
           *> OSX users may use line drawing characters in this and any GNU COBOL program
  564
           *> simply by setting their 'terminal' application's font to "Lucida Console".
  565
           >>IF LINEDRAW IS EQUAL TO O
  566
            78 LD-UL-Corner
                                      VALUE ' '.
  567
  568
            78 LD-LL-Corner
                                      VALUE ' '.
                                      VALUE ''.
  569
            78 LD-UR-Corner
                                      VALUE ' '.
            78 LD-LR-Corner
  570
            78 LD-Upper-T
                                      VALUE ' '.
  571
           78 LD-Lower-T
                                      VALUE ' '.
  572
                                      VALUE ''.
  573
           78 LD-Horiz-Line
                                      VALUE ' '.
  574
           78 I.D-Vert.-Line
  575
            >>ELIF LINEDRAW IS EQUAL TO 1
            78 LD-UL-Corner
                                      VALUE X'DA'.
  576
  577
            78 LD-LL-Corner
                                      VALUE X'CO'.
           78 LD-UR-Corner
  578
                                      VALUE X'BF'.
  579
           78 LD-LR-Corner
                                      VALUE X'D9'.
  580
           78 LD-Upper-T
                                      VALUE X'C2'.
            78 LD-Lower-T
                                      VALUE X'C1'.
  581
  582
            78 LD-Horiz-Line
                                      VALUE X'C4'.
                                      VALUE X'B3'.
  583
            78 LD-Vert-Line
  584
            >>ELSE
  585
            78 LD-UL-Corner
                                      VALUE '+'.
  586
            78 LD-LL-Corner
                                      VALUE '+'.
  587
           78 LD-UR-Corner
                                      VALUE '+'.
                                      VALUE '+'.
  588
            78 LD-LR-Corner
            78 LD-Upper-T
  589
                                      VALUE '+'.
                                      VALUE '+'.
  590
            78 LD-Lower-T
                                      VALUE '-'.
  591
            78 LD-Horiz-Line
                                      VALUE '|'.
  592
            78 LD-Vert-Line
  593
            >>END-IF
  594
```

```
ACS Cobol Xref v2.02.04
                               Dictionary File for GCIC
                                                         06/03/2022 23:09:10:97
                                                                                Page
                                                                                        12
              01 S-Blank-SCR LINE 1 COLUMN 1 BLANK SCREEN.
  595
  596
  597
              O1 S-Switches-SCR BACKGROUND-COLOR COB-COLOR-BLACK
                               FOREGROUND-COLOR COB-COLOR-WHITE AUTO.
  598
  599
             *>
             *> GENERAL SCREEN FRAMEWORK
  600
  601
             *>
                 O3 BACKGROUND-COLOR COB-COLOR-BLACK
  602
  603
                   FOREGROUND-COLOR COB-COLOR-GREEN HIGHLIGHT.
                   05 LINE 02 COL 01
                                             VALUE LD-UL-Corner.
  604 GC0712
                             COL 02 PIC X(78) FROM WS-Horizontal-Line-TXT.
  605 GC0712
                   05
                   05
                             COL 80
                                             VALUE LD-UR-Corner.
  606
  607
  608 GC0712
                   05 LINE 03 COL 01
                                              VALUE LD-Vert-Line.
  609
                   05 COL 80
                                             VALUE LD-Vert-Line.
  610
                   05 LINE 04 COL 01
  611 GC0712
                                             VALUE LD-Vert-Line.
  612
                   05
                              COL 80
                                              VALUE LD-Vert-Line.
  613
  614 GC0712
                   05 LINE 05 COL 01
                                              VALUE LD-LL-Corner.
  615 GC0712
                             COL 02 PIC X(78) FROM WS-Horizontal-Line-TXT.
  616
                   05
                              COL 80
                                              VALUE LD-LR-Corner.
  617
  618 GC0712
                   05 LINE 07 COL 01
                                             VALUE LD-UL-Corner.
                             COL 02 PIC X(65) FROM WS-Horizontal-Line-TXT.
  619 GC0712
  620 GC0712
                   05
                              COL 67
                                             VALUE LD-Upper-T.
                   05
                             COL 68 PIC X(12) FROM WS-Horizontal-Line-TXT.
  621 GC0712
  622
                   05
                             COL 80
                                              VALUE LD-UR-Corner.
  623
  624 GC0712
                  05 LINE 08 COL 01
                                             VALUE LD-Vert-Line.
                   05 COL 67
  625 GC0712
                                             VALUE LD-Vert-Line.
                             COL 80
                                             VALUE LD-Vert-Line.
  626
  627
  628 GC0712 05 LINE 09 COL 01
                                             VALUE LD-Vert-Line.
  629 GC0712
                   05 COL 67
                                             VALUE LD-Vert-Line.
  630
                   05
                             COL 80
                                              VALUE LD-Vert-Line.
  631
                05 LINE 10 COL 01
  632 GC0712
                                             VALUE LD-Vert-Line.
  633 GC0712
                   05
                             COL 67
                                              VALUE LD-Vert-Line.
  634
                   05
                             COL 80
                                              VALUE LD-Vert-Line.
  635
  636 GC0712
                   05 LINE 11 COL 01
                                             VALUE LD-Vert-Line.
  637
       GC0712
                   05
                             COL 67
                                              VALUE LD-Vert-Line.
  638
                   05
                              COL 80
                                              VALUE LD-Vert-Line.
  639
  640 GC0712
                   05 LINE 12 COL 01
                                             VALUE LD-Vert-Line.
  641 GC0712
                             COL 67
                                              VALUE LD-Vert-Line.
                   05
  642
                   05
                             COL 80
                                              VALUE LD-Vert-Line.
  643
  644 GC0712
                   05 LINE 13 COL 01
                                             VALUE LD-LL-Corner.
                   05
                             COL 02 PIC X(65) FROM WS-Horizontal-Line-TXT.
  645 GC0712
  646 GC0712
                             COL 67 VALUE LD-Lower-T.
                   05
  647 GC0712
                             COL 68 PIC X(12) FROM WS-Horizontal-Line-TXT.
                   05
                                              VALUE LD-LR-Corner.
  648
                            COL 80
```

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Dictionary File for GCIC
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                                                            06/03/2022 23:09:10:97
                                                                                      Page
                                                                                             13
   649
   650
       GC0712
                    05 LINE 15 COL 01
                                                VALUE LD-UL-Corner.
                               COL 02 PIC X(78) FROM WS-Horizontal-Line-TXT.
   651
   652
                    05
                               COL 80
                                                VALUE LD-UR-Corner.
   653
                    05 LINE 16 COL 01
   654
       GC0712
                                                VALUE LD-Vert-Line.
   655
                    05
                               COL 80
                                                VALUE LD-Vert-Line.
   656
   657 GC0712
                    05 LINE 17 COL 01
                                                VALUE LD-Vert-Line.
                                                VALUE LD-Vert-Line.
   658
                               COT. 80
   659
                    05 LINE 18 COL 01
                                                VALUE LD-LL-Corner.
   660 GC0712
   661 GC0712
                    05
                        COL 02 PIC X(78) FROM WS-Horizontal-Line-TXT.
   662
                    05
                               COL 80
                                                VALUE LD-LR-Corner.
   663
                    05 LINE 20 COL 01
                                                VALUE LD-UL-Corner.
   664 GC0712
                               COL 02 PIC X(78) FROM WS-Horizontal-Line-TXT.
   665 GC0712
   666
                    05
                               COL 80
                                                VALUE LD-UR-Corner.
   667
   668
       GC0712
                    05 LINE 21 COL 01
                                                VALUE LD-Vert-Line.
                               COL 80
   669
                                                VALUE LD-Vert-Line.
   670
   671 GC0712
                    05 LINE 22 COL 01
                                                VALUE LD-Vert-Line.
   672
                    05
                               COL 80
                                                VALUE LD-Vert-Line.
   673
   674 GC0712
                    05 LINE 23 COL 01
                                                VALUE LD-LL-Corner.
                               COL 02 PIC X(78) FROM WS-Horizontal-Line-TXT.
   675 GC0712
                    05
   676
                    05
                               COL 80
                                                VALUE LD-LR-Corner.
   677
             *> TOP AND BOTTOM LINES
   678
   679
             *>
   680 GC0712
                 O3 BACKGROUND-COLOR COB-COLOR-BLUE
   681
                    FOREGROUND-COLOR COB-COLOR-WHITE HIGHLIGHT.
   682 GC0410
                    O5 LINE O1 COL O1 VALUE ' GCic ('.
   683 GC0410
                    05
                               COL 08 PIC X(16) FROM WS-OC-Compile-DT.
   684 GC1213
                               COL 24 VALUE ') GNUCOBOL 3.1.2 O6MAR2022 ' &
   685 GC0410
                                             'Interactive Compilation
                 O3 BACKGROUND-COLOR COB-COLOR-RED
   686 VC0617
                    FOREGROUND-COLOR COB-COLOR-WHITE HIGHLIGHT.
   687 GC0712
   688
       GC0712
                    05 LINE 24 COL 01 PIC X(80) FROM WS-Output-Msg-TXT.
   689
             *>
   690
             *> LABELS
   691
   692
                 O3 BACKGROUND-COLOR COB-COLOR-BLACK
                    FOREGROUND-COLOR COB-COLOR-CYAN HIGHLIGHT.
   693
   694 GC0712
                    05 LINE 06 COL 02 VALUE 'Set/Clr Switches Via F1-F9; ' &
   695 GC0712
                                             'Set Config Via F12; Enter Key ' &
   696 GC0712
                                             'Compiles; Esc Quits'.
   697 GC0712
                    05 LINE 14 COL 02 VALUE 'Extra "cobc" Switches, If Any ' &
                                             '("-save-temps=xxx" Prevents ' &
   698 GC0712
   699 GC0712
                                             'Listings):'.
   700 GC0712
                    05 LINE 19 COL 02 VALUE 'Program Execution Arguments, ' &
                                             'If Any:'.
   701 GC0712
   702 GC0712
                 O3 BACKGROUND-COLOR COB-COLOR-BLACK
```

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Dictionary File for GCIC
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                                                                                              Page
                                                                                                      14
                      FOREGROUND-COLOR COB-COLOR-WHITE HIGHLIGHT.
   703 GC0712
   704 GC0712
                    05 LINE 06 COL 23 VALUE 'F1'.
                     O5 COL 26 VALUE 'F9'.
   705 GC0712
   706 GC0712
                     05
                                  COL 45 VALUE 'F12'.
   707 GC0712
                     05
                                  COL 50 VALUE 'ENTER'.
   708 GC0712
                     05
                                  COL 70 VALUE 'ESC'.
   709
               *> TOP SECTION BACKGROUND
   710
   711
               *>
                   O3 BACKGROUND-COLOR COB-COLOR-BLACK
   712
   713
                    FOREGROUND-COLOR COB-COLOR-WHITE HIGHLIGHT.
   714 GC0712
                      05 LINE 03 COL 62 VALUE 'Enter'.
   715 GC0712
                      05 LINE 04 COL 62 VALUE 'Esc'.
   716
                   O3 BACKGROUND-COLOR COB-COLOR-BLACK
   717
                   FOREGROUND-COLOR COB-COLOR-GREEN HIGHLIGHT.
   718
   719 GC0712
                    05 LINE 04 COL 03 VALUE 'Folder: '.
   720 GC0712
                    05 LINE 03 COL 03 VALUE 'Filename: '.
   721
   722 GC0712
                      05 LINE 03 COL 67 VALUE ': Compile
   723 GC0712
                      05 LINE 04 COL 65 VALUE ': Quit
   724
               *> TOP SECTION PROGRAM INFO
   725
   726
                   O3 BACKGROUND-COLOR COB-COLOR-BLACK
   727
                      FOREGROUND-COLOR COB-COLOR-WHITE HIGHLIGHT.
   728
   729 GC0712
                      05 LINE 03 COL 13 PIC X(66) FROM WS-Prog-File-Name-TXT.
   730 GC0712
                      05 LINE 04 COL 13 PIC X(66) FROM WS-Prog-Folder-TXT.
   731
   732
               *> MIDDLE LEFT SECTION F-KEYS
   733
               *>
                   O3 BACKGROUND-COLOR COB-COLOR-BLACK
   734
                    FOREGROUND-COLOR COB-COLOR-WHITE HIGHLIGHT.
   735
                    05 LINE 08 COL 03 VALUE 'F1'.
   736 GC0712
  737 GC0712 05 LINE 09 COL 03 VALUE 'F2'.
738 GC0712 05 LINE 10 COL 03 VALUE 'F3'.
739 GC0712 05 LINE 11 COL 03 VALUE 'F4'.
740 GC0712 05 LINE 12 COL 03 VALUE 'F5'.
                    05 LINE 09 COL 03 VALUE 'F2'.
   741
                   05 LINE 08 COL 35 VALUE 'F6'.
   742 GC0712
   743 GC0712
                    05 LINE 09 COL 35 VALUE 'F7'.
   744 GC0712
                      05 LINE 10 COL 35 VALUE 'F8'.
                      05 LINE 11 COL 35 VALUE 'F9'.
   745 GC0712
   746
              *>
   747
               *> MIDDLE LEFT SECTION SWITCHES
   748
   749
                   O3 BACKGROUND-COLOR COB-COLOR-BLACK
   750
                    FOREGROUND-COLOR COB-COLOR-RED HIGHLIGHT.
   751 GC0712
                     05 LINE 08 COL 06 PIC X(1) FROM WS-CS-DEBUG-CHR.
   752 GC0712
                     05 LINE 09 COL 06 PIC X(1) FROM WS-CS-TRACEALL-CHR.
   753 GC0712
                     05 LINE 10 COL 06 PIC X(1) FROM WS-CS-LIBRARY-CHR.
   753 GC0/12 O5 LINE 10 COL O6 PIC X(1) FROM WS-CS-LIBRARI CHR.
754 GC0712 O5 LINE 11 COL O6 PIC X(1) FROM WS-CS-EXECUTE-CHR.
755 GC0712 O5 LINE 12 COL O6 PIC X(1) FROM WS-CS-LISTING-CHR.
   756
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ACS Cobol Xref v2.02.04
                                    Dictionary File for GCIC
                                                                    06/03/2022 23:09:10:98 Page
                                                                                                         15
                      05 LINE 08 COL 38 PIC X(1) FROM WS-CS-NOFUNC-CHR.
   757 GC0712
   758 GC0712
                      05 LINE 09 COL 38 PIC X(1) FROM WS-CS-WARNALL-CHR.
                       05 LINE 10 COL 38 PIC X(1) FROM WS-CS-FREE-CHR.
   759 GC0712
   760 GC0712
                      05 LINE 11 COL 38 PIC X(1) FROM WS-CS-NOTRUNC-CHR.
   761
              *>
               *> MIDDLE LEFT SECTION BACKGROUND
   762
   763
                   O3 BACKGROUND-COLOR COB-COLOR-BLACK
   764
                    FOREGROUND-COLOR COB-COLOR-GREEN HIGHLIGHT.
   765
   766 GC0712
                     05 LINE 08 COL 07 VALUE 'Assume WITH DEBUGGING MODE'.
  766 GC0712 O5 LINE O6 COL O7 VALUE 'Procedure+Statement Trace'.
768 GC0712 O5 LINE 10 COL 07 VALUE 'Procedure+Statement Trace'.
769 GC0712 O5 COL 23 VALUE WS-OS-Lib-Type-CONST.
770 GC0712 O5 LINE 11 COL 07 VALUE 'Execute If Compilation OK'.
771 GC1213 O5 LINE 12 COL 07 FROM WS-Listing-TXT.
   772
   773 GC0712
                    05 LINE 08 COL 39 VALUE '"FUNCTION" Is Optional
   774 GC0712
                      05 LINE 09 COL 39 VALUE 'Enable All Warnings
                      05 LINE 10 COL 39 VALUE 'Source Is Free-Format
   775 GC0712
   776 GC0712
                      O5 LINE 11 COL 39 VALUE 'No COMP/BINARY Truncation '.
   777
   778
               *> MIDDLE RIGHT SECTION Text
   779
               *>
   780
                    O3 BACKGROUND-COLOR COB-COLOR-BLACK
                       FOREGROUND-COLOR COB-COLOR-GREEN HIGHLIGHT.
   781
   782 GC0712
                       05 LINE 08 COL 69 VALUE 'Current'.
   783 GC0712
                       05 LINE 09 COL 69 VALUE 'Config:'.
   784
   785
               *> MIDDLE RIGHT SECTION CONFIG FILE
   786
               *>
   787
                    O3 BACKGROUND-COLOR COB-COLOR-BLACK
                    FOREGROUND-COLOR COB-COLOR-WHITE HIGHLIGHT.
   788
   789 GC0712
                       05 LINE 10 COL 69 PIC X(10)
   790 GC0712
                        FROM WS-CS-Filename-TXT (WS-CS-Config-NUM).
   791
              *>
   792
               *> FREE-FORM OPTIONS FIELDS
   793
               *>
                   O3 BACKGROUND-COLOR COB-COLOR-BLACK
   794
   795
                    FOREGROUND-COLOR COB-COLOR-WHITE HIGHLIGHT.
   796 GC0712
                       05 LINE 16 COL 03 PIC X(76) USING WS-CS-Extra-H1-TXT.
                      05 LINE 17 COL 03 PIC X(76) USING WS-CS-Extra-H2-TXT.
   797 GC0712
   798 GC0712
                      05 LINE 21 COL 03 PIC X(76) USING WS-CS-Arg-H1-TXT.
                      05 LINE 22 COL 03 PIC X(76) USING WS-CS-Arg-H2-TXT.
   799 GC0712
   800
   801
               PROCEDURE DIVISION.
               *>**********************
   802
   803
               *> Legend to procedure names:
   804
               *>
              *> 00x-xxx All MAIN driver procedures

*> 0xx-xxx All GLOBAL UTILITY procedures

*> 1xx-xxx All INITIALIZATION procedures

*> 2xx-xxx All CORE PROCESSING procedures
   805
   806
   807
   808
               *> 9xx-xxx All TERMINATION procedures
   809
   810
```

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                                                                                                                                                                                                             16
                              DECLARATIVES.
                             000-File-Error SECTION.
      812
                                 USE AFTER STANDARD ERROR PROCEDURE ON F-Source-Code-FILE.
                                    COPY FileStat-Msgs
      814
                            * REPLACING STATUS BY WS-FSM-Status-CD
      815
      816
                                                               MSG BY WS-FSM-Msg-TXT.
      817
                             *> ** Author: Gary L. Cutler
      818
                                                                                                                                                                          **
      819
                             *> ** CutlerGL@gmail.com
                                                                                                                                                                          **
                             *> **
      820
      821
                             *> ** This copybook defines an EVALUATE statement capable of
                                                                                                                                                                          **
      822
                             *> ** translating two-digit FILE-STATUS codes to a message.
                                                                                                                                                                          **
      823
                             *> **
                                                                                                                                                                          **
      824
                              *> ** Use the REPLACING option to COPY to change the names of
                             *> ** the MSG and STATUS identifiers to the names your program **
      825
      826
                            *> ** needs.
                            827
                           EVALUATE WS-FSM-Status-CD
WHEN 00 MOVE 'SUCCESS ' TO WS-FSM-Msg-TXT
WHEN 02 MOVE 'SUCCESS DUPLICATE ' TO WS-FSM-Msg-TXT
WHEN 04 MOVE 'SUCCESS INCOMPLETE ' TO WS-FSM-Msg-TXT
WHEN 05 MOVE 'SUCCESS OPTIONAL ' TO WS-FSM-Msg-TXT
WHEN 07 MOVE 'SUCCESS NO UNIT ' TO WS-FSM-Msg-TXT
WHEN 10 MOVE 'END OF FILE ' TO WS-FSM-Msg-TXT
WHEN 14 MOVE 'OUT OF KEY RANGE ' TO WS-FSM-Msg-TXT
WHEN 21 MOVE 'KEY INVALID ' TO WS-FSM-Msg-TXT
WHEN 22 MOVE 'KEY EXISTS ' TO WS-FSM-Msg-TXT
WHEN 23 MOVE 'KEY EXISTS ' TO WS-FSM-Msg-TXT
WHEN 30 MOVE 'PERMANENT ERROR ' TO WS-FSM-Msg-TXT
WHEN 31 MOVE 'INCONSISTENT FILENAME ' TO WS-FSM-Msg-TXT
WHEN 34 MOVE 'BOUNDARY VIOLATION ' TO WS-FSM-Msg-TXT
WHEN 35 MOVE 'FILE NOT FOUND ' TO WS-FSM-Msg-TXT
WHEN 37 MOVE 'PERMISSION DENIED ' TO WS-FSM-Msg-TXT
WHEN 38 MOVE 'CLOSED WITH LOCK ' TO WS-FSM-Msg-TXT
WHEN 39 MOVE 'CONFLICT ATTRIBUTE ' TO WS-FSM-Msg-TXT
WHEN 41 MOVE 'ALREADY OPEN ' TO WS-FSM-Msg-TXT
WHEN 42 MOVE 'NOT OPEN ' TO WS-FSM-Msg-TXT
WHEN 43 MOVE 'READ NOT DONE ' TO WS-FSM-Msg-TXT
WHEN 44 MOVE 'READ RROR ' TO WS-FSM-Msg-TXT
WHEN 45 MOVE 'READ ERROR ' TO WS-FSM-Msg-TXT
WHEN 46 MOVE 'READ ERROR ' TO WS-FSM-Msg-TXT
WHEN 47 MOVE 'INPUT DENIED ' TO WS-FSM-Msg-TXT
WHEN 48 MOVE 'OUTPUT DENIED ' TO WS-FSM-Msg-TXT
WHEN 48 MOVE 'INPUT DENIED ' TO WS-FSM-Msg-TXT
WHEN 49 MOVE 'INPUT DENIED ' TO WS-FSM-Msg-TXT
WHEN 49 MOVE 'INPUT DENIED ' TO WS-FSM-Msg-TXT
WHEN 51 MOVE 'RECORD LOCKED ' TO WS-FSM-Msg-TXT
WHEN 52 MOVE 'END-OF-PAGE ' TO WS-FSM-Msg-TXT
WHEN 51 MOVE 'RECORD LOCKED ' TO WS-FSM-Msg-TXT
WHEN 51 MOVE 'FILE SHARING FAILURE ' TO WS-FSM-Msg-TXT
WHEN 51 MOVE 'FILE SHARING FAILURE ' TO WS-FSM-Msg-TXT
WHEN 61 MOVE 'FILE SHARING FAILURE ' TO WS-FSM-Msg-TXT
WHEN 91 MOVE 'FILE SHARING FAILURE ' TO WS-FSM-Msg-TXT
      828
                                       EVALUATE WS-FSM-Status-CD
      829
      830
      831
      832
      833
      834
      836
      837
      838
      839
      840
      841
      842
      843
      844
      845
      846
      847
      848
      850
      851
      852
      853
      854
      855
      856
                                        WHEN 61 MOVE 'FILE SHARING FAILURE ' TO WS-FSM-Msg-TXT
WHEN 91 MOVE 'FILE NOT AVAILABLE ' TO WS-FSM-Msg-TXT
      857
      858
      859
                                        END-EVALUATE.
      860 *>>W Msg29 Caution: One or more replacing sources not found
      861
                                       MOVE SPACES TO WS-Output-Msg-TXT
      862
                                         IF WS-FSM-Status-CD = 35
      863
                                                DISPLAY
                                                          'File not found: "'
      864
```

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                                                                Dictionary File for GCIC
                                                                                                                       06/03/2022 23:09:10:98 Page
                                                                                                                                                                                        17
     865
                                                     TRIM(WS-File-Name-TXT,TRAILING)
     866
     867
                                     ELSE
     868
                                            DISPLAY
                                                     'Error accessing file: "'
     869
                                                     TRIM(WS-File-Name-TXT, TRAILING)
     870
     871
                                     END-IF
     872
     873
                                     GOBACK
     874
                           END DECLARATIVES.
     875
     876
     877
                            000-Main SECTION.
  ### WS-RS-Complete-BOOL
### WS-RS-Complete-BOOL
### WS-RS-Complete-BOOL
### WS-RS-Complete-BOOL
### WS-RS-Complete-BOOL
### WS-RS-Complete-OK-BOOL OR WS-RS-Complete-OK-Warn-BOOL
### WS-RS-Complete-OK-BOOL OR WS-RS-Complete-OK-Warn-BOOL
### WS-CS-LISTING-CHR > SPACE
### SPACE
### WS-CS-LISTING-CHR > SPACE

     878
                                    PERFORM 100-Initialization
     893 GC0609 END-PERFORM
894 PERFORM 900-Terminate
     895
                           * -- Control will NOT return
     896
     897
     898
                          899
                           *> Perform all program-wide initialization operations
     900
                           901
                           100-Initialization SECTION.
     902
                           903
                           *> Make sure full screen-handling is in effect
     904
                           SET ENVIRONMENT 'COB_SCREEN_EXCEPTIONS' TO 'Y'
     905
                                     SET ENVIRONMENT 'COB_SCREEN_ESC'
     906
                                                                                                                   TO 'Y'
                                   SET ENVIRONMENT "COB_EXIT_WAIT"
     907
              VC0617
     908
                          *>*******************
     909
                           *> Get GCic Compilation Date/Time
                           *>**********************
     910
                                     MOVE WHEN-COMPILED (1:12) TO WS-OC-Compile-DT
     911
     912
                                     INSPECT WS-OC-Compile-DT
                                           REPLACING ALL '/' BY ':'
     913
     914
                                            AFTER INITIAL SPACE
     915
                          *>**********************
     916
                          *> Convert WS-CS-All-Switches-TXT to Needed Alphanumeric Values**
     917
                           *>************************
     918
                                    INSPECT WS-CS-All-Switches-TXT
```

```
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ACS Cobol Xref v2.02.04
                                                                           18
  919
                  REPLACING ALL 'O' BY SPACE
  920
                         ALL '1' BY SELCHAR
                         ALL '2' BY SELCHAR
  921 GC1213
       *>******************
  922
  923
          *> Process filename (the only command-line argument)
  924
          *>***********************
  925 GC0712
             ACCEPT WS-Cmd-Args-TXT FROM COMMAND-LINE
  926 GC0712 MOVE 1 TO WS-Cmd-SUB
  927 GC0712
              IF WS-Cmd-Args-TXT(WS-Cmd-SUB:1) = '"' OR "'"
  928 GC0712
                MOVE WS-Cmd-Args-TXT(WS-Cmd-SUB:1)
  TO WS-Cmd-End-Quote-CHR
                UNSTRING WS-Cmd-Args-TXT
                   DELIMITED BY WS-Cmd-End-Quote-CHR
  933 GC0712
                     INTO WS-File-Name-TXT
  934 GC0712
                     WITH POINTER WS-Cmd-SUB
  935 GC0712 ELSE
              UNSTRING WS-Cmd-Args-TXT
  936 GC0712
  937 GC0712
                     DELIMITED BY ALL SPACES
  938 GC0712
                     INTO WS-File-Name-TXT
  939 GC0712
                     WITH POINTER WS-Cmd-SUB
  939 GC0712
940 GC0712 END-IF
  941
              IF WS-File-Name-TXT = SPACES
  942 GC0712 DISPLAY 'No program filename was specified'
                 PERFORM 900-Terminate
  943
           * ----- Control will NOT return
  944
              END-IF
  945
  946
          947
           *> Determine if 'Make A Library' feature should be forced 'ON' **
  948
          PERFORM 240-Find-LINKAGE-SECTION
  949
  950
          *>************************
          *> Split 'WS-File-Name-TXT' into 'WS-Prog-Folder-TXT' and
  951
  952
          *> 'WS-Prog-File-Name-TXT'
  953
          954 GC0909
              IF WS-OS-Cygwin-BOOL AND WS-File-Name-TXT (2:1) = ':'
  955 GC0712
               MOVE '\' TO WS-OS-Dir-CHR
  956 GC0909 END-IF
  957 GCO712 MOVE LENGTH(WS-File-Name-TXT) TO WS-I-SUB
  958 GC0712 PERFORM UNTIL WS-I-SUB = 0
  959 GCO712 OR WS-FN-CHR (WS-I-SUB) = WS-OS-Dir-CHR
  960
                 SUBTRACT 1 FROM WS-I-SUB
               END-PERFORM
  961
  962
               IF WS-I-SUB = 0
                  MOVE SPACES
  963
                            TO WS-Prog-Folder-TXT
                  MOVE WS-File-Name-TXT TO WS-Prog-File-Name-TXT
  964
  965
               ELSE
                  MOVE '*' TO WS-FN-CHR (WS-I-SUB)
  966
                  UNSTRING WS-File-Name-TXT DELIMITED BY '*'
  967
  968
                     INTO WS-Prog-Folder-TXT
  969
                         WS-Prog-File-Name-TXT
  970 GC0712
                  MOVE WS-OS-Dir-CHR TO WS-FN-CHR (WS-I-SUB)
               END-IF
  971
               IF WS-Prog-Folder-TXT = SPACES
  972
```

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                                                                                                                                                                         19
     973
                                        ACCEPT WS-Prog-Folder-TXT FROM ENVIRONMENT 'CD'
     974 GC0909
                                CALL 'CBL_CHANGE_DIR'
     975 GC0909
     976 GC0909
                                                USING TRIM(WS-Prog-Folder-TXT, TRAILING)
     977
                                  END-IF
     978 GC0909
                                 IF WS-OS-Cygwin-BOOL AND WS-File-Name-TXT (2:1) = ':'
     979 GC0712
                                  MOVE '/' TO WS-OS-Dir-CHR
     980 GC0909 END-IF
     981
               *> Split 'WS-Prog-File-Name-TXT' into 'WS-Pgm-Nm-TXT' &
     983
                       *> 'WS-Prog-Extension-TXT'
     984
                       *>***********************
     985 GC0712 MOVE LENGTH(WS-Prog-File-Name-TXT) TO WS-I-SUB
     986 GC0712
                                 PERFORM UNTIL WS-I-SUB = 0
     986 GC0712 PERFURM UNITE WS-I-SUB = 0
987 GC0712 OR WS-PFN-CHR (WS-I-SUB) = '.'
     988 GC0712
                                 SUBTRACT 1 FROM WS-I-SUB
     989 GC0712 END-PERFORM
     990 GC0712 IF WS-I-SUB = 0
                                MOVE WS-Prog-File-Name-TXT TO WS-Pgm-Nm-TXT
     991 GC0712
     992 GC0712
                                       MOVE SPACES TO WS-Prog-Extension-TXT
     993 GC0712
994 GC0712
    994 GC0712 MOVE '*' TO WS-PFN-CHR (WS-I-SUB)
995 GC0712 UNSTRING WS-Prog-File-Name-TXT DE
996 GC0712 INTO WS-Pgm-Nm-TXT
997 GC0712 WS-Prog-Extension-TXT
998 GC0712 MOVE '.' TO WS-PFN-CHR (WS-I-SUB)
                                        UNSTRING WS-Prog-File-Name-TXT DELIMITED BY '*'
     999 GC0712
                                END-IF
   1000
                *>************************
   1001
                         *> Build initial Line 24 Message
   1002
                       *>*********************
   1003 GC0909 MOVE ALL LD-Horiz-Line TO WS-Horizontal-Line-TXT.
   1004 GC0410 MOVE CONCATENATE(' GCic for '
   1005 GC0410
                                                                TRIM(WS-OS-Type-TXT(WS-OS-Type-CD),Trailing)
   1006 VC0811
                                                                 ' Copyright (C) 2009-2022, Gary L. '
   1007 GC0410
                                                                 'Cutler, GPL')
   1008 GC0410
                                     TO WS-Output-Msg-TXT.
   1009 GC0909
   1010
   1011
   1012
                         *> Show the user the current switch settings and allow them to **
   1013
                        *> be changed.
   1014
                        200-Let-User-Set-Switches SECTION.
   1015
   1016
                                SET WS-RS-Switch-Changes-BOOL TO TRUE
   1017
                                 PERFORM UNTIL WS-RS-No-Switch-Changes-BOOL
                                 EVALUATE WS-Listing-CD
   1018 GC1213
   1019 GC1213
                                      WHEN O
   1020 GC1213
                                                                                                      TO WS-Listing-TXT
                                               MOVE 'Listing Off'
   1021 GC1213
                                                                                                      TO WS-CS-LISTING-CHR
                                               MOVE SPACE
                                MOV
WHEN 1
   1022 GC1213
  MOV 1 MOV 2-24 GC1213 MOV 2-24 GC1213 WHEN 2 1026 GC1213 MOV 2-24 
                                               MOVE 'Listing On (Landscape)' TO WS-Listing-TXT
                                              MOVE SELCHAR
                                                                                                      TO WS-CS-LISTING-CHR
                                             MOVE 'Listing On (Portrait)' TO WS-Listing-TXT
```

ACS Cob	ol Xref	v2.02.04 Dictionary File for GCIC 06/03/2022 23:09:10:98	Page	20
1027	GC1213	MOVE SELCHAR TO WS-CS-LISTING-CHR		
1028	GC1213			
1029		ACCEPT S-Switches-SCR		
1030		IF COB-CRT-STATUS > 0		
1031		EVALUATE COB-CRT-STATUS		
1032		WHEN COB-SCR-F1		
1033		IF WS-CS-DEBUG-CHR = SPACE		
1034	GC0712	MOVE SELCHAR TO WS-CS-DEBUG-CHR		
1035		ELSE		
1036		MOVE ' ' TO WS-CS-DEBUG-CHR		
1037		END-IF		
1038	GC0712	WHEN COB-SCR-F2		
1039	GC0712	IF WS-CS-TRACEALL-CHR = SPACE		
	GC0712	MOVE SELCHAR TO WS-CS-TRACEALL-CHR		
	GC0712	ELSE		
1042	GC0712	MOVE ' ' TO WS-CS-TRACEALL-CHR		
1043	GC0712	END-IF		
1044		WHEN COB-SCR-F3		
1045	GC0712	IF WS-CS-LIBRARY-CHR = SPACE		
1046	GC0712	MOVE SELCHAR TO WS-CS-LIBRARY-CHR		
1047		ELSE		
1048	GC0712	MOVE ' ' TO WS-CS-LIBRARY-CHR		
1049		END-IF		
1050		WHEN COB-SCR-F4		
1051		IF WS-CS-EXECUTE-CHR = SPACE		
1052	GC0712	MOVE SELCHAR TO WS-CS-EXECUTE-CHR		
1053		ELSE		
1054		MOVE ' ' TO WS-CS-EXECUTE-CHR		
1055		END-IF		
1056	GC0712	WHEN COB-SCR-F5		
1057	GC1213	ADD 1 TO WS-Listing-CD		
	GC1213	IF WS-Listing-CD > 2		
	GC1213	MOVE O TO WS-Listing-CD		
1060	GC1213	END-IF		
1061	GC0712	WHEN COB-SCR-F6		
	GC0712	IF WS-CS-NOFUNC-CHR = SPACE		
	GC0712	MOVE SELCHAR TO WS-CS-NOFUNC-CHR		
	GC0712 GC0712	ELSE		
1065 1066	GC0712 GC0712	MOVE ' ' TO WS-CS-NOFUNC-CHR END-IF		
1067	GC0712	WHEN COB-SCR-F7		
1067	GC0712	IF WS-CS-WARNALL-CHR = SPACE		
1069	GC0712	MOVE SELCHAR TO WS-CS-WARNALL-CHR		
	GC0712	ELSE		
1070	GC0712	MOVE ' ' TO WS-CS-WARNALL-CHR		
1071	GC0712	END-IF		
1072	GC0712	WHEN COB-SCR-F8		
	GC0712	IF WS-CS-FREE-CHR = SPACE		
1074	GC0712	MOVE SELCHAR TO WS-CS-FREE-CHR		
	GC0712	ELSE		
	GC0712	MOVE ' ' TO WS-CS-FREE-CHR		
	GC0712	END-IF		
	GC0712	WHEN COB-SCR-F9		
	GC0712	IF WS-CS-NOTRUNC-CHR = SPACE		
_000		11 110 00 HOLINGTO OMY DI NOL		

