```
 CCCCCCLCCCCC      000000000    BBBBBBBBBBBB    RRRRRRRRRRRR   TTTTTTTTTTTTTTT  LLL
 CCCCCCCCCCCC      000000000    BBBBBBBBBBBB    RRRRRRRRRRRR   TTTTTTTTTTTTTTT  LLL
 CCCCCCCCCCCC      000000000    BBBBBBBBBBBB    RRRRRRRRRRRR   TTTTTTTTTTTTTTT  LLL
CCC             000       000   BBB       BBB   RRR        RRR       TTT        LLL
CCC             000       000   BBB       BBB   RRR        RRR       TTT        LLL
CCC             000       000   BBB       BBB   RRR        RRR       TTT        LLL
CCC             000       000   BBB       BBB   RRR        RRR       TTT        LLL
CCC             000       000   BBB       BBB   RRR        RRR       TTT        LLL
CCC             000       000   BBB       BBB   RRR        RRR       TTT        LLL
CCC             000       000   BBBBBBBBLBBBBB  RRRRRRRRRRRR        TTT        LLL
CCC             000       000   BBBBBBBBBBBBB   RRRRRRRRRRRR        TTT        LLL
CCC             000       000   BBBBBBBBBBBB    RRRRRRRRRRR         TTT        LLL
CCC             000       000   BBB       BBB   RRR   RRR           TTT        LLL
CCC             000       000   BBB       BBB   RRR   RRR           TTT        LLL
CCC             000       000   BBB       BBB   RRR      RRR        TTT        LLL
CCC             000       000   BBB       BBB   RRR      RRR        TTT        LLL
CCC             000       000   BBB       BBB   RRR      RRR        TTT        LLL
 CCCCCCCCCCCC      000000000    BBBBBBBBBBBB    RRR      RRR        TTT        LLLLLLLLLLLLLL
 CCCCCCCCCCCC      000000000    BBBBBBBBBBBB    RRR      RRR        TTT        LLLLLLLLLLLLLL
 CCCCCCCCCCCC      000000000    BBBBBBBBBBBB    RRR      RRR        TTT        LLLLLLLLLLLLLL
```

```
CCCCCCCC    000000   BBBBBBBB   EEEEEEEEEE  RRRRRRRR   RRRRRRRR    000000   RRRRRRRR
CCCCCCCC    000000   BBBBBBBB   EEEEEEEEEE  RRRRRRRR   RRRRRRRR    000000   RRRRRRRR
CC        00    00   BB    BB   EE          RR    RR   RR    RR   00    00  RR    RR
CC        00    00   BB    BB   EE          RR    RR   RR    RR   00    00  RR    RR
CC        00    00   BB    BB   EE          RR    RR   RR    RR   00    00  RR    RR
CC        00    00   BB    BB   EE          RR    RR   RR    RR   00    00  RR    RR
CC        00    00   BBBBBBBB   EEEEEEE     RRRRRRRR   RRRRRRRR   00    00  RRRRRRRR
CC        00    00   BBBBBBBB   EEEEEEE     RRRRRRRR   RRRRRRRR   00    00  RRRRRRRR
CC        00    00   BB    BB   EE          RR  RR     RR  RR     00    00  RR  RR
CC        00    00   BB    BB   EE          RR  RR     RR  RR     00    00  RR  RR
CC        00    00   BB    BB   EE          RR    RR   RR    RR   00    00  RR    RR
CC        00    00   BB    BB   EE          RR    RR   RR    RR   00    00  RR    RR
CCCCCCCC    000000   BBBBBBBB   EEEEEEEEEE  RR    RR   RR    RR    000000   RR    RR   ....
CCCCCCCC    000000   BBBBBBBB   EEEEEEEEEE  RR    RR   RR    RR    000000   RR    RR   ....

LL          IIIIII   SSSSSSSS
LL          IIIIII   SSSSSSSS
LL            II    SS
LL            II    SS
LL            II    SS
LL            II     SSSSSS
LL            II     SSSSSS
LL            II          SS
LL            II          SS
LL            II          SS
LL            II          SS
LLLLLLLLLL  IIIIII   SSSSSSSS
LLLLLLLLLL  IIIIII   SSSSSSSS
```

```
  1    0001  0  MODULE COB$ERROR(
  2    0002  0                  IDENT = '1-011'        ! file: COBERROR.B32 EDIT:LB1011
  3    0003  0                  ) =
  4    0004  1  BEGIN
  5    0005  1  !
  6    0006  1  !*****************************************************************************
  7    0007  1  !*                                                                           *
  8    0008  1  !*   COPYRIGHT (c) 1978, 1980, 1982, 1984 BY                                 *
  9    0009  1  !*   DIGITAL EQUIPMENT CORPORATION, MAYNARD, MASSACHUSETTS.                  *
 10    0010  1  !*   ALL RIGHTS RESERVED.                                                    *