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                           Dictionary File for GCIC
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                                                                               21
 1081 GC0712
                                 MOVE SELCHAR TO WS-CS-NOTRUNC-CHR
 1082 GC0712
                             ELSE
 1083 GC0712
                                MOVE ' ' TO WS-CS-NOTRUNC-CHR
 1084 GC0712
                             FND-TF
 1085
                          WHEN COB-SCR-ESC
 1086
                           PERFORM 900-Terminate
            * ----- Control will NOT return
 1087
 1088 GC0712
                         WHEN COB-SCR-F12
 1089 GC0712
                           ADD 1 TO WS-CS-Config-NUM
 1090 GC0712
                             IF WS-CS-Config-NUM > 7
 1091 GC0712
                                MOVE 1 TO WS-CS-Config-NUM
 1092 GC0712
                             END-TF
 1093
                          WHEN OTHER
 1094
                             MOVE 'An unsupported key was pressed'
 1095
                               TO WS-Output-Msg-TXT
 1096
                      END-EVALUATE
 1097
 1098
                      SET WS-RS-No-Switch-Changes-BOOL TO TRUE
 1099
                   END-IF
 1100
                END-PERFORM
 1101
 1102
 1103
           1104
           *> Run the compiler using the switch settings we've prepared. **
 1105
           *>***********************
           210-Run-Compiler SECTION.
 1106
             MOVE SPACES TO WS-Cmd-TXT
 1107
 1108
                            WS-Cobc-Cmd-TXT
 1109
                            WS-Output-Msg-TXT
              DISPLAY S-Switches-SCR
 1110
 1111
               MOVE 1 TO WS-I-SUB
 1112 GC0712 MOVE LOWER-CASE(WS-CS-Filename-TXT (WS-CS-Config-NUM))
 1113 GC0712
               TO WS-Config-Fn-TXT
 1115
           *> Build the 'cobc' command
 1116
           1117 GCO909 MOVE SPACES TO WS-Cobc-Cmd-TXT
 1118 GC0909
               STRING 'cobc -v -std='
               TRIM(WS-Config-Fn-TXT,TRAILING)
 1119 GC0909
 1120 GC0909
 1121 GC0909 INTO WS-Cobc-Cmd-TXT
1122 GC0909 WITH POINTER WS-I-SUB
1123 IF WS-CS-LIBRARY-CHR NOT = ' '
 1124
                 STRING '-m '
 1125
                      DELIMITED SIZE INTO WS-Cobc-Cmd-TXT
                      WITH POINTER WS-I-SUB
 1126
 1127
                ELSE
                   STRING '-x'
 1128
                      DELIMITED SIZE INTO WS-Cobc-Cmd-TXT
 1129
                       WITH POINTER WS-I-SUB
 1130
 1131
              END-IF
               IF WS-CS-DEBUG-CHR NOT = ' '
 1132
 1133
                   STRING '-fdebugging-line '
 1134
                      DELIMITED SIZE INTO WS-Cobc-Cmd-TXT
```

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                                                                                            22
                          WITH POINTER WS-I-SUB
  1135
 1136
                END-IF
                 IF WS-CS-NOTRUNC-CHR NOT = ' '
  1137
  1138
                      STRING '-fnotrunc '
 1139
                          DELIMITED SIZE INTO WS-Cobc-Cmd-TXT
                          WITH POINTER WS-I-SUB
  1140
  1141
                 END-IF
                 IF WS-CS-TRACEALL-CHR NOT = ' '
 1142
                  STRING '-ftraceall '
 1143 GC0809
                          DELIMITED SIZE INTO WS-Cobc-Cmd-TXT
 1144
 1145
                          WITH POINTER WS-I-SUB
                 END-IF
 1146
 1147 GC0712
                 IF WS-CS-NOFUNC-CHR NOT = ' '
                  STRING '-fintrinsics=ALL '
  1148 VC0717
  1149 GC0712
                          DELIMITED SIZE INTO WS-Cobc-Cmd-TXT
 1150 GC0712
                          WITH POINTER WS-I-SUB
 1151 GC0712 END-IF
  1152 GCO712 IF WS-CS-WARNALL-CHR NOT = ', '
 1153 GC0712
                      STRING '-Wall '
  1154 GC0712
                          DELIMITED SIZE INTO WS-Cobc-Cmd-TXT
  1155 GC0712
                          WITH POINTER WS-I-SUB
  1156 GC0712
                END-IF
  1157 GC0712
                 IF WS-CS-FREE-CHR NOT = ' '
                 STRING '-free '
 1158 GC0712
  1159 GC0712
                          DELIMITED SIZE INTO WS-Cobc-Cmd-TXT
  1160 GC0712
                          WITH POINTER WS-I-SUB
  1161 GC0712 ELSE
  1162 GC0712
                 STRING '-fixed '
  1163 GC0712
                         DELIMITED SIZE INTO WS-Cobc-Cmd-TXT
 1164 GC0712
                          WITH POINTER WS-I-SUB
 1165 GC0712 END-IF
 1166
 1167 GC0712 MOVE 0 TO WS-Tally-QTY
 1168 GC0712 INSPECT WS-CS-Extra-TXT
 1169 GC0712 TALLYING WS-Tally-QTY FOR
1170 GC0712 IF WS-CS-LISTING-CHR > SPACE
1171 GC0712 AND WS-Tally-QTY > 0
1172 GC0712 MOVE SPACE TO WS-CS-LISTI
                  TALLYING WS-Tally-QTY FOR ALL '-save-temps'
                 MOVE SPACE TO WS-CS-LISTING-CHR *> Can't generate listing if -save-temps used
 1173 GC0712 END-IF
  1174 GC0712 IF WS-CS-LISTING-CHR > SPACE
                 STRING '-save-temps '
DELIMITED SIZE IN
  1175 GC1010
  1176 GC1010
                      DELIMITED SIZE INTO WS-Cobc-Cmd-TXT
                          WITH POINTER WS-I-SUB
  1177 GC1010
               END-IF
  1178 GC1010
 1179
               IF WS-CS-Extra-TXT > SPACES
 1180 GC0709
                 STRING ',
 1181 GC0709
 1182 GC0709
                             TRIM(WS-CS-Extra-TXT, TRAILING)
 1183 GC0709
                             DELIMITED SIZE INTO WS-Cobc-Cmd-TXT
  1184 GC0709
  1185 GC0709
                             WITH POINTER WS-I-SUB
 1186 GC0709
                END-IF
 1187 GC0909 STRING TRIM(WS-Prog-File-Name-TXT,TRAILING)
 1188 GC0909
                 DELIMITED SIZE INTO WS-Cobc-Cmd-TXT
```

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ACS Cobol Xref v2.02.04
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                                                                                                                          23
  1189 GC0909
                           WITH POINTER WS-I-SUB
          1190
  1191
                  *> Prepare the compilation listing file
  1192
                *>***********************
  1193 GC1113 MOVE CONCATENATE(TRIM(WS-Pgm-Nm-TXT,Trailing),'.gclst')
  1194 GC0712
                        TO WS-Listing-Filename-TXT
  1195 GC0712 CALL 'CBL_DELETE_FILE' USING WS-Listing-Filename-TXT
  1196
          *>***********************************
  1197
                *> Now execute the 'cobc' command
                *>***********************
  1198
  1199 GCO410 MOVE 'Compiling...' TO WS-Output-Msg-TXT
  1200 GC0410 DISPLAY S-Switches-SCR
  1201 GC0609 SET WS-RS-Output-File-Avail-BOOL TO TRUE
  1202 MOVE SPACES TO WS-Cmd-TXT
1203 STRING TRIM(WS-Cobc-Cmd-TXT,TRAILING)
1204 GC0712 '>' WS-Listing-Filename-TXT
  1205 GC0712
                                ' 2>&1'
  1206
                                 DELIMITED SIZE
  1207
                                 INTO WS-Cmd-TXT
  1208 DEBUG D DISPLAY WS-Cmd-TXT UPON SYSERR
  1209
                       CALL 'SYSTEM' USING TRIM(WS-Cmd-TXT, TRAILING)
  1210 GC0712
                       OPEN EXTEND F-Cobc-Output-FILE
  1211 GC0712 WRITE F-Cobc-Output-REC FROM SPACES
  1212 GC0712 IF RETURN-CODE = 0
  1212 GC0712 IF RETURN-CODE = 0

1213 GC0712 SET WS-RS-Compile-OK-BOOL TO TRUE

1214 GC0712 MOVE ' Compilation Was Successful'

1215 GC0712 MOVE CONCATENATE('GNU COBOL', WS-Ou

1216 GC0712 TO F-Cobc-Output-REC

1217 GC0712 WRITE F-Cobc-Output-REC

1218 GC0712 SET WS-RS-Complete-BOOL TO TRUE
                             MOVE 'Compilation Was Successful' TO WS-Output-Msg-TXT
                          MOVE CONCATENATE('GNU COBOL', WS-Output-Msg-TXT)
  1219 GC0712 ELSE
                       SET WS-RS-Compile-Failed-BOOL TO TRUE MOVE CONCATENATE(' Compilation Failed - See ',
  1220 GC0712
  1221 GC0712
 1221 GCO712
1222 GCO712
1223 GCO712
1224 GCO712
1225 GCO712
1226 GCO712
1226 GCO712
1227 TO WS-Output-Msg-TXT
1228 TO WS-Output-Msg-TXT
1229 GCO712
1220 GCO712
  1228 GC0712 CLOSE F-Cobc-Output-FILE
  1229 GC0712 DISPLAY S-Switches-SCR
1230 GC0712 CALL 'C$SLEEP' USING 2
1231 GC0712 MOVE SPACES TO WS-Output-Msg-TXT
                      IF WS-RS-Compile-Failed-BOOL
  1232
  1233 GC0712 PERFORM 250-Autoload-Listing
1234 PERFORM 900-Terminate
  1235
                  *> ---- Control will not return
                       END-IF
  1236
  1237
  1238
  1239
                 *>**********************
                  *> Generate a source + xref listing using 'LISTING' subroutine **
  1240
  1241
                *>************************
  1242 GCO410 220-Make-Listing SECTION.
```

```
ACS Cobol Xref v2.02.04
                           Dictionary File for GCIC
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                                                                               24
               MOVE 'Generating listing...' TO WS-Output-Msg-TXT
 1243 GC0410
 1244 GCO410 DISPLAY S-Switches-SCR
 1245 GCO410 MOVE O TO RETURN-CODE
        *>******************
 1246
 1247
           *> Create the listing
                                                                **
 1248
           *>**********************
 1249 GC0410 MOVE SPACES TO WS-Output-Msg-TXT
1250 GC0410 CALL 'LISTING' USING WS-Listing-
               CALL 'LISTING' USING WS-Listing-Filename-TXT
 1251 GC0712
                                 WS-File-Name-TXT
 1252 GC0712
                                 WS-OS-Type-CD
 1253 GC1213
                                 I.PP
 1254 GC1213
                                 I.PPP
 1200 GC0410 ON EXCEPTION 1257 GC0410 MOVE 1258 CC
 1255 GC1213
                                 WS-Listing-CD
               MOVE ' LISTING module is not available'
 1258 GC0410
                  TO WS-Output-Msg-TXT
 1258 GC0410 TO WS-Output-Msg-TX
1259 GC0410 MOVE 1 TO RETURN-CODE
 1260 GCO410 END-CALL
 1261 GCO410 IF RETURN-CODE = 0
              MOVE ' Source+Xref listing generated '
 1262 GC0712
 1263 GC0712 T0 WS-Output-Msg-
1264 GC0410 END-IF
1265 GC0712 DISPLAY S-Switches-SCR
                   TO WS-Output-Msg-TXT
 1266 GC0712 CALL 'C$SLEEP' USING 2
 1267 GC0712
               PERFORM 250-Autoload-Listing
 1268 GC0410
 1269
 1270
           *>************************
           *> Run the compiled program
 1271
          1272
 1273
 1274 GC0114 MOVE ' Preparing to run program ... press ENTER to close '
 1275 GC0114
               TO WS-Output-Msg-TXT
 1276 GC0114 DISPLAY S-Switches-SCR
 1277 GC0114 CALL 'C$SLEEP' USING 3
1278 GC0909 MOVE SPACES TO WS-Cmd-TXT
1279 GC0909 MOVE 1 TO WS-I-SUB
 1280
      1281
           *> If necessary, start with 'cobcrun' command
        1282
 1283 GCO712 IF WS-CS-LIBRARY-CHR NOT = ' '
 1284
                   STRING 'cobcrum ' DELIMITED SIZE
                        INTO WS-Cmd-TXT
 1285
 1286
                         WITH POINTER WS-I-SUB
 1287
               END-IF
 1288
           1289
          *> Add any necessary path prefix
 1290
          *>***********************
 1291 GC0712
               SET WS-RS-Double-Quote-Used-BOOL TO FALSE
              IF WS-OS-Cygwin-BOOL AND WS-Prog-Folder-TXT (2:1) = ':'
STRING '/cygdrive/'
 1292
 1293 GC0909
                  STRING '/cygdrive/'
 1294 GC0909
 1295 GC0909
                         INTO WS-Cmd-TXT
 1296 GC0909
                         WITH POINTER WS-I-SUB
```

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                                                                                     25
 1297 GC0909
                        STRING LOWER-CASE(WS-Prog-Folder-TXT (1:1))
 1298 GC0909
                           INTO WS-Cmd-TXT
 1299 GC0909
                            WITH POINTER WS-I-SUB
                      PERFORM
 1300 GC0909
 1301 GC0909
                            VARYING WS-J-SUB FROM 3 BY 1
                            UNTIL WS-J-SUB > LENGTH(TRIM(WS-Prog-Folder-TXT))
 1302 GC0909
 1303 GC0909
                            IF WS-Prog-Folder-TXT (WS-J-SUB:1) = '\'
                               STRING '/'
 1304 GC0909
 1305 GC0909
                                   INTO WS-Cmd-TXT
 1306 GC0909
                                   WITH POINTER WS-I-SUB
                            ELSE
 1307 GC0909
 1308 GC0909
                               STRING WS-Prog-Folder-TXT (WS-J-SUB:1)
 1309 GC0909
                                   INTO WS-Cmd-TXT
 1310 GC0909
                                   WITH POINTER WS-I-SUB
 1311 GC0909
                            END-IF
 1312 GC0909
                       END-PERFORM
 1313 GC0909
                   ELSE
 1314 GC0410
                        STRING '"' TRIM(WS-Prog-Folder-TXT, TRAILING)
 1315 GC0909
                            INTO WS-Cmd-TXT
 1316 GC0909
                            WITH POINTER WS-I-SUB
                SET WS-RS-Double
END-IF
STRING WS-OS-Dir-CHF
INTO WS-Cmd-TXT
WITH POINTER WS-
 1317 GC0712
                        SET WS-RS-Double-Quote-Used-BOOL TO TRUE
 1318 GC0909
 1319 GC0712
                    STRING WS-OS-Dir-CHR
 1320 GC0909
 1321 GC0909
                        WITH POINTER WS-I-SUB
 1322 GC0909
                ELSE.
 1323 GC0909
                IF WS-OS-Cygwin-BOOL OR WS-OS-UNIX-BOOL
 1324 GC0909
                        STRING './'
 1325 GC0909
                           INTO WS-Cmd-TXT
 1326 GC0909
                            WITH POINTER WS-I-SUB
 1327 GC0909
                    END-IF
 1328
 1329
            *>***********************
 1330
           *> Insert program filename
 1331
            1332 GC0909
                 STRING TRIM(WS-Pgm-Nm-TXT, TRAILING)
 1333 GC0909
                 INTO WS-Cmd-TXT
 1334 GC0909
                    WITH POINTER WS-I-SUB
 1335
 1336
            *> Insert proper extension
 1337
           *>***********************
 1338 GCO712 IF WS-CS-LIBRARY-CHR = ', '
                IF WS-OS-Exe-Ext-CONST > ' '
 1339 GC0712
 1340 GC0712
                       STRING WS-OS-Exe-Ext-CONST DELIMITED SPACE
 1341 GC0712
                            INTO WS-Cmd-TXT
 1342 GC0712
                            WITH POINTER WS-I-SUB
 1343 GC0712
                   END-IF
 1344 GC0712 ELSE
 1345 GC0712 IF WS-OS-Lib-Ext-CONST > ' '
                        STRING WS-OS-Lib-Ext-CONST DELIMITED SPACE
 1346 GC0712
 1347 GC0712
                            INTO WS-Cmd-TXT
 1348 GC0712
                            WITH POINTER WS-I-SUB
                END-IF
 1349 GC0712
 1350 GC0712
              END-IF
```

```
ACS Cobol Xref v2.02.04
                              Dictionary File for GCIC
                                                       06/03/2022 23:09:10:99 Page
                                                                                     26
 1351 GC0712
                IF WS-RS-Double-Quote-Used-BOOL
                STRING '"' DELIMITED SIZE
 1352 GC0712
 1353 GC0712
                        INTO WS-Cmd-TXT
 1354 GC0712
                        WITH POINTER WS-I-SUB
 1355 GC0712 END-IF
                IF WS-CS-Args-TXT NOT = SPACES
 1356
 1356 IF WS-OS AIGS IN NO.

1357 GC0809 STRING ' ' TRIM(WS-CS-Args-TXT, TRAILING)

TMTO WS-Cmd-TXT
 1359
                        WITH POINTER WS-I-SUB
 1360
                END-IF
 1361
           *>**********************
           *> Run the program
 1362
 1363
           1364 GC0114 CALL X'E4'
1365 CALL 'SYSTEM' USING TRIM(WS-Cmd-TXT,TRAILING)
 1366 GC0712 MOVE SPACES TO WS-Output-Msg-TXT
 1367 GC0114 ACCEPT WS-Output-Msg-TXT(1:1) AT 0101
 1368
               PERFORM 900-Terminate
 1369
            * -- Control will NOT return
 1370
 1371
 1372
            1373
            *> Determine if the program being compiled is a MAIN program **
 1374
            *>***********************
            240-Find-LINKAGE-SECTION SECTION.
 1375
 1376
                OPEN INPUT F-Source-Code-FILE
 1377 GC0712
                MOVE ' ' TO WS-CS-LIBRARY-CHR
 1378
                 SET WS-RS-More-To-1st-Prog-BOOL TO TRUE
 1379
                PERFORM UNTIL WS-RS-1st-Prog-Complete-BOOL
 1380
                   READ F-Source-Code-FILE AT END
 1381
                       CLOSE F-Source-Code-FILE
 EXIT SECTIO
END-READ

1384 GC0712 CALL 'CHECKSRC'
1385 GC0712 USING BY CON
1386 GC0712
 1382
                        EXIT SECTION
                 USING BY CONTENT F-Source-Code-REC
BY REFERENCE WS-RS-Source-Reco
                              BY REFERENCE WS-RS-Source-Record-Type-CHR
 1387
 1388
                        SET WS-RS-1st-Prog-Complete-BOOL TO TRUE
 1389
                    END-IF
 1390
               END-PERFORM
 1391 GC0712 SET WS-RS-Source-Rec-Ignored-BOOL TO TRUE
 1392
                PERFORM UNTIL WS-RS-Source-Rec-Linkage-BOOL
                          OR WS-RS-Source-Rec-Ident-BOOL
 1393
 1394
                    READ F-Source-Code-FILE AT END
 1395
                     CLOSE F-Source-Code-FILE
 1396
                        EXIT SECTION
 1397
                    END-READ
 1398 GC0712
                    CALL 'CHECKSRC'
                    USING BY CONTENT F-Source-Code-REC
 1399 GC0712
 1400 GC0712
                              BY REFERENCE WS-RS-Source-Record-Type-CHR
 1401
                END-PERFORM
 1402
                CLOSE F-Source-Code-FILE
 1403
                IF WS-RS-Source-Rec-Linkage-BOOL
                MOVE SELCHAR TO WS-CS-LIBRARY-CHR
 1404 GC0712
```

```
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   1405
                               END-IF
   1406
   1407
   1409 GCO712*> Attempt to open the listing file as a command. This will - **
   1410 GC1113*> if the user has associated filetype/extension 'gclst' with **
   1411 GC0712*> an application - invoke the appropriate application to
   1412 GC0712*> allow the user to view the listing.
   1414 GCO712 250-Autoload-Listing SECTION.
   1415 GC0712 EVALUATE TRUE
                             WHEN WS-OS-Windows-BOOL OR WS-OS-Cygwin-BOOL
   1416 GC0712
   1417 GC0712
                                  MOVE SPACES TO WS-Cmd-TXT
                                          STRING
   1418 GC0712
  | 1415 | GCO/12 | 'cmd /c '
| 1420 | GCO712 | TRIM(WS-Listing-Filename-TXT,TRAILING)
| 1421 | GCO712 | DELIMITED SIZE INTO WS-Cmd-TXT
| 1422 | GCO712 | CALL 'SYSTEM' USING TRIM(WS-Cmd-TXT,TRAILING)
| 1423 | GCO712 | WHEN WS-OS-OSX-BOOL |
| 1424 | GCO712 | MOVE SPACES TO THE CONTROL OF THE C
                                  MOVE SPACES TO WS-Cmd-TXT
   1424 GC0712
   1425 GC0712
                                           STRING
   1426 GC0712
                                                  'open -t'
   1427 GC0712
                                                   TRIM(WS-Listing-Filename-TXT,TRAILING)
   1428 GC0712
                                                 DELIMITED SIZE INTO WS-Cmd-TXT
   1429 GC0712
                                           CALL 'SYSTEM' USING TRIM(WS-Cmd-TXT, TRAILING)
                           END-EVALUATE
   1430 GC0712
   1431 GC0712*>
                             *****************
   1432 GC0712*>
                              ** Since we had to do our own '-save-temps' when we
   1433 GC0712*>
                              ** compiled (in order to generate the cross-reference
   1434 GCO712*> ** listing) we now need to clean up after ourselves.
   1436 GC1112 DISPLAY S-Blank-SCR
   1437 GC0712 IF WS-OS-Windows-BOOL
                             MOVE CONCATENATE('del ',TRIM(WS-Pgm-Nm-TXT,TRAILING))
   1438 GC0712
  1439 GC0712
1440 GC0712
1441 GC0712
                                      TO WS-Cmd-TXT
                             MOVE CONCATENATE('rm ',TRIM(WS-Pgm-Nm-TXT,TRAILING))
   1442 GC0712
                                       TO WS-Cmd-TXT
   1443 GC0712 END-IF
   1444 GC0712 CALL 'SYSTEM'
   1445 GC0712
                             USING CONCATENATE(TRIM(WS-Cmd-TXT,TRAILING),'.c')
  1446 GC0712 CALL 'SYSTEM'
1447 GC0712 USING CON
1448 GC0712 CALL 'SYSTEM'
                                 USING CONCATENATE(TRIM(WS-Cmd-TXT,TRAILING),'.c.h')
   1449 GC0712
                              USING CONCATENATE(TRIM(WS-Cmd-TXT,TRAILING),'.c.1*.h')
   1450 GC0712 CALL 'SYSTEM'
   1451 GC0712
                             USING CONCATENATE(TRIM(WS-Cmd-TXT,TRAILING),'.i')
   1452 GC0712 CALL 'SYSTEM'
                             USING CONCATENATE(TRIM(WS-Cmd-TXT,TRAILING),'.o')
   1453 GC0712
   1454
   1455 GC0712
   1456
   1457
                       *>************************
                      *> Display a message and halt the program
   1458
```

ACS Cobol Xref v2.02.04 Dictionary File for GCIC 06/03/2022 23:09:10:99 Page 29 Symbols of Module: GCIC (GCIC)

----- of nodure: dolo (dolo)

Data Section (FILE)	Defn	Locations
	-+	
F-COBC-OUTPUT-FILE	000192F	000201 001210 001228
F-COBC-OUTPUT-REC	000202F	001211 001216 001217 001225 001226
F-SOURCE-CODE-FILE	000195F	000204 000813 001376 001380 001381 001394 001395 001402
F-SOURCE-CODE-REC	000205F	001385 001399
WS-FILE-NAME-TXT	000195F	000399 000865 000870 000933 000938 000941 000954 000957
		000964 000967 000978 001251
WS-FSM-STATUS-CD	000197F	000405 000828 000862
WS-LISTING-FILENAME-TXT	000192F	000417 001194 001195 001204 001222 001250 001420 001427

ACS Cobol Xref v2.02.04 Symbols of Module: GCIC (GCIC)	Diction	hary File for GCIC 06/03/2022 23:09:11:00 Page 30
Data Section (WORKING-STORAGE)		
COB-COLOR-BLACK	000232W	000597 000602 000692 000702 000712 000717 000727 000734 000749 000764 000780 000787 000794
COB-COLOR-BLUE	000233W	000680
COB-COLOR-CYAN	000235W	000693
COB-COLOR-GREEN	000234W	000603 000718 000765 000781
COB-COLOR-MAGENTA	000237W	
COB-COLOR-RED	000236W	000686 000750
COB-COLOR-WHITE	000239W	000598 000681 000687 000703 000713 000728 000735 000788 000795
COB-COLOR-YELLOW	000238W	
COB-SCR-BACK-TAB	000321W	
COB-SCR-BACKSPACE	000328W	
COB-SCR-DELETE	000327W	
COB-SCR-ESC	000318W	001085
COB-SCR-F1	000245W	001032
COB-SCR-F10	000254W	
COB-SCR-F11	000255W	
COB-SCR-F12	000256W	001088
COB-SCR-F13	000257W	
COB-SCR-F14	000258W	
COB-SCR-F15	000259W	
COB-SCR-F16	000260W	
COB-SCR-F17	000261W	
COB-SCR-F18	000262W	
COB-SCR-F19	000263W	
COB-SCR-F2	000246W	001038
COB-SCR-F20	000264W	
COB-SCR-F21	000265W	
COB-SCR-F22	000266W	
COB-SCR-F23	000267W	
COB-SCR-F24	000268W	
COB-SCR-F25	000269W	
COB-SCR-F26	000270W	
COB-SCR-F27	000271W	
COB-SCR-F28	000272W	
COB-SCR-F29	000273W	004044
COB-SCR-F3	000247W	001044
COB-SCR-F30	000274W	
COB-SCR-F31	000275W	
COB-SCR-F32	000276W	
COB-SCR-F33	000277W	
COB-SCR-F34 COB-SCR-F35	000278W 000279W	
COB-SCR-F36	000279W	
COB-SCR-F37	000280W	
COB-SCR-F38	000281W	
COB-SCR-F39	000282W	
COB-SCR-F4	000283W	001050
COB-SCR-F40	000248W	001000

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Data Section (WORKING-STORAGE)	Defn	Locations				
	<b>,</b>					
COB-SCR-F41	000285W					
COB-SCR-F42	000286W					
COB-SCR-F43	000287W					
COB-SCR-F44	000288W					
COB-SCR-F45	000289W					
COB-SCR-F46	000290W					
COB-SCR-F47	000291W					
COB-SCR-F48	000292W					
COB-SCR-F49	000293W	004050				
COB-SCR-F5	000249W	001056				
COB-SCR-F50	000294W					
COB-SCR-F51	000295W					
COB-SCR-F52	000296W					
COB-SCR-F53	000297W					
COB-SCR-F54	000298W					
COB-SCR-F55	000299W					
COB-SCR-F56	000300W					
COB-SCR-F57	000301W 000302W					
COB-SCR-F58 COB-SCR-F59	000302W					
COB-SCR-F6	000303W	001061				
COB-SCR-F60	000230W	001001				
COB-SCR-F61	00030 <del>1</del> W					
COB-SCR-F62	000306W					
COB-SCR-F63	000307W					
COB-SCR-F64	000308W					
COB-SCR-F7	000251W	001067				
COB-SCR-F8	000251W	001073				
COB-SCR-F9	000253W	001079				
COB-SCR-FATAL	000335W	002010				
COB-SCR-INSERT	000326W					
COB-SCR-KEY-DOWN	000316W					
COB-SCR-KEY-END	000330W					
COB-SCR-KEY-HOME	000329W					
COB-SCR-KEY-LEFT	000322W					
COB-SCR-KEY-RIGHT	000323W					
COB-SCR-KEY-UP	000314W					
COB-SCR-KEY_DOWN	000317W					
COB-SCR-KEY_UP	000315W					
COB-SCR-MAX-FIELD	000336W					
COB-SCR-NO-FIELD	000332W					
COB-SCR-OK	000243W					
COB-SCR-PAGE-DOWN	000312W					
COB-SCR-PAGE-UP	000310W					
COB-SCR-PAGE_DOWN	000313W					
COB-SCR-PAGE_UP	000311W					
COB-SCR-PRINT	000319W					
COB-SCR-TAB	000320W					
COB-SCR-TIME-OUT	000333W					

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Data Section (WORKING-STORAGE)		Locations	
F1	000364W		
F12	000358W		
F2	000371W		
F3	000367W		
F4	000365W		
F5	000368W	000415	
F6	000369W		
F7	000372W		
F8	000366W		
F9	000370W		
WS-CMD-ARGS-TXT	000387W	000925 000927 000928 000931 000936	
WS-CMD-END-QUOTE-CHR	000389W	000929 000932	
WS-CMD-SUB	000391W	000926 000930 000934 000939	
WS-CMD-TXT	000385W	001107 001202 001207 001208 001209 001278 001285 00	
		001298 001305 001309 001315 001320 001325 001333 00	
		001347 001353 001358 001365 001417 001421 001422 00	)1424
		001428 001429 001439 001442 001445 001447 001449 00	)1451
		001453	
WS-COBC-CMD-TXT	000393W	001108 001117 001121 001125 001129 001134 001139 00 001149 001154 001159 001163 001176 001184 001188 00	
WS-COMPILATION-SWITCHES-TXT	000338W		
WS-CONFIG-FN-TXT	000395W	001113 001119	
WS-CS-ALL-SWITCHES-TXT	000373W	000918	
WS-CS-ARG-H1-TXT	000340W	000798	
WS-CS-ARG-H2-TXT	000341W	000799	
WS-CS-ARGS-TXT	000339W	001356 001357	
WS-CS-CONFIG-NUM	000354W	000356 000358 001089 001090 001091 001112	
WS-CS-DEBUG-CHR	000375W	000751 001033 001034 001036 001132	
WS-CS-EXECUTE-CHR	000376W	000754 000888 001051 001052 001054	
WS-CS-EXTRA-H1-TXT	000361W	000796	
WS-CS-EXTRA-H2-TXT	000362W	000797	
WS-CS-EXTRA-TXT	000360W	001168 001180 001182	
WS-CS-FILENAME-TXT	000351W	000790 001112	
WS-CS-FILENAMES-TABLE-TXT	000350W		
WS-CS-FILENAMES-TXT	000342W	000350	
WS-CS-FREE-CHR	000377W	000759 001074 001075 001077 001157	
WS-CS-LIBRARY-CHR	000378W	000753 001045 001046 001048 001123 001283 001338 00 001404	)1377
WS-CS-LISTING-CHR	000379W	000755 000884 001021 001024 001027 001170 001172 00	01174
WS-CS-NOFUNC-CHR	000380W	000757 001062 001063 001065 001147	
WS-CS-NOTRUNC-CHR	000381W	000760 001080 001081 001083 001137	
WS-CS-SWITCH-DEFAULTS-TXT	000363W	000374	
WS-CS-TRACEALL-CHR	000382W	000752 001039 001040 001042 001142	
WS-CS-WARNALL-CHR	000383W	000758 001068 001069 001071 001152	
WS-DELETE-FN-TXT	000397W		
WS-FILE-NAME-TXT	000399W	000865 000870 000933 000938 000941 000954 000957 00 000967 000978 001251	)0964
WS-FILE-STATUS-MESSAGE-TXT	000403W	000967 000978 001251	

ACS Cobol Xref v2.02.04 Symbols of Module: GCIC (GCIC)	Diction	Dictionary File for GCIC			06/03/2022 23:09:11:00				ge 33
Data Section (WORKING-STORAGE)									
WS-FSM-MSG-TXT	000407W	000837	000838	000839	000840	000841	000842	000843	000844
					000848 000856			000851	000852
WS-FSM-STATUS-CD	000405W			00000	00000	000001	000000		
WS-HORIZONTAL-LINE-TXT	000409W	000605 000665				000645	000647	000651	000661
WS-I-SUB	000411W					000962	000966	000970	000985
		000986	000987	000988	000990	000994	000998	001111	001122
		001126	001130	001135	001140	001145	001150	001155	001160
		001164	001177	001185	001189	001279	001286	001296	001299
		001306	001310	001316	001321	001326	001334	001342	001348
		001354	001359						
WS-J-SUB	000413W								
WS-LISTING-CD	000415W								
WS-LISTING-FILENAME-TXT	000417W					001250	001420	001427	
WS-LISTING-TXT	000419W								
WS-OC-COMPILE-DT	000421W					004440			
WS-OS-CYGWIN-BOOL	000455W						000050	000070	000070
WS-OS-DIR-CHR	000424W	000430 001319	000436	000442	000448	000955	000959	000970	000979
WS-OS-EXE-EXT-CONST	000425W	000431	000437	000443	000449	001339	001340		
WS-OS-LIB-EXT-CONST	000426W	000432	000438	000444	000450	001345	001346		
WS-OS-LIB-TYPE-CONST	000427W	000433	000439	000445	000451	000769			
WS-OS-OSX-BOOL	000457W	001423							
WS-OS-TYPE-CD	000428W	000434	000440	000446	000452	001005	001252		
WS-OS-TYPE-FILLER-TXT	000459W	000465							
WS-OS-TYPE-TXT	000466W	001005							
WS-OS-TYPES-TXT	000465W								
WS-OS-UNIX-BOOL	000456W		004400						
WS-OS-WINDOWS-BOOL	000454W			001000	001005	001100	001100	001011	001015
WS-OUTPUT-MSG-TXT	000469W				001095				
		001223		001243	001249	001256	001203	001275	001300
WS-PATH-DELIMITER-CHR	000471W	001007	001401						
WS-PFN-CHR	000478W	000987	000994	000998					
WS-PGM-NM-TXT	000481W				001332	001438	001441		
WS-PROG-EXTENSION-TXT	000473W	000992							
WS-PROG-FILE-NAME-TXT	000477W	000729	000964	000969	000985	000991	000995	001187	
WS-PROG-FOLDER-TXT	000475W	000730	000963	000968	000972	000973	000976	001292	001293
		001297	001302	001303	001308	001314			
WS-RS-1ST-PROG-COMPLETE-BOOL	000494W	001379	001388						
WS-RS-COMPILE-FAILED-BOOL	000487W	001220	001232						
WS-RS-COMPILE-OK-BOOL	000485W	000883	001213						
WS-RS-COMPILE-OK-CHR	000484W								
WS-RS-COMPILE-OK-WARN-BOOL	000486W	000883							
WS-RS-COMPLETE-BOOL	000489W	000880	001218						
WS-RS-COMPLETE-CHR	000488W								
WS-RS-DOUBLE-QUOTE-USED-BOOL	000492W	001291	001317	001351					

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Data Section (WORKING-STORAGE)	Defn	Locations				
WS-RS-IDENT-DIV-CHR	000493W					
WS-RS-MORE-TO-1ST-PROG-BOOL	000495W	001378				
WS-RS-NO-SWITCH-CHANGES-BOOL	000497W	001017 001098				
WS-RS-NO-SWITCH-CHGS-CHR	000496W					
WS-RS-NOT-COMPLETE-BOOL	000490W	000879				
WS-RS-OUTPUT-FILE-AVAIL-BOOL	000501W	000889 001201				
WS-RS-OUTPUT-FILE-BUSY-BOOL	000500W					
WS-RS-OUTPUT-FILE-BUSY-CHR	000499W					
WS-RS-QUOTE-CHR	000491W					
WS-RS-SOURCE-REC-IDENT-BOOL	000504W	001387 001393				
WS-RS-SOURCE-REC-IGNORED-BOOL	000505W	001391				
WS-RS-SOURCE-REC-LINKAGE-BOOL	000503W	001392 001403				
WS-RS-SOURCE-RECORD-TYPE-CHR	000502W	001386 001400				
WS-RS-SWITCH-CHANGES-BOOL	000498W	001016				
WS-RS-SWITCH-ERROR-CHR	000506W					
WS-RS-SWITCH-IS-BAD-BOOL	000507W					
WS-RS-SWITCH-IS-GOOD-BOOL	000508W					
WS-RUNTIME-SWITCHES-TXT	000483W					
WS-TALLY-QTY	000510W	001167 001169 0011	71			

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WS-PROG-FOLDER-TXT

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000730S 000963 000968 000972 000973 000976 001292 001293 001297

001302 001303 001308 001314

ACS Cobol Xref v2.02.04 Dictionary File for GCIC 06/03/2022 23:09:11:00 Page 36 Symbols of Module: GCIC (GCIC)

-----

Variable Tested [S] Symbol (88-Conditions)

 
 WS-OS-TYPE-CD
 WS-OS-WINDOWS-BOOL

 WS-OS-TYPE-CD
 WS-OS-CYGWIN-BOOL

 WS-OS-TYPE-CD
 WS-OS-UNIX-BOOL

 WS-OS-TYPE-CD
 WS-OS-OSX-BOOL

 WS-RS-COMPILE-OK-CHR
 WS-RS-COMPILE-OK-BOOL

 WS-RS-COMPILE-OK-CHR
 WS-RS-COMPILE-OK-WARN-BOOL

 WS-RS-COMPILE-OK-CHR
 WS-RS-COMPILE-FAILED-BOOL

 WS-RS-COMPLETE-CHR
 WS-RS-COMPLETE-BOOL

 WS-RS-COMPLETE-CHR
 WS-RS-NOT-COMPLETE-BOOL

 WS-RS-IDENT-DIV-CHR
 WS-RS-NOT-COMPLETE-BOOL

 WS-RS-IDENT-DIV-CHR
 WS-RS-MORE-TO-1ST-PROG-BOOL

 WS-RS-NO-SWITCH-CHGS-CHR
 WS-RS-NO-SWITCH-CHANGES-BOOL

 WS-RS-NO-SWITCH-CHGS-CHR
 WS-RS-SWITCH-CHANGES-BOOL

 WS-RS-OUTPUT-FILE-BUSY-CHR
 WS-RS-OUTPUT-FILE-BUSY-BOOL

 WS-RS-OUTPUT-FILE-AVAIL-BOOL
 WS-RS-OUTPUT-FILE-AVAIL-BOOL
 WS-RS-QUOTE-CHR WS-RS-DOUBLE-QUOTE-USED-BOOL WS-RS-SOURCE-RECORD-TYPE-CHR
WS-RS-SOURCE-RECORD-TYPE-CHR
WS-RS-SOURCE-RECORD-TYPE-CHR WS-RS-SOURCE-REC-LINKAGE-BOOL WS-RS-SOURCE-REC-IDENT-BOOL WS-RS-SOURCE-REC-IGNORED-BOOL WS-RS-SWITCH-ERROR-CHR WS-RS-SWITCH-IS-DAD-DOOL
US-RS-SWITCH-ERROR-CHR WS-RS-SWITCH-IS-GOOD-BOOL

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Symbols of Module: GCIC (GCIC)

Variable Tested Symbol (88-Conditions) [S]

WS-OS-TYPE-CD WS-OS-CYGWIN-BOOL WS-OS-TYPE-CD WS-OS-OSX-BOOL 
 WS-OS-TYPE-CD
 WS-OS-OSX-BOOL

 WS-OS-TYPE-CD
 WS-OS-UNIX-BOOL

 WS-OS-TYPE-CD
 WS-OS-WINDOWS-BOOL

 WS-RS-IDENT-DIV-CHR
 WS-RS-1ST-PROG-COMPLETE-BOOL

 WS-RS-COMPILE-OK-CHR
 WS-RS-COMPILE-FAILED-BOOL

 WS-RS-COMPILE-OK-CHR
 WS-RS-COMPILE-OK-BOOL

 WS-RS-COMPLETE-CHR
 WS-RS-COMPLETE-BOOL

 WS-RS-QUOTE-CHR
 WS-RS-DOUBLE-QUOTE-USED-BOOL

 WS-RS-IDENT-DIV-CHR
 WS-RS-MORE-TO-1ST-PROG-BOOL

 WS-RS-NO-SWITCH-CHGS-CHR
 WS-RS-NO-SWITCH-CHANGES-BOOL

 WS-RS-COMPLETE-CHR
 WS-RS-NOT-COMPLETE-BOOL
 WS-RS-OUTPUT-FILE-BUSY-CHR WS-RS-OUTPUT-FILE-BUSY-CHR WS-RS-OUTPUT-FILE-AVAIL-BOOL WS-RS-OUTPUT-FILE-BUSY-BOOL WS-RS-SOURCE-RECORD-TYPE-CHR WS-RS-SOURCE-REC-IDENT-BOOL WS-RS-SUURCE-RECORD-TYPE-CHR WS-RS-SOURCE-REC-IGNORED-BOOL WS-RS-SOURCE-RECORD-TYPE-CHR WS-RS-SOURCE-REC-LINKAGE-BOOL WS-RS-NO-SWITCH-CHGS-CHR WS-RS-SWITCH-CHANGES-BOOL WS-RS-SWITCH-ERROR-CHR WS-RS-SWITCH-IS-BAD-BOOL WS-RS-SWITCH-ERROR-CHR WS-RS-SWITCH-IS-GOOD-BOOL

ACS Cobol Xref v2.02.04 Symbols of Module: GCIC (GCIC)	Diction	ary File for GCIC	06/03/2022	23:09:11:00	Page 38
Functions	Defn	Locations			
CONCATENATE	001004I	001193 001215 00122	21 001438 0014	41 001445 0	01447 001449
		001451 001453			
LOWER-CASE	001112I	001297			
TRIM	000865I	000870 000976 00100	5 001119 0011	32 001187 0	01193 001203
		001209 001222 00130	2 001314 0013	32 001357 0	01365 001420
		001422 001427 00142	9 001438 0014	41 001445 0	01447 001449
		001451 001453			

ACS Cobol Xref v2.02.04 Symbols of Module: GCIC (GCIC)	Dictio	onary F	ile for	GCIC	06/03,	/2022	23:09:11	1:00	Page	39
Called Procedures	Туре	Locatio								
	+									
C\$SLEEP	SYSTEM	001230	001266	001277	001463					
CBL_CHANGE_DIR	SYSTEM	000975								
CBL_DELETE_FILE	SYSTEM	001195								
CHECKSRC	USER	001384	001398							
E4	SYSTEM	001364								
LISTING	USER	001250								
SYSTEM	SYSTEM		001365	001422	001429	001444	001446	001448	00145	0
		001452								

ACS Cobol Xref v2.02.04 Symbols of Module: GCIC (GCIC)	Diction	nary File for GCIC	06/03/2022	23:09:11:00	Page 40
Procedure	Defn	Locations			
CAUTION:	000860P				
FOUND G29	000860P 000860P				
LPP	001253P				
LPPP	001254P				
MORE ONE	000860P 000860P				
SELCHAR	000920P	000921 001024 0010 001069 001075 0010		1040 001046 00	1052 001063
SYSERR	001208P				

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Dictionary File for GCIC

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Symbols of Module: GCIC (GCIC) -----Unreferenced Working Storage Symbols CBL\_CHANGE\_DIR 000975C CBL\_DELETE\_FILE 001195C COB-COLOR-MAGENTA 000237W COB-COLOR-YELLOW 000238W COB-SCR-BACK-TAB 000321W COB-SCR-BACKSPACE 000328W COB-SCR-DELETE 000327W COB-SCR-F10 000254W COB-SCR-F11 000255W COB-SCR-F13 000257W COB-SCR-F14 000258W COB-SCR-F15 000259W COB-SCR-F16 000260W COB-SCR-F17 000261W COB-SCR-F18 000262W COB-SCR-F19 000263W COB-SCR-F20 000264W COB-SCR-F21 000265W COB-SCR-F22 000266W COB-SCR-F23 000267W COB-SCR-F24 000268W COB-SCR-F25 000269W COB-SCR-F26 000270W COB-SCR-F27 000271W COB-SCR-F28 000272W COB-SCR-F29 000273W COB-SCR-F30 000274W COB-SCR-F31 000275W COB-SCR-F32 000276W COB-SCR-F33 000277W COB-SCR-F34 000278W COB-SCR-F35 000279W COB-SCR-F36 000280W COB-SCR-F37 000281W COB-SCR-F38 000282W COB-SCR-F39 000283W COB-SCR-F40 000284W COB-SCR-F41 000285W COB-SCR-F42 000286W COB-SCR-F43 000287W COB-SCR-F44 000288W COB-SCR-F45 000289W COB-SCR-F46 000290W COB-SCR-F47 000291W COB-SCR-F48 000292W COB-SCR-F49 000293W COB-SCR-F50 000294W COB-SCR-F51 000295W COB-SCR-F52 000296W COB-SCR-F53 000297W COB-SCR-F54 000298W

Dictionary File for GCIC

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Symbols of Module: GCIC (GCIC) -----Unreferenced Working Storage Symbols COB-SCR-F55 000299W COB-SCR-F56 000300W COB-SCR-F57 000301W COB-SCR-F58 000302W COB-SCR-F59 000303W COB-SCR-F60 000304W COB-SCR-F61 000305W COB-SCR-F62 000306W COB-SCR-F63 000307W COB-SCR-F64 000308W COB-SCR-FATAL 000335W COB-SCR-INSERT 000326W COB-SCR-KEY-DOWN 000316W COB-SCR-KEY-END 000330W COB-SCR-KEY-HOME 000329W COB-SCR-KEY-LEFT 000322W COB-SCR-KEY-RIGHT 000323W COB-SCR-KEY-UP 000314W COB-SCR-KEY\_DOWN 000317W COB-SCR-KEY\_UP 000315W COB-SCR-MAX-FIELD 000336W COB-SCR-NO-FIELD 000332W COB-SCR-OK 000243W COB-SCR-PAGE-DOWN 000312W COB-SCR-PAGE-UP 000310W COB-SCR-PAGE\_DOWN 000313W COB-SCR-PAGE\_UP 000311W COB-SCR-PRINT 000319W COB-SCR-TAB 000320W COB-SCR-TIME-OUT 000333W F.4 001364C F1 000364W F12 000358W F2 000371W F3 000367W F4 000365W F6 000369W F7 000372W F8 000366W F9 000370W LISTING 001250C WS-COMPILATION-SWITCHES-TXT 000338W WS-CS-FILENAMES-TABLE-TXT 000350W WS-DELETE-FN-TXT 000397W WS-FILE-STATUS-MESSAGE-TXT 000403W WS-OS-TYPES-TXT 000465W WS-PATH-DELIMITER-CHR 000471W WS-RS-COMPILE-OK-CHR 000484W WS-RS-COMPLETE-CHR 000488W WS-RS-IDENT-DIV-CHR 000493W WS-RS-NO-SWITCH-CHGS-CHR 000496W

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Symbols of Module: GCIC (GCIC)

Unreferenced Working Storage Symbols

WS-RS-OUTPUT-FILE-BUSY-BOOL	000500W
WS-RS-OUTPUT-FILE-BUSY-CHR	000499W
WS-RS-QUOTE-CHR	000491W
WS-RS-SWITCH-ERROR-CHR	000506W
WS-RS-SWITCH-IS-BAD-BOOL	000507W
WS-RS-SWITCH-IS-GOOD-BOOL	000508W
WS-RUNTIME-SWITCHES-TXT	000483W

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Symbols of Module: GCIC (GCIC)

Unreferenced Procedures

CAUTION: 000860P FOUND 000860P G29 000860P LPP 001253P LPPP 001254P MORE 000860P ONE 000860P SYSERR 001208P

```
ACS Cobol Xref v2.02.04
                             Dictionary File for GCIC
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                                                                              Page
                                                                                    45
             IDENTIFICATION DIVISION.
 1472
            PROGRAM-ID. CHECKSRC.
 1473
            *> This subprogram will scan a line of source code it is given **
 1474
            *> looking for 'LINKAGE SECTION' or 'IDENTIFICATION DIVISION'. **
 1475
 1476
            *> ****NOTE**** ****NOTE*** ***NOTE*** **
 1477
 1478
            *>
                                                                     **
            *> These two strings must be found IN THEIR ENTIRETY within
 1479
 1480
            *> the 1st 80 columns of program source records, and cannot
 1481
            *> follow either a '*>' sequence OR a '*' in col 7.
 1482
            1483
            *> DATE CHANGE DESCRIPTION
 1484
            *> -----
 1485
            *> GC0809 Initial coding.
            *>****************
 1486
 1487
            ENVIRONMENT DIVISION.
 1488
             CONFIGURATION SECTION.
 1489
             REPOSITORY.
 1490
                FUNCTION ALL INTRINSIC.
 1491
             DATA DIVISION.
 1492
             WORKING-STORAGE SECTION.
             01 WS-Compressed-Src-TXT.
 1493
 1494
                 05 WS-CS-CHR
                                                   OCCURS 80 TIMES
 1495
                                                   PIC X(1).
 1496
             01 WS-Runtime-Switches-TXT.
 1497
 1498
                 05 WS-RS-Found-SPACE-CHR
                                                   PIC X(1).
 1499
                   88 WS-RS-Skipping-SPACE-BOOL
                                                 VALUE 'Y'.
                   88 WS-RS-Not-Skipping-SPACE-BOOL VALUE 'N'.
 1500
 1501
             01 WS-I-SUB
                                                   USAGE BINARY-CHAR.
 1502
 1503
             01 WS-J-SUB
                                                   USAGE BINARY-CHAR.
 1504
 1505
             LINKAGE SECTION.
 1506
             01 L-Argument-1-TXT.
                                                   OCCURS 80 TIMES
 1507
                 02 L-A1-CHR
                                                   PIC X(1).
 1508
 1509
 1510
             01 L-Argument-2-CHR
                                                   PIC X(1).
                 88 L-A2-LINKAGE-SECTION-BOOL VALUE 'L'.
 1511
                 88 L-A2-IDENT-DIVISION-BOOL VALUE 'I'.
 1512
 1513
                 88 L-A2-Nothing-Special-BOOL VALUE ' '.
 1514
 1515 GCO712 PROCEDURE DIVISION USING BY VALUE
                                               L-Argument-1-TXT
                                   BY REFERENCE L-Argument-2-CHR.
 1516 GC0712
             000-Main SECTION.
 1517
 1518
                 SET L-A2-Nothing-Special-BOOL TO TRUE
 1519
                 IF L-A1-CHR (7) = '*'
 1520
                    GOBACK
 1521
                 END-IF
 1522
 1523
 1524
            *> Compress multiple consecutive spaces
```

```
Dictionary File for GCIC (CHECKSRC) 06/03/2022 23:09:11:00
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                                                                                                  Page
                                                                                                          46
  1525
              *>
  1526
                   SET WS-RS-Not-Skipping-SPACE-BOOL TO TRUE
  1527
                   MOVE O TO WS-J-SUB
                   MOVE SPACES TO WS-Compressed-Src-TXT
  1528
  1529
                   PERFORM VARYING WS-I-SUB FROM 1 BY 1
                             UNTIL WS-I-SUB > 80
  1530
  1531
                       IF L-A1-CHR (WS-I-SUB) = SPACE
  1532
                           IF WS-RS-Not-Skipping-SPACE-BOOL
 1533
                               ADD 1 TO WS-J-SUB
  1534
                               MOVE UPPER-CASE(L-A1-CHR (WS-I-SUB))
  1535
                                 TO WS-CS-CHR (WS-J-SUB)
  1536
                               SET WS-RS-Skipping-SPACE-BOOL TO TRUE
  1537
                           END-IF
  1538
                       ELSE
  1539
                           SET WS-RS-Not-Skipping-SPACE-BOOL TO TRUE
  1540
                           ADD 1 TO WS-J-SUB
                           MOVE L-A1-CHR (WS-I-SUB) TO WS-CS-CHR (WS-J-SUB)
  1541
  1542
                       END-IF
  1543
                   END-PERFORM
  1544
              *>
  1545
              *> Scan the compressed source line
  1546
              *>
  1547
                   PERFORM VARYING WS-I-SUB FROM 1 BY 1
  1548
                             UNTIL WS-I-SUB > 66
                       EVALUATE TRUE
  1549
                           WHEN WS-CS-CHR (WS-I-SUB) = '*'
  1550
                               IF WS-Compressed-Src-TXT (WS-I-SUB : 2) = '*>'
  1551
  1552
                                   GOBACK
  1553
                               END-IF
                           WHEN (WS-CS-CHR (WS-I-SUB) = 'L') AND (WS-I-SUB < 66)
  1554
  1555
                               IF WS-Compressed-Src-TXT (WS-I-SUB : 15)
  1556
                                   = 'LINKAGE SECTION'
  1557
                                   SET L-A2-LINKAGE-SECTION-BOOL TO TRUE
                                   GOBACK
  1558
  1559
                               END-IF
  1560
                           WHEN (WS-CS-CHR (WS-I-SUB) = 'I') AND (WS-I-SUB < 58)
                               IF WS-Compressed-Src-TXT (WS-I-SUB : 23)
  1561
                                   = 'IDENTIFICATION DIVISION'
  1562
  1563
                                   SET L-A2-IDENT-DIVISION-BOOL TO TRUE
  1564
                                    GOBACK
                               END-IF
  1565
  1566
                       END-EVALUATE
                   END-PERFORM
  1567
  1568
              *>
  1569
              *> If we get to here, we never found anything!
  1570
  1571 +
                    GOBACK
  1572
               END PROGRAM CHECKSRC.
  1573
  1574
```

ACS Cobol Xref v2.02.04 Dictionary File for GCIC (CHECKSRC) 06/03/2022 23:09:11:00 Page 47 Symbols of Module: GCIC (CHECKSRC)

Data Section (WORKING-STORAGE)		Locations
WS-COMPRESSED-SRC-TXT	001493W	001528 001551 001555 001561
WS-CS-CHR	001494W	001535 001541 001550 001554 001560
WS-I-SUB	001502W	001529 001530 001531 001534 001541 001547 001548 001550
		001551 001554 001555 001560 001561
WS-J-SUB	001504W	001527 001533 001535 001540 001541
WS-RS-FOUND-SPACE-CHR	001498W	
WS-RS-NOT-SKIPPING-SPACE-BOOL	001500W	001526 001532 001539
WS-RS-SKIPPING-SPACE-BOOL	001499W	001536
WS-RUNTIME-SWITCHES-TXT	001497W	

ACS Cobol Xref v2.02.04 Dictionary File for GCIC (CHECKSRC) 06/03/2022 23:09:11:00 Page 48 Symbols of Module: GCIC (CHECKSRC)

\_\_\_\_\_

Data Section (LINKAGE)	Defn	Locations
	-+	
L-A1-CHR	001507K	001519 001531 001534 001541
L-A2-IDENT-DIVISION-BOOL	001512K	001563
L-A2-LINKAGE-SECTION-BOOL	001511K	001557
L-A2-NOTHING-SPECIAL-BOOL	001513K	001518
L-ARGUMENT-1-TXT	001506K	001515
L-ARGUMENT-2-CHR	001510K	001516

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Symbols of Module: GCIC (CHECKSRC)

Variable Tested [S] Symbol (88-Conditions)

L-ARGUMENT-2-CHR
L-ARGUMENT-2-CHR
L-A2-LINKAGE-SECTION-BOOL
L-ARGUMENT-2-CHR
L-A2-IDENT-DIVISION-BOOL
L-ARGUMENT-2-CHR
L-A2-NOTHING-SPECIAL-BOOL
WS-RS-FOUND-SPACE-CHR
WS-RS-SKIPPING-SPACE-BOOL
WS-RS-FOUND-SPACE-CHR
WS-RS-NOT-SKIPPING-SPACE-BOOL

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Symbols of Module: GCIC (CHECKSRC)

Variable Tested Symbol (88-Conditions) [S]

L-ARGUMENT-2-CHR
L-ARGUMENT-2-CHR
L-A2-IDENT-DIVISION-BOOL
L-ARGUMENT-2-CHR
L-A2-LINKAGE-SECTION-BOOL
L-ARGUMENT-2-CHR
L-A2-NOTHING-SPECIAL-BOOL
WS-RS-FOUND-SPACE-CHR
WS-RS-NOT-SKIPPING-SPACE-BOOL
WS-RS-FOUND-SPACE-CHR

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Functions Defn Locations

UPPER-CASE 001534I

None

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Symbols of Module: GCIC (CHECKSRC)

Unreferenced Working Storage Symbols

WS-RS-FOUND-SPACE-CHR 001498W WS-RUNTIME-SWITCHES-TXT 001497W

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Symbols of Module: GCIC (CHECKSRC)

Unreferenced Procedures

None

```
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                                                                                        55
 1575
            IDENTIFICATION DIVISION.
 1576
           PROGRAM-ID. LISTING.
           *>****************
 1577
           *> This subprogram generates a cross-reference listing of an **
 1578
           *> GNU COBOL program.
 1579
                                                                 **
 1580
           1581
           *>
           *> AUTHOR:
                        GARY L. CUTLER
 1582
 1583
           *>
                          Copyright (C) 2010, Gary L. Cutler, GPL
 1584
 1585
           *> DATE-WRITTEN: April 1, 2010
 1586
           *>
 1587
           1588
           *> DATE CHANGE DESCRIPTION
           1589
           *> GCO410 Initial coding
 1590
 1591
           *> GC0711 Updates to accommodate the 12MAR2010 version of OC
 1592
           *> GC0710 Handle duplicate data names (i.e. 'CORRESPONDING' or **
 1593
           *>
                    qualified items) better; ignore 'END PROGRAM' recs **
 1594
           *>
                   so program name doesn't appear in listing.
 1595
           *> GC0313 Fix problem where the first procedure name defined
 1596
           *>
                    in the PROCEDURE DIVISION lacks a "Defined" line
                                                                 **
 1597
           *>
                    number.
 1598
           *> GC1213 Updated for 23NOV2013 version of GNU COBOL 2.1; Stop **
               showing functions as if they were identifiers in the **
 1599
 1600
           *>
                  xref listing; Flag all CALL argument references with **
 1601
                  a "C" rather than "*" because they aren't necessari- **
           *>
                  ly altered; Fixed assorted formatting bugs; DOWN-
 1602
           *>
 1603
           *>
                    WARD COMPATIBLE WITH GNU COBOL 2.0 SYNTAX
           *> GC0314 Fix problem where 1st char of 1st token on a line is **
 1604
               lost if >>SOURCE MODE IS FREE is in effect and the **
 1605
           *>
 1606
                    1st character is non-blank.
 1607
          *> VC1217 Updated compiler version & date to v3.0 & 24DEC2017. **
 1608
          *> VCO720 Updated compiler to 3.1 July2020 and the copyright. **
 1609
           *> VCO322 Updated compiler to 3.1.2 March2022 & the copyright. **
 1610
           ENVIRONMENT DIVISION.
 1611
 1612
            CONFIGURATION SECTION.
 1613
            REPOSITORY.
 1614
                FUNCTION ALL INTRINSIC.
            INPUT-OUTPUT SECTION.
 1615
 1616
            FILE-CONTROL.
 1617
               SELECT F-Expanded-Src-FILE ASSIGN TO WS-Expanded-Src-Fn-TXT
 1618
                                       ORGANIZATION IS LINE SEQUENTIAL.
                                       ASSIGN TO L-Listing-Fn-TXT
 1619 GC0712
               SELECT F-Listing-FILE
                                       ORGANIZATION IS LINE SEQUENTIAL.
 1620
                SELECT F-Original-Src-FILE ASSIGN TO L-Src-Fn-TXT
 1621
                                       ORGANIZATION IS LINE SEQUENTIAL.
 1622
                                       ASSIGN TO DISK.
 1623
                SELECT F-Sort-Work-FILE
           DATA DIVISION.
 1624
           FILE SECTION.
 1625
           FD F-Expanded-Src-FILE.
 1626
           01 F-Expanded-Src-REC.
 1627
                05 F-ES-1-CHR
                                                PIC X.
 1628
```

```
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                                                                                            Page
                                                                                                  56
 1629
                  05 F-ES-2-256-TXT-256
                                                      PIC X(256).
 1630 GC0712 01 F-Expanded-Src2-REC.
 1631 GC0712 05 F-ES-1-7-TXT
                                                      PIC X(7).
 1632 GC0712 05 F-ES-8-256-TXT
                                                      PIC X(249).
 1633
 1634 GC0712 FD F-Listing-FILE.
 1635 GC1213 01 F-Listing-96-REC
                                                      PIC X(96).
 1636 GC1213 01 F-Listing-135-REC
                                                      PIC X(135).
           01 F-Listing-REC
 1637
                                                      PIC X(135).
 1638
 1639
            FD F-Original-Src-FILE.
 1640
             01 F-Original-Src-REC.
 1641 GCO410 05 F-OS-1-128-TXT.
                 10 FILLER
10 F-OS-7-CHR
 1642 GC0410
                                                      PIC X(6).
 1643 GC0410
                                                      PIC X(1).
                 10 F-OS-8-72-TXT
10 FILLER
 1644 GC0712
                                                      PIC X(65).
 1645 GC0712
                                                     PIC X(56).
              05 F-OS-129-256-TXT
 1646
                                                      PIC X(128).
 1647
 1648
             SD F-Sort-Work-FILE.
 1649
             01 F-Sort-Work-REC.
 1650
                  05 F-SW-Prog-ID-TXT
                                                      PIC X(15).
                                                     PIC X(32).
 1651
                 05 F-SW-Token-Uc-TXT
                                                   PIC X(32).
PIC X(15).
 1652
                 05 F-SW-Token-TXT
                 05 F-SW-Section-TXT
 1653
                 05 F-SW-Def-Line-NUM
                                                    PIC 9(6).
 1654
                 05 F-SW-Reference-TXT.
 1655
 1656
                    10 F-SW-Ref-Line-NUM
                                                      PIC 9(6).
 1657
                     10 F-SW-Ref-Flag-CHR
                                                      PIC X(1).
 1658
             WORKING-STORAGE SECTION.
 1659
 1660 GC1213 01 WS-Copyright-TXT
                                                      PIC X(86).
 1661
             01 WS-Curr-CHR
 1662
                                                      PTC X(1).
 1663
                 88 WS-Curr-Char-Is-Punct-BOOL
                                                      VALUE '=', '(', ')',
                                                            '*', '/', '&',
';', ',', '<',</pre>
 1664
 1665
 1666
                                                     VALUE "', '"'.
                 88 WS-Curr-Char-Is-Quote-BOOL
 1667
 1668
                  88 WS-Curr-Char-Is-X-BOOL
                                                      VALUE 'x', 'X'.
                                                      VALUE 'z', 'Z'.
 1669
                 88 WS-Curr-Char-Is-Z-BOOL
 1670
 1671
             01 WS-Curr-Division-TXT
                                                      PIC X(1).
                 88 WS-CD-In-IDENT-DIV-BOOL
 1672 GC1010
                                                      VALUE 'i', 'I', '?'.
 1673 GC1010
                                                      VALUE 'e', 'E'.
                 88 WS-CD-In-ENV-DIV-BOOL
 1674 GC1010 88 WS-CD-In-DATA-DIV-BOOL
                                                      VALUE 'd', 'D'.
 1675 GC1010 88 WS-CD-In-PROC-DIV-BOOL
                                                      VALUE 'p', 'P'.
 1676
             01 WS-Curr-Line-NUM
                                                      PIC 9(6).
 1677
 1678
 1679
              01 WS-Curr-Prog-ID-TXT.
                  05 FILLER
                                                      PIC X(12).
 1680
                 05 WS-CPI-13-15-TXT
                                                      PIC X(3).
 1681
 1682 GC0712 05 WS-CPI-16-CHR
                                                     PIC X(1).
```

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168	33												
168			01	WS-Curr-Section	on-TXT.								
168	35			05 WS-CS-1-CHI	₹			F	PIC X(1).				
168	36			05 WS-CS-2-14-	-TXT.								
168	37			10 FILLER				F	PIC X(10).				
168	38			10 WS-CS-1:	l-14-TXT			F	PIC X(3).				
168	39			05 WS-CS-15-CH	łR			F	PIC X(1).				
169	90												
169	91		01	WS-Curr-Verb-	ТХТ			F	PIC X(12).				
169	92												
169	93		01	WS-Delim-TXT				F	PIC X(2).				
169	94												
169	95		01	WS-Dummy-TXT				F	PIC X(1).				
169													
169			01	WS-Expanded-Si	cc-Fn-TXT			F	PIC X(256)				
169													
169			01	WS-Filename-T	<b>C</b> T			F	PIC X(256)	١.			
170													
			01	WS-Flags-TXT.	a			_	T 7 T (4)				
170		C1213		05 WS-Suppress	s-FF-CHR			ŀ	PIC X(1).				
170		21010	0.1	UQ Et-1	NT.				TA 0000 /0	00.400			
170		01213	01	WS-Formatted-I	) I			ŀ	PIC 9999/9	99/99.			
170			Λ1	UC Common Toddi	+ TVT								
170			OI	WS-Group-India 05 WS-GI-Prog-				т	TC V(15)				
170 170				05 WS-GI-Prog-					PIC X(15). PIC X(32).				
170				OO WD GI TOKEI	1 IXI				10 A(32).				
17:			01	WS-Held-Refere	ence-TXT			F	PIC X(100)				
17:			O1	WD Herd Refer	since TXT				10 K(100)	•			
17:			01	WS-I-SUB				ī	JSAGE BINA	ARY-I.ONG			
17:			V-	1 202						201141			
17:			01	WS-J-SUB				Ţ	JSAGE BINA	ARY-LONG.			
17:													
17:	16		01	WS-Lines-Left	-NUM			Ţ	JSAGE BINA	ARY-LONG.			
17:	17												
17:	18		01	WS-Lines-Per-	Page-NUM			Ţ	JSAGE BINA	RY-LONG.			
17:	19												
172	20		01	WS-Lines-Per-	Page-Env-TX1			F	PIC X(256)				
172	21												
172	22 G	C1010	01	WS-Main-Module	e-Name-TXT			F	PIC X(256)	١.			
172	23												
172			01	WS-Next-CHR					PIC X(1).				
172				88 WS-Next-Cha	ar-Is-Quote-	-BOOL		I	ALUE '"',	. "''.			
172													
172			01	WS-OS-Type-FII									
172				05 VALUE 'Wind					PIC X(14).				
172				05 VALUE 'Wind	00	•			PIC X(14).				
173				OF VALUE 'UNIX					PIC X(14).				
173				OF VALUE 'USX					PIC X(14).				
173			01	05 VALUE 'Wind		tio o	10. T-		PIC X(14).				
173 173			ΟI	WS-OS-Types-T		w5-0	12-17	-					
173				05 WS-OS-Type	- 1 V I		חממ		PIC X(14) TIMES .				
173							UCC	cano	, TILES .				
1/3	,,,												

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1737 1738	GC0712	01	WS-Page-NUM				USA	GE BINA	RY-LONG.			
1739	GC0712	01	WS-Page-No-TXT	7.								
1740			05 WS-PN-Liter	al-TXT			PIC	X(6).				
1741	GC0712		05 WS-PN-Liter 05 WS-PN-Page-	-NUM			PIC	Z(3)9.				
1742			O .									
1743	GC1213	01	WS-Program-Pat	:h-TXT			PIC	X(135)				
1744			· ·									
1745		01	WS-Reserved-Wo	ords-TXT.								
1746			O5 VALUE '					, bic	X(33).			
1747	GC1213		O5 VALUE 'FABS	3				, bic	X(33).			
1748			O5 VALUE 'VACO	CEPT				, bic	X(33).			
1749			O5 VALUE ' ACC	CESS					X(33).			
1750	GC1213		O5 VALUE 'FABS O5 VALUE 'VACC O5 VALUE 'ACC O5 VALUE 'ACC O5 VALUE 'ACC O5 VALUE 'ACC O5 VALUE 'ADC O5 VALUE 'ADC O5 VALUE 'ADC O5 VALUE 'KAFT	)S					X(33).			
1751			O5 VALUE ' ACT	TIVE-CLASS					X(33).	UNIMPLEMENTED		
1752			O5 VALUE 'VADI	)					X(33).			
1753			O5 VALUE , ADI	DRESS					X(33).			
1754			OF VALUE , ADV	ANCING					X(33).			
1755									X(33).	INTERNET EMENIMEN		
1756			OF VALUE , ALI						X(33). X(33).	UNIMPLEMENTED		
1757 1758			O5 VALUE 'VALI						X(33).			
1758			05 VALUE 'VALI						X(33).			
1760			OS VALUE ' ALF						X(33).			
1761			OS VALUE , ALF		IFR			, bic				
1762			05 VALUE , ALF					, bic				
1763			O5 VALUE , ALF						X(33).			
1764			O5 VALUE ' ALF		EDITED				X(33).			
1765			O5 VALUE ' ALS						X(33).			
1766			O5 VALUE 'VALT						X(33).			
1767			O5 VALUE ' ALT	TERNATE				, bic	X(33).			
1768			O5 VALUE ' AND					, bic	X(33).			
1769	GC1213		O5 VALUE 'FANN					, bic	X(33).			
1770			O5 VALUE ' ANY					, bic	X(33).			
1771			O5 VALUE ' ANY	CASE				, bic	X(33).	UNIMPLEMENTED		
1772			O5 VALUE ' ARE						X(33).			
1773			O5 VALUE ' ARE						X(33).			
1774			O5 VALUE ' ARE						X(33).			
1775			O5 VALUE ' ARG						X(33).			
1776			O5 VALUE ' ARG		5				X(33).	IIIITMDI PMPNTPD		
1777			O5 VALUE ' ARI	THMETIC					X(33).	UNIMPLEMENTED		
1778 1779			05 VALUE ' AS	TENDING					X(33). X(33).			
1779			05 VALUE ' ASC						X(33).			
1781	GC1213		05 VALUE 'FASI						X(33).			
1782	GOIZIO		05 VALUE , ASS						X(33).			
1783			O5 VALUE ' AT						X(33).			
1784	GC1213		O5 VALUE 'FATA	ΔN					X(33).			
1785	GC0711		O5 VALUE ' ATT						X(33).			
1786			O5 VALUE ' AUT					, bic	X(33).	OBSOLETE		
1787			O5 VALUE ' AUT					, bic	X(33).			
1788			O5 VALUE ' AUT					, bic	X(33).			
1789			O5 VALUE ' AUT	TOMATIC				, bic	X(33).			
1790			05 VALUE ' AUT	COTERMINATE				, bic	X(33).			

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1791		05 VALUE	' AWAY-FROM-ZERO		, bic	X(33).			
1792		05 VALUE	' B-AND		, bic	X(33).	UNIMPLEMENTED		
1793		05 VALUE	' B-AND ' B-NOT ' B-OR ' B-XOR		, bic	X(33). X(33).	UNIMPLEMENTED		
1794		05 VALUE	, B-OK		, bic	X(33).	UNIMPLEMENTED		
1795		05 VALUE	' B-XOR		, bic	X(33).	UNIMPLEMENTED		
1796		05 VALUE	, BACKGROUND-COLOR		, bic	X(33).			
1797		05 VALUE	' BACKGROUND-COLOUR		, bic	X(33).			
1798		OF WATEE	1 DAGED		, bic	X(33).			
1799		05 VALUE	, BEEL		, bic	X(33).			
1800		05 VALUE	, BEFORE		, bic	X(33).			
1801		05 VALUE	, BELL		, bic	X(33).			
1802		05 VALUE	' BINARY		, bic	X(33).			
1803		05 VALUE	BASED  BEEP  BEFORE  BELL  BINARY  BINARY-C-LONG		, bic	X(33).			
1804		05 VALUE	' BINARY-CHAR		, bic	X(33).			
1805		05 VALUE	' BINARY-DOUBLE		, bic	X(33).			
1806		05 VALUE	' BINARY-CHAR ' BINARY-DOUBLE ' BINARY-INT		, bic	X(33).			
1807		OE MATTIC	) DINADV_IONC		) DTC	X(33).			
1808		05 VALUE	' BINARY-LONG-LONG		, bic	X(33).			
1809		05 VALUE	' BINARY-SHORT		, bic	X(33).			
1810		05 VALUE	'BIT		, bic	X(33).	UNIMPLEMENTED		
1811		05 VALUE	BINARY-LONG-LONG  BINARY-SHORT  BIT  BLANK  BLINK  BLOCK  BOOLEAN		, bic	X(33).			
1812		05 VALUE	' BLINK		, bic	X(33).			
1813		05 VALUE	, BLOCK		, bic	X(33).			
1814		05 VALUE	' BOOLEAN		, bic	X(33).	UNIMPLEMENTED		
	GC1213	05 VALUE	'FBOOLEAN-OF-INTEGER		, PIC	X(33).	UNIMPLEMENTED		
1816		05 VALUE				X(33).			
1817		05 VALUE				X(33).			
	GC1213		'FBYTE-LENGTH		, bic	X(33).			
1819		05 VALUE				X(33).			
1820		05 VALUE				X(33).			
1821		05 VALUE				X(33).			
1822		05 VALUE				X(33).			
1823		05 VALUE				X(33).			
1824		05 VALUE				X(33).			
1825		05 VALUE				X(33).			
1826 1827		05 VALUE 05 VALUE				X(33).			
1828		05 VALUE				X(33). X(33).			
1829		05 VALUE				X(33).			
1830		05 VALUE				X(33).			
1831		05 VALUE				X(33).			
1832			'MCALL-CONVENTION			X(33).			
1833		05 VALUE				X(33).			
1834			, CAPACITY			X(33).	UNIMPLEMENTED		
1835		05 VALUE				X(33).	OBSOLETE		
1836		05 VALUE				X(33).	UNIMPLEMENTED		
1837		05 VALUE				X(33).			
1838		05 VALUE				X(33).			
1839		05 VALUE				X(33).	UNIMPLEMENTED		
1840			' CHAINING		, bic	X(33).			
	GC1213	05 VALUE				X(33).			
1842	GC1213		'FCHAR-NATIONAL			X(33).	UNIMPLEMENTED		
1843		05 VALUE	' CHARACTER			X(33).			
1844		05 VALUE	' CHARACTERS		, bic	X(33).			