 11    0011  1  !*                                                                           *
 12    0012  1  !*   THIS SOFTWARE IS FURNISHED UNDER A LICENSE AND MAY BE USED AND COPIED   *
 13    0013  1  !*   ONLY IN  ACCORDANCE WITH  THE  TERMS  OF  SUCH  LICENSE  AND WITH THE   *
 14    0014  1  !*   INCLUSION OF THE ABOVE COPYRIGHT NOTICE. THIS SOFTWARE OR  ANY  OTHER   *
 15    0015  1  !*   COPIES THEREOF MAY NOT BE PROVIDED OR OTHERWISE MADE AVAILABLE TO ANY   *
 16    0016  1  !*   OTHER PERSON.  NO TITLE TO AND OWNERSHIP OF  THE  SOFTWARE IS  HEREBY   *
 17    0017  1  !*   TRANSFERRED.                                                            *
 18    0018  1  !*                                                                           *
 19    0019  1  !*   THE INFORMATION IN THIS SOFTWARE IS  SUBJECT TO CHANGE WITHOUT NOTICE   *
 20    0020  1  !*   AND  SHOULD  NOT  BE  CONSTRUED AS  A COMMITMENT BY DIGITAL EQUIPMENT   *
 21    0021  1  !*   CORPORATION.                                                            *
 22    0022  1  !*                                                                           *
 23    0023  1  !*   DIGITAL ASSUMES NO RESPONSIBILITY FOR THE USE  OR  RELIABILITY OF ITS   *
 24    0024  1  !*   SOFTWARE ON EQUIPMENT WHICH IS NOT SUPPLIED BY DIGITAL.                 *
 25    0025  1  !*                                                                           *
 26    0026  1  !*                                                                           *
 27    0027  1  !*****************************************************************************
 28    0028  1  !
 29    0029  1  !
 30    0030  1  !
 31    0031  1  !++
 32    0032  1  ! FACILITY:     COBOL SUPPORT
 33    0033  1  !
 34    0034  1  ! ABSTRACT
 35    0035  1  !
 36    0036  1  !      Signals a variety of compiler-detected errors.
 37    0037  1  !
 38    0038  1  !
 39    0039  1  ! ENVIRONMENT:  Vax-11 User Mode
 40    0040  1  !
 41    0041  1  ! AUTHOR: MLJ , CREATION DATE: 02-MAY-1979
 42    0042  1  !
 43    0043  1  ! MODIFIED BY:
 44    0044  1  !
 45    0045  1  ! 1-001 - Original. MLJ  02-MAY-1979
 46    0046  1  ! 1-002 - Added boilerplate and comments. RKR 15-AUGUST-1979
 47    0047  1  ! 1-003 - Make this routine signal rather than output. RKR 21-Aug-1979
 48    0048  1  ! 1-004 - Added error COB$_ROUNOTLIN.  RKR 13-SEPT-1979
 49    0049  1  ! 1-005 - Fetch COBDEF.REQ from RTLIN instead of LIB$ RKR 18-SEPT-79
 50    0050  1  ! 1-006 - Use an FAO COUNT of zero in SORT-case LIB$STOP call
 51    0051  1  !          RKR 19-SEPT-79
 52    0052  1  ! 1-007 - Make OWN data fall into code PSECT since it is read-only
 53    0053  1  !          RKR 26-SEPT-79
 54    0054  1  ! 1-008 - Make CASE statement use symbols in REQUIRE file, change
 55    0055  1  !          error message to COB$_INVARG, cosmetic changes.
 56    0056  1  !          RKR 18-OCT-79
 57    0057  1  ! 1-009 - Remove reference to OTS$_FATINTERR.  Change BADCL case to
```

```
   58      0058  1 !          reference new error condition COB$_CALFAI.
   59      0059  1 !          RKR 29-OCT-79
   60      0060  1 ! 1-010 - Added error type COB$K_ERR_DBARG.  Also caused an entry to be
   61      0061  1 !          added to own storage of FAC_ERR_CODES for COB$_EXPDBOVER as well
   62      0062  1 !          as defining it as an external literal.  LB  1-MAY-81
   63      0063  1 ! 1-011 - Changed GOTNO_ALT to be GOTO_ALT.  This had been in error in this
   64      0064  1 !          file as well as in COBMSG.  CB  1-APR-82
   65      0065  1 !--
   66      0066  1
   67      0067  1 !<BLF/PAGE>
```

```
 69      0068   1  !
 70      0069   1  ! SWITCHES
 71      0070   1  !
 72      J071   1
 73      0072   1  SWITCHES ADDRESSING_MODE (EXTERNAL = GENERAL, NONEXTERNAL = WORD_RELATIVE);
 74      0073   1
 75      0074   1  !
 76      0075   1  ! LINKAGES
 77      0076   1  !
 78      0077   1  !      NONE
  ?      0078   1  !
 80      0079   1  ! TABLE OF CONTENTS:
 81      0080   1  !
 82      0081   1  FORWARD ROUTINE
 83      0082   1
 84      0083   1  COBSERROR : NOVALUE ;
 85      0084   1  !
 86      0085   1  ! INCLUDE FILES
 87      0086   1  !
 88      0087   1  REQUIRE 'RTLIN:RTLPSECT' ;          ! Macros for defining psects
 89      0182   1  REQUIRE 'RTLIN:COBDEF' ;                ! Definition of internal error msgs
 90      0624   1  !
 91      0625   1  ! MACROS
 92      0626   1  !
 93      0627   1  !      NONE
 94      0628   1  !
 95      0629   1  ! EQUATED SYMBOLS
 96      0630   1  !
 97      0631   1  LITERAL
 98      0632   1
 99      0633   1          NUM_MSGS = COB$K_ERR_MAX - COB$K_ERR_MIN + 1 ; ! No. of msgs
100      0634   1
101      0635   1
102      0636   1
103      0637   1
104      0638   1  !
105      0639   1  ! PSECT DECLARATIONS:
106      0640   1  !
107      0641   1  DISPATCH_PSECTS (COB) ;             ! Make OWN data fall into _CODE psect
108      0642   1
109      0643   1  !
110      0644   1  ! EXTERNAL REFERENCES
111      0645   1  !
112      0646   1  !
113      0647   1  EXTERNAL LITERAL
114      0648   1          COB$_GOTO_ALT,             ! GO TO with no preceding ALTER
115      0649   1          COB$_RECACTPER,            ! Recursive activation of PERFORM
116      0650   1          COB$_NESERRPER,            ! Nesting error for PERFORM
117      0651   1          COB$_TIMOVELON,            ! TIMES value overflows longword
118      0652   1          COB$_OCCDEPOVE,            ! OCCURS DEPENDING value overflows longword
119      0653   1          COB$_SUBOVELON,            ! Subscript overflows longword
120      0654   1          COB$_ERRDURSOR,            ! Error during SORT
121      0655   1          COB$_UNEINSCON,            ! INSPECT CONVERTING lengths unequal
122      0656   1          COB$_CALFAI,               ! Failure CALLing routine (!AS)
123      0657   1          COB$_EXPDBOVER,            ! Expression value in data base argument list overflows longword
124      0658   1          COB$_INVARG,               ! Invalid argument
125      0659   1          COB$_FATINTERR ;           ! Fatal internal error -- not enough args
```

```
:   126      0660   1 !
:   127      0661   1 ! The following non-standard positioning of the OWN declaration is
:   128      0662   1 ! necessary to avoid warnings from the BLISS compiler.  The OWN variable
:   129      0663   1 ! FAC_ERR_CODES is preset to values defined via EXTERNAL LITERALs, and
:   130      0664   1 ! causes compiler to generate warnings if they are not declared prior
:   131      0665   1 ! to usage as INITIAL constants.
:   132      0666   1 !
:   133      0667   1 OWN
:   134      0668   1
:   135      0669   1 FAC_ERR_CODES: VECTOR [NUM_MSGS]
:   136      0670   1         INITIAL (
:   137      0671   1
:   138      0672   1             COB$_GOTO_ALT    ,      ! GO TO with no preceding ALTER
:   139      0673   1             COB$_RECACTPER ,        ! Recursive activation of PERFORM
:   140      0674   1             COB$_NESERRPER ,        ! Nesting error for PERFORM
:   141      0675   1             COB$_TIMOVELON ,        ! TIMES value overflows longword
:   142      0676   1             COB$_OCCDEPOVE ,        ! OCCURS DEPENDING value overflows longword
:   143      0677   1             COB$_SUBOVELON ,        ! Subscript overflows longword
:   144      0678   1             COB$_ERRDURSOR ,        ! Error during SORT
:   145      0679   1             COB$_UNEINSCON ,        ! INSPECT CONVERTING lengths unequal
:   146      0680   1             COB$_CALFAI,            ! Failure in CALLing routine (!AS)
:   147      0681   1             COB$_EXPDBOVER          ! Expression value in data base argument list overflows longword
:   148      0682   1             );
:   149      0683   1 DECLARE_PSECTS (COB) ;             ! Declare psects for COB$ facility
```