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1845 1846		05 VALUE	' CLASS ' CLASS-ID			X(33). X(33).	UNIMPLEMENTED		
1847	GC0711	05 VALUE	, CLASSIFICATION		, bic	X(33).			
1848		05 VALUE	'VCLOSE		, bic	X(33).			
1849	GC1213	05 VALUE	'FCOB-CRT-STATUS		, bic	X(33).			
1850		OC VALUE	OODL			X(33).			
1851		05 VALUE	, CODE-SET			X(33).			
1852		05 VALUE	, COL		, bic	X(33).			
1853		05 VALUE	' COLLATING		, bic	X(33).			
1854		05 VALUE	, COLS			X(33).			
1855		05 VALUE	' COL ' COLLATING ' COLS ' COLUMN ' COLUMNS			X(33).			
1856		05 VALUE	, COLUMNS		, PIC	X(33).			
1857	GC1213	05 VALUE	'FCOMBINED-DATETIME		, PIC	X(33).			
1858		05 VALUE				X(33).			
1859		OF VALUE	' COMMAND-LINE		, PIC	X(33).			
1860 1861		OF VALUE	'VCOMMIT' 'COMMUNICATION		, PIC	X(33).			
1862		OS VALUE	COMMINICATION		, DIC	X(33). X(33).	OBSOLETE		
1863		05 VALUE	, CUMP		, DIC	X(33).	ODSOLETE		
1864		05 VALUE				X(33).			
1865		05 VALUE				X(33).			
1866		05 VALUE				X(33).			
1867		05 VALUE				X(33).			
1868		05 VALUE				X(33).			
1869		05 VALUE				X(33).			
1870		05 VALUE			, bic	X(33).			
1871		05 VALUE	' COMPUTATIONAL			X(33).			
1872		05 VALUE	' COMPUTATIONAL-1		, bic	X(33).			
1873		05 VALUE	' COMPUTATIONAL-2			X(33).			
1874			' COMPUTATIONAL-3		, bic	X(33).			
1875		05 VALUE	' COMPUTATIONAL-4		, bic	X(33).			
1876		05 VALUE	' COMPUTATIONAL-5			X(33).			
1877			' COMPUTATIONAL-X			X(33).			
1878		05 VALUE	'VCOMPUTE			X(33).			
1879	GC1213	05 VALUE	'FCONCATENATE			X(33).			
1880	GC0712		' CONDITION 'KCONFIGURATION			X(33).			
1881 1882			'MCONSOLE			X(33). X(33).			
1883			, CONSTANT			X(33).			
1884			, CONTAINS			X(33).			
1885	GC0712		'ACONTENT			X(33).			
1886	400112		'VCONTINUE			X(33).			
1887			, CONTROL			X(33).			
1888			, CONTROLS			X(33).			
1889	GC0711	05 VALUE	' CONVERSION		, bic	X(33).			
1890		05 VALUE	'KCONVERTING		, bic	X(33).			
1891	*	05 VALUE	, COPA		, bic	X(33).			
1892		05 VALUE	' CORR		, bic	X(33).			
1893			' CORRESPONDING			X(33).			
1894	GC1213	05 VALUE				X(33).			
1895		05 VALUE				X(33).			
1896		05 VALUE				X(33).			
1897			, CRT-UNDER			X(33).			
1898		05 VALUE	MUSP		, PIC	X(33).			

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1899		05 VALUE	, CURRENCY	, bic	X(33).			
	GC1213	05 VALUE	'FCURRENCY-SYMBOL 'FCURRENT-DATE 'CURSOR 'CYCLE 'KDATA 'DATA-POINTER DATE 'DATE 'DATE-COMPILED 'DATE-MODIFIED 'FDATE-OF-INTEGER 'FDATE-TO-YYYYMMDD	, bic	X(33).			
1901	GC1213	05 VALUE	'FCURRENT-DATE	, bic	X(33).			
1902		05 VALUE	, CURSOR	, bic	X(33).			
1903		05 VALUE	, CYCLE	, bic	X(33).			
1904		05 VALUE	'KDATA	, bic	X(33).			
1905		05 VALUE	' DATA-POINTER	, bic	X(33).	UNIMPLEMENTED		
1906		05 VALUE	, DATE	, bic	X(33).			
1907		05 VALUE	' DATE-COMPILED	, bic	X(33).	OBSOLETE		
1908		05 VALUE	' DATE-MODIFIED	, bic	X(33).	OBSOLETE		
1909	GC1213	05 VALUE	'FDATE-OF-INTEGER	, bic	X(33).			
1910	GC1213 GC1213							
1011		05 VALUE	' DATE-WRITTEN	, bic	X(33).	OBSOLETE		
1912	GC1213	05 VALUE	'DAY 'FDAY-OF-INTEGER 'DAY-OF-WEEK 'IDAY-TO-YYYYDDD	, bic	X(33).			
1913	GC1213	05 VALUE	'FDAY-OF-INTEGER	, bic	X(33).			
1914		05 VALUE	' DAY-OF-WEEK	, bic	X(33).			
1915	GC1213	05 VALUE	'IDAY-TO-YYYYDDD	, bic	X(33).			
1916		05 VALUE	' DE	, bic	X(33).			
1917	GC0712	05 VALUE	'IDEBUG-CONTENTS 'IDEBUG-ITEM 'IDEBUG-I INF	, bic	X(33).			
1918	GC0712	05 VALUE	'IDEBUG-ITEM	, bic	X(33).			
1919	GC0712	05 VALUE	'IDEBUG-LINE	, bic	X(33).			
1920	GC0712	05 VALUE	'IDEBUG-NAME	, bic	X(33).			
1921	GC0712	05 VALUE	'IDEBUG-SUB-1	, bic	X(33).			
	GC0712	05 VALUE	'IDEBUG-SUB-2	, bic	X(33).			
	GC0712	05 VALUE	'IDEBUG-ITEM 'IDEBUG-LINE 'IDEBUG-NAME 'IDEBUG-SUB-1 'IDEBUG-SUB-2 'IDEBUG-SUB-3 ' DEBUGGING ' DECIMAL-POINT ' DECLARATIVES ' DEFAULT 'VUELETE ' DELIMITED 'KDELIMITER ' DEPENDING ' DESCENDING ' DESCENDING ' DESTINATION ' DETAIL ' DISC ' DISK 'VUISPLAY 'FDISPLAY-OF 'VDIVIDE	, bic	X(33).			
1924		05 VALUE	' DEBUGGING	, bic	X(33).			
1925		05 VALUE	' DECIMAL-POINT	, bic	X(33).			
1926		05 VALUE	, DECLARATIVES	, bic	X(33).			
1927		05 VALUE	, DEFAULT	, bic	X(33).			
1928		05 VALUE	'VDELETE	, bic	X(33).			
1929		05 VALUE	' DELIMITED	, bic	X(33).			
1930		05 VALUE	'KDELIMITER	, bic	X(33).			
1931		05 VALUE	, DEPENDING	, bic	X(33).			
1932		05 VALUE	, DESCENDING	, bic	X(33).			
1933		05 VALUE	DESTINATION	PIC	X(33).	UNIMPLEMENTED		
1934	000711	O5 VALUE	DETAIL	, PIC	X(33).			
1935	GC0711	O5 VALUE	, DISC	, PIC	X(33).			
1936 1937		OF VALUE	, DIPK	, PIC	X(33).			
	GC1213	OF VALUE	ADIODIAN-OE	, PIC	X(33). X(33).	IINTMDI EMENTED		
	GC1213	OF VALUE	ANDIATOE	, PIC		UNIMPLEMENTED		
1939 1940			'KDIVIDE		X(33). X(33).			
1940		05 VALUE			X(33).			
1941			' DUPLICATES		X(33).			
1942			' DYNAMIC		X(33).			
1943	GC1213	O5 VALUE			X(33).			
1944	401213	05 VALUE			X(33).			
1946	GC0712	05 VALUE			X(33).			
1947	300112	05 VALUE			X(33).	OBSOLETE		
1948		05 VALUE			X(33).	2200111		
1949		05 VALUE			X(33).	OBSOLETE		
1950			, EMPTY-CHECK		X(33).	- ·		
1951		05 VALUE			X(33).	OBSOLETE		
	GC0710	05 VALUE			X(33).	<del>-</del>		

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1953		05 VALUE	' END-ACCEPT			, bic	X(33).			
1954		05 VALUE	' END-ADD			, bic	X(33).			
1955			' END-CALL			, bic	X(33).			
1956			' END-CHAIN				X(33).	UNIMPLEMENTED		
1957			' END-COMPUTE				X(33).			
1958		05 VALUE	' END-DELETE				X(33).			
1959		05 VALUE	' END-DISPLAY				X(33).			
1960		05 VALUE	, END-DIAIDE				X(33).			
1961			' END-EVALUATE				X(33).			
1962		05 VALUE					X(33).			
1963			' END-MULTIPLY ' END-OF-PAGE				X(33).			
1964 1965							X(33). X(33).			
1966			' END-PERFORM ' END-READ				X(33).			
1967		OS VALUE	' END-RECEIVE				X(33).	OBSOLETE		
1968		OS VALUE	' END-RETURN				X(33).	ODDOLLIL		
1969			' END-REWRITE				X(33).			
1970			' END-SEARCH				X(33).			
1971			' END-START				X(33).			
1972		05 VALUE	' END-STRING				X(33).			
1973		OS VALUE	, END-SIIRTRACT				X(33).			
1974		05 VALUE	' END-UNSTRING			, bic	X(33).			
1975		05 VALUE	' END-WRITE			, bic	X(33).			
1976		05 VALUE	'VENTRY			, bic	X(33).			
1977		05 VALUE	' ENTRY-CONVENT	ION		, bic	X(33).	UNIMPLEMENTED		
1978			'KENVIRONMENT				X(33).			
1979			' ENVIRONMENT-NA				X(33).			
1980			' ENVIRONMENT-VA	ALUE			X(33).			
1981		05 VALUE					X(33).	UNIMPLEMENTED		
1982		05 VALUE					X(33).			
1983		05 VALUE					X(33).			
1984		05 VALUE					X(33).			
1985		05 VALUE 05 VALUE					X(33).			
1986 1987		05 VALUE					X(33). X(33).			
1988		05 VALUE					X(33).			
1989		05 VALUE					X(33).			
1990		05 VALUE					X(33).	OBSOLETE		
1991		05 VALUE	'VEVALUATE				X(33).			
1992			' EXCEPTION				X(33).			
1993	GC1213		FEXCEPTION-FILE	3		, bic	X(33).			
	GC1213		'FEXCEPTION-FILE				X(33).	UNIMPLEMENTED		
1995	GC1213	05 VALUE	'FEXCEPTION-LOCA	ATION		, bic	X(33).			
1996	GC1213	05 VALUE	'FEXCEPTION-LOCA	ATION-N		, bic	X(33).	UNIMPLEMENTED		
1997			' EXCEPTION-OBJE			, bic	X(33).	UNIMPLEMENTED		
	GC1213		'FEXCEPTION-STAT				X(33).			
	GC1213		'FEXCEPTION-STAT	rus			X(33).			
2000			' EXCLUSIVE				X(33).			
2001	001010	05 VALUE					X(33).			
	GC1213	O5 VALUE					X(33).			
	GC1213	O5 VALUE					X(33).	IINTMDI EMENGER		
2004		O5 VALUE					X(33). X(33).	UNIMPLEMENTED		
2005 2006		O5 VALUE	' EXTERNAL				X(33).			
2006		US VALUE	EVICUNAL			PIC	Λ(33).			

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2007	GC1213	05 VALUE	'FFACTORIAL		, bic	X(33).			
2008		05 VALUE	' FACTORY		, bic	X(33).	UNIMPLEMENTED		
2009		05 VALUE	' FALSE		, bic	X(33).			
2010		O5 VALUE	'KFD		, bic	X(33).			
2011		O5 VALUE	'KFILE		, bic	X(33).			
2012		05 VALUE	' FILE-CONTROL		, bic	X(33).			
2013		05 VALUE	'FFACTORIAL ' FACTORY ' FALSE 'KFD 'KFILE ' FILE-CONTROL ' FILE-ID ' FILLER ' FINAL ' FINAT		, bic	X(33).			
	GC1113	05 VALUE	' FILLER		, bic	X(33).			
2015		05 VALUE	' FINAL		, bic	X(33).			
2016		05 VALUE	'FIRST		, PIC	X(33).			
	GC0712	05 VALUE	' FLOAT-BINARY-128 ' FLOAT-BINARY-32		, bic	X(33).	UNIMPLEMENTED		
	GC0712	O5 VALUE	FLUAT-BINARY-32		, PIC	X(33).	UNIMPLEMENTED		
2019	GC0712		' FLOAT-BINARY-64				UNIMPLEMENTED		
2020 2021		OF VALUE	' FLOAT-DECIMAL-16 ' FLOAT-DECIMAL-34		, PIC	Λ(33).			
2021		OS VALUE	' FLOAT-DECIMAL-34 ' FLOAT-EXTENDED		, DIC	X(33).	UNIMPLEMENTED		
	GC0712	OS VALUE	' FLOAT-INFINITY		, PIC	X(33).	UNIMPLEMENTED		
2023	000712	O5 VALUE	, FLOAT-LONG		) DTC	v(22)			
	GC0712		' FLOAT-NOT-A-NUMBER		, bic	X(33).	UNIMPLEMENTED		
2026	400112	O5 VALUE	' FI.OAT-SHORT		, bic	X(33).			
2027		05 VALUE	, FOOTING		, bic	X(33).			
2028		05 VALUE	' FOOTING ' FOR ' FOREGROUND-COLOR		, bic	X(33).			
2029		O5 VALUE	, FOREGROUND-COLOR		, bic	X(33).			
2030		O5 VALUE	> EUDECDUIMD CUI UIID		י א דרי	V ( 22 )			
2031	GC0711	OS VALUE	' FOREVER		, PIC	X (33)			
2032		O5 VALUE	' FORMAT 'FFORMATTED-CURRENT-I 'FFORMATTED-DATE		, bic	X(33).	UNIMPLEMENTED		
	GC1213	O5 VALUE	'FFORMATTED-CURRENT-I	DATE	, bic	X(33).	UNIMPLEMENTED		
	GC1213	05 VALUE	'FFORMATTED-DATE		, bic	X(33).	UNIMPLEMENTED		
	GC1213	05 VALUE	'FFORMATTED-DATETIME		, bic	X(33).	UNIMPLEMENTED		
	GC1213		'FFORMATTED-TIME				UNIMPLEMENTED		
2037	aa	05 VALUE	'MFORMFEED		, PIC	X(33).			
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2039		OF VALUE	YFKEE Y EDOM		, PIC	X(33).			
2040 2041		OS VALUE	) FIII I		, DIC	X(33). X(33).			
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2044	400.12		' FUNCTION-POINTER		, bic	X(33).	UNIMPLEMENTED		
2045		05 VALUE	'VGENERATE			X(33).			
2046		O5 VALUE	' GET		, bic	X(33).	UNIMPLEMENTED		
2047		O5 VALUE	'KGIVING		, bic	X(33).			
2048		05 VALUE	' GLOBAL		, bic	X(33).			
2049		O5 VALUE	'VGO			X(33).			
2050		O5 VALUE	'VGOBACK			X(33).			
2051			' GREATER			X(33).			
2052		05 VALUE				X(33).			
2053			' GROUP-USAGE			X(33).	UNIMPLEMENTED		
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2055			' HIGH-VALUE			X(33).			
2056	001012		' HIGH-VALUES			X(33). X(33).			
2057 2058	GC1213		'FHIGHEST-ALGEBRAIC ' HIGHLIGHT			X(33). X(33).			
2059		05 VALUE				X(33).			
2060			' I-O-CONTROL			X(33).			
2000		UU VALUL	_ 0 00.11.01		110	(00).			

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2061		05 VALUE	'KID	, bic	X(33).			
2062		05 VALUE	'KIDENTIFICATION	, bic :	X(33).			
2063		05 VALUE		, bic :	X(33).			
2064		05 VALUE		, bic :	X(33).			
2065		05 VALUE	' IGNORING	, bic :	X(33).			
2066		05 VALUE	' IMPLEMENTS	, bic ;		UNIMPLEMENTED		
2067		05 VALUE	' IN	, bic ;				
2068		05 VALUE		, bic ;				
2069			'KINDEXED	' PIC				
2070			' INDICATE	, bic				
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2072			' INHERITS		X(33).	UNIMPLEMENTED		
2073 2074			' INITIAL 'VINITIALISE	, bic ;				
2074		OS VALUE	' INITIALISED	, bic ;				
2076			'VINITIALIZE	, bic				
2077			' INITIALIZED	, bic				
2078			'VINITIATE	, bic				
2079		05 VALUE		, bic :				
2080		05 VALUE	'KINPUT-OUTPUT					
2081		05 VALUE	'VINSPECT	, bic :	X(33).			
2082		05 VALUE	'INSTALLATION' 'FINTEGER	, bic ;	X(33).	OBSOLETE		
2083	GC1213			, bic ;				
2084	GC1213		'FINTEGER-OF-BOOLEAN			UNIMPLEMENTED		
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2087			'FINTEGER-OF-FORMATTED-DATE		X(33).	UNIMPLEMENTED		
2088	GC1213		'FINTEGER-PART	, bic		INTMDI PMPNTPD		
2089 2090			' INTERFACE ' INTERFACE-ID	, bic ;	х(33). Х(33).	UNIMPLEMENTED		
2090			' INTERMEDIATE		X(33).	UNIMPLEMENTED UNIMPLEMENTED		
2092		05 VALUE		, bic		ONITH ELHENTED		
2093			' INTRINSIC	, bic				
2094			' INVALID	, bic				
2095		05 VALUE			X(33).	UNIMPLEMENTED		
2096		05 VALUE	, IS	, bic :	X(33).			
2097		05 VALUE	, Just	, bic ;	X(33).			
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2099		05 VALUE		, bic ;				
2100		05 VALUE		' PIC				
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2102		05 VALUE		, bic				
2103 2104		05 VALUE 05 VALUE		, bic ;		UNIMPLEMENTED		
2104			, rc_collate	, bic ;		UNIMPLEMENTED		
2106			, rc_ctable	, bic ;		UNIMPLEMENTED		
2107			, LC_MESSAGES	, bic ;		UNIMPLEMENTED		
2108			' LC_MONETARY	, bic		UNIMPLEMENTED		
2109			, LC_NUMERIC	, bic :		UNIMPLEMENTED		
2110			, TC_LIWE	, bic ;		UNIMPLEMENTED		
2111		05 VALUE	' LEADING	, bic ;	X(33).			
2112		05 VALUE	' LEFT	, bic ;				
2113			' LEFT-JUSTIFY	, bic ;		UNIMPLEMENTED		
2114		05 VALUE	' LEFTLINE	, bic ;	X(33).			

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      2128
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      2131
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      2134
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      2136
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      2141
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      2153
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      2154
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      2155
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      2156
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      05 VALUE 'FMODULE-CALLER-ID
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      2157
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      2158
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      2159
      GC1213
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      'PIC X(33).

      2160
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      2161
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      05 VALUE 'FMODULE-SOURCE
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      2162
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      05 VALUE 'FMONETARY-DECIMAL-POINT
      'PIC X(33).

      2163
      GC1213
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      2165
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                                 O5 VALUE 'VMUVE
O5 VALUE 'VMULTIPLE
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      2168 GC0711 05 VALUE 'NAME
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2169 O5 VALUE 'NATIONAL 'PIC X(33).	
2170 05 VALUE 'NATIONAL-EDITED 'PIC X(33).	
2171 GC1213 O5 VALUE 'FNATIONAL-OF 'PIC X(33). UNIMPLEMENTED	
2172 05 VALUE 'NATIVE 'PIC X(33).	
2173 O5 VALUE 'NEAREST-AWAY-FROM-ZERO 'PIC X(33).	
2174 O5 VALUE 'NEAREST-EVEN 'PTC X(33).	
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2176 05 VALUE 'NEGATIVE 'PIC X(33).	
2177 05 VALUE 'NESTED 'PIC X(33). UNIMPLEMENTED	
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2181 O5 VALUE 'NONE 'PIC X(33). UNIMPLEMENTED	
2182	
2184 05 VALUE 'NULL 'PIC X(33).	
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2192 GC1213 O5 VALUE 'FNUMERIC-THOUSANDS-SEPARATUR' PIC X(33).	
2193 GC1213 05 VALUE 'FNUMVAL 'PIC X(33).	
2194 GC1213 05 VALUE 'FNUMVAL-C 'PIC X(33).	
2195 GC1213 05 VALUE 'FNUMVAL-F 'PIC X(33).	
2196 05 VALUE 'OBJECT 'PIC X(33). UNIMPLEMENTED 2197 05 VALUE 'OBJECT-COMPUTER 'PIC X(33).	
2197       05 VALUE ' OBJECT-COMPUTER       ' PIC X(33).         2198       05 VALUE ' OBJECT-REFERENCE       ' PIC X(33).       UNIMPLEMENTED         2199       05 VALUE ' OCCURS       ' PIC X(33).       UNIMPLEMENTED	
2198 O5 VALUE 'OBJECT-REFERENCE 'PIC X(33). UNIMPLEMENTED	
2199	
2201 05 VALUE ' OFF ' PIC X(33).	
2202 05 VALUE 'OMITTED 'PIC X(33).	
2203 05 VALUE ' ON ' PIC X(33).	
2204 05 VALUE 'ONLY 'PIC X(33).	
2205 05 VALUE 'VOPEN ' PIC X(33).	
2206 O5 VALUE 'OPTIONAL 'PIC X(33).	
2207 05 VALUE 'OPTIONS 'PIC X(33). UNIMPLEMENTED	
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2200 401210 00 VIII02 10102	
2210 GC1213 05 VALUE 'FORD-MAX ' PIC X(33).	
2211 GC1213 05 VALUE 'FORD-MIN ' PIC X(33).	
2212 05 VALUE ' ORDER ' PIC X(33).	
2213 O5 VALUE 'ORGANISATION 'PIC X(33).	
2214 05 VALUE ' ORGANIZATION ' PIC X(33). 2215 05 VALUE ' OTHER ' PIC X(33).	
2216 05 VALUE ' OUTPUT ' PIC X(33).	
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2218 05 VALUE ' OVERLINE ' PIC X(33).	
2219 05 VALUE ' OVERRIDE ' PIC X(33).	
2220 O5 VALUE ' PACKED-DECIMAL ' PIC X(33).	
2221 05 VALUE ' PADDING ' PIC X(33).	
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2224			, PARAGRAPH	, I	PIC X(33).			
2225		05 VALUE	'VPERFORM	, I	PIC X(33).			
2226		O5 VALUE		, I	PIC X(33).			
2227		O5 VALUE	'PH	, I	PIC X(33).			
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2229		05 VALUE			PIC X(33).			
2230			'KPICTURE		PIC X(33).			
2231		05 VALUE			PIC X(33).			
2232		05 VALUE	'KPOINTER		PIC X(33).			
2233		05 VALUE	' POSITION		PIC X(33).			
2234			, POSITIVE		PIC X(33).	IINTADI PAPARED		
2235			' PREFIXED			UNIMPLEMENTED		
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2238	GCIZIO		, PREVIOUS		PIC X(33).			
2239			'MPRINTER		PIC X(33).			
2240			, PRINTING		PIC X(33).			
2241			'KPROCEDURE		PIC X(33).			
2242			' PROCEDURE-POINTER		PIC X(33).			
2243			' PROCEDURES		PIC X(33).			
2244			, PROCEED	, I	PIC X(33).			
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2247		05 VALUE	' PROGRAM-POINTER		PIC X(33).			
2248			' PROHIBITED		PIC X(33).			
2249		05 VALUE			PIC X(33).			
2250		05 VALUE	PROPERTY	' I	PIC X(33).	UNIMPLEMENTED		
2251		OF VALUE	' PROTOTYPE	, i	PIC X(33).	UNIMPLEMENTED		
2252 2253		05 VALUE 05 VALUE			PIC X(33). PIC X(33).	OBSOLETE OBSOLETE		
2254		05 VALUE	•		PIC X(33).	ODSOLETE		
2255		05 VALUE		, т	OTC ¥(33)			
2256		05 VALUE		, <sub>I</sub>	PIC X(33).	UNIMPLEMENTED		
2257			, RAISING	, I	PIC X(33).	UNIMPLEMENTED		
2258	GC1213	05 VALUE	'FRANDOM		PIC X(33).			
2259	GC1213	05 VALUE	'FRANGE	, I	PIC X(33).			
2260	GC1213	O5 VALUE	'KRD		PIC X(33).			
2261		05 VALUE	'VREAD	, I	PIC X(33).			
2262		05 VALUE			PIC X(33).			
2263			'VRECEIVE		PIC X(33).	OBSOLETE		
2264		05 VALUE			PIC X(33).			
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2266 2267			' RECORDS ' RECURSIVE		PIC X(33). PIC X(33).			
2268			'KREDEFINES		PIC X(33).			
2269		05 VALUE			PIC X(33).			
2270	GC0712		'AREFERENCE		PIC X(33).			
2271	<del>-</del>		, REFERENCES		PIC X(33).			
2272			' RELATION		PIC X(33).	UNIMPLEMENTED		
2273		05 VALUE	' RELATIVE		PIC X(33).			
2274		05 VALUE	'VRELEASE		PIC X(33).			
2275	GC1213	O5 VALUE			PIC X(33).			
2276		05 VALUE	' REMAINDER	, I	PIC X(33).			

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2278		05 VALUE	' REMOVAL			, bic	X(33).			
2279			'KRENAMES			, bic	X(33).			
2280		05 VALUE	' REPLACE			, bic	X(33).			
2281		05 VALUE	'KREPLACING			, bic	X(33).			
2282		05 VALUE					X(33).			
2283			' REPORTING				X(33).			
2284			, REPORTS				X(33).			
2285			' REPOSITORY				X(33).			
2286			' REQUIRED				X(33).			
2287			, RESERVE				X(33).			
2288		05 VALUE					X(33).			
2289		05 VALUE						UNIMPLEMENTED		
2290		05 VALUE					X(33).	UNIMPLEMENTED		
2291		05 VALUE					X(33).			
2292		05 VALUE	'IRETURN-CODE				X(33).			
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2295		05 VALUE	' REVERSE-VIDEO			, bic	X(33).			
2296		05 VALUE	' REVERSED			, bic	X(33).			
2297		05 VALUE	' REWIND				X(33).			
2298		05 VALUE	'VREWRITE				X(33).			
2299		05 VALUE	' RF				X(33).			
2300		05 VALUE	'RH			, bic	X(33).			
2301		05 VALUE	' RIGHT			, bic	X(33).			
2302			' RIGHT-JUSTIFY			, bic	X(33).	UNIMPLEMENTED		
2303		05 VALUE	'VROLLBACK			, bic	X(33).			
2304		05 VALUE	, ROUNDED			, bic	X(33).			
2305			' ROUNDING			, bic	X(33).	UNIMPLEMENTED		
2306		05 VALUE	' RUN			, bic	X(33).			
2307		05 VALUE	' SAME				X(33).			
2308		05 VALUE	'KSCREEN				X(33).			
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2311		05 VALUE					X(33).			
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2318			' SEGMENT				X(33).	OBSOLETE		
2319			' SEGMENT-LIMIT				X(33).			
2320		05 VALUE					X(33).			
2321		05 VALUE					X(33).	UNIMPLEMENTED		
2322		O5 VALUE					X(33).	OBSOLETE		
2323			' SENTENCE				X(33).			
2324			' SEPARATE				X(33).			
2325 2326			' SEQUENCE ' SEQUENTIAL				X(33). X(33).			
2326		05 VALUE	•				X(33).			
2328			' SHARING				X(33).			
2329	GC1213	05 VALUE					X(33).			
2330	301210	05 VALUE					X(33).			
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2338 2339 2340 2341		05 VALUE 05 VALUE 05 VALUE	' SOURCE ' SOURCE-COMPUTER ' SOURCES		FIC	X(33). X(33). X(33). X(33).	UNIMPLEMENTED		
2342 2343 2344 2345		O5 VALUE O5 VALUE O5 VALUE	' SOURCES ' SPACE ' SPACE-FILL ' SPACES ' SPECIAL-NAMES		, bic , bic	X(33). X(33).	UNIMPLEMENTED		
2347 2348 2349	GC1213	OS VALUE	'FSQRT ' STANDARD ' STANDARD-1 ' STANDARD-2 ' STANDARD-BINARY		, PIC	X(33). X(33). X(33). X(33).			
2352 2353	GC1213 GC1213	05 VALUE 05 VALUE 05 VALUE	'FSTANDARD-COMPARE 'STANDARD-DECIMAL 'FSTANDARD-DEVIATION		, bic , bic	X(33). X(33). X(33).	UNIMPLEMENTED UNIMPLEMENTED UNIMPLEMENTED		
2354 2355 2356 2357		05 VALUE 05 VALUE	' STATEMENT ' STATIC ' STATUS		, bic , bic	X(33). X(33).	UNIMPLEMENTED		
2358 2359 2360 2361		05 VALUE 05 VALUE 05 VALUE	'MSTDIN		, bic	X(33). X(33). X(33). X(33).			
2362 2363	GC1213	05 VALUE 05 VALUE	' STEP 'VSTOP 'FSTORED-CHAR-LENGT	Н	, bic , bic	X(33). X(33). X(33). X(33).			
2366 2367 2368		05 VALUE 05 VALUE	' STRONG ' SUB-QUEUE-1		, bic , bic	X(33). X(33). X(33).	UNIMPLEMENTED OBSOLETE OBSOLETE		
2371 2372	GC1213 GC1213	05 VALUE 05 VALUE	' SUB-QUEUE-2 ' SUB-QUEUE-3 'FSUBSTITUTE 'FSUBSTITUTE-CASE 'VSUBTRACT		, bic , bic	X(33). X(33). X(33). X(33).	OBSOLETE		
2373 2374 2375 2376	GC1213	05 VALUE	' SUPER 'VSUPPRESS 'MSWO		, bic , bic	X(33). X(33). X(33). X(33).	UNIMPLEMENTED		
2377 2378 2379 2380		05 VALUE 05 VALUE 05 VALUE 05 VALUE	'MSW10 'MSW11 'MSW12		, bic , bic	X(33). X(33). X(33). X(33).			
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2387		JE 'MSW5			X(33).			
2388		JE 'MSW6			X(33).			
2389		JE 'MSW7			X(33).			
2390		JE 'MSW8			X(33).			
2391		JE 'MSW9			X(33).			
2392		JE 'MSWITCH-O			X(33).			
2393		JE 'MSWITCH-1			X(33).			
2394		JE 'MSWITCH-10			X(33).			
2395		JE 'MSWITCH-11			X(33).			
2396		JE 'MSWITCH-12			X(33).			
2397		JE 'MSWITCH-13			X(33).			
2398		JE 'MSWITCH-14			X(33).			
2399		JE 'MSWITCH-15			X(33).			
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2401	O5 VAL	JE 'MSWITCH-3		, PIC	X(33).			
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2403	O5 VAL	JE 'MSWITCH-5		, PIC	X(33).			
2404	O5 VAL	JE 'MSWITCH-6		, bic	X(33).			
2405	O5 VAL	JE 'MSWITCH-7		, bic	X(33).			
2406	O5 VAL	JE 'MSWITCH-8		, bic	X(33).			
2407	O5 VAL	JE 'MSWITCH-9		, bic	X(33).			
2408	O5 VAL	JE ' SYMBOL		, bic	X(33).	UNIMPLEMENTED		
2409		JE ' SYMBOLIC			X(33).			
2410	O5 VAL	JE ' SYNC		, bic	X(33).			
2411	05 VAL	JE ' SYNCHRONISED			X(33).			
2412		JE ' SYNCHRONIZED			X(33).			
2413		JE 'MSYSERR			X(33).			
2414		JE 'MSYSIN		, bic	X(33).			
2415		JE 'MSYSIPT			X(33).			
2416		JE 'MSYSLIST			X(33).			
2417		JE 'MSYSLST			X(33).			
2418		JE 'MSYSOUT			X(33).			
2419		JE ' SYSTEM-DEFAULT			X(33).			
2420		JE ' TABLE			X(33).	UNIMPLEMENTED		
2421		JE 'KTALLYING			X(33).			
		JE 'FTAN			X(33).			
2423 2424		JE 'TAPE JE 'TERMINAL			X(33).	חספחו בידב		
		JE 'VTERMINATE			X(33).	OBSOLETE		
2425 2426		JE ' TEST			X(33). X(33).			
2427		JE 'FTEST-DATE-YYYYMMI	מח		X(33).			
2428		JE 'FTEST-DAY-YYYYDDD	עס		X(33).			
2429		JE 'FTEST-FORMATTED-D <i>I</i>	ATETTME		X(33).	UNIMPLEMENTED		
2430		JE 'FTEST-NUMVAL			X(33).	***************************************		
2431		JE 'FTEST-NUMVAL-C			X(33).			
2432		JE 'FTEST-NUMVAL-F			X(33).			
2433		JE ' TEXT			X(33).	OBSOLETE		
2434		JE ' THAN			X(33).			
2435	05 VAL	JE ' THEN			X(33).			
2436	05 VAL	JE ' THROUGH			X(33).			
2437	O5 VAL	JE ' THRU			X(33).			
2438	O5 VAL	JE ' TIME		, bic	X(33).			

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2439	GC0711	05 VALUE	' TIME-OUT		, bic	X(33).			
2440	GC0711	05 VALUE	' TIMEOUT ' TIMES 'KTO ' TOP ' TOWARD-GREATER		, bic	X(33).			
2441		05 VALUE	' TIMES			X(33).			
2442		05 VALUE	'KTO		, bic	X(33).			
2443		05 VALUE	' TOP			X(33).			
2444		05 VALUE	' TOWARD-GREATER		, bic	X(33).			
2445		05 VALUE	' TOWARD-LESSER		, bic	X(33).			
2446		OS VALUE	INAILING		FIC	X(33).			
2447		05 VALUE	' TRAILING-SIGN		, PIC	X(33).	UNIMPLEMENTED		
2448	001010		'VTRANSFORM			X(33).			
2449 2450	GC1213					X(33). X(33).			
2450		OS VALUE	' TRUE ' TRUNCATION			X(33).			
2451		OS VALUE	, TADE			X(33).			
2453		O5 VALUE	' TYPE ' TYPEDEF ' UCS-4			X(33).	UNIMPLEMENTED		
2454		O5 VALUE	, UCS-4			X(33).	UNIMPLEMENTED		
2455		05 VALUE	' UNDERLINE			X(33).			
2456		05 VALUE	' UNIT			X(33).			
2457		05 VALUE	' UNIVERSAL				UNIMPLEMENTED		
2458		05 VALUE	'VUNLOCK			X(33).			
2459		05 VALUE	'VUNLOCK ' UNSIGNED ' UNSIGNED-INT		, bic	X(33).			
2460		05 VALUE	' UNSIGNED-INT		, bic	X(33).			
2461		05 VALUE	' UNSIGNED-LONG		, bic	X(33).			
2462		05 VALUE	' UNSIGNED-SHORT		, bic	X(33).			
2463		05 VALUE	'VUNSTRING		, bic	X(33).			
2464		05 VALUE				X(33).			
2465		05 VALUE	'KUP			X(33).			
2466		05 VALUE	' UPDATE ' UPON ' UPPER			X(33).			
2467 2468		OF VALUE	, OLON			X(33). X(33).			
	GC1213	OS VALUE	'FUPPER-CASE			X(33).			
2470	GC1213	05 VALUE				X(33).			
2471		05 VALUE				X(33).			
	GC0711	05 VALUE				X(33).			
2473			' USER-DEFAULT			X(33).			
2474		05 VALUE				X(33).			
2475		05 VALUE	, UTF-16		, bic		UNIMPLEMENTED		
2476		05 VALUE	, UTF-8		, bic	X(33). X(33).	UNIMPLEMENTED		
2477		05 VALUE	' VAL-STATUS		, bic	X(33).	UNIMPLEMENTED		
2478		05 VALUE	' UTF-8 ' VAL-STATUS ' VALID		, bic	X(33).	UNIMPLEMENTED		
2479		05 VALUE	, ANTIDATE		, PIC		UNIMPLEMENTED		
2480			' VALIDATE-STATUS			X(33).	UNIMPLEMENTED		
	GC0712	05 VALUE				X(33).			
2482	001010	05 VALUE				X(33).			
2483	GC1213		'FVARIANCE			X(33).			
2484 2485			'KVARYING ' VDISABLE			X(33). X(33).	UNIMPLEMENTED		
2486		05 VALUE				X(33).	ON THE PERIENTED		
2487		05 VALUE				X(33).			
2488	GC1213		'FWHEN-COMPILED			X(33).			
2489	202210	05 VALUE				X(33).			
2490		05 VALUE				X(33).			
2491			'KWORKING-STORAGE			X(33).			
2492		05 VALUE				X(33).			