COB$ERROR
1-011

E 10
16-Sep-1984 00:06:04   VAX-11 Bliss-32 V4.0-742
14-Sep-1984 12:10:43   [COBRTL.SRC]COBERROR.B32;1

Page 5
     (3)

```
151   0684  1  GLOBAL ROUTINE COBSERROR(WHICH,AUX_INFO): NOVALUE=
152   0685  1
153   0686  1  !
154   0687  1  !++      FUNCTIONAL DESCRIPTION
155   0688  1  !
156   0689  1  !        Signals a variety of compiler-detected errors.  Most are
157   0690  1  !        simply signaled based on error code supplied.  Two errors
158   0691  1  !        have additional information provided and this is signaled
159   0692  1  !        as well.
160   0693  1  !
161   0694  1  !  FORMAL PARAMETERS:
162   0695  1  !
163   0696  1  !        WHICH.rl.v        Basic error number
164   0697  1  !
165   0698  1  !        AUX_INFO.rl.v     (Optional parameter)
166   0699  1  !                          if .WHICH = COB$K_ERR_SORT
167   0700  1  !                               then AUX_INFO.rl.v = SORT error number.
168   0701  1  !                          if .WHICH = COB$R_ERR_BADCL
169   0702  1  !                               then AUX_INFO.ra.v = addr. of name
170   0703  1  !                                                    descriptor not
171   0704  1  !                                                    found.
172   0705  1  !
173   0706  1  !
174   0707  1  !  IMPLICIT INPUTS:
175   0708  1  !
176   0709  1  !        NONE
177   0710  1  !
178   0711  1  !  IMPLICIT OUTPUTS:
179   0712  1  !
180   0713  1  !        NONE
181   0714  1  !
182   0715  1  !  ROUTINE VALUE:
183   0716  1  !  COMPLETION CODES:
184   0717  1  !
185   0718  1  !        NONE
186   0719  1  !
187   0720  1  !  SIDE EFFECTS:
188   0721  1  !
189   0722  1  !        NONE
190   0723  1  !
191   0724  1  !--
192   0725  1  !
193   0726  2     BEGIN
194   0727  2
195   0728  2     BUILTIN
196   0729  2         ACTUALCOUNT;
197   0730  2
198   0731  2
199   0732  2  !<BLF/PAGE>
```