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2493 2494 2495 2496 2497 2498 2499	GC1213		05 VALUE 'FYEAR-TO-YYYY 05 VALUE ' YYYYDDD 05 VALUE ' YYYYMMDD 05 VALUE ' ZERO 05 VALUE ' ZERO-FILL 05 VALUE ' ZEROES 05 VALUE ' ZEROS	' PIC X(33).	UNIMPLEMENTED		
2500		01	WS-Reserved-Word-Table-TXT REDEFINE	S WS-Reserved-Words-TXT.			
2501 2502 2503	GC1113		05 WS-Reserved-Word-TXT OCCUI	RS 754 TIMES ASCENDING KEY WS-RW-Word-TXT			
2504				INDEXED WS-RW-IDX.			
2505 2506 2507			10 WS-RW-Type-CD 10 WS-RW-Word-TXT	PIC X(1). PIC X(32).			
2508		01	WS-Runtime-Switches.				
2509	GC0710		05 WS-RS-Duplicate-CHR	PIC X(1).			
2510			05 WS-RS-In-Which-Pgm-CHR	PIC X(1).			
2511			88 WS-RS-In-Main-Module-BOOL	VALUE 'M'.			
2512			88 WS-RS-In-Copybook-BOOL	VALUE 'C'.			
2513			05 WS-RS-Last-Token-Ended-Sent-CHR	PIC X(1).			
2514			05 WS-RS-Processing-PICTURE-CHR	PIC X(1).			
2515			05 WS-RS-Token-Ended-Sentence-CHR	PIC X(1).			
2516	GC0710		05 WS-RS-Verb-Has-Been-Found-CHR	PIC X(1).			
2517		01	UC Court Costing TVT	DIG V(15)			
2518 2519		01	WS-Saved-Section-TXT	PIC X(15).			
2520	GC1213	01	WS-Src-Dashes-TXT.				
2521	GC0712		05 VALUE '====='	PIC X(7).			
2522 2523	GC0712		O5 VALUE ALL '='	PIC X(128).			
2524		01	WS-Src-Detail-Line-TXT.				
2525			05 WS-SDL-Line-NUM	PIC ZZZZZ9.			
2526			05 FILLER	PIC X(1).			
2527 2528			05 WS-SDL-Statement-TXT	PIC X(256).			
2529 2530	GC1213	01	WS-Src-Hold-TXT	PIC X(256).			
2531 2532		01	WS-Src-Line-NUM	PIC 9(6).			
2533 2534	GC1213	01	WS-Src-Lines-NUM	USAGE BINARY-LONG.			
2535 2536		01	WS-Src-SUB	USAGE BINARY-LONG.			
2537 2538		01	WS-Tally-QTY	USAGE BINARY-LONG.			
2539 2540		01	WS-Temp-10-Chars-TXT	PIC X(10).			
2541 2542		01	WS-Temp-32-Chars-1-TXT	PIC X(32).			
2543 2544	GC0711	01	WS-Temp-32-Chars-2-TXT	PIC X(32).			
2545 2546	GC0711	01	WS-Temp-32-Chars-3-TXT	PIC X(32).			

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  2547 GC0712 01 WS-Temp-65-Chars-TXT
                                                           PIC X(65).
  2548
  2549
               01 WS-Temp-256-Chars-TXT
                                                           PIC X(256).
  2550
  2551
              01 WS-Today-DT
                                                           PIC 9(8).
  2552
              01 WS-Token-Curr-TXT
  2553
                                                           PIC X(32).
  2554
  2555
              01 WS-Token-Curr-Uc-TXT
                                                           PIC X(32).
  2556
              01 WS-Token-Prev-TXT
  2557
                                                           PIC X(32).
  2558
  2559
               01 WS-Token-Search-TXT
                                                           PIC X(32).
  2560
               01 WS-Token-Type-CD
                                                           PIC X(1).
  2561

      2562
      GC0712
      88
      WS-TT-Token-Is-Argtype-BOOL
      VALUE 'A'.

      2563
      88
      WS-TT-Token-Is-EOF-BOOL
      VALUE HIGH

      2564
      GC1213
      88
      WS-TT-Token-Is-Function-BOOL
      VALUE 'F'.

                                                           VALUE HIGH-VALUES.
 VALUE 'K', 'V', 'A'.
                                                           VALUE 'V'.
  2569
                   88 WS-TT-Token-Is-Verb-BOOL
  2570 GC1213 88 WS-TT-Token-Is-Reserved-Wd-BOOL
                                                           VALUE ' ', 'F'.
  2571
              01 WS-Usernames-QTY
                                                           USAGE BINARY-LONG.
  2572
  2573
  2574
               01 WS-Version-TXT
                                                           PIC X(23).
  2575
              01 WS-Xref-Detail-Line-TXT.
  2576
                  05 WS-XDL-Prog-ID-TXT
                                                           PIC X(15).
  2577
                  05 FILLER
                                                           PIC X(1).
  2578
  2579
                 05 WS-XDL-Token-TXT
                                                          PIC X(32).
                 05 FILLER
                                                          PIC X(1).
  2580
  2581
                  05 WS-XDL-Def-Line-NUM
                                                           PIC ZZZZZ9.
  2582
                   05 FILLER
                                                           PIC X(1).
                   05 WS-XDL-Section-TXT
                                                          PIC X(15).
  2583
                  05 FILLER
                                                         PIC X(1).
  2584
  2585
                   05 WS-XDL-Reference-TXT
                                                         OCCURS 8 TIMES.
  2586
                      10 WS-XDL-Ref-Line-NUM
                                                         PIC ZZZZZ9.
  2587
                      10 WS-XDL-Ref-Flag-CHR
                                                         PIC X(1).
  2588
                       10 FILLER
                                                           PIC X(1).
  2589
  2590 GC1213 01 WS-Xref-Lines-Per-Rec-NUM
                                                           PIC 9(1).
  2591
  2592
               LINKAGE SECTION.
  2593 GC0712 01 L-Listing-Fn-TXT
                                                           PIC X(256).
  2594
               01 L-Src-Fn-TXT
                                                           PIC X(256).
  2595
  2596
  2597 GC0712 01 L-OS-Type-CD
                                                           PIC 9(1).
  2598
  2599 GC1213 01 L-LPP-NUM
                                                           USAGE BINARY-LONG.
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                                                                                               74
 2601 GC1213 01 L-LPP-Port-NUM
                                                    USAGE BINARY-LONG.
 2602
                                                    PIC 9(1).
 2603 GC1213 01 L-Listing-CD
 2604
 2605 GC0712 PROCEDURE DIVISION USING L-Listing-Fn-TXT
 2606 GC0712
                                     L-Src-Fn-TXT
 2607 GC0712
                                     L-OS-Type-CD
 2608 GC1213
                                    L-LPP-NUM
 2609 GC1213
                                    L-LPP-Port-NUM
 2610 GC1213
                                    L-Listing-CD.
 2611
             000-Main SECTION.
               PERFORM 100-Initialization
 2612
               OPEN OUTPUT F-Listing-FILE
 2613 GC0712
 2614 GC0712
                PERFORM 500-Produce-Source-Listing
 2615 GC0712
                SORT F-Sort-Work-FILE
 2616 GC0712
                                  F-SW-Prog-ID-TXT
                  ASCENDING KEY
 2617 GC0712
                                    F-SW-Token-Uc-TXT
 2618 GC0712
                                     F-SW-Ref-Line-NUM
 2619 GC0712 INPUT PROCEDURE 300-Tokenize-Source
 2620 GC0712
                   OUTPUT PROCEDURE 400-Produce-Xref-Listing
                 CLOSE F-Listing-FILE
 2622
                 GOBACK
 2623
 2624
 2625
 2626
            *> Perform all program-wide initialization operations
            2627
 2628
             100-Initialization SECTION.
 2629 GC1213 MOVE 0 TO WS-Page-NUM
                MOVE 'N' TO WS-Suppress-FF-CHR
 2630 GC1213
 2631 GC1213 MOVE SPACES TO WS-Copyright-TXT
 2632 GC1213 STRING 'GCic for '
                                                  DELIMITED SIZE
                       WS-OS-Type-TXT(L-OS-Type-CD) DELIMITED SPACE
 2633 GC1213
                        ' Copyright (C) 2009-' DELIMITED SIZE
 2634 VC0820
 2635 VC0322
                       COMP-YEAR
                                                  DELIMITED SIZE
 2636 VC0322
                        ', Gary L. Cutler, GPL'
                                                  DELIMITED SIZE
 2637 GC1213
                       INTO WS-Copyright-TXT
 2638 VCO811*> See const-set-1.cpy for constants used
                MOVE 'GNUCOBOL 3.1.2 O6MAR2022' TO WS-Version-TXT
 2639 VC0811*>
 2640
 2641 VC0811
                         Comp-Vers to
                                        WS-Version-TXT.
                 move
 2642
                 MOVE TRIM(L-Src-Fn-TXT, Leading) TO L-Src-Fn-TXT
                 PERFORM VARYING WS-I-SUB FROM LENGTH(L-Src-Fn-TXT) BY -1
 2643 GC1010
 2644
         *> Locate last directory delimiter character so that the filename can be extracted
                          UNTIL L-Src-Fn-TXT(WS-I-SUB:1) = '/' OR '\'
 2645 GC1010
 2646 GC1010
                               OR WS-I-SUB = 0
 2647 VC0322
                          continue
 2648 GC1010 END-PERFORM
              IF WS-I-SUB = 0
 2649 GC1010
                    MOVE UPPER-CASE(L-Src-Fn-TXT) TO WS-Main-Module-Name-TXT
 2650 GC1010
 2651
          *> No directory delimiter, whole thing is filename
 2652 GC1010
               ELSE
                 ADD 1 TO WS-I-SUB
MOVE UPPER-CASE(L-Src-Fn-TXT(WS-I-SUB:))
 2653 GC1010
 2654 GC1010
```

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                                                                                            Page
                                                                                                  75
 2655 GC1010
                       TO WS-Main-Module-Name-TXT *> Extract filename
 2656 GC1010 END-IF
 2657 GC1213
                IF L-Listing-CD = 1 *> LANDSCAPE
                 MOVE 8 TO WS-Xref-Lines-Per-Rec-NUM
ACCEPT WS-Lines-Per-Page-Env-TXT
 2658 GC1213
 2659 GC1213
 2660 GC1213
                         FROM ENVIRONMENT 'GCXREF_LINES'
 2661 GC1213
                ELSE *> PORTRAIT
                 MOVE 3 TO WS-Xref-Lines-Per-Rec-NUM
 2662 GC1213
 2663 GC1213
                    ACCEPT WS-Lines-Per-Page-Env-TXT
 2664 GC1213
                         FROM ENVIRONMENT 'GCXREF_LINES_PORT'
 2665 GC1213 END-IF
 2666
                 INSPECT L-Src-Fn-TXT REPLACING ALL '\' BY '/'
 2667
                 MOVE L-Src-Fn-TXT TO WS-Program-Path-TXT
 2668
                  CALL 'C$JUSTIFY' USING WS-Program-Path-TXT, 'Right'
 2669
                 MOVE LENGTH(TRIM(L-Src-Fn-TXT, Trailing)) TO WS-I-SUB
                 MOVE O TO WS-J-SUB
 2670
                 PERFORM UNTIL L-Src-Fn-TXT(WS-I-SUB:1) = '/'
 2671
 2672
                            OR WS-I-SUB = 0
 2673
                     SUBTRACT 1 FROM WS-I-SUB
 2674
                     ADD
                           1 TO WS-J-SUB
 2675
                  END-PERFORM
 2676
                  UNSTRING L-Src-Fn-TXT((WS-I-SUB + 1):WS-J-SUB)
                     DELIMITED BY '.'
 2677
 2678
                     INTO WS-Filename-TXT
 2679
                          WS-Dummy-TXT
 2680 GC1010 STRING
 2681 GC1010
                       TRIM(WS-Filename-TXT, Trailing)
 2682 GC1010
                         '.i'
 2683 GC1010
                        DELIMITED SIZE
 2684 GC1010
                        INTO WS-Expanded-Src-Fn-TXT
 2685 GC1010 CALL 'CBL_CHECK_FILE_EXIST' USING WS-Expanded-Src-Fn-TXT
 2686 GC1010
                                                  WS-Temp-256-Chars-TXT
 2687 GC1010
                IF RETURN-CODE NOT = 0
 2688 GC1010
                     GOBACK
 2689 GC1010
                 END-IF
 2690
                 IF WS-Lines-Per-Page-Env-TXT NOT = SPACES
 2691
                     MOVE NUMVAL(WS-Lines-Per-Page-Env-TXT)
 2692
                       TO WS-Lines-Per-Page-NUM
                ELSE
 2693
                 IF L-LISTING-CD = 1 *> LANDSCAPE
 2694 GC1213
 2695 GC1213
                     MOVE L-LPP-NUM TO WS-Lines-Per-Page-NUM
                   ELSE
 2696 GC1213
                                      *> PORTRAIT
 2697 GC1213
                        MOVE L-LPP-Port-NUM TO WS-Lines-Per-Page-NUM
                    END-IF
 2698 GC1213
                END-IF
 2699
 2700 GC1213 SUBTRACT 3 FROM WS-Lines-Per-Page-NUM *> FOR PAGE FOOTER
 2701
                ACCEPT WS-Today-DT FROM DATE YYYYMMDD
 2702 GC1213
               MOVE WS-Today-DT TO WS-Formatted-DT
                 MOVE '???????????...' TO WS-Curr-Prog-ID-TXT
 2703
 2704
                 MOVE SPACES
                                       TO WS-Curr-Verb-TXT
 2705
                                           WS-Held-Reference-TXT
 2706
 2707
              300-Tokenize-Source SECTION.
```

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  2709
                   OPEN INPUT F-Expanded-Src-FILE
  2710
                  MOVE SPACES TO F-Expanded-Src-REC
                  MOVE 256 TO WS-Src-SUB
  2711
                  MOVE 0 TO WS-Usernames-QTY
  2712
  2713
                            WS-Curr-Line-NUM
  2714
                  MOVE '?' TO WS-Curr-Division-TXT
                  MOVE 'N' TO WS-RS-Verb-Has-Been-Found-CHR
  2715 GC0710
 2716
                  PERFORM FOREVER
 2717
                      PERFORM 310-Get-Token
 2718
                      IF WS-TT-Token-Is-E0F-B00L
 2719
                          EXIT PERFORM
 2720
                      END-TF
  2721
                      MOVE UPPER-CASE(WS-Token-Curr-TXT)
  2722
                        TO WS-Token-Curr-Uc-TXT
  2723 GC1010
                      IF WS-TT-Token-Is-Keyword-BOOL
  2724 GC1010
                      OR WS-TT-Token-Is-Reserved-Wd-BOOL
  2725 GC1010
                          MOVE WS-Token-Curr-Uc-TXT TO WS-Token-Curr-TXT
  2726 GC1010
                      END-IF
  2727
                      IF WS-TT-Token-Is-Verb-BOOL
  2728
                          MOVE WS-Token-Curr-Uc-TXT TO WS-Curr-Verb-TXT
  2729
                                                        WS-Token-Prev-TXT
  2730
                           IF WS-Held-Reference-TXT NOT = SPACES
                              MOVE WS-Held-Reference-TXT TO F-Sort-Work-REC
  2731
  2732
                               MOVE SPACES TO WS-Held-Reference-TXT
  2733
                               RELEASE F-Sort-Work-REC
                          END-TF
  2734
                      END-IF
  2735
  2736
                       EVALUATE TRUE
  2737
                       WHEN WS-CD-In-IDENT-DIV-BOOL
  2738
                          PERFORM 320-IDENTIFICATION-DIVISION
  2739
                       WHEN WS-CD-In-ENV-DIV-BOOL
  2740
                          PERFORM 330-ENVIRONMENT-DIVISION
  2741
                      WHEN WS-CD-In-DATA-DIV-BOOL
  2742
                          PERFORM 340-DATA-DIVISION
  2743
                       WHEN WS-CD-In-PROC-DIV-BOOL
  2744
                          PERFORM 350-PROCEDURE-DIVISION
  2745
                      END-EVALUATE
  2746
                      IF WS-TT-Token-Is-Keyword-BOOL
  2747
                          MOVE WS-Token-Curr-Uc-TXT TO WS-Token-Prev-TXT
  2748
                      END-IF
                      IF WS-RS-Token-Ended-Sentence-CHR = 'Y'
  2749
  2750
                       AND WS-Curr-Division-TXT NOT = 'I'
                           MOVE SPACES TO WS-Token-Prev-TXT
  2751
  2752
                                         WS-Curr-Verb-TXT
  2753
                      END-IF
  2754
  2755
                   END-PERFORM
  2756
                   CLOSE F-Expanded-Src-FILE
  2757
  2758
  2759
              310-Get-Token SECTION.
              *>-- Position to 1st non-blank character
  2760
  2761
                  MOVE WS-RS-Token-Ended-Sentence-CHR
  2762
                    TO WS-RS-Last-Token-Ended-Sent-CHR
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                  MOVE 'N' TO WS-RS-Token-Ended-Sentence-CHR
  2763
  2764
                  PERFORM UNTIL F-Expanded-Src-REC(WS-Src-SUB : 1) NOT = SPACE
  2765
                      IF WS-Src-SUB > 255
                          READ F-Expanded-Src-FILE AT END
  2766
                              IF WS-Held-Reference-TXT NOT = SPACES
  2767
  2768
                                  MOVE WS-Held-Reference-TXT TO F-Sort-Work-REC
  2769
                                  MOVE SPACES TO WS-Held-Reference-TXT
 2770
                                  RELEASE F-Sort-Work-REC
 2771
                              END-IF
  2772
                              SET WS-TT-Token-Is-EOF-BOOL TO TRUE
 2773
                              MOVE O TO WS-Curr-Line-NUM
 2774
                              EXIT SECTION
 2775
                          END-READ
  2776 GC0712
                          IF F-ES-1-7-TXT NOT = '#DEFLIT'
  2777 GC0712
                              IF F-ES-1-CHR = '#'
 2778 GC0712
                                  PERFORM 311-Control-Record
  2779 GC0712
  2780 GC0712
                                  PERFORM 312-Expanded-Src-Record
                              END-IF
  2781 GC0712
  2782 GC0712
                          END-IF
  2783
                      ELSE
  2784
                          ADD 1 TO WS-Src-SUB
  2785
                      END-IF
  2786
                 END-PERFORM
             *>-- Extract token string
  2787
                 MOVE F-Expanded-Src-REC(WS-Src-SUB : 1)
  2788
  2789
                    TO WS-Curr-CHR
  2790
                  MOVE F-Expanded-Src-REC(WS-Src-SUB + 1: 1)
  2791
                    TO WS-Next-CHR
                  IF WS-Curr-CHR = '.'
  2792
  2793
                      ADD 1 TO WS-Src-SUB
                      MOVE WS-Curr-CHR TO WS-Token-Curr-TXT
  2794
  2795
                      MOVE SPACE TO WS-Token-Type-CD
                      MOVE 'Y' TO WS-RS-Token-Ended-Sentence-CHR
 2796
  2797
                      EXIT SECTION
  2798
                  END-IF
                  IF WS-Curr-Char-Is-Punct-BOOL
  2799
                 AND WS-Curr-CHR = '='
  2800
  2801
                  AND WS-Curr-Division-TXT = 'P'
  2802
                      ADD 1 TO WS-Src-SUB
  2803
                      MOVE 'EQUALS' TO WS-Token-Curr-TXT
  2804
                      MOVE 'K'
                                    TO WS-Token-Type-CD
  2805
                      EXIT SECTION
  2806
                  END-IF
  2807
                  IF WS-Curr-Char-Is-Punct-BOOL *> So subscripts don't get flagged w/ '*'
  2808
                  AND WS-Curr-CHR = '('
  2809
                  AND WS-Curr-Division-TXT = 'P'
  2810
                      MOVE SPACES TO WS-Token-Prev-TXT
                  END-IF
  2811
                  IF WS-Curr-Char-Is-Punct-BOOL
  2812
  2813
                      ADD 1 TO WS-Src-SUB
                      MOVE WS-Curr-CHR TO WS-Token-Curr-TXT
  2814
  2815
                      MOVE SPACE TO WS-Token-Type-CD
  2816
                      EXIT SECTION
```

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  2817
                   END-TF
  2818
                   IF WS-Curr-Char-Is-Quote-BOOL
                       ADD 1 TO WS-Src-SUB
  2819
  2820
                       UNSTRING F-Expanded-Src-REC
  2821
                           DELIMITED BY WS-Curr-CHR
  2822
                           INTO WS-Token-Curr-TXT
  2823
                           WITH POINTER WS-Src-SUB
                       IF F-Expanded-Src-REC(WS-Src-SUB : 1) = '.'
  2824
                           MOVE 'Y' TO WS-RS-Token-Ended-Sentence-CHR
  2825
  2826
                           ADD 1 TO WS-Src-SUB
  2827
                       END-TF
  2828
                       SET WS-TT-Token-Is-Lit-Alpha-BOOL TO TRUE
  2829
                       EXIT SECTION
  2830
                   END-IF
                   IF WS-Curr-Char-Is-X-BOOL AND WS-Next-Char-Is-Quote-BOOL
  2831
  2832
                       ADD 2 TO WS-Src-SUB
  2833
                       UNSTRING F-Expanded-Src-REC
  2834
                           DELIMITED BY WS-Next-CHR
  2835
                           INTO WS-Token-Curr-TXT
  2836
                           WITH POINTER WS-Src-SUB
  2837
                       IF F-Expanded-Src-REC(WS-Src-SUB : 1) = '.'
  2838
                           MOVE 'Y' TO WS-RS-Token-Ended-Sentence-CHR
  2839
                           ADD 1 TO WS-Src-SUB
  2840
                       END-IF
                       SET WS-TT-Token-Is-Lit-Number-BOOL TO TRUE
  2841
  2842
                       EXIT SECTION
                   END-IF
  2843
  2844
                   IF WS-Curr-Char-Is-Z-BOOL AND WS-Next-Char-Is-Quote-BOOL
  2845
                       ADD 2 TO WS-Src-SUB
  2846
                       UNSTRING F-Expanded-Src-REC
  2847
                           DELIMITED BY WS-Next-CHR
                           INTO WS-Token-Curr-TXT
  2848
  2849
                           WITH POINTER WS-Src-SUB
                       IF F-Expanded-Src-REC(WS-Src-SUB : 1) = '.'
  2850
  2851
                           MOVE 'Y' TO WS-RS-Token-Ended-Sentence-CHR
  2852
                           ADD 1 TO WS-Src-SUB
  2853
                       END-IF
                       SET WS-TT-Token-Is-Lit-Alpha-BOOL TO TRUE
  2854
  2855
                       EXIT SECTION
  2856
                   END-IF
                   IF WS-RS-Processing-PICTURE-CHR = 'Y'
  2857
  2858
                       UNSTRING F-Expanded-Src-REC
                           DELIMITED BY '. ' OR ' '
  2859
  2860
                           INTO WS-Token-Curr-TXT
  2861
                           DELIMITER IN WS-Delim-TXT
  2862
                           WITH POINTER WS-Src-SUB
  2863
                       IF WS-Delim-TXT = '. '
                           MOVE 'Y' TO WS-RS-Token-Ended-Sentence-CHR
  2864
  2865
                           ADD 1 TO WS-Src-SUB
  2866
  2867
                       IF UPPER-CASE(WS-Token-Curr-TXT) = 'IS'
  2868
                           MOVE SPACE TO WS-Token-Type-CD
  2869
                           EXIT SECTION
  2870
                       ELSE
```

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  2871
                           MOVE 'N' TO WS-RS-Processing-PICTURE-CHR
  2872
                           MOVE SPACE TO WS-Token-Type-CD
  2873
                           EXIT SECTION
                       FND-TF
  2874
  2875
                  END-IF
  2876
                  UNSTRING F-Expanded-Src-REC
                      DELIMITED BY '. ' OR ' ' OR '=' OR '(' OR ')' OR '*'
  2877
                                         OR '/' OR '&' OR ';' OR ',' OR '<'
  2878
                                         OR '>' OR ':'
  2879
  2880
                       INTO WS-Token-Curr-TXT
  2881
                       DELIMITER IN WS-Delim-TXT
  2882
                      WITH POINTER WS-Src-SUB
  2883
                  IF WS-Delim-TXT = '. '
  2884
                      MOVE 'Y' TO WS-RS-Token-Ended-Sentence-CHR
 2885
                  END-IF
                  IF WS-Delim-TXT NOT = '. ' AND ' '
  2886
  2887
                      SUBTRACT 1 FROM WS-Src-SUB
  2888
                  END-IF
  2889
             *>-- Classify Token
  2890
                  MOVE UPPER-CASE(WS-Token-Curr-TXT) TO WS-Token-Search-TXT
  2891
                   IF WS-Token-Search-TXT = 'EQUAL' OR 'EQUALS'
  2892
                       MOVE 'EQUALS' TO WS-Token-Curr-TXT
                      MOVE 'K'
  2893
                                    TO WS-Token-Type-CD
  2894
                      EXIT SECTION
  2895
  2896
                  SEARCH ALL WS-Reserved-Word-TXT
  2897
                      WHEN WS-RW-Word-TXT (WS-RW-IDX) = WS-Token-Search-TXT
                           MOVE WS-RW-Type-CD (WS-RW-IDX) TO WS-Token-Type-CD
  2898
  2899 GC0710
                           IF WS-TT-Token-Is-Verb-BOOL
                              MOVE 'Y' TO WS-RS-Verb-Has-Been-Found-CHR
  2900 GC0710
  2901 GC0710
                           END-IF
                           EXIT SECTION
  2902
  2903
                  END-SEARCH
  2904
            *>-- Not a reserved word, must be a user name
  2905
                  SET WS-TT-Token-Is-Identifier-BOOL TO TRUE
  2906
                  PERFORM 313-Check-For-Numeric-Token
  2907
                  IF WS-TT-Token-Is-Lit-Number-BOOL
                      IF (WS-RS-Last-Token-Ended-Sent-CHR = 'Y')
  2908
  2909
                       AND (WS-Curr-Division-TXT = 'D')
  2910
                           MOVE 'LEVEL #' TO WS-Token-Curr-TXT
                           MOVE 'K'
  2911
                                         TO WS-Token-Type-CD
  2912
                          EXIT SECTION
                       ELSE
  2913
  2914
                           EXIT SECTION
  2915
                      END-IF
  2916
                   END-IF
  2917
  2918
              311-Control-Record SECTION.
  2919
                   UNSTRING F-ES-2-256-TXT-256
  2920
  2921
                       DELIMITED BY '"'
                       INTO WS-Temp-10-Chars-TXT
  2922
  2923
                            WS-Temp-256-Chars-TXT
  2924
                            WS-Dummy-TXT
```

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  2925
                   INSPECT WS-Temp-10-Chars-TXT REPLACING ALL '"' BY SPACE
  2926 GC0712
                   IF WS-Temp-10-Chars-TXT(1:4) = 'line'
                      MOVE SPACES TO WS-Temp-10-Chars-TXT(1:4)
  2927 GC0712
                   END-IF
  2928 GC0712
                   COMPUTE WS-I-SUB = NUMVAL(WS-Temp-10-Chars-TXT) - 1
  2929
                   IF UPPER-CASE(TRIM(WS-Temp-256-Chars-TXT,Trailing)) =
  2930 GC1010
  2931 GC1010
                      TRIM(WS-Main-Module-Name-TXT)
                      MOVE WS-I-SUB TO WS-Curr-Line-NUM
  2932
  2933
                       SET WS-RS-In-Main-Module-BOOL TO TRUE
                       IF WS-Saved-Section-TXT NOT = SPACES
  2934
  2935
                           MOVE WS-Saved-Section-TXT TO WS-Curr-Section-TXT
                      END-IF
  2936
  2937
                  ELSE
  2938
                       SET WS-RS-In-Copybook-BOOL TO TRUE
  2939
                       IF WS-Saved-Section-TXT = SPACES
                          MOVE WS-Curr-Section-TXT TO WS-Saved-Section-TXT
  2940
  2941
                       END-IF
  2942
                       MOVE LENGTH(TRIM(WS-Temp-256-Chars-TXT, Trailing))
  2943
                         TO WS-I-SUB
  2944
                       MOVE O TO WS-J-SUB
  2945
                       PERFORM UNTIL WS-Temp-256-Chars-TXT(WS-I-SUB:1) = '/'
  2946
                                  OR WS-I-SUB = 0
  2947
                           SUBTRACT 1 FROM WS-I-SUB
  2948
                           ADD
                                    1 TO WS-J-SUB
                       END-PERFORM
  2949
                       UNSTRING WS-Temp-256-Chars-TXT((WS-I-SUB + 1):WS-J-SUB)
  2950
                           DELIMITED BY '.'
  2951
  2952
                           INTO WS-Filename-TXT
  2953
                                WS-Dummy-TXT
                       MOVE '['
                                    TO WS-CS-1-CHR
  2954
                       MOVE WS-Filename-TXT TO WS-CS-2-14-TXT
  2955
                       IF WS-CS-11-14-TXT NOT = SPACES
  2956
  2957
                           MOVE '...' TO WS-CS-11-14-TXT
  2958
                       FND-TF
  2959
                       MOVE '1'
                                     TO WS-CS-15-CHR
  2960
                   END-IF
                   MOVE SPACES TO F-Expanded-Src-REC *> Force another READ
  2961
                               TO WS-Src-SUB
  2962
                   MOVE 256
  2963
  2964
  2965
               312-Expanded-Src-Record SECTION.
  2966 GC0314
                   IF F-Expanded-Src-REC(1:1) = SPACE
                      MOVE 2 TO WS-Src-SUB
  2967
        GC0314
  2968
       GC0314
                   ELSE
                     MOVE 1 TO WS-Src-SUB
  2969
       GC0314
                   END-IF
  2970 GC0314
  2971
                   IF WS-RS-In-Main-Module-BOOL
  2972
                      ADD 1 To WS-Curr-Line-NUM
                   END-IF
  2973
  2974
  2975
               313-Check-For-Numeric-Token SECTION.
  2976
  2977
                   MOVE WS-Token-Curr-TXT TO WS-Temp-32-Chars-1-TXT
  2978
                   INSPECT WS-Temp-32-Chars-1-TXT
```

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                                                                                                    81
  2979 GC0711
                     CONVERTING '0123456789' TO SPACES
  2980 GC0711
                IF WS-Temp-32-Chars-1-TXT = SPACES
                                                                         *> Simple Unsigned Integer
                  SET WS-TT-Token-Is-Lit-Number-BOOL TO TRUE
  2981
  2982
                      EXIT SECTION
  2983
                 END-IF
  2984 GC0711
                 MOVE SPACES TO WS-Temp-32-Chars-2-TXT
  2985 GC0711
                                 WS-Temp-32-Chars-3-TXT
 2986 GC0711
                                WS-Dummy-TXT
 2987 GC0711 UNSTRING WS-Temp-32-Chars-1-TXT
  2988 GC0711
                  DELIMITED BY 'e' OR 'E'
  2989 GC0711
                    INTO WS-Temp-32-Chars-2-TXT
  2990 GC0711
                          WS-Temp-32-Chars-3-TXT
 ws-Dummy-TXT
2992 GC0711 IF WS-Dummy-TXT NOT = SPACES
2993 GC0711 EXIT SECTION
  2991 GC0711
                          WS-Dummy-TXT
                                                                 *> More than one 'E' - Not Numeric
  2994 GC0711
                END-IF
                IF WS-Temp-32-Chars-2-TXT(1:1) = '+' OR '-'
  2995 GC0711
  2996 GC0711
                   MOVE SPACE TO WS-Temp-32-Chars-2-TXT(1:1)
  2997 GC0711 END-IF
  2998 GC0711 IF WS-Temp-32-Chars-3-TXT(1:1) = '+' OR '-'
  2999 GC0711
                      MOVE SPACE TO WS-Temp-32-Chars-3-TXT(1:1)
  3000 GC0711
                 END-IF
  3001
                  MOVE O TO WS-Tally-QTY
  3002 GC0711 INSPECT WS-Temp-32-Chars-2-TXT
                      TALLYING WS-Tally-QTY FOR ALL '.'
  3003
                  IF WS-Tally-QTY = 1
  3004
  3005 GC0711
                  INSPECT WS-Temp-32-Chars-2-TXT REPLACING ALL '.' BY SPACE
  3006
                  END-IF
  3007 GC0711
                 INSPECT WS-Temp-32-Chars-3-TXT
  3008 GC0711
                   TALLYING WS-Tally-QTY FOR ALL '.'
  3009 GC0711
                IF WS-Tally-QTY = 1
                     INSPECT WS-Temp-32-Chars-3-TXT REPLACING ALL '.' BY SPACE
  3010 GC0711
  3011 GC0711 END-IF
                  IF WS-Temp-32-Chars-2-TXT = SPACES AND WS-Temp-32-Chars-3-TXT = SPACES
  3012 GC0711
  3013
                      SET WS-TT-Token-Is-Lit-Number-BOOL TO TRUE
                      EXIT SECTION
  3014
                  END-IF
 3015
  3016
  3017
  3018
              320-IDENTIFICATION-DIVISION SECTION.
  3019 GC0712 IF WS-TT-Token-Is-Argtype-BOOL
  3020 GC0712
                   SET WS-TT-Token-Is-Reserved-Wd-BOOL TO TRUE
  3021 GC0712
                 END-IF
  3022 GC0710
                  MOVE 'N' TO WS-RS-Verb-Has-Been-Found-CHR
  3023
                  IF WS-TT-Token-Is-Keyword-BOOL
  3024
                  AND WS-Token-Curr-TXT = 'DIVISION'
  3025
                      MOVE WS-Token-Prev-TXT TO WS-Curr-Division-TXT
  3026
                      EXIT SECTION
  3027
                  FND-TF
                  IF WS-Token-Prev-TXT = 'PROGRAM-ID' OR 'FUNCTION-ID'
  3028 GC0712
  3029
                      MOVE SPACES TO WS-Token-Prev-TXT
                     MOVE WS-Token-Curr-TXT TO WS-Curr-Prog-ID-TXT
  3030
                     IF WS-CPI-16-CHR NOT = SPACES
  3031 GC0712
                          MOVE '...' TO WS-CPI-13-15-TXT
  3032
```

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  3033
                      END-IF
  3034
                      EXIT SECTION
                  END-IF
  3035
  3036
  3037
              330-ENVIRONMENT-DIVISION SECTION.
  3038
  3039 GC0712
                  IF WS-TT-Token-Is-Argtype-BOOL
  3040 GC0712
                     SET WS-TT-Token-Is-Reserved-Wd-BOOL TO TRUE
  3041 GC0712 END-IF
                 IF WS-TT-Token-Is-Keyword-BOOL
  3042
  3043
                  AND WS-Token-Curr-TXT = 'DIVISION'
  3044
                    MOVE WS-Token-Prev-TXT TO WS-Curr-Division-TXT
  3045
                      EXIT SECTION
  3046
                  END-IF
                  IF WS-TT-Token-Is-Keyword-BOOL
  3047
                  AND WS-Token-Curr-TXT = 'SECTION'
  3048
  3049
                      MOVE WS-Token-Prev-TXT TO WS-Curr-Section-TXT
  3050
                      EXIT SECTION
  3051
                 END-IF
  3052
                  IF WS-TT-Token-Is-Identifier-BOOL
  3053 GC0712
                      IF WS-Token-Prev-TXT = 'FUNCTION'
  3054 GC0712
                          PERFORM 360-Release-Def
  3055 GC0712
                      ELSE
  3056 GC0712
                         PERFORM 361-Release-Ref
  3057 GC0712
                      END-IF
                  END-IF
  3058
  3059 GC1213
                  IF WS-TT-Token-Is-Function-BOOL
  3060 GC1213
                     PERFORM 361-Release-Ref
  3061 GC1213
                  END-IF
  3062
  3063
             340-DATA-DIVISION SECTION.
  3064
  3065 GC0712 IF WS-TT-Token-Is-Argtype-BOOL
  3066 GC0712
                      SET WS-TT-Token-Is-Reserved-Wd-BOOL TO TRUE
  3067 GC0712
                  END-IF
  3068
                  IF WS-TT-Token-Is-Keyword-BOOL
                  AND WS-Token-Curr-TXT = 'DIVISION'
  3069
  3070
                      MOVE WS-Token-Prev-TXT TO WS-Curr-Division-TXT
  3071
                      EXIT SECTION
  3072
                  END-IF
  3073
                  IF WS-TT-Token-Is-Keyword-BOOL
  3074
                  AND WS-Token-Curr-TXT = 'SECTION'
                      MOVE WS-Token-Prev-TXT TO WS-Curr-Section-TXT
  3075
  3076
                      EXIT SECTION
                 END-IF
  3077
                  IF (WS-Token-Curr-TXT = 'PIC' OR 'PICTURE')
  3078
  3079
                  AND (WS-TT-Token-Is-Keyword-BOOL)
  3080
                      MOVE 'Y' TO WS-RS-Processing-PICTURE-CHR
                      EXIT SECTION
  3081
                  END-IF
  3082
  3083 GC0710
                  IF WS-TT-Token-Is-Reserved-Wd-BOOL
  3084 GC0710
                 AND WS-Token-Prev-TXT = 'LEVEL #'
                  MOVE SPACES TO WS-Token-Prev-TXT
  3085 GC0710
  3086 GC0710
                    EXIT SECTION
```

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  3087 GC0710
                  END-IF
  3088
                  IF WS-TT-Token-Is-Identifier-BOOL
  3089
                   EVALUATE WS-Token-Prev-TXT
  3090
                      WHEN 'FD'
  3091
                          PERFORM 360-Release-Def
                          MOVE SPACES TO WS-Token-Prev-TXT
  3092
 3093 GC1213 WHEN 'RD'
3094 GC1213 PERFO
                        PERFORM 360-Release-Def
  3095 GC1213
                         MOVE SPACES TO WS-Token-Prev-TXT
  3096
                      WHEN 'SD'
  3097
                          PERFORM 360-Release-Def
  3098
                          MOVE SPACES TO WS-Token-Prev-TXT
  3099
                      WHEN 'LEVEL #'
  3100
                          PERFORM 360-Release-Def
                          MOVE SPACES TO WS-Token-Prev-TXT
 3101
                      WHEN 'INDEXED'
 3102
  3103
                         PERFORM 360-Release-Def
  3104
                          MOVE SPACES TO WS-Token-Prev-TXT
 3105
                      WHEN 'USING'
  3106
                          PERFORM 362-Release-Upd
  3107
                          MOVE SPACES TO WS-Token-Prev-TXT
  3108
                      WHEN 'INTO'
 3109
                         PERFORM 362-Release-Upd
 3110
                          MOVE SPACES TO WS-Token-Prev-TXT
                      WHEN OTHER
  3111
                      IF WS-Token-Curr-TXT NOT = 'SUM'
 3112 GC1213
  3113 GC1213
                             PERFORM 361-Release-Ref
  3114 GC1213
                         END-IF
                     END-EVALUATE
  3115
 3116
                      EXIT SECTION
 3117
                  END-IF
 3118
 3119
            350-PROCEDURE-DIVISION SECTION.
 3120
  3121
               IF WS-Curr-Section-TXT NOT = 'PROCEDURE'
  3122
                      MOVE 'PROCEDURE' TO WS-Curr-Section-TXT
                 END-IF
 3123
 3124 GCO710 IF WS-Token-Curr-Uc-TXT = 'PROGRAM'
 3125 GCO710 AND WS-Token-Prev-TXT = 'END'
                 MOVE '?' TO WS-Curr-Division-TXT
  3126 GC0710
 3127 GC0710 EX.
3128 GC0710 END-IF
                     EXIT SECTION
  3129
                  IF WS-TT-Token-Is-Keyword-BOOL
  3130
                  AND WS-Token-Curr-TXT = 'DIVISION'
                  MOVE WS-Token-Prev-TXT TO WS-Curr-Division-TXT
 3131
 3132
                      EXIT SECTION
  3133
                END-IF
 3134 GCO313 IF WS-TT-Token-Is-Identifier-BOOL
  3135 GC0313 AND WS-Token-Prev-TXT = SPACES
  3136 GC0313
                 AND WS-Curr-Verb-TXT = SPACES
 3137 GCO313*> ----- Definition of a Paragraph or Section
 3138 GC0313 PERFORM 360-Release-Def
3139 GC0313 MOVE SPACES TO WS-Token-Prev-TXT
3140 GC0313 EXIT SECTION
```

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 3141 GC0313
                END-TF
 3142
                IF NOT WS-TT-Token-Is-Identifier-BOOL
 3143
                   EXIT SECTION
           EXI
END-IF
 3144
               EVALUATE WS-Curr-Verb-TXT
 3145
                WHEN 'ACCEPT'
 3146
 3147
                  PERFORM 351-ACCEPT
         WHEN 'ADD'
 3148
 3149
                  PERFORM 351-ADD
 3150
               WHEN 'ALLOCATE'
 3151
                   PERFORM 351-ALLOCATE
               WHEN 'CALL'
 3152
 3153
                   PERFORM 351-CALL
               WHEN 'COMPUTE'
 3154
                  PERFORM 351-COMPUTE
 3155
              WHEN 'DIVIDE'
 3156
 3157
                  PERFORM 351-DIVIDE
 3158
               WHEN 'FREE'
 3159
                 PERFORM 351-FREE
 3160 GC1213 WHEN 'GENERATE'
 3161 GC1213
                PERFORM 351-GENERATE
 3162
                 WHEN 'INITIALIZE'
                 PERFORM 351-INITIALIZE
 3163
 3164 GC1213 WHEN 'INITIATE'
 3165 GC1213
                PERFORM 351-GENERATE
                WHEN 'INSPECT'
 3166
 3167
                  PERFORM 351-INSPECT
               WHEN 'MOVE'
 3168
 3169
                  PERFORM 351-MOVE
               WHEN 'MULTIPLY'
 3170
                   PERFORM 351-MULTIPLY
 3171
               WHEN 'PERFORM'
 3172
 3173
                   PERFORM 351-PERFORM
               WHEN 'SET'
 3174
 3175
                  PERFORM 351-SET
              WHEN 'STRING'
 3176
 3177
                 PERFORM 351-STRING
               WHEN 'SUBTRACT'
 3178
 3179
                 PERFORM 351-SUBTRACT
 3180 GC1213 WHEN 'TERMINATE'
 3181 GC1213
                PERFORM 351-GENERATE
 3182
                WHEN 'TRANSFORM'
                   PERFORM 351-TRANSFORM
 3183
 3184
                WHEN 'UNSTRING'
 3185
                  PERFORM 351-UNSTRING
 3186
                 WHEN OTHER
 3187
                   PERFORM 361-Release-Ref
 3188
                 END-EVALUATE
 3189
 3190
 3191
             351-ACCEPT SECTION.
                EVALUATE WS-Token-Prev-TXT
 3192
 3193
                 WHEN 'ACCEPT'
 3194
                    PERFORM 362-Release-Upd
```

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                      MOVE SPACES TO WS-Token-Prev-TXT
 3195
 3196
                WHEN OTHER
 3197
                     PERFORM 361-Release-Ref
 3198
                  END-EVALUATE
 3199
  3200
           351-ADD SECTION.
 3201
 3202
                EVALUATE WS-Token-Prev-TXT
 3203
                  WHEN 'GIVING'
 3204
                     PERFORM 362-Release-Upd
                WHEN 'TO'
 3205
 3206
                    PERFORM 362-Release-Upd
  3207
                  WHEN OTHER
  3208
                    PERFORM 361-Release-Ref
 3209
                  END-EVALUATE
 3210
 3211
  3212
             351-ALLOCATE SECTION.
              EVALUATE WS-Token-Prev-TXT
 3213
                  WHEN 'ALLOCATE'
  3214
         PERFORM 362-Release-Upd
MOVE SPACES TO WS-Token-Prev-TXT
WHEN 'RETURNING'
PERFORM 362-Release-Upd
WHEN OTHER
PERFORM 361-Release-Ref
END-EVALUATE
  3215
  3216
 3217
 3218
  3219
  3220
  3221
  3222
  3223
             351-CALL SECTION.
 3224
             EVALUATE WS-Token-Prev-TXT
 3225
 3226
                WHEN 'RETURNING'
          WHEN 'KETURNI
PERFORM 3
WHEN 'GIVING'
 3227
                    PERFORM 362-Release-Upd
 3228
                    PERFORM 362-Release-Upd
 3229
  3230
                  WHEN OTHER
 3231 GC1213
                  PERFORM 365-Release-Arg
                 END-EVALUATE
 3232
 3233
  3234
             351-COMPUTE SECTION.
 3235
  3236
             EVALUATE WS-Token-Prev-TXT
                  WHEN 'COMPUTE'
  3237
  3238
                    PERFORM 362-Release-Upd
                WHEN OTHER
 3239
 3240
                     PERFORM 361-Release-Ref
  3241
                  END-EVALUATE
 3242
  3243
             351-DIVIDE SECTION.
  3244
  3245
                  EVALUATE WS-Token-Prev-TXT
 3246
                  WHEN 'INTO'
 3247
                     PERFORM 363-Set-Upd
  3248
                      MOVE F-Sort-Work-REC TO WS-Held-Reference-TXT
```

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                                                                                             Page
                                                                                                    86
                  WHEN 'GIVING'
  3249
  3250
                      IF WS-Held-Reference-TXT NOT = SPACES
  3251
                          MOVE WS-Held-Reference-TXT To F-Sort-Work-REC
  3252
                          MOVE SPACES
                                             To WS-Held-Reference-TXT
  3253
                                                F-SW-Ref-Flag-CHR
  3254
                          RELEASE F-Sort-Work-REC
  3255
                      END-IF
 3256
                     PERFORM 362-Release-Upd
 3257
                WHEN 'REMAINDER'
  3258
                    PERFORM 362-Release-Upd
                 WHEN OTHER
  3259
 3260
                    PERFORM 361-Release-Ref
  3261
                  END-EVALUATE
  3262
  3263
             351-FREE SECTION.
  3264
  3265
                 PERFORM 362-Release-Upd
  3266
  3267
  3268 GC1213 351-GENERATE SECTION.
  3269 GC1213 PERFORM 362-Release-Upd
  3270 GC1213
 3271
 3272
             351-INITIALIZE SECTION.
  3273
               EVALUATE WS-Token-Prev-TXT
                 WHEN 'INITIALIZE'
  3274
                    PERFORM 362-Release-Upd
  3275
  3276
                 WHEN 'REPLACING'
  3277
                    PERFORM 361-Release-Ref
 3278
                  END-EVALUATE
 3279
  3280
  3281 GC1213 351-INITIATE SECTION.
  3282 GC1213 PERFORM 362-Release-Upd
  3283 GC1213
  3284
              351-INSPECT SECTION.
 3285
                 EVALUATE WS-Token-Prev-TXT
 3286
                  WHEN 'INSPECT'
  3287
  3288
                     PERFORM 364-Set-Ref
  3289
                     MOVE SPACES TO WS-Held-Reference-TXT
  3290
                     MOVE SPACES TO WS-Token-Prev-TXT
                  WHEN 'TALLYING'
  3291
  3292
                     PERFORM 362-Release-Upd
  3293
                     MOVE SPACES TO WS-Token-Prev-TXT
  3294
                  WHEN 'REPLACING'
  3295
                      IF WS-Held-Reference-TXT NOT = SPACES
  3296
                          MOVE WS-Held-Reference-TXT TO F-Sort-Work-REC
                          MOVE SPACES TO WS-Held-Reference-TXT
  3297
                          MOVE '*'
  3298
                                             TO F-SW-Ref-Flag-CHR
  3299
                          RELEASE F-Sort-Work-REC
                      FND-TF
  3300
  3301
                      MOVE SPACES TO WS-Token-Prev-TXT
  3302
                  WHEN 'CONVERTING'
```

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                                                                                            Page
 3303
                     IF WS-Held-Reference-TXT NOT = SPACES
 3304
                         MOVE WS-Held-Reference-TXT TO F-Sort-Work-REC
 3305
                         MOVE SPACES TO WS-Held-Reference-TXT
 3306
                         MOVE '*'
                                            TO F-SW-Ref-Flag-CHR
 3307
                         RELEASE F-Sort-Work-REC
 3308
                     END-IF
 3309
                     MOVE SPACES TO WS-Token-Prev-TXT
                WHEN OTHER
 3310
 3311
                   PERFORM 361-Release-Ref
 3312
                 END-EVALUATE
 3313
 3314
 3315
             351-MOVE SECTION.
 3316
                 EVALUATE WS-Token-Prev-TXT
                 WHEN 'TO'
 3317
                   PERFORM 362-Release-Upd
 3318
 3319
                 WHEN OTHER
 3320
                     PERFORM 361-Release-Ref
 3321
                  END-EVALUATE
 3322
 3323
 3324
              351-MULTIPLY SECTION.
                 EVALUATE WS-Token-Prev-TXT
 3325
 3326
                  WHEN 'BY'
 3327
                     PERFORM 363-Set-Upd
                     MOVE F-Sort-Work-REC TO WS-Held-Reference-TXT
 3328
 3329
                 WHEN 'GIVING'
 3330
                    MOVE WS-Held-Reference-TXT TO F-Sort-Work-REC
 3331
                     MOVE SPACES TO WS-Held-Reference-TXT
 3332
                                          F-SW-Ref-Flag-CHR
 3333
                     RELEASE F-Sort-Work-REC
 3334
                     PERFORM 362-Release-Upd
 3335
                 WHEN OTHER
                    PERFORM 361-Release-Ref
 3336
 3337
                 END-EVALUATE
 3338
 3339
            351-PERFORM SECTION.
 3340
                EVALUATE WS-Token-Prev-TXT
 3341
 3342
                  WHEN 'VARYING'
 3343
                    PERFORM 362-Release-Upd
 3344
                     MOVE SPACES TO WS-Token-Prev-TXT
                 WHEN 'AFTER'
 3345
 3346
                     PERFORM 362-Release-Upd
 3347
                     MOVE SPACES TO WS-Token-Prev-TXT
 3348
                 WHEN OTHER
 3349
                    PERFORM 361-Release-Ref
 3350
                 END-EVALUATE
 3351
 3352
 3353
             351-SET SECTION.
               EVALUATE WS-Token-Prev-TXT
 3354
 3355
                  WHEN 'SET'
 3356
                     PERFORM 362-Release-Upd
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 3357
                 WHEN OTHER
 3358
                    PERFORM 361-Release-Ref
 3359
                  END-EVALUATE
 3360
 3361
 3362
            351-STRING SECTION.
              EVALUATE WS-Token-Prev-TXT
 3363
                 WHEN 'INTO'
 3364
                    PERFORM 362-Release-Upd
 3365
 3366
               WHEN 'POINTER'
 3367
                    PERFORM 362-Release-Upd
                 WHEN OTHER
 3368
 3369
                   PERFORM 361-Release-Ref
 3370
                 END-EVALUATE
 3371
 3372
            351-SUBTRACT SECTION.
 3373
 3374
             EVALUATE WS-Token-Prev-TXT
                 WHEN 'GIVING'
 3375
                 PERFORM 362-Release-Upd
 3376
 3377
                 WHEN 'FROM'
 3378
                 PERFORM 362-Release-Upd
 3379
                 WHEN OTHER
 3380
                   PERFORM 361-Release-Ref
 3381
                 END-EVALUATE
 3382
 3383
 3384 GC1213 351-TERMINATE SECTION.
 3385 GC1213 PERFORM 362-Release-Upd
 3386 GC1213
 3387
 3388
            351-TRANSFORM SECTION.
 3389
               EVALUATE WS-Token-Prev-TXT
                 WHEN 'TRANSFORM'
 3390
 3391
                   PERFORM 362-Release-Upd
 3392
                     MOVE SPACES TO WS-Token-Prev-TXT
                 WHEN OTHER
 3393
                    PERFORM 361-Release-Ref
 3394
                 END-EVALUATE
 3395
 3396
 3397
 3398
             351-UNSTRING SECTION.
 3399
                 EVALUATE WS-Token-Prev-TXT
 3400
                 WHEN 'INTO'
 3401
                   PERFORM 362-Release-Upd
 3402
                 WHEN 'DELIMITER'
 3403
                    PERFORM 362-Release-Upd
                 WHEN 'COUNT'
 3404
                   PERFORM 362-Release-Upd
 3405
                 WHEN 'POINTER'
 3406
 3407
                   PERFORM 362-Release-Upd
 3408
                 WHEN 'TALLYING'
 3409
                   PERFORM 362-Release-Upd
 3410
                 WHEN OTHER
```

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  3411
                      PERFORM 361-Release-Ref
  3412
                  END-EVALUATE
  3413
  3414
  3415
             360-Release-Def SECTION.
                  MOVE SPACES
  3416
                                              TO F-Sort-Work-REC
                  MOVE WS-Curr-Prog-ID-TXT TO F-SW-Prog-ID-TXT
  3417
                 MOVE WS-Token-Curr-Uc-TXT TO F-SW-Token-Uc-TXT
 3418
 3419
                MOVE WS-Token-Curr-TXT TO F-SW-Token-TXT
                MOVE WS-Curr-Section-TXT TO F-SW-Section-TXT
  3420
 3421
                MOVE WS-Curr-Line-NUM TO F-SW-Def-Line-NUM
  3422
                MOVE O
                                             TO F-SW-Ref-Line-NUM
  3423
                  RELEASE F-Sort-Work-REC
  3424
  3425
             361-Release-Ref SECTION.
  3426
  3427
                  PERFORM 364-Set-Ref
  3428
                  RELEASE F-Sort-Work-REC
  3429
  3430
  3431
              362-Release-Upd SECTION.
  3432
                  PERFORM 363-Set-Upd
  3433
                  RELEASE F-Sort-Work-REC
  3434
  3435
              363-Set-Upd SECTION.
  3436
                 MOVE SPACES
                                              TO F-Sort-Work-REC
  3437
  3438
                  MOVE WS-Curr-Prog-ID-TXT
                                              TO F-SW-Prog-ID-TXT
                  MOVE WS-Token-Curr-Uc-TXT TO F-SW-Token-Uc-TXT MOVE WS-Token-Curr-TXT TO F-SW-Token-TXT
  3439
                  MOVE WS-Token-Curr-TXT
  3440
                 MOVE WS-Curr-Section-TXT TO F-SW-Section-TXT
  3441
                MOVE WS-Curr-Line-NUM

TO F-SW-Ref-Line-NUM

TO F-SW-Ref-Flag-CHR
  3442
  3443
                MOVE '*'
                                             TO F-SW-Ref-Flag-CHR
  3444
  3445
  3446
             364-Set-Ref SECTION.
              MOVE SPACES
                                              TO F-Sort-Work-REC
  3447
                  MOVE WS-Curr-Prog-ID-TXT TO F-SW-Prog-ID-TXT
  3448
                MOVE WS-Token-Curr-Uc-TXT TO F-SW-Token-Uc-TXT
  3449
  3450
                MOVE WS-Token-Curr-TXT TO F-SW-Token-TXT
                  MOVE WS-Curr-Section-TXT TO F-SW-Section-TXT
  3451
  3452
                  MOVE WS-Curr-Line-NUM TO F-SW-Ref-Line-NUM
  3453
  3454
  3455 GC1213 365-Release-Arg SECTION.
  3456 GC1213 PERFORM 366-Set-Arg
  3457 GC1213
                 RELEASE F-Sort-Work-REC
  3458 GC1213
  3459
  3460 GC1213 366-Set-Arg SECTION.
 3461 GC1213 MOVE SPACES TO F-Sort-Work-REC 3462 GC1213 MOVE WS-Curr-Prog-ID-TXT TO F-SW-Prog-ID-TXT
  3463 GC1213 MOVE WS-Token-Curr-Uc-TXT TO F-SW-Token-Uc-TXT
  3464 GC1213 MOVE WS-Token-Curr-TXT TO F-SW-Token-TXT
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  3465 GC1213
                  MOVE WS-Curr-Section-TXT
                                              TO F-SW-Section-TXT
                  MOVE WS-Curr-Line-NUM
  3466 GC1213
                                              TO F-SW-Ref-Line-NUM
                  MOVE 'C'
  3467 GC1213
                                              TO F-SW-Ref-Flag-CHR
  3468 GC1213
  3469
  3470
  3471
              400-Produce-Xref-Listing SECTION.
                                  TO WS-Xref-Detail-Line-TXT
  3472
                  MOVE SPACES
  3473
                                      WS-Group-Indicators-TXT
                  MOVE O
                                    TO WS-I-SUB
  3474
  3475
                                      WS-Lines-Left-NUM
  3476 GC0710
                  MOVE 'N'
                                    TO WS-RS-Duplicate-CHR
  3477
                  PERFORM FOREVER
  3478
                    RETURN F-Sort-Work-FILE AT END
                         IF WS-Xref-Detail-Line-TXT NOT = SPACES
  3479 GC1213
  3480 GC1213
                              PERFORM 410-Generate-Report-Line
  3481 GC1213
                         END-IF
  3482 GC1213
                        MOVE SPACES TO WS-Xref-Detail-Line-TXT
  3483 GC1213
                          PERFORM 410-Generate-Report-Line
  3484 GC1213
                              UNTIL WS-Lines-Left-NUM = 0
  3485
       GC1213
                          MOVE 'Y' TO WS-Suppress-FF-CHR
  3486 GC1213
                          PERFORM 420-Generate-Xref-Footer
  3487
                          EXIT PERFORM
  3488
                      END-RETURN
                      IF F-SW-Prog-ID-TXT NOT = WS-GI-Prog-ID-TXT
  3489
  3490
                      OR F-SW-Token-Uc-TXT NOT = WS-GI-Token-TXT
                          MOVE 'N' TO WS-RS-Duplicate-CHR
  3491 GC0710
  3492
                          IF WS-Xref-Detail-Line-TXT NOT = SPACES
  3493
                              PERFORM 410-Generate-Report-Line
  3494
                          FND-TF
  3495
                          IF F-SW-Prog-ID-TXT NOT = WS-GI-Prog-ID-TXT
                              MOVE SPACES TO WS-Xref-Detail-Line-TXT
  3496 GC1213
  3497 GC1213
                              PERFORM 410-Generate-Report-Line
  3498 GC1213
                                  UNTIL WS-Lines-Left-NUM = 0
  3499
                          END-IF
  3500
                          MOVE F-SW-Prog-ID-TXT TO WS-GI-Prog-ID-TXT
                          MOVE F-SW-Token-Uc-TXT TO WS-GI-Token-TXT
  3501
  3502
                     END-IF
                     IF F-SW-Token-Uc-TXT = WS-GI-Token-TXT
  3503 GC0710
  3504 GC0710
                    AND F-SW-Def-Line-NUM NOT = SPACES
  3505 GC0710
                      AND WS-Xref-Detail-Line-TXT NOT = SPACES
  3506 GC0710
                       MOVE 'Y' TO WS-RS-Duplicate-CHR
  3507 GC0710
                          PERFORM 410-Generate-Report-Line
  3508 GC0710
                          MOVE O TO WS-I-SUB
  3509 GC0710
                          MOVE F-SW-Prog-ID-TXT TO WS-XDL-Prog-ID-TXT
  3510 GC0710
                          MOVE ' (Duplicate Definition)' TO WS-XDL-Token-TXT
                          MOVE F-SW-Section-TXT TO WS-XDL-Section-TXT
  3511 GC0710
  3512 GC0710
                          MOVE F-SW-Def-Line-NUM TO WS-XDL-Def-Line-NUM
                          EXIT PERFORM CYCLE
  3513 GC0710
                     END-IF
  3514 GC0710
  3515 GC0710
                      IF F-SW-Token-Uc-TXT = WS-GI-Token-TXT
  3516 GC0710
                     AND F-SW-Def-Line-NUM = SPACES
  3517 GC0710
                     AND WS-RS-Duplicate-CHR = 'Y'
  3518 GC0710
                          MOVE 'N' TO WS-RS-Duplicate-CHR
```

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  3519 GC0710
                            PERFORM 410-Generate-Report-Line
  3520 GC0710
                           MOVE O TO WS-I-SUB
                             MOVE F-SW-Prog-ID-TXT TO WS-XDL-Prog-ID-TXT
  3521 GC0710
  3522 GC0710
                            MOVE ' (Duplicate References)' TO WS-XDL-Token-TXT
                      END-IF
  3523 GC0710
  3524
                        IF WS-Xref-Detail-Line-TXT = SPACES
  3525
                             MOVE F-SW-Prog-ID-TXT TO WS-XDL-Prog-ID-TXT
  3526
                             MOVE F-SW-Token-TXT TO WS-XDL-Token-TXT
  3527
                             MOVE F-SW-Section-TXT TO WS-XDL-Section-TXT
                             IF F-SW-Def-Line-NUM NOT = SPACES
  3528
  3529
                                 MOVE F-SW-Def-Line-NUM TO WS-XDL-Def-Line-NUM
  3530
                             FND-TF
  3531
                        END-IF
  3532
                         IF F-SW-Reference-TXT > '000000'
  3533
                             ADD 1 TO WS-I-SUB
                             IF WS-I-SUB > WS-Xref-Lines-Per-Rec-NUM
  3534
  3535
                                 PERFORM 410-Generate-Report-Line
  3536
                                 MOVE 1 TO WS-I-SUB
  3537
                             END-IF
                             MOVE F-SW-Ref-Line-NUM
  3538
  3539
                               TO WS-XDL-Ref-Line-NUM (WS-I-SUB)
  3540
                             MOVE F-SW-Ref-Flag-CHR
                               TO WS-XDL-Ref-Flag-CHR (WS-I-SUB)
  3541
  3542
                        END-IF
                    END-PERFORM
  3543
                    IF WS-Xref-Detail-Line-TXT NOT = SPACES
  3544
  3545
                        PERFORM 410-Generate-Report-Line
  3546
                    END-IF
  3547
  3548
                  DECITION.

IF WS-Lines-Left-NUM < 1
PERFORM 420-Generate-Xref-Footer
ADD 1 TO WS-Page-NUM
MOVE 'Page:' TO WS-PN-Literal-TXT
MOVE WS-Page-NUM TO WS-PN-Page-NUM
CALL 'C$JUSTIFY' USING WS-PN-Page-NUM, 'Left'
CALL 'C$JUSTIFY' USING WS-Page-No-TXT, 'Right'
IF L-Listing-CD = 1 *> LANDSCAPE
MOVE WS-Version-TXT
TO F-Lieting-CD
  3549
               410-Generate-Report-Line SECTION.
                 IF WS-Lines-Left-NUM < 1
  3550
  3551 GC1213
  3552 GC1213
  3553 GC1213
  3554 GC1213
  3555 GC1213
  3556 GC1213
  3557 GC1213
  3558 GC1213
  3559 GC1213
                              TO F-Listing-135-REC
  3560 GC1213
3561 GC1213
                           MOVE 'Cross-Reference Listing'
  3561 GC1213
                              TO F-Listing-135-REC(25:23)
  3562 GC1213
                           MOVE WS-Formatted-DT
  3563 GC1213
                              TO F-Listing-135-REC(126:10)
  3564 GC1213
                           WRITE F-Listing-135-REC BEFORE 1 *> Page Header Line #1
  3565 GC1213
                           MOVE WS-Program-Path-TXT
  3566 GC1213
                              TO F-Listing-135-REC
  3567 GC1213
                           WRITE F-Listing-135-REC BEFORE 1 *> Page Header Line #2
  3568 GC1213
                           MOVE 'PROGRAM-ID Identifier/Register/Function' &
  3569 GC1213
                                        Defn Where Defined References'
  3570 GC1213
                             TO F-Listing-135-REC
  3571 GC1213
                           MOVE WS-Page-No-TXT
  3572 GC1213
                               TO F-Listing-135-REC(126:10)
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 3573 GC1213
                         WRITE F-Listing-135-REC BEFORE 1 *> Page Header Line #3
 3574 GC1213
                         MOVE ALL '=' TO F-Listing-135-REC
                         MOVE SPACE TO F-Listing-135-REC(16:1)
 3575 GC1213
 3576 GC1213
                                      F-Listing-135-REC(49:1)
                                      F-Listing-135-REC(56:1)
 3577 GC1213
 3578 GC1213
                                      F-Listing-135-REC(72:1)
                  WF
ELSE
 3579 GC1213
                         WRITE F-Listing-135-REC BEFORE 1 *> Page Header Line #4
 3580 GC1213
                                        *> PORTRAIT
 3581 GC1213
                     MOVE WS-Version-TXT
 3582 GC1213
                          TO F-Listing-96-REC
 3583 GC1213
                       MOVE 'Cross-Reference Listing'
 3584 GC1213
                          TO F-Listing-96-REC(25:23)
 3585 GC1213
                       MOVE WS-Formatted-DT
 3586 GC1213
                          TO F-Listing-96-REC(87:10)
 3587 GC1213
                        WRITE F-Listing-96-REC BEFORE 1 *> Page Header Line #1
 3588 GC1213
                        MOVE WS-Program-Path-TXT(40:96)
 3589 GC1213
                          TO F-Listing-96-REC
 3590 GC1213
                       WRITE F-Listing-96-REC BEFORE 1 *> Page Header Line #2
 3591 GC1213
                       MOVE 'PROGRAM-ID
                                              Identifier/Register/Function' &
 3592 GC1213
                                  Defn Where Defined References
                         TO F-Listing-96-REC
 3593 GC1213
 3594 GC1213
                        MOVE WS-Page-No-TXT
 3595 GC1213
                         TO F-Listing-96-REC(87:10)
 3596 GC1213
                        WRITE F-Listing-96-REC BEFORE 1 *> Page Header Line #3
 3597 GC1213
                         MOVE ALL '=' TO F-Listing-96-REC
                         MOVE SPACE TO F-Listing-96-REC(16:1)
 3598 GC1213
 3599 GC1213
                                      F-Listing-96-REC(49:1)
 3600 GC1213
                                      F-Listing-96-REC(56:1)
 3601 GC1213
                                      F-Listing-96-REC(72:1)
 3602 GC1213
                         WRITE F-Listing-96-REC BEFORE 1 *> Page Header Line #4
 3603 GC1213
                     END-IF
                     COMPUTE WS-Lines-Left-NUM = WS-Lines-Per-Page-NUM - 4
 3604 GC1213
 3605
                END-IF
 3606 GC1213
                IF L-Listing-CD = 1 *> LANDSCAPE
                 WRITE F-Listing-135-REC FROM WS-Xref-Detail-Line-TXT
 3607 GC1213
 3608 GC1213
                         BEFORE 1
 3609 GC1213
                 ELSE
                                     *> PORTRAIT
                 WRITE F-Listing-96-REC FROM WS-Xref-Detail-Line-TXT
 3610 GC1213
 3611 GC1213
 3612 GC1213 END-IF
                 MOVE SPACES TO WS-Xref-Detail-Line-TXT
 3613
 3614
                 MOVE O TO WS-I-SUB
 3615
                 SUBTRACT 1 FROM WS-Lines-Left-NUM
 3616
 3617 GC1213 420-Generate-Xref-Footer SECTION.
 3618 GC1213 IF L-Listing-CD = 1 *> LANDSCAPE
                 WRITE F-Listing-135-REC FROM SPACES BEFORE 1 *> Footer Line #1
 3619 GC1213
                    MOVE ALL '='
 3620 GC1213
 3621 GC1213
                      TO F-Listing-135-REC
 3622 GC1213
                     WRITE F-Listing-135-REC BEFORE 1 *> Footer Line #2
 3623 GC1213
                     MOVE WS-Copyright-TXT
 3624 GC1213
                     TO F-Listing-135-REC
 3625 GC1213
                   MOVE WS-Page-No-TXT
 3626 GC1213
                     TO F-Listing-135-REC(126:10)
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                                                                                                      93
                      IF WS-Suppress-FF-CHR = 'Y'
  3627 GC1213
  3628 GC1213
                          WRITE F-Listing-135-REC BEFORE 1 *> Footer Line #3
  3629 GC1213
                          WRITE F-Listing-135-REC BEFORE PAGE *> Footer Line #3
  3630 GC1213
  3631 GC1213
                          WRITE F-Listing-135-REC FROM SPACES BEFORE 1 *> Spaces After FF Character
  3632 GC1213
                      END-IF
  3633 GC1213
                  ELSE
                                       *> PORTRAIT
                 WRITE F-Listing-96-REC FROM SPACES BEFORE 1 *> Footer Line #1 MOVE ALL '='
  3634 GC1213
  3635 GC1213
                 TO F-Listing-96-REC
WRITE F-Listing-96-REC BEFORE 1 *> Footer Line #2
MOVE WS-Copyright-TXT
  3636 GC1213
  3637 GC1213
  3638 GC1213
  3639 GC1213
                        TO F-Listing-96-REC
                    MOVE WS-Page-No-TXT
  3640 GC1213
  3641 GC1213
                       TO F-Listing-96-REC(87:10)
                    IF WS-Suppress-FF-CHR = 'Y'
  3642 GC1213
                          WRITE F-Listing-96-REC BEFORE 1 *> Footer Line #3
  3643 GC1213
  3644 GC1213
                      ELSE
  3645 GC1213
                          WRITE F-Listing-96-REC BEFORE PAGE *> Footer Line #3
  3646 GC1213
                          WRITE F-Listing-96-REC FROM SPACES BEFORE 1 *> Spaces After FF Character
  3647 GC1213
                      END-IF
  3648 GC1213
                  END-IF
  3649 GC1213
  3650
              500-Produce-Source-Listing SECTION.
  3651
                  OPEN INPUT F-Original-Src-FILE
  3652
  3653
                             F-Expanded-Src-FILE
  3654
                  MOVE O TO WS-Src-Line-NUM
  3655
                  PERFORM FOREVER
  3656
                   READ F-Expanded-Src-FILE AT END
  3657 GC1213
                         MOVE SPACES TO WS-Src-Detail-Line-TXT
  3658 GC1213
                          PERFORM 530-Generate-Source-Line
  3659 GC1213
                              UNTIL WS-Lines-Left-NUM = 0
  3660
                          EXIT PERFORM
  3661
                      END-READ
                    IF F-ES-1-7-TXT NOT = '#DEFLIT'
  3662 GC0712
                     IF F-ES-1-CHR = '#'
  3663 GC0712
  3664 GC0712
                              PERFORM 510-Control-Record
  3665 GC0712
  3666 GC0712
                              PERFORM 520-Expanded-Src-Record
  3667 GC0712
                          END-IF
  3668 GC0712
                      END-IF
  3669
                  END-PERFORM
  3670
                  CLOSE F-Original-Src-FILE
  3671
                        F-Expanded-Src-FILE
  3672
  3673
  3674
              510-Control-Record SECTION.
                  UNSTRING F-ES-2-256-TXT-256
  3675
  3676
                      DELIMITED BY '"'
  3677
                      INTO WS-Temp-10-Chars-TXT
                           WS-Temp-256-Chars-TXT
  3678
                           WS-Dummy-TXT
  3679
  3680 GC1010
               IF UPPER-CASE(TRIM(WS-Temp-256-Chars-TXT,Trailing)) =
```

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                                Dictionary File for GCIC (LISTING) 06/03/2022 23:09:11:06
                                                                                               Page
                                                                                                      94
  3681 GC1010
                     TRIM(WS-Main-Module-Name-TXT) *> Main Pgm
  3682
                      SET WS-RS-In-Main-Module-BOOL TO TRUE
  3683
                      IF WS-Src-Line-NUM > 0
  3684
                          READ F-Expanded-Src-FILE END-READ
  3685
                      END-IF
  3686
                  ELSE *> COPY
  3687
                      SET WS-RS-In-Copybook-BOOL TO TRUE
                  END-TF
  3688
  3689
  3690
  3691
              520-Expanded-Src-Record SECTION.
  3692
                  IF WS-RS-In-Main-Module-BOOL
  3693
                      ADD 1 To WS-Curr-Line-NUM
  3694 GC0712
                      READ F-Original-Src-FILE AT END CONTINUE END-READ
                      ADD 1 TO WS-Src-Line-NUM
  3695
                      MOVE SPACES TO WS-Src-Detail-Line-TXT
  3696
  3697
                      MOVE WS-Src-Line-NUM TO WS-SDL-Line-NUM
  3698 GC1213
                      MOVE F-Original-Src-REC TO WS-SDL-Statement-TXT
  3699 GC0712
                      MOVE LOWER-CASE(TRIM(F-OS-8-72-TXT, LEADING))
  3700 GC0712
                       TO WS-Temp-65-Chars-TXT
  3701 GC0712
                      INSPECT WS-Temp-65-Chars-TXT REPLACING ALL '.' BY SPACE
  3702 GC0712
                      EVALUATE TRUE
  3703 GC0712
                          WHEN F-OS-7-CHR = '/'
  3704 GC1213
                              MOVE SPACES TO WS-Src-Detail-Line-TXT
  3705 GC1213
                              PERFORM 530-Generate-Source-Line
  3706 GC1213
                                  UNTIL WS-Lines-Left-NUM = 0
  3707 GC0712
                          WHEN WS-Temp-65-Chars-TXT = "eject"
  3708 GC1213
                              MOVE SPACES TO WS-Src-Detail-Line-TXT
  3709 GC1213
                              PERFORM 530-Generate-Source-Line
  3710 GC1213
                                  UNTIL WS-Lines-Left-NUM = 0
  3711 GC0712
                              EXIT SECTION
                         WHEN WS-Temp-65-Chars-TXT = "skip1"
  3712 GC0712
  3713 GC0712
                              MOVE SPACES TO WS-Src-Detail-Line-TXT
  3714 GC0712
                              PERFORM 530-Generate-Source-Line
  3715 GC0712
                              EXIT SECTION
  3716 GC0712
                          WHEN WS-Temp-65-Chars-TXT = "skip2"
  3717 GC0712
                              MOVE SPACES TO WS-Src-Detail-Line-TXT
  3718 GC0712
                              PERFORM 530-Generate-Source-Line 2 TIMES
  3719 GC0712
                              EXIT SECTION
  3720 GC0712
                          WHEN WS-Temp-65-Chars-TXT = "skip3"
  3721 GC0712
                              MOVE SPACES TO WS-Src-Detail-Line-TXT
  3722 GC0712
                              PERFORM 530-Generate-Source-Line 3 TIMES
  3723 GC0712
                              EXIT SECTION
  3724 GC0712
                      END-EVALUATE
  3725
                      PERFORM 530-Generate-Source-Line
  3726
                  ELSE
  3727
                      IF F-Expanded-Src-REC NOT = SPACES
  3728
                          MOVE SPACES TO WS-Src-Detail-Line-TXT
                          MOVE F-Expanded-Src-REC
  3729 GC1213
  3730
                            TO WS-SDL-Statement-TXT
  3731 GC0712
                          MOVE LOWER-CASE(TRIM(F-OS-8-72-TXT, LEADING))
  3732 GC0712
                           TO WS-Temp-65-Chars-TXT
                          INSPECT WS-Temp-65-Chars-TXT
  3733 GC0712
  3734 GC0712
                              REPLACING ALL '.' BY SPACE
```