COBSERROR
1-011

F 10
16-Sep-1984 00:06:04   VAX-11 Bliss-32 V4.0-742
14-Sep-1984 12:10:43   [COBRTL.SRC]COBERROR.B32;1

Page 6
(4)

```
  201    0733  2  IF ACTUALCOUNT() LSS 1 THEN SIGNAL_STOP (COB$_FATINTERR)
  202    0734  2      ELSE
  203    0735  3          BEGIN
  204    0736  3          !
  205    0737  3          ! Case on the error type
  206    0738  3          !
  207    0739  3          CASE .WHICH FROM COB$K_ERR_MIN TO COB$K_ERR_MAX OF
  208    0740  3              SET
  209    0741  3
  210    0742  3          [COB$K_ERR_ALTER,
  211    0743  3           COB$K_ERR_PERFR,
  212    0744  3           COB$K_ERR_PERFN,
  213    0745  3           COB$K_ERR_PERFT,
  214    0746  3           COB$K_ERR_SUBSD,
  215    0747  3           COB$K_ERR_SUBSC,
  216    0748  3           COB$K_ERR_INSPE,
  217    0749  3           COB$K_ERR_DBARG]:
  218    0750  3              !
  219    0751  3              ! General case
  220    0752  3              !
  221    0753  4              BEGIN
  222    0754  4                  SIGNAL_STOP (.FAC_ERR_CODES[.WHICH]) ;
  223    0755  3              END;
  224    0756  3
  225    0757  3
  226    0758  3          [COB$K_ERR_SORT]:
  227    0759  4              BEGIN
  228    0760  4              !
  229    0761  4                 SORT error case
  230    0762  4              .
  231    0763  4                  SIGNAL_STOP (.FAC_ERR_CODES[.WHICH], 0, .AUX_INFO) ;
  232    0764  3              END;
  233    0765  3
  234    0766  3          [COB$K_ERR_BADCL]:
  235    0767  4              BEGIN
  236    0768  4              !
  237    0769  4              ! Bad CALL case
  238    0770  4              !
  239    0771  4                  SIGNAL_STOP (.FAC_ERR_CODES[.WHICH], 1, .AUX_INFO) ;
  240    0772  3              END;
  241    0773  3
  242    0774  3
  243    0775  3
  244    0776  3          [INRANGE, OUTRANGE]:
  245    0777  4              BEGIN
  246    0778  4              !
  247    0779  4              ! Invalid value for .WHICH (internal error)
  248    0780  4              !
  249    0781  4                  SIGNAL_STOP (COB$_INVARG) ;
  250    0782  3              END;
  251    0783  3
  252    0784  3          TES;
  253    0785  2      END;
  254    0786  1  END; ! of routine COBSERROR
```

.TITLE COBSERROR

```
                                                      .IDENT   \1-011\

                                                      .PSECT   _COB$CODE,NOWRT,  SHR,  PIC,2

00000000G 00000000G 00000000G 00000000G 00000000G 00000000G 00000 FAC_ERR_CODES:
                                                      .LONG    COB$_GOTO_ALT, COB$_RECACTPER, -
          00000000G 00000000G 00000000G 00000000G 00018          COB$_NESERRPER, COB$_TIMOVELON, -
                                                               COB$_OCCDEPOVE, COB$_SUBOVELON, -
                                                               COB$_ERRDURSOR, COB$_UNEINSCON, -
                                                               COB$_CALFAI, COB$_EXPDBOVER

                                                      .EXTRN   COB$_GOTO_ALT, COB$_RECACTPER
                                                      .EXTRN   COB$_NESERRPER, COB$_TIMOVELON
                                                      .EXTRN   COB$_OCCDEPOVE, COB$_SUBOVELON
                                                      .EXTRN   COB$_ERRDURSOR, COB$_UNEINSCON
                                                      .EXTRN   COB$_CALFAI, COB$_EXPDBOVER
                                                      .EXTRN   COB$_INVARG, COB$_FATINTERR

                                      000C 00000      .ENTRY   COB$ERROR, Save R2,R3                        ; 0684
                       53 00000000G 00 9E 00002       MOVAB    LIB$STOP, R3                                 ; 0733
                                      6C 95 00009      TSTB     (AP)
                                      08 12 0000B      BNEQ     1$
                          00000000G 8F DD 0000D       PUSHL    #COB$_FATINTERR
                                      28 11 00013      BRB      4$
                                52    04 AC D0 00015 1$: MOVL   WHICH, R2                                    ; 0739
                                00    52 CF 00019      CASEL    R2, #0, #9
        001C          001C         001C    0001C 2$: .WORD    3$-2$,-
        001C          0024         001C    00025          3$-2$,-
        001C          002B         0002D              3$-2$,-
                                                           3$-2$,-
                                                           3$-2$,-
                                                           3$-2$,-
                                                           5$-2$,-
                                                           3$-2$,-
                                                           6$-2$,-
                                                           3$-2$

                          00000000G 8F DD 00031       PUSHL    #COB$_INVARG                                 ; 0781
                                      04 11 00037      BRB      4$
                                   9B AF42 DD 00039 3$: PUSHL   FAC_ERR_CODES[R2]                            ; 0754
                                63          01 FB 0003D 4$: CALLS #1, LIB$STOP
                                      04 00040         RET                                                  ; 0739
                                08    AC DD 00041 5$: PUSHL   AUX_INFO                                       ; 0763
                                      7E D4 00044      CLRL     -(SP)
                                      05 11 00046      BRB      7$
                                08    AC DD 00048 6$: PUSHL   AUX_INFO                                       ; 0771
                                      01 DD 0004B      PUSHL    #1
                                   87 AF42 DD 0004D 7$: PUSHL   FAC_ERR_CODES[R2]
                                63          03 FB 00051 CALLS   #3, LIB$STOP
                                      04 00054         RET                                                  ; 0786

; Routine Size:  85 bytes,    Routine Base:  _COB$CODE + 0028

;  255          0787  0 END ELUDOM
```

COBSERROR
1-011

H 10
16-Sep-1984 00:06:04   VAX-11 Bliss-32 V4.0-742
14-Sep-1984 12:10:43   [COBRTL.SRC]COBERROR.B32;1

Page 8
(4)

.EXTRN LIB$STOP

PSECT SUMMARY

Name   Bytes   Attributes

_COB$CODE   125 NOVEC,NOWRT, RD , EXE, SHR, LCL, REL, CON, PIC,ALIGN(2)

COMMAND QUALIFIERS

BLISS/CHECK=(FIELD,INITIAL,OPTIMIZE)/NOTRACE/LIS=LIS$:COBERROR/OBJ=OBJ$:COBERROR MSRC$:COBERROR/UPDATE=(ENH$:COBERROR)

Size: 85 code + 40 data bytes
Run Time: 00:03.1
Elapsed Time: 00:11.8
Lines/CPU Min: 15086
Lexemes/CPU-Min: 37303
Memory Used: 53 pages
Compilation Complete

COBDIVQ
LIS

COBFINDNA
LIS

COBDBEXCE
LIS

COBEXPI
LIS

COBDEEDIT   COBDISPLA
LIS   LIS

COBESCGEN
LIS

COBERROR
LIS

COBDHANDL
LIS