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                                                                                             Page
                                                                                                    95
                        EVALUATE TRUE
 3735 GC0712
 3736 GC0712
                             WHEN WS-Temp-65-Chars-TXT = "eject"
  3737 GC0712
                                 MOVE O TO WS-Lines-Left-NUM
                                  EXIT SECTION
  3738 GC0712
  3739 GC0712
                            WHEN WS-Temp-65-Chars-TXT = "skip1"
  3740 GC0712
                                 MOVE SPACES TO WS-Src-Detail-Line-TXT
 3741 GC0712
                                 PERFORM 530-Generate-Source-Line
 3742 GC0712
                                 EXIT SECTION
                           WHEN WS-Temp-65-Chars-TXT = "skip2"
 3743 GC0712
  3744 GC0712
                                 MOVE SPACES TO WS-Src-Detail-Line-TXT
 3745 GC0712
                                  PERFORM 530-Generate-Source-Line 2 TIMES
  3746 GC0712
                                 EXIT SECTION
  3747 GC0712
                             WHEN WS-Temp-65-Chars-TXT = "skip3"
  3748 GC0712
                                 MOVE SPACES TO WS-Src-Detail-Line-TXT
 3749 GC0712
                                  PERFORM 530-Generate-Source-Line 3 TIMES
  3750 GC0712
                                  EXIT SECTION
  3751 GC0712
                         END-EVALUATE
  3752
                          PERFORM 530-Generate-Source-Line
  3753
                     END-IF
  3754
                 END-IF
  3755
  3756
         530-Generate-Source-Line SECTION.
 3757
  3758 GC1213 MOVE 1 TO WS-Src-Lines-NUM
  3759 GC1213
                IF L-Listing-CD = 1 *> LANDSCAPE
                 IF WS-SDL-Statement-TXT(129:128) > SPACES
    ADD 1 TO WS-Src-Lines-NUM
END-IF
  3760 GC1213
  3761 GC1213
  3762 GC1213
  3763 GC1213
                ELSE
                                     *> PORTRAIT
                 IF WS-SDL-Statement-TXT(90:167) > SPACES
  3764 GC1213
  3765 GC1213
                         ADD 1 TO WS-Src-Lines-NUM
  3766 GC1213
                          IF WS-SDL-Statement-TXT(179:78) > SPACES
  3767 GC1213
                             ADD 1 TO WS-Src-Lines-NUM
                         END-IF
  3768 GC1213
  3769 GC1213
                    END-IF
                END-IF
  3770 GC1213
 3771 GC1213
                  IF WS-Lines-Left-NUM < WS-Src-Lines-NUM
                 IF WS-Page-Num > 0 *> Don't print footer before page 1

IF L-Listing-CD = 1 *> LANDSCAPE

IF WS-Src-Lines-NUM = 2
 3772 GC1213
  3773 GC1213
  3774 GC1213
  3775 GC1213
                                 WRITE F-Listing-135-REC FROM SPACES BEFORE 1 *> Blank Line
  3776 GC1213
                              END-IF
  3777 GC1213
                              WRITE F-Listing-135-REC FROM SPACES BEFORE 1 *> Footer Line #1
  3778 GC1213
                             MOVE ALL '='
 3779 GC1213
                               TO F-Listing-135-REC
                             WRITE F-Listing-135-REC BEFORE 1 *> Footer Line #2
 3780 GC1213
  3781 GC1213
                            MOVE WS-Copyright-TXT
  3782 GC1213
                               TO F-Listing-135-REC
  3783 GC1213
                              MOVE WS-Page-No-TXT
  3784 GC1213
                               TO F-Listing-135-REC(126:10)
  3785 GC1213
                              WRITE F-Listing-135-REC BEFORE PAGE *> Footer Line #3
 3786 GC1213
                             WRITE F-Listing-135-REC FROM SPACES BEFORE 1 *> Spaces After FF Character
 3787 GC1213
                                             *> PORTRAIT
  3788 GC1213
                             EVALUATE WS-Src-Lines-NUM
```

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Dictionary File for GCIC (LISTING) 06/03/2022 23:09:11:06
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                                                                                                    Page
                                                                                                            96
                                WHEN 1 *> Need no extra blank lines
  3789 GC1213
  3790 GC1213
                                    CONTINUE
  3791 GC1213
                                WHEN 2 *> Need 1 extra blank line
                                    WRITE F-Listing-96-REC FROM SPACES BEFORE 1
  3792 GC1213
                                WHEN 3 *> Need 2 extra blank lines
  3793 GC1213
  3794 GC1213
                                    WRITE F-Listing-96-REC FROM SPACES BEFORE 1
  3795 GC1213
                                    WRITE F-Listing-96-REC FROM SPACES BEFORE 1
  3796 GC1213
                              END-EVALUATE
  3797 GC1213
                                WRITE F-Listing-96-REC FROM SPACES BEFORE 1 *> Footer Line #1
  3798 GC1213
                               MOVE ALL '='
  3799 GC1213
                                  TO F-Listing-96-REC
                                WRITE F-Listing-96-REC BEFORE 1 *> Footer Line #2
  3800 GC1213
  3801 GC1213
                                MOVE WS-Copyright-TXT
  3802 GC1213
                                  TO F-Listing-96-REC
  3803 GC1213
                                MOVE WS-Page-No-TXT
  3804 GC1213
                                  TO F-Listing-96-REC(87:10)
  3805 GC1213
                                WRITE F-Listing-96-REC BEFORE PAGE *> Footer Line #3
                  WRITE F-Listing 50 REC FROM SPACES BEF
END-IF
END-IF
ADD 1 TO WS-Page-NUM
MOVE 'Page:' TO WS-PN-Literal-TXT
MOVE WS-Page-NUM TO WS-PN-Page-NUM
CALL 'C$JUSTIFY' USING WS-PN-Page-NUM, 'Left'
CALL 'C$JUSTIFY' USING WS-PAGE-NO-TXT, 'Right'
IF L-Listing-CD = 1 *> LANDSCAPE
MOVE WS-Version-TXT
TO F-Listing-135-REC
  3806 GC1213
                                WRITE F-Listing-96-REC FROM SPACES BEFORE 1 *> Spaces After FF Character
  3807 GC1213
  3808 GC1213
  3809 GC1213
  3810 GC1213
  3811 GC1213
  3812 GC1213
  3813 GC1213
  3814 GC1213
  3815 GC1213
  3816 GC1213
                             TO F-Listing-135-REC
  3817 GC1213
                          MOVE 'Source Listing'
  3818 GC1213
                             TO F-Listing-135-REC(25:14)
  3819 GC1213
                          MOVE WS-Formatted-DT
  3820 GC1213
                             TO F-Listing-135-REC(126:10)
  3821 GC1213
                          WRITE F-Listing-135-REC BEFORE 1 *> Page Header Line #1
  3822 GC1213
                          MOVE WS-Program-Path-TXT
  3823 GC1213
                            TO F-Listing-135-REC
  3824 GC1213
                           WRITE F-Listing-135-REC BEFORE 1 *> Page Header Line #2
  3825 GC1213
                          MOVE 'Line Statement'
  3826 GC1213
                            TO F-Listing-135-REC
  3827 GC1213
                          MOVE WS-Page-No-TXT
  3828 GC1213
                             TO F-Listing-135-REC(126:10)
  3829 GC1213
                           WRITE F-Listing-135-REC BEFORE 1 *> Page Header Line #3
  3830 GC1213
                          MOVE WS-Src-Dashes-TXT
  3831 GC1213
                             TO F-Listing-135-REC
  3832 GC1213
                           WRITE F-Listing-135-REC BEFORE 1 *> Page Header Line #4
  3833 GC1213
                     ELSE
                                             *> PORTRAIT
                       MOVE WS-Version-TXT
  3834 GC1213
  3835 GC1213
                             TO F-Listing-96-REC
                          MOVE 'Source Listing'
  3836 GC1213
  3837 GC1213
                            TO F-Listing-96-REC(25:14)
  3838 GC1213
                           MOVE WS-Formatted-DT
  3839 GC1213
                            TO F-Listing-96-REC(87:10)
  3840 GC1213
                          WRITE F-Listing-96-REC BEFORE 1 *> Page Header Line #1
  3841 GC1213
                          MOVE WS-Program-Path-TXT(40:96)
  3842 GC1213
                              TO F-Listing-96-REC
```

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Dictionary File for GCIC (LISTING) 06/03/2022 23:09:11:06
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                                                                                               Page
                                                                                                      97
  3843 GC1213
                          WRITE F-Listing-96-REC BEFORE 1 *> Page Header Line #2
                        MOVE 'Line Statement'
  3844 GC1213
                           TO F-Listing-96-REC
  3845 GC1213
  3846 GC1213
                         MOVE WS-Page-No-TXT
  3847 GC1213
                           TO F-Listing-96-REC(87:10)
  3848 GC1213
                          WRITE F-Listing-96-REC BEFORE 1 *> Page Header Line #3
  3849 GC1213
                          MOVE WS-Src-Dashes-TXT
  3850 GC1213
                           TO F-Listing-96-REC
  3851 GC1213
                         WRITE F-Listing-96-REC BEFORE 1 *> Page Header Line #4
                 END-IF
COMPUTE WS-Lines-Left-NUM = WS-Lines-Per-Page-NUM - 4
  3852 GC1213
  3853 GC1213
  3854 GC1213 END-IF
  3855 GC1213 IF L-Listing-CD = 1 *> LANDSCAPE
                 EVALUATE WS-Src-Lines-NUM WHEN 1
  3856 GC1213
  3857 GC1213
  3858 GC1213
                         MOVE WS-Src-Detail-Line-TXT TO F-Listing-135-REC
  3859 GC1213
                          WRITE F-Listing-96-REC BEFORE 1
                   SUE
WHEN 2
  3860 GC1213
                          SUBTRACT 1 FROM WS-Lines-Left-NUM
  3861 GC1213
                     MOVE WS-SDL-Statement-TXT TO WS-Src-Hold-TXT
  3862 GC1213
  3863 GC1213
                          MOVE WS-Src-Detail-Line-TXT TO F-Listing-135-REC
  3864 GC1213
                          WRITE F-Listing-135-REC BEFORE 1 *> Prints chars 1-128 of stmnt
  3865 GC1213
                         MOVE SPACES TO WS-Src-Detail-Line-TXT
  3866 GC1213
                         MOVE WS-Src-Hold-TXT(129:128) TO WS-SDL-Statement-TXT
  3867 GC1213
                          MOVE WS-Src-Detail-Line-TXT TO F-Listing-135-REC
  3868 GC1213
                          WRITE F-Listing-135-REC BEFORE 1 *> Prints chars 129-256 of stmnt
  3869 GC1213
                          SUBTRACT 2 FROM WS-Lines-Left-NUM
  3870 GC1213
                      END-EVALUATE
  3871 GC1213
                 ELSE
                                       *> PORTRAIT
                  EVALUATE WS-Src-Lines-NUM
WHEN 1 *> Print only chars 1-89 of stmnt
  3872 GC1213
  3873 GC1213
  3874 GC1213
                          WRITE F-Listing-96-REC FROM WS-Src-Detail-Line-TXT
  3875 GC1213
                  BEFORE 1
SUBTRACT 1 FROM WS-Lines-Left-NUM
WHEN 2 *> Print only chars 1-89 and 90-178 of text
MOVE WS-SDL-Statement-TXT TO WS-Src-Hold-TXT
WRITE F-Listing-96-REC FROM WS-Src-Detail-Line-
                              BEFORE 1
  3876 GC1213
  3877 GC1213
  3878 GC1213
  3879 GC1213
                          WRITE F-Listing-96-REC FROM WS-Src-Detail-Line-TXT
  3880 GC1213
                              BEFORE 1
  3881 GC1213
                        MOVE SPACES TO WS-Src-Detail-Line-TXT
  3882 GC1213
                         MOVE WS-Src-Hold-TXT(90:89) TO WS-SDL-Statement-TXT
  3883 GC1213
                          WRITE F-Listing-96-REC FROM WS-Src-Detail-Line-TXT
  3884 GC1213
                              BEFORE 1
  3885 GC1213
                          SUBTRACT 2 FROM WS-Lines-Left-NUM
  3886 GC1213
                    WHEN 3 *> Print chars 1-89, 90-178 and 179-256 of stmnt
  3887 GC1213
                     MOVE WS-SDL-Statement-TXT TO WS-Src-Hold-TXT
  3888 GC1213
                         WRITE F-Listing-96-REC FROM WS-Src-Detail-Line-TXT
  3889 GC1213
                              BEFORE 1
  3890 GC1213
                        MOVE SPACES TO WS-Src-Detail-Line-TXT
                         MOVE WS-Src-Hold-TXT(90:89) TO WS-SDL-Statement-TXT
  3891 GC1213
                         WRITE F-Listing-96-REC FROM WS-Src-Detail-Line-TXT
  3892 GC1213
  3893 GC1213
                              BEFORE 1
                      MOVE SPACES TO WS-Src-Detail-Line-TXT
  3894 GC1213
                         MOVE WS-Src-Hold-TXT(179:78) TO WS-SDL-Statement-TXT
  3895 GC1213
  3896 GC1213
                         WRITE F-Listing-96-REC FROM WS-Src-Detail-Line-TXT
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3897 GC1213 BEFORE 1
3898 GC1213 SUBTRACT 3 FROM WS-Lines-Left-NUM
3899 GC1213 END-EVALUATE
3900 GC1213 END-IF
3901 MOVE SPACES TO WS-Src-Detail-Line-TXT
3902 .
3903
3904 END PROGRAM LISTING.
3905 *>>>Info: Total Copy Depth Used = 02; Caution messages issued = 1
```

Symbols of Module: GCIC (LISTING)

Data Section (FILE)	Defn	Locatio	ons						
F-ES-1-7-TXT	001631F	002776	003662						
F-ES-1-CHR	001628F	002777	003663						
F-ES-2-256-TXT-256	001629F	002920	003675						
F-ES-8-256-TXT	001632F								
F-EXPANDED-SRC-FILE	001617F	001626	002709	002756	002766	003653	003656	003671	003684
F-EXPANDED-SRC-REC	001627F	002710	002764	002788	002790	002820	002824	002833	002837
		002846	002850	002858	002876	002961	002966	003727	003729
F-EXPANDED-SRC2-REC	001630F								
F-LISTING-135-REC	001636F	003559	003561	003563	003564	003566	003567	003570	003572
		003573	003574	003575	003576	003577	003578	003579	003607
		003619	003621	003622	003624	003626	003628	003630	003631
		003775	003777	003779	003780	003782	003784	003785	003786
					003821				
					003858				
F-LISTING-96-REC	001635F								
					003599				
					003639				
					003797				
					003837				
					003850	003851	003859	003874	003879
				003892	003896				
F-LISTING-FILE		001634	002613	002621					
F-LISTING-REC	001637F								
F-ORIGINAL-SRC-FILE	001621F	001639	003652	003670	003694				
F-ORIGINAL-SRC-REC	001640F	003698							
F-0S-1-128-TXT	001641F								
F-0S-129-256-TXT	001646F								
F-OS-7-CHR	001643F	003703							
F-0S-8-72-TXT	001644F								
F-SORT-WORK-FILE	001623F	001648				000040	000054	000054	
F-SORT-WORK-REC	001649F	002731							
					003328			003416	003423
E OU DEE LINE NUM	0016545				003447				
F-SW-DEF-LINE-NUM	001654F							002405	003500
F-SW-PROG-ID-TXT	001650F	002616 003509			003448	003462	003469	003495	003500
F-SW-REF-FLAG-CHR	001657F				002220	002442	002467	003E40	
F-SW-REF-LINE-NUM	001657F 001656F							003540	
F-SW-REFERENCE-TXT	001656F		003422	003442	003432	003400	003536		
F-SW-SECTION-TXT	001653F		003441	003/151	003465	003511	003527		
F-SW-TOKEN-TXT	001653F				003464		003321		
F-SW-TOKEN-UC-TXT	001652F				003449		003490	003501	003503
1 5" IONEN OO INI	2010011	002017	200410	300 <del>1</del> 03	300443	300-00	300-300	300001	300000
L-LISTING-FN-TXT	001619F	002593	002605						
L-SRC-FN-TXT	001613F			002642	002643	002645	002650	002654	002666
	,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,				002676	302010	302000	302001	302000
WS-EXPANDED-SRC-FN-TXT	001617F								

 ${\tt Symbols \ of \ Module: \ GCIC \ (LISTING)}$ 

Data Section (WORKING-STORAGE)	Defn	
	,	
WS-CD-IN-DATA-DIV-BOOL	001674W	002741
WS-CD-IN-ENV-DIV-BOOL	001673W	
WS-CD-IN-IDENT-DIV-BOOL	001672W	002737
WS-CD-IN-PROC-DIV-BOOL	001675W	002743
WS-COPYRIGHT-TXT	001660W	002631 002637 003623 003638 003781 003801
WS-CPI-13-15-TXT	001681W	003032
WS-CPI-16-CHR	001682W	003031
WS-CS-1-CHR	001685W	002954
WS-CS-11-14-TXT	001688W	002956 002957
WS-CS-15-CHR	001689W	002959
WS-CS-2-14-TXT	001686W	002955
WS-CURR-CHAR-IS-PUNCT-BOOL	001663W	002799 002807 002812
WS-CURR-CHAR-IS-QUOTE-BOOL	001667W	002818
WS-CURR-CHAR-IS-X-BOOL	001668W	002831
WS-CURR-CHAR-IS-Z-BOOL	001669W	002844
WS-CURR-CHR	001662W	002789 002792 002794 002800 002808 002814 002821
WS-CURR-DIVISION-TXT	001671W	002714 002750 002801 002809 002909 003025 003044 003070
		003126 003131
WS-CURR-LINE-NUM	001677W	002713 002773 002932 002972 003421 003442 003452 003466
		003693
WS-CURR-PROG-ID-TXT	001679W	002703 003030 003417 003438 003448 003462
WS-CURR-SECTION-TXT	001684W	002935 002940 003049 003075 003121 003122 003420 003441
		003451 003465
WS-CURR-VERB-TXT		002704 002728 002752 003136 003145
WS-DELIM-TXT	001693W	002861 002863 002881 002883 002886
WS-DUMMY-TXT	001695W	002679 002924 002953 002986 002991 002992 003679
WS-EXPANDED-SRC-FN-TXT	001697W	002684 002685
WS-FILENAME-TXT	001699W	002678 002681 002952 002955
WS-FLAGS-TXT	001701W	
WS-FORMATTED-DT	001704W	
WS-GI-PROG-ID-TXT	001707W	003489 003495 003500
WS-GI-TOKEN-TXT	001708W	
WS-GROUP-INDICATORS-TXT	001706W	
WS-HELD-REFERENCE-TXT	001710W	
		003250 003251 003252 003289 003295 003296 003297 003303
		003304 003305 003328 003330 003331
WS-I-SUB	001712W	002643 002646 002649 002653 002669 002672 002673 002676
		002929 002932 002943 002946 002947 002950 003474 003508
		003520 003533 003534 003536 003539 003541 003614
WS-J-SUB		002670 002674 002944 002948
WS-LINES-LEFT-NUM	001716W	
		003710 003737 003771 003853 003860 003869 003876 003885
		003898
WS-LINES-PER-PAGE-ENV-TXT	001720W	
WS-LINES-PER-PAGE-NUM	001718W	
WS-MAIN-MODULE-NAME-TXT	001722W	
WS-NEXT-CHAR-IS-QUOTE-BOOL		002831 002844
WS-NEXT-CHR		002791 002834 002847
WS-OS-TYPE-FILLER-TXT	001727W	001733

Symbols of Module: GCIC (LISTING)

Data Section (WORKING-STORAGE)	Defn	Locatio	ons						
	+								
WS-OS-TYPE-TXT WS-OS-TYPES-TXT	001734W 001733W	002633							
WS-PAGE-NO-TXT	001739W	003556 003827		003594	003625	003640	003783	003803	003813
WS-PAGE-NUM	001737W	002629	003552	003554	003772	003809	003811		
WS-PN-LITERAL-TXT	001740W	003553	003810						
WS-PN-PAGE-NUM	001741W	003554	003555	003811	003812				
WS-PROGRAM-PATH-TXT	001743W	002667	002668	003565	003588	003822	003841		
WS-RESERVED-WORD-TABLE-TXT	002500W								
WS-RESERVED-WORD-TXT	002501W	002896							
WS-RESERVED-WORDS-TXT	001745W	002500							
WS-RS-DUPLICATE-CHR	002509W	003476	003491	003506	003517	003518			
WS-RS-IN-COPYBOOK-BOOL	002512W	002938	003687						
WS-RS-IN-MAIN-MODULE-BOOL	002511W	002933	002971	003682	003692				
WS-RS-IN-WHICH-PGM-CHR	002510W								
WS-RS-LAST-TOKEN-ENDED-SENT-CHR		002762	002908						
WS-RS-PROCESSING-PICTURE-CHR	002514W	002857							
WS-RS-TOKEN-ENDED-SENTENCE-CHR	002515W	002749 002884	002761	002763	002796	002825	002838	002851	002864
WS-RS-VERB-HAS-BEEN-FOUND-CHR WS-RUNTIME-SWITCHES	002516W 002508W	002715	002900	003022					
WS-RW-IDX	002504W	002897	002898						
WS-RW-TYPE-CD	002505W	002898							
WS-RW-WORD-TXT	002503W	002506	002897						
WS-SAVED-SECTION-TXT	002518W	002934	002935	002939	002940				
WS-SDL-LINE-NUM	002525W	003697							
WS-SDL-STATEMENT-TXT	002527W	003698 003882		003760 003891		003766	003862	003866	003878
WS-SRC-DASHES-TXT	002520W	003830	003849						
WS-SRC-DETAIL-LINE-TXT	002524W	003657	003696	003704	003708	003713	003717	003721	003728
		003740	003744	003748	003858	003863	003865	003867	003874
		003879	003881	003883	003888	003890	003892	003894	003896
		003901							
WS-SRC-HOLD-TXT	002529W	003862				003887	003891	003895	
WS-SRC-LINE-NUM	002531W	003654							
WS-SRC-LINES-NUM	002533W	003758 003872	003761	003765	003767	003771	003774	003788	003856
WS-SRC-SUB	002535W	002711							
					002824				
		002839	002845	002849	002850	002852	002862	002865	002882
					002969				
WS-SUPPRESS-FF-CHR	001702W	002630							
WS-TALLY-QTY	002537W	003001							
WS-TEMP-10-CHARS-TXT	002539W	002922							
WS-TEMP-256-CHARS-TXT	002549W				002942	002945	002950	003678	003680
WS-TEMP-32-CHARS-1-TXT	002541W	002977							
WS-TEMP-32-CHARS-2-TXT	002543W	002984							
WS-TEMP-32-CHARS-3-TXT	002545W	002985							000700
WS-TEMP-65-CHARS-TXT	002547W	003700	003701	003707	003712	003716	003720	003732	003733

 ${\tt Symbols \ of \ Module: \ GCIC \ (LISTING)}$ 

Data Section (WORKING-STORAGE)	Defn	Locatio	ns						
	+								
		003736	003739	003743	003747				
WS-TODAY-DT	002551W	002701	002702						
WS-TOKEN-CURR-TXT	002553W	002721	002725	002794	002803	002814	002822	002835	002848
		002860	002867	002880	002890	002892	002910	002977	003024
		003030	003043	003048	003069	003074	003078	003112	003130
		003419	003440	003450	003464				
WS-TOKEN-CURR-UC-TXT	002555W	002722	002725	002728	002747	003124	003418	003439	003449
		003463							
WS-TOKEN-PREV-TXT	002557W	002729	002747	002751	002810	003025	003028	003029	003044
		003049							
		003095	003098	003101	003104	003107	003110	003125	003131
		003135							
		003236	003245	003273	003286	003290	003293	003301	003309
		003316	003325	003341	003344	003347	003354	003363	003374
		003389	003392	003399					
WS-TOKEN-SEARCH-TXT	002559W	002890	002891	002897					
WS-TOKEN-TYPE-CD	002561W	002795	002804	002815	002868	002872	002893	002898	002911
	002562W	003019	003039	003065					
WS-TT-TOKEN-IS-EOF-BOOL	002563W	002718	002772						
WS-TT-TOKEN-IS-FUNCTION-BOOL	002564W	003059							
WS-TT-TOKEN-IS-IDENTIFIER-BOOL	002565W	002905	003052	003088	003134	003142			
WS-TT-TOKEN-IS-KEYWORD-BOOL	002566W	002723	002746	003023	003042	003047	003068	003073	003079
		003129							
WS-TT-TOKEN-IS-LIT-ALPHA-BOOL		002828							
WS-TT-TOKEN-IS-LIT-NUMBER-BOOL		002841							
WS-TT-TOKEN-IS-RESERVED-WD-BOOL	002570W	002724	003020	003040	003066	003083			
	002569W	002727	002899						
WS-USERNAMES-QTY		002712							
WS-VERSION-TXT	002574W 002581W	002641		003581	003815	003834			
WS-XDL-DEF-LINE-NUM	002581W	003512							
WS-XDL-PROG-ID-TXT	002577W	003509	003521	003525					
WS-XDL-REF-FLAG-CHR		003541							
WS-XDL-REF-LINE-NUM	002586W	003539							
	002585W								
	002583W	003511							
WS-XDL-TOKEN-TXT		003510							
WS-XREF-DETAIL-LINE-TXT	002576W	003472			003492	003496	003505	003524	003544
		003607							
WS-XREF-LINES-PER-REC-NUM	002590W	002658	002662	003534					

ACS Cobol Xref v2.02.04

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Symbols of Module: GCIC (LISTING) -----Defn Locations Data Section (LINKAGE) 002603K 002610 002657 002694 003557 003606 003618 003759 003773 L-LISTING-CD 003814 003855 L-LISTING-FN-TXT 002593K 002605 002599K 002608 002695 L-LPP-NUM L-LPP-PORT-NUM L-LPP-NUM 002601K 002609 002697 L-OS-TYPE-CD 002597K 002607 002633 L-SRC-FN-TXT 002595K 002606 002642 002643 002645 002650 002654 002666 002667 002669 002671 002676 ACS Cobol Xref v2.02.04 Dictionary File for GCIC (LISTING) 06/03/2022 23:09:11:07 Page 104 Symbols of Module: GCIC (LISTING) -----Variable Tested [S] Symbol (88-Conditions) WS-CURR-CHR WS-CURR-CHAR-IS-PUNCT-BOOL WS-CURR-CHR WS-CURR-CHAR-IS-QUOTE-BOOL WS-CURR-CHAR-IS-X-BOOL
WS-CURR-CHR WS-CURR-CHAR-IS-Z-BOOL
WS-CURR-DIVISION-TXT WS-CD-IN-IDENT-DIV-BOOL
WS-CURR-DIVISION-TXT WS-CD-IN-ENV-DIV-BOOL
WS-CURR-DIVISION-TXT WS-CD-IN-PROC-DIV-BOOL
WS-CURR-DIVISION-TXT WS-CD-IN-PROC-DIV-BOOL
WS-CURR-DIVISION-TXT WS-CD-IN-PROC-DIV-BOOL
WS-NEXT-CHR WS-NEXT-CHAR-IS-QUOTE-BOOL
WS-RS-IN-WHICH-PGM-CHR WS-RS-IN-MAIN-MODULE-BOOL
WS-RS-IN-WHICH-PGM-CHR WS-RS-IN-COPYBOOK-BOOL
WS-TOKEN-TYPE-CD WS-TT-TOKEN-IS-ARGTYPE-BOOL
WS-TOKEN-TYPE-CD WS-TT-TOKEN-IS-FUNCTION-BOOL
WS-TOKEN-TYPE-CD WS-TT-TOKEN-IS-IDENTIFIER-BOOL
WS-TOKEN-TYPE-CD WS-TT-TOKEN-IS-KEYWORD-BOOL
WS-TOKEN-TYPE-CD WS-TT-TOKEN-IS-LIT-ALPHA-BOOL
WS-TOKEN-TYPE-CD WS-TT-TOKEN-IS-LIT-NUMBER-BOOL
WS-TOKEN-TYPE-CD WS-TT-TOKEN-IS-VERB-BOOL
WS-TOKEN-TYPE-CD WS-TT-TOKEN-IS-VERB-BOOL
WS-TOKEN-TYPE-CD WS-TT-TOKEN-IS-RESERVED-WD-BOOL WS-CURR-CHR

Dictionary File for GCIC (LISTING) 06/03/2022 23:09:11:07

8 January 2025 Chapter GCic

ACS Cobol Xref v2.02.04 Dictionary File for GCIC (LISTING) 06/03/2022 23:09:11:07 Page 105 Symbols of Module: GCIC (LISTING)

Variable Tested Symbol (88-Conditions) [S]

WS-CD-TN-DATA-DTV-BOOL
WS-CD-IN-ENV-DIV-BOOL
WS-CD-IN-IDENT-DIV-BOOL
WS-CD-IN-PROC-DIV-BOOL
WS-CURR-CHAR-IS-PUNCT-BOOL
WS-CURR-CHAR-IS-QUOTE-BOOL
WS-CURR-CHAR-IS-X-BOOL
WS-CURR-CHAR-IS-Z-BOOL
WS-NEXT-CHAR-IS-QUOTE-BOOL
WS-RS-IN-COPYBOOK-BOOL
WS-RS-IN-MAIN-MODULE-BOOL
WS-TT-TOKEN-IS-ARGTYPE-BOOL
WS-TT-TOKEN-IS-EOF-BOOL
WS-TT-TOKEN-IS-FUNCTION-BOOL
WS-TT-TOKEN-IS-IDENTIFIER-BOOL
WS-TT-TOKEN-IS-KEYWORD-BOOL
WS-TT-TOKEN-IS-LIT-ALPHA-BOOL
WS-TT-TOKEN-IS-LIT-NUMBER-BOOL
WS-TT-TOKEN-IS-RESERVED-WD-BOOL
WS-TT-TOKEN-IS-VERB-BOOL

Chapter GCic 8 January 2025

Defn Locations

002641P

002635P

ACS Cobol Xref v2.02.04

-----

Procedure

COMP-VERS

COMP-YEAR

Page 106

Symbols of Module: GCIC (LISTING) -----Functions Defn Locations LOWER-CASE 003699I 003731 002691I 002929 002642I 002669 002681 002930 002931 002942 003680 003681 003699 NUMVAL TRIM 003731 002650I 002654 002721 002867 002890 002930 003680 UPPER-CASE Dictionary File for GCIC (LISTING) 06/03/2022 23:09:11:07 Page 107 ACS Cobol Xref v2.02.04 Symbols of Module: GCIC (LISTING) Called Procedures Type Locations C\$JUSTIFY SYSTEM 002668 003555 003556 003812 003813 CBL\_CHECK\_FILE\_EXIST SYSTEM 002685 ACS Cobol Xref v2.02.04 Dictionary File for GCIC (LISTING) 06/03/2022 23:09:11:07 Page 108 Symbols of Module: GCIC (LISTING)

Dictionary File for GCIC (LISTING) 06/03/2022 23:09:11:07

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Symbols of Module: GCIC (LISTING)

Unreferenced Working Storage Symbols

 CBL\_CHECK\_FILE\_EXIST
 002685C

 F-ES-8-256-TXT
 001632F

 F-EXPANDED-SRC2-REC
 001630F

 F-LISTING-REC
 001637F

 F-OS-1-128-TXT
 001641F

 F-OS-129-256-TXT
 001701W

 WS-FLAGS-TXT
 001701W

 WS-OS-TYPES-TXT
 001733W

 WS-RESERVED-WORD-TABLE-TXT
 002500W

 WS-RS-IN-WHICH-PGM-CHR
 002510W

 WS-RUNTIME-SWITCHES
 002508W

 WS-XDL-REFERENCE-TXT
 002585W

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Symbols of Module: GCIC (LISTING)

Unreferenced Procedures

COMP-VERS 002641P COMP-YEAR 002635P

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# 6 STREAMIO

STREAMIO is a utility I created to assist with handling stream I/O functions. I've used it to construct a number of useful little command-line utilities.

Usage of this subroutine is completely documented in the program comments. The program COPY's a copybook named STREAMIOcb, the format of which is described in the program comments.

Both STREAMIO.cbl and STREAMIOcb.cpy are included in the "samples" directory of any pre-built distributions of GnuCOBOL that I have created.

In addition to general GnuCOBOL concepts, this program provides a useful demonstration of the following:

- Coding a GnuCOBOL subroutine
- Using the REPLACING clause on a CDF COPY statement
- Using hexadecimal alphanumeric literals
- Using the following statements:
  - o ACCEPT FROM ENVIRONMENT statement
  - o INSPECT statement
  - o STRING statement
- Using the following built-in subroutines:
  - o C\$PARAMSIZE built-in system subroutine
  - o CBL\_CLOSE\_FILE built-in system subroutine
  - o CBL\_DELETE\_FILE built-in system subroutine
  - o CBL\_EXIT\_PROC built-in system subroutine
  - o CBL\_OPEN\_FILE built-in system subroutine
  - o CBL\_READ\_FILE built-in system subroutine
  - o CBL\_WRITE\_FILE built-in system subroutine
- Using the following intrinsic functions:
  - o RANDOM intrinsic function
  - o TRIM intrinsic function

First, here is the STREAMIOcb.cpy copybook:

```
05 SCB-Handle-NUM
                                                                                                                                                                                                PIC X(4) COMP-X.
   05 SCB-Mode-CD
                                                                                                                                                                                                PIC X(1).
                 88 SCB-MODE-Input-BOOL
88 SCB-MODE-Output-BOOL
88 SCB-MODE-Both-BOOL
                                                                                                                                                                                                VALUE 'I', 'i'.
                                                                                                                                                                                              VALUE '0', 'o'.
                  88 SCB-MODE-Both-BOOL
                                                                                                                                                                                              VALUE 'B', 'b'.
                                                                                                                                                                                        PIC X(2).
   05 SCB-Function-CD
                SCB-Function-CD PIC X(2).

88 SCB-Func-CLOSE-BOOL VALUE 'C', 'c'.

88 SCB-Func-DELETE-BOOL VALUE 'D', 'd'.

88 SCB-Func-OPEN-BOOL VALUE 'O', 'o'.

88 SCB-Func-READ-BOOL VALUE 'R', 'r'.

88 SCB-Func-READ-Delim-BOOL VALUE 'RD', 'rd',
                 'rD', 'Kd'.

88 SCB-Func-WRITE-BOOL

88 SCB-Func-WRITE-Delim-BOOL

VALUE 'WD', 'wd',
'wD'. 'Wd'.
VALUE 'WD', 'wd 'wD', 'wd 'wD', 'wd'
                                                                                                                                                                                                                                'wD', 'Wd'.
                                                                                                                                                                                              PIC X(8) COMP-X.
                                                                                                                                                                                              USAGE PROGRAM-POINTER.
   05 SCB-Error-Routine-NUM REDEFINES SCB-Error-Routine-PTR
                                                                                                                                                                                          USAGE BINARY-LONG.
                                                                                                                                                                                                USAGE BINARY-LONG.
   05 SCB-Return-CD
   05 SCB-Filename-TXT
                                                                                                                                                                                                PIC X(256).
```

The program source and cross-reference listing, produced using the GnuCOBOL Interactive Compiler front-end (GCic.cbl, one of the sample programs included here), begins on the next page.

GNU COBOL 2.1 23NOV2013 Source Listing

C:/Users/tda010/Documents/Programs/Samples/STREAMIO.cbl \_\_\_\_\_ >>SOURCE FORMAT IS FIXED 1 IDENTIFICATION DIVISION. PROGRAM-ID. STREAMIO. 4 \*>\* \*> Author: Gary L. Cutler 6 \*> 7 \*> This routine centralizes all bytestream file I/O functions \*\* 8 \*> into one routine. The manner in which this routine is \*\* \*> CALLed is as follows: 10 \*> CALL "STREAMIO" USING control-block [ , arg2 ] 11 \*> \*\* 12 \*> \*\* \*> where 'control-block' is defined by the "STREAMIOcb.cpy" \*> copybook and 'arg2' will vary, depending upon the function 14 \*\* \*> specified in the control block. \*\* 15 16 17 \*> The STREAMIO routine has an advantage over the various \*\* 18 \*> "CBL\_xxxxxx\_FILE" routines in that: \*\* 19 \*\* \*> \*> 1. It automates the establishment and on-going adjustment of \*\* 21 the file-offset value in such a way as to simplify the 22 \*> sequential processing of a bytestream file (you may still \*\* 23 \*> specify a file-offset manually on each read or write, if \*\* you wish) 25 \*> \*\* 26 \*> 2. It auto-detects the size of the I/O buffer you supply to \*\* 27 \*> STREAMIO, using that as the byte-count of all read and 28 \*> write operations. \*\* 29 \*> \*\* \*> 3. Not only does it support the raw input and output of data \*\* 30 \*> that the CBL\_READ\_FILE and CBL\_WRITE\_FILE routines do, 32 \*> but on input it is also capable of delivering just a \*> 33 single newline-delimited or carriage-return/newline de-\*\* 34 \*> limited record to the caller. \*\* 35 \*> 4. On output, STREAMIO can optionally append either a new-36 37 \*> line or carriage-return/newline sequence (your choice) to \*\* \*> the end of every record it writes. 39 \*> \*> 5. STREAMIO can automatically generate filenames for output \*\* 40 41 \*> files if you wish, simplifying the process of creating \*\* 42 \*> scratch or work files. \*\* 43 \*> \*\* 44 \*> 6. The STREAMIO routine also allows you to (optionally) re-\*> 45 gister a general error-handling routine to be given control should a fatal error be detected with STREAMIO. 47 \*> This routine can be "turned on" and "turned off" at will. \*\* 48 \*>

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GNU COBOL 2.1 23NOV2013 Source Listing

C:/Users/tda010/Documents/Programs/Samples/STREAMIO.cbl \_\_\_\_\_\_ \*> The control block format is as follows. This structure must \*\* \*> be defined under an 01-level data item of your creation and \*\* 52 \*> should be INITIALIZEd before any items within it are used. \*\* 53 \*> \*\* PIC X(4) COMP-X. \*> 05 SCB-Handle-NUM \*> 05 SCB-Handle-NUM PIC X(4) COMP-X.

\*> 05 SCB-Mode-CD PIC X(1).

\*> 88 SCB-Mode-Input-BOOL VALUE 'I', 'i'.

\*> 88 SCB-Mode-Output-BOOL VALUE 'O', 'o'.

\*> 88 SCB-Mode-Both-BOOL VALUE 'B', 'b'.

\*> 05 SCB-Function-CD PIC X(2). 55 56 57 \*> 05 SCB-Function-CD PIC X(2). \*\*

\*> 88 SCB-Func-CLOSE-BOOL VALUE 'C', 'c'. \*\*

\*> 88 SCB-Func-DELETE-BOOL VALUE 'D', 'd'. \*\*

\*> 88 SCB-Func-OPEN-BOOL VALUE 'O', 'o'. \*\*

\*> 88 SCB-Func-READ-BOOL VALUE 'R', 'r'. \*\*

\*> 88 SCB-Func-READ-Delim-BOOL VALUE 'R', 'r'. \*\*

\*> 88 SCB-Func-READ-Delim-BOOL VALUE 'R', 'r'. \*\*

\*> 88 SCB-Func-WRITE-BOOL VALUE 'W', 'rd', \*\*

\*> 88 SCB-Func-WRITE-Delim-BOOL VALUE 'W', 'w'. \*\*

\*> 88 SCB-Func-WRITE-Delim-BOOL VALUE 'W', 'wd', \*\*

\*> 88 SCB-Delimiter-Mode-CD PIC X(1). \*\*

\*> 88 SCB-Delim-Unix-BOOL VALUE 'U', 'u'. \*\*

\*> 88 SCB-Delim-Windows-BOOL VALUE 'W', 'w'. \*\*

\*> 05 SCB-Offset-NUM PIC X(8) COMP-X. \*\*

\*> 05 SCB-Error-Routine-PTR USAGE PROGRAM-POINTER. \*\*

\*> 05 SCB-Error-Routine-PTR \*\* \*> 05 SCB-Function-CD 59 PIC X(2). 60 61 62 63 64 65 66 67 68 69 70 71 72 73 \*> 05 SCB-Error-Routine-NUM REDEFINES SCB-Error-Routine-PTR \*\* 74 75 USAGE BINARY-LONG. \*\* \*> USAGE BINARY-LONG. 76 \*> 05 SCB-Return-CD \*> 05 SCB-Filename-TXT 77 PIC X(256). 78 \*> 79 \*> Such a structure is defined for your use using the copybook \*\* \*> "STREAMIOcb.cpy" (you may also define your own, provided it \*\* 81 \*> conforms to the above layout). 82 83 \*> SCB-Handle-NUM 85 \*> 86 \*> Serves as a file handle to the file once it has been opened \*\* \*> (via the "SCB-Func-OPEN-BOOL" function). 88 89 \*>-----\*\* 90 \*> SCB-Mode-CD 91 92 \*> Prior to calling "STREAMIO" for the first time for a file, 93 \*> the appropriate subordinate level-88 must be set to TRUE to \*\* 94 \*> select an I/O mode. You may also simply move one of the \*\* 96 \*> string values listed on the level-88 items to "SCB-Mode-CD". \*\*

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\*>

GNU COBOL 2.1 23NOV2013 Source Listing

C:/Users/tda010/Documents/Programs/Samples/STREAMIO.cbl \_\_\_\_\_\_ \*> SCB-Function-CD 101 \*> 102 \*> The appropriate subordinate level-88 must be set to TRUE to \*\* 103 \*> select a function you'd like to execute against a file. You \*\* 104 \*> may also simply move one of the string values listed on the \*\* \*> level-88 items to "SCB-Function-CD". 105 106 \*> \*\* 107 \*> Available functions are as follows: 108 \*> \*\* 109 \*> SCB-Func-OPEN-BOOL \*\* 110 \*> \*\* 111 This must be the function specified the first time you call STREAMIO for any given file. It opens the file & \*\* 112 \*> makes it available for use according to the \*> 113 \*\* 114 \*> "SCB-Mode-CD" specification. \*> 115 \*> The filename being opened must be specified in the 116 \*\* 117 \*> "SCB-Filename-TXT" field. \*\* 118 \*> 119 \*> The SCB-Offset-NUM field will be initialized to ZERO. \*\* 120 \*> \*\* If "arg2" is specified in conjunction with this funct-121 \*> 122 ion, it will be ignored. 123 \*> \*\* \*> SCB-Func-CLOSE-BOOL 124 \*\* 125 \*> 126 \*> This function should be the one specified the LAST time \*\* you call STREAMIO against a specific file. After this \*\* 127 \*> 128 \*> function has been executed, you'll have to re-open the \*\* 129 file if you wish to use it with STREAMIO again. 130 \*> \*> 131 The SCB-Handle-NUM item will be reset to ZERO. \*\* 132 \*> \*\* 133 If "arg2" is specified in conjunction with this funct-134 \*> ion, it will be ignored. \*\* 135 \*> \*\* 136 \*> SCB-Func-DELETE-BOOL 137 \*> This function will delete the file specified in the \*\* 138

\_\_\_\_\_\_\_

If "arg2" is specified in conjunction with this funct-

control block (see SCB-Filename-TXT).

\*> This function should not be performed against a file
\*> that is open.

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\*> SCB-Func-READ-BOOL

ion, it will be ignored.

139

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144 145

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\*>

\*>

\*>

\*>

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GNU COBOL 2.1 23NOV2013 Source Listing

2014/03/27 C:/Users/tda010/Documents/Programs/Samples/STREAMIO.cbl

		C:/Users/tda010/Documents/Programs/	Samples/STREAMIO.cbl
Line	Statement		Page: 4
148	*>	military and a second s	**
149		This function invokes a standard CBL_READ_FILE against	**
150		the file specified in the control block (see	**
151		SCB-Filename-TXT).	**
152			**
153		The buffer into which you wish to read data must be	**
154		supplied as "arg2". The size of that buffer, in bytes,	
155	*>	will define the "byte-count" value supplied to the	**
156		CBL_READ_FILE subroutine. The buffer data item will be	
157		set to SPACES before the read takes place.	**
158	*>	(222 222 222)	**
159	*>	If the file-offset value (SCB-Offset-NUM) is greater	**
160		than the size of the file, a "no more data" return code	
161	*>	(01) will be passed back in SCB-Return-CD and the	**
162		buffer will have been set to SPACES.	**
163			**
164		At the conclusion of a successful SCB-Func-READ-BOOL,	**
165	*>	the value of SCB-Offset-NUM will have been automati-	**
166		cally incremented by the byte-count size of "arg2".	**
167			**
168	*> SCB-	-Func-WRITE-BOOL	**
169			**
170	*>	This function invokes a standard CBL_WRITE_FILE against	**
171	*>	the file specified in the control block (see	**
172		SCB-Filename-TXT).	**
173			**
174	*>	The buffer from which data will be written to the file	**
175	*>	must be supplied as "arg2". The size of that buffer,	**
176	*>	in bytes, will define the "byte-count" value supplied	**
177	*>	CBL_WRITE_FILE subroutine. The buffer data will be	**
178	*>	written to the file-offset position defined by the	**
179	*>	SCB-Offset-NUM value. You may specify "arg2" either	**
180	*>	as an actual alphanumeric data item or as an alpha-	**
181	*>	numeric literal.	**
182			**
183		If the file-offset value (SCB-Offset-NUM) is greater	**
184	*>	than the size of the file, a "no more data" return code	**
185	*>	will be passed back in SCB-Return-CD and the buffer	**
186	*>	will have been set to SPACES.	**
187	*>		**
188	*>	At the conclusion of a successful SCB-Func-WRITE-BOOL	**
189	*>	operation, the value of SCB-Offset-NUM will have been	**
190	*>	automatically incremented by the byte-count size of	**
191	*>	"arg2".	**
192	*>		**
193	*> SCB-	-Func-READ-Delim-BOOL	**
194	*>		**
195	*>	SCB-Func-READ-Delim-BOOL bahaves like the SCB-FUNC-	**
196	*>	READ function, with the following behavioral dif-	**

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Line	Statemen	C:/Users/tda010/Documents/Programs/S	Samples/STREAMIO.cbl Page: 5
===== 197		ferences:	**
198	*>		**
199	*>	1. When data is read from the file, only that data read	**
200	*>	up to BUT NOT INCLUDING an end-of-line delimiter	**
201	. *>	sequence (either a LF or CRLF) will be retained in	**
202	<u>*</u>	the buffer - the remainder of the buffer from the	**
203	*>	end-of-line sequence onward will be reset to SPACES.	**
204	*>	The file-offset value (SCB-Offset-NUM) will be in-	**
205	*>	cremented ONLY by the amount of data transferred up	**
206	*>	to AND INCLUDING the end-of-line sequence.	**
207	*>		**
208	*>	2. When data is read from the file and an end-of-line	**
209	*>	delimiter sequence (either a LF or a CRLF) cannot be	**
210	*>	found within the buffer, the assumption is made that	**
211	. *>		**
212	·>	these instances, an SCB-Return-CD value of 02 will	**
213	*>	be returned and the SCB-Offset-NUM value will be	**
214		incremented past the next end-of-line sequence in	**
215		the file (this will involve at least one additional	**
216		call to CBL_READ_FILE to locate that eol sequence,	**
217		but any additional such reads will be done internal-	**
218		ly to STREAMIO and will be entirely transparent to	**
219		the caller of STREAMIO.	**
220		010 04222 02 01102111201	**
221		DO NOT USE the Streamio-READ-Delim function if the	**
222		possibility exists that linefeed (X"OA") or carriage-	**
223		return (X"OD") characters could exist as actual data	**
224		characters in the file.	**
225			**
226		SCB-Func-WRITE-Delim-BOOL	**
227		DOD TANG WILL DOTTE DOCE	**
228		SCB-Func-WRITE-Delim-BOOL acts like the Streamio-	**
229		FUNC-WRITE function, with the following difference:	**
230		Toko with function, with the following difference.	**
231		After the specified data is written to the file, an	**
231		end-of-line sequence will also be written to the file.	**
233		The file-offset value (SCB-Value) will be incremented	**
234		by the byte-count size of the data PLUS the size of the	
235		·	**
236		end-of-line sequence. One of two possible end-of-line	**
		sequences must be specified using the value of SCB- Delimter-Mode.	**
237		Delimter-mode.	
238			**
239			
240		SCB-Delimiter-Mode-CD 	**
241	•		
242		mid- a	**
243		This data item is needed only when issuing the Streamio-	**
244		FUNC-WRITE-Delim function. In those circumstances, this	**
245	*>	item defines what end-of-line delimiter sequence is to be	**

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C:/Users/tda010/Documents/Programs/Samples/STREAMIO.cbl \_\_\_\_\_\_ 246 \*> written: \*> If SCB-Delim-Unix-BOOL is true, a linefeed character will 248 \*\* 249 \*> be written. \*\* 250 251 \*> If SCB-Delim-Windows-BOOL is true, a carriage-return and 252 \*> linefeed sequence will be written. 253 \*> \*>-----\*\* 255 \*> SCB-Offset-NUM \*>-----256 257 \*> 258 \*> This data item specifies the next relative byte number with- \*\* 259 \*> in the file where the next read or write will start. 260 261 \*> SCB-Offset-NUM is automatically set to 0 (the first byte) \*\* 262 \*> when the file is opened, and is automatically incremented as \*\* 263 \*> the file is read or written via STREAMIO. 264 \*> 265 \*> You may also manually set this value as desired before any 266 \*> call to STREAMIO. 267 \*> 268 \*>----269 \*> SCB-Error-Routine-PTR 270 \*>-271 \*> 272 \*> To specify a general error-handling routine for handling \*> STREAMIO failures, Create the routine and define an entry-273 \*> name for it via the ENTRY statement. Then use the following \*\* 274 275 \*> to set that routine up as the error handler: 276 277 \*> SET SCB-Error-Routine-PTR TO ENTRY "entry-name" \*\* 278 \*> \*\* 279 \*> To "turn off" the error-routine: \*\* 280 281 \*> SET SCB-Error-Routine-PTR TO NULL \*\* 282 \*> \*> If a fatal error occurs (any error not marked with a ">" in \*\* 284 \*> the SCB-Return-CD discussion), the error routine you spe-285 \*> cified (if any) will be set up as an exit routine via the 286 \*> CBL\_EXIT\_PROC subroutine; the STREAMIO routine will then is- \*\* 287 \*> sue a STOP RUN to intentionally trigger your error routine. \*\* 288 \*> You will not be able to recover your program once your error \*\* \*> routine triggers. If you wish to be able to recover from \*\* 289 \*> fatal STREAMIO errors, you should NOT use the SCB-Error-290 \*> Routine feature but instead you should explicitly test the \*\* 292 \*> SCB-Return-CD value after every call to STREAMIO. 293 \*> 294 \*> A default error routine is defined by the "STREAMIOError.cpy"\*\*

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GNU COBOL 2.1 23NOV2013 Source Listing

C:/Users/tda010/Documents/Programs/Samples/STREAMIO.cbl \_\_\_\_\_ \*> copybook.

```
*>-----
297
298
        *> SCB-Return-CD
299
300
        *>
        *> The following are the possible SCB-Return-CD values. The
301
        *> ones marked with a ">" will NOT trigger an error-routine, if **
302
        *> one is currently registered via SCB-Error-Routine-PTR.
304
        *>
305
        *> 12 I/O error writing to file
                                                                   **
306
        *> 11 File does not exist
                                                                   **
307
             10 File already OPEN or already CLOSEd
        *> > 02 READ-Delim was truncated
308
                                                                    **
309
        *> > 01 No more data is available from the current
                                                                    **
310
               SCB-Offset-NUM
311
       *> > 00 OK - the operation was successful
312
       *> -1 Invalid SCB-Function-CD
       *>
313
             -2 Invalid SCB-Mode-CD
314
             -3 CBL_xxxxx_FILE routine rejected operation
315
        *>
             -4 Invalid delimiter mode specified (Not U/W)
316
        *>
        *>-----
317
318
        *> SCB-Filename-TXT
319
        *>----**
320
        *>
321
        *> This is the name of the file you wish to access.
322
323
        *> If you are planning on reading the file, the file MUST exist **
        *> at the time the SCB-Func-OPEN-BOOL is executed.
324
325
326
        *> If you are planning on writing to the file, the file need **
        *> exist when the SCB-Func-OPEN-BOOL is issued.
327
                                                                   **
328
                                                                   **
        *>
        *> In general, the contents of SCB-Filename-TXT should re-
329
330
        *> flect the complete path to the file as well as the name of
                                                                   **
331
        *> the file itself, unless the file is contained in whatever
                                                                    **
332
        *> directory is current at the time the SCB-Func-OPEN-BOOL is
333
                                                                    **
334
                                                                    **
        *>
335
        *> The following special values may be used for
                                                                    **
336
        *> SCB-Filename-TXT:
337
338
        *> SPACES If the filename is SPACES, a filename will be created **
339
       *> automatically for you in whatever directory is de- **
340
                fined by the TEMP environment variable. If there IS **
       *> no TEMP variable defined, the "/tmp" folder will be **

*> assumed. The filename will be STREAMIO-nnnnnnnn.dat **

*> where "nnnnnnn" is a random number. **
341
342
343
```

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C:/Users/tda010/Documents/Programs/Samples/STREAMIO.cbl \_\_\_\_\_ 344 If you specify only a dot (period) as the filename, \*> 346 the behavior will be the same as with a value of \*\* 347 SPACES except there will be no ".dat" at the end of \*> \*\* 348 \*> the generated filename. 349 \*> 350 \*\* 351 352 353 354 355 356 357 358 359 \*>\* 360 ENVIRONMENT DIVISION. 361 362 CONFIGURATION SECTION. 363 REPOSITORY. 364 FUNCTION ALL INTRINSIC. DATA DIVISION. 365 WORKING-STORAGE SECTION. 366 PIC X(1) COMP-X. 367 01 WS-Access-Mode-CD PIC X(4) COMP-X. 368 01 WS-Arg-Length-NUM PIC X(256). 369 01 WS-Buffer-TXT O1 WS-Delim-Buffer-TXT O1 WS-Env-Temp-TXT 370 PIC X(2). 371 PIC X(256). 01 WS-Slash-CHR PIC X(1). 372 01 WS-Tally-NUM USAGE BINARY-LONG. 373 01 WS-8-Digit-NUM 374 PIC 9(8). 375 01 WS-256-Byte-TXT PIC X(256). LINKAGE SECTION. 376 377 01 L-StreamIO-Control-Block-TXT. 378 COPY STREAMIOcb REPLACING LEADING ==SCB-== BY ==L-SCB-==. 379 05 L-SCB-Handle-NUM PIC X(4) COMP-X. 05 L-SCB-Mode-CD PIC X(1). 88 L-SCB-MODE-Input-BOOL VALUE 'I' 'i'. 88 L-SCB-MODE-Output-BOOL VALUE 'O' 'o'. 88 L-SCB-MODE-Both-BOOL VALUE 'B' 'b'. 05 L-SCB-Function-CD PIC X(2). 88 L-SCB-Func-CLOSE-BOOL VALUE 'C ' 'c '. 88 L-SCB-Func-DELETE-BOOL VALUE 'D ' 'd '. 88 L-SCB-Func-OPEN-BOOL VALUE 'O ' 'o '. 88 L-SCB-Func-READ-BOOL VALUE 'R ' 'r '. 88 L-SCB-Func-READ-Delim-BOOL VALUE 'RD' 'rd' 'rD' 'Rd'. 88 L-SCB-Func-WRITE-BOOL VALUE 'W ' 'w '.

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```
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```

```
______
  88 L-SCB-Func-WRITE-Delim-BOOL VALUE 'WD' 'wd'
```

C:/Users/tda010/Documents/Programs/Samples/STREAMIO.cbl

```
'wD' 'Wd'.
    05 L-SCB-Delimiter-Mode-CD PIC X(1).
    88 L-SCB-DELIM-Unix-BOOL VALUE 'U' 'u'.
    88 L-SCB-DELIM-Windows-BOOL VALUE 'W' 'w'.
    05 L-SCB-Offset-NUM PIC X(8) COMP-X.
    05 L-SCB-Error-Routine-PTR USAGE PROGRAM-POINTER.
    05 L-SCB-Error-Routine-NUM REDEFINES L-SCB-Error-Routine-PTR
    USAGE BINARY-LONG.
    05 L-SCB-Return-CD USAGE BINARY-LONG.
    05 L-SCB-Filename-TXT PIC X(256).
380
                                                    PIC X ANY LENGTH.
          01 L-Arg2-TXT
381
          PROCEDURE DIVISION USING L-StreamIO-Control-Block-TXT,
382
                                   L-Arg2-TXT.
          000-Main SECTION.
383
             MOVE 00 TO L-SCB-Return-CD
384
385
              EVALUATE TRUE
386
                  WHEN L-SCB-Func-CLOSE-BOOL
387
                      PERFORM 030-Validate-Handle-NonZero
388
                      PERFORM 200-CLOSE
389
                  WHEN L-SCB-Func-DELETE-BOOL
390
                     CALL "CBL_DELETE_FILE" USING L-SCB-Filename-TXT
391
                   WHEN L-SCB-Func-OPEN-BOOL
392
                      PERFORM 020-Validate-Handle-Zero
393
                      PERFORM 100-OPEN
                  WHEN L-SCB-Func-READ-BOOL
394
395
                      PERFORM 030-Validate-Handle-NonZero
396
                      PERFORM 400-READ
397
                  WHEN L-SCB-Func-READ-Delim-BOOL
398
                      PERFORM 030-Validate-Handle-NonZero
                      PERFORM 500-READ-Delim
399
400
                  WHEN L-SCB-Func-WRITE-BOOL
401
                      PERFORM 030-Validate-Handle-NonZero
402
                      PERFORM 300-WRITE
403
                   WHEN L-SCB-Func-WRITE-Delim-BOOL
404
                      EVALUATE TRUE
405
                           WHEN L-SCB-Delim-Unix-BOOL
406
                              PERFORM 030-Validate-Handle-NonZero
407
                               PERFORM 300-WRITE
408
                               MOVE 1 TO WS-Arg-Length-NUM
409
                              MOVE X"OA" TO WS-Delim-Buffer-TXT
410
                           WHEN L-SCB-Delim-Windows-BOOL
411
                              PERFORM 030-Validate-Handle-NonZero
412
                               PERFORM 300-WRITE
413
                               MOVE 2 TO WS-Arg-Length-NUM
                               MOVE X"ODOA" TO WS-Delim-Buffer-TXT
414
                          WHEN OTHER
415
416
                               MOVE -4 TO L-SCB-Return-CD
417
                               PERFORM 099-ERROR-Return
```

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C:/Users/tda010/Documents/Programs/Samples/STREAMIO.cbl \_\_\_\_\_ END-EVALUATE 418 CALL "CBL\_WRITE\_FILE" USING L-SCB-Handle-NUM 419 420 L-SCB-Offset-NUM 421 WS-Arg-Length-NUM 422 423 WS-Delim-Buffer-TXT PERFORM 040-Check-WRITE-SCB-Return-CD 424 425 ADD WS-Arg-Length-NUM TO L-SCB-Offset-NUM WHEN OTHER 426 427 MOVE -1 TO L-SCB-Return-CD 428 PERFORM 099-ERROR-Return 429 END-EVALUATE 430 GOBACK 431 020-Validate-Handle-Zero SECTION. 432 IF L-SCB-Handle-NUM NOT = ZERO 433 434 MOVE 10 TO L-SCB-Return-CD 435 PERFORM 099-ERROR-Return 436 END-IF 437 438 030-Validate-Handle-NonZero SECTION. IF L-SCB-Handle-NUM = ZERO439 440 MOVE 10 TO L-SCB-Return-CD PERFORM 099-ERROR-Return 441 END-IF 442 443 444 040-Check-WRITE-SCB-Return-CD SECTION. 445 IF RETURN-CODE < 0 MOVE -3 TO L-SCB-Return-CD 446 447 PERFORM 099-ERROR-Return 448 FND-TF 449 IF RETURN-CODE = 30450 MOVE 12 TO L-SCB-Return-CD 451 PERFORM 099-ERROR-Return 452 MOVE 00 TO L-SCB-Return-CD 453 454 050-Check-READ-SCB-Return-CD SECTION. 455 456 IF RETURN-CODE < 0 MOVE -3 TO L-SCB-Return-CD 457 458 PERFORM 099-ERROR-Return END-IF 459 460 IF RETURN-CODE = 10 461 MOVE 01 TO L-SCB-Return-CD 462 GOBACK 463 END-IF 464 MOVE 00 TO L-SCB-Return-CD 465

\_\_\_\_\_\_

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060-Identify-TEMP SECTION.

466

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C:/Users/tda010/Documents/Programs/Samples/STREAMIO.cbl \_\_\_\_\_ ACCEPT WS-Env-Temp-TXT FROM ENVIRONMENT "TEMP" 467 EVALUATE TRUE 469 WHEN WS-Env-Temp-TXT (1:1) = "/"470 MOVE "/" TO WS-Slash-CHR WHEN WS-Env-Temp-TXT (2:1) = ":" 471 MOVE "\" TO WS-Slash-CHR 472 WHEN OTHER 473 MOVE "/tmp" TO WS-Env-Temp-TXT 474 MOVE "/" TO WS-Slash-CHR 475 END-EVALUATE 476 477 478 099-ERROR-Return SECTION. 479 IF L-SCB-Error-Routine-NUM NOT = 0 CALL "CBL\_EXIT\_PROC" USING O, L-SCB-Error-Routine-PTR 480 481 482 END-IF 483 GOBACK 484 100-OPEN SECTION. 485 486 IF (L-SCB-Mode-Input-BOOL OR L-SCB-Mode-Both-BOOL) 487 AND (L-SCB-Filename-TXT = SPACES OR LOW-VALUES) 488 MOVE 11 TO L-SCB-Return-CD 489 PERFORM 099-ERROR-Return 490 EVALUATE TRUE 491 WHEN L-SCB-Filename-TXT = SPACES OR LOW-VALUES 492 493 PERFORM 060-Identify-TEMP 494 MOVE SPACES TO L-SCB-Filename-TXT COMPUTE 495 WS-8-Digit-NUM = 496 RANDOM(SECONDS-PAST-MIDNIGHT) \* 100000000 497 498 END-COMPUTE 499 STRING 500 TRIM(WS-Env-Temp-TXT, TRAILING) 501 WS-Slash-CHR "STREAMIO-" 502 WS-8-Digit-NUM 503 504 ".dat" 505 DELIMITED BY SIZE INTO L-SCB-Filename-TXT 506 507 WHEN L-SCB-Filename-TXT(1:1) = "." 508 PERFORM 060-Identify-TEMP 509 IF L-SCB-Filename-TXT(2:1) = SPACE 510 MOVE SPACES TO WS-256-Byte-TXT 511 ELSE MOVE L-SCB-Filename-TXT TO WS-256-Byte-TXT 512 513 END-IF 514 MOVE SPACES TO L-SCB-Filename-TXT 515 COMPUTE WS-8-Digit-NUM =

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```
C:/Users/tda010/Documents/Programs/Samples/STREAMIO.cbl
_____
                           RANDOM(SECONDS-PAST-MIDNIGHT) * 100000000
  516
  517
                       STRING
                           TRIM(WS-Env-Temp-TXT,TRAILING)
  518
  519
                           WS-Slash-CHR
  520
                           "STREAMIO-"
  521
                           WS-8-Digit-NUM
                           TRIM(WS-256-Byte-TXT, TRAILING)
  522
  523
                           DELIMITED BY SIZE
  524
                           INTO L-SCB-Filename-TXT
                END-EVALUATE
  525
               EVALUATE TRUE
  526
  527
                  WHEN L-SCB-Mode-Input-BOOL
  528
                       MOVE 1 TO WS-Access-Mode-CD
  529
                    WHEN L-SCB-Mode-Output-BOOL
  530
                      MOVE 2 TO WS-Access-Mode-CD
  531
                    WHEN L-SCB-Mode-Both-BOOL
  532
                       MOVE 3 TO WS-Access-Mode-CD
  533
                    WHEN OTHER
                       MOVE -2 TO L-SCB-Return-CD
  534
  535
                       PERFORM 099-ERROR-Return
  536
                END-EVALUATE
                CALL "CBL_OPEN_FILE" USING TRIM(L-SCB-Filename-TXT,TRAILING)
  537
  538
                                         WS-Access-Mode-CD
  539
  540
                                         0
                                         L-SCB-Handle-NUM
  541
  542
                IF RETURN-CODE = 35
  543
                   MOVE 11 TO L-SCB-Return-CD
                   PERFORM 099-ERROR-Return
  544
  545
              END-IF
              IF RETURN-CODE < 0
  546
  547
                   MOVE -2 TO L-SCB-Return-CD
                   PERFORM 099-ERROR-Return
  548
  549
                END-IF
  550
                MOVE 00 TO L-SCB-Return-CD
                MOVE O TO L-SCB-Offset-NUM
  551
  552
          200-CLOSE SECTION.
  553
  554
                CALL "CBL_CLOSE_FILE" USING L-SCB-Handle-NUM
  555
                IF RETURN-CODE < 0
  556
                   MOVE -2 TO L-SCB-Return-CD
                    PERFORM 099-ERROR-Return
  557
  558
                END-IF
                MOVE 00 TO L-SCB-Return-CD
  559
  560
                MOVE 0 TO L-SCB-Handle-NUM
  561
          300-WRITE SECTION.
  562
  563
                CALL "C$PARAMSIZE" USING 2
  564
                MOVE RETURN-CODE TO WS-Arg-Length-NUM
```

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```
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```

2014/03/27 C:/Users/tda010/Documents/Programs/Samples/STREAMIO.cbl

```
______
                CALL "CBL_WRITE_FILE" USING L-SCB-Handle-NUM
  565
                                           L-SCB-Offset-NUM
  567
                                           WS-Arg-Length-NUM
  568
                                           0
  569
                                           L-Arg2-TXT
  570
                PERFORM 040-Check-WRITE-SCB-Return-CD
                ADD WS-Arg-Length-NUM TO L-SCB-Offset-NUM
  571
  572
           400-READ SECTION.
  573
                CALL "C$PARAMSIZE" USING 2
  574
                MOVE RETURN-CODE TO WS-Arg-Length-NUM
  575
  576
                MOVE SPACES TO L-Arg2-TXT(1:WS-Arg-Length-NUM)
  577
                CALL "CBL_READ_FILE" USING L-SCB-Handle-NUM
                                          {\tt L-SCB-Offset-NUM}
  578
  579
                                          WS-Arg-Length-NUM
  580
  581
                                          L-Arg2-TXT
                PERFORM 050-Check-READ-SCB-Return-CD
  582
  583
                ADD WS-Arg-Length-NUM TO L-SCB-Offset-NUM
  584
  585
            500-READ-Delim SECTION.
  586
                CALL "C$PARAMSIZE" USING 2
  587
                MOVE RETURN-CODE TO WS-Arg-Length-NUM
                MOVE SPACES TO L-Arg2-TXT(1:WS-Arg-Length-NUM)
  588
                CALL "CBL_READ_FILE" USING L-SCB-Handle-NUM
  589
  590
                                          L-SCB-Offset-NUM
  591
                                          WS-Arg-Length-NUM
  592
  593
                                          L-Arg2-TXT
                PERFORM 050-Check-READ-SCB-Return-CD
  594
                MOVE O TO WS-Tally-NUM
  595
  596
                INSPECT L-Arg2-TXT(1:WS-Arg-Length-NUM)
  597
                    TALLYING WS-Tally-NUM FOR ALL X"OA"
  598
                IF WS-Tally-NUM = 0 *> No LF found - return truncated data and position past n
      ext LF (if any)
                    IF L-Arg2-TXT(WS-Arg-Length-NUM:1) = X"OD"
  599
  600
                        MOVE SPACE TO L-Arg2-TXT(WS-Arg-Length-NUM:1)
  601
  602
                    ADD WS-Arg-Length-NUM TO L-SCB-Offset-NUM
  603
                    MOVE 02 TO L-SCB-Return-CD
  604
                    MOVE 256 TO WS-Arg-Length-NUM
                    PERFORM UNTIL 0 = 1
  605
  606
                        MOVE SPACES TO WS-Buffer-TXT
                        CALL "CBL_READ_FILE" USING L-SCB-Handle-NUM
  607
  608
                                                  L-SCB-Offset-NUM
  609
                                                  WS-Arg-Length-NUM
  610
  611
                                                  WS-Buffer-TXT
                        IF RETURN-CODE < 0
  612
```

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```
C:/Users/tda010/Documents/Programs/Samples/STREAMIO.cbl
_____
                           MOVE -3 TO L-SCB-Return-CD
  613
                           PERFORM 099-ERROR-Return
  614
                        FND-TF
  615
  616
                        IF RETURN-CODE = 10
  617
                            GOBACK
  618
                        END-IF
  619
                        MOVE O TO WS-Tally-NUM
                        INSPECT WS-Buffer-TXT
  620
  621
                            TALLYING WS-Tally-NUM FOR ALL X"OA"
  622
                        IF WS-Tally-NUM = 0
                           ADD 256 TO L-SCB-Offset-NUM
  623
  624
                        ELSE
  625
                            MOVE O TO WS-Tally-NUM
  626
                            INSPECT WS-Buffer-TXT
  627
                               TALLYING WS-Tally-NUM
                                FOR CHARACTERS BEFORE INITIAL X"OA"
  628
  629
                            ADD WS-Tally-NUM, 1 TO L-SCB-Offset-NUM
  630
                            GOBACK
  631
                        END-IF
  632
                    END-PERFORM
  633
                ELSE
                             *> There is (at least) one LF in the buffer
  634
                    MOVE O TO WS-Tally-NUM
  635
                    INSPECT L-Arg2-TXT(1:WS-Arg-Length-NUM)
                        TALLYING WS-Tally-NUM
  636
                        FOR CHARACTERS BEFORE INITIAL X"OA"
  637
  638
                    ADD WS-Tally-NUM, 1 TO L-SCB-Offset-NUM
  639
                    IF WS-Tally-NUM > 1
  640
                        IF L-Arg2-TXT(WS-Tally-NUM:1) = X"OD"
                            COMPUTE WS-Arg-Length-NUM =
  641
  642
                                     WS-Arg-Length-NUM
                                   - WS-Tally-NUM
  643
  644
                                   + 1
                        ELSE.
  645
  646
                            COMPUTE WS-Arg-Length-NUM =
  647
                                     WS-Arg-Length-NUM
                                   - WS-Tally-NUM
  648
  649
                            ADD 1 TO WS-Tally-NUM
                        END-IF
  650
  651
                        MOVE SPACES
  652
                          TO L-Arg2-TXT(WS-Tally-NUM:WS-Arg-Length-NUM)
  653
  654
                        MOVE SPACES
  655
                          TO L-Arg2-TXT(1:WS-Arg-Length-NUM)
                    END-IF
  656
                END-IF
  657
  658
```

------

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GNU COBOL 2.1 23NOV2013 Cross-Reference Listing 2014/03/27

PROGRAM-ID	Identifier/Register/Function	Defn			Reference	S	Page: 15	
STREAMIO	000-Main		PROCEDURE	== :	======		=======	
STREAMIO	020-Validate-Handle-Zero	432	PROCEDURE		392			
STREAMIO	030-Validate-Handle-NonZero	438	PROCEDURE		387	395	398	
					401	406	411	
STREAMIO	040-Check-WRITE-SCB-Return-CD	444	PROCEDURE		424	570		
STREAMIO	050-Check-READ-SCB-Return-CD	455	PROCEDURE		582	594		
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