
MMM MMM TTTTTTTTTTTTTTT AAAAAAAAA AAAAAAAAA CCCCCCCCCCCC PPPPPPPPPPPP
MMM MMM TTTTTTTTTTTTTTT AAAAAAAAA AAAAAAAAA CCCCCCCCCCCC PPPPPPPPPPPP
MMM MMM TTTTTTTTTTTTTTT AAAAAAAAA AAAAAAAAA CCCCCCCCCCCC PPPPPPPPPPPP
MMMMMM MMMMMM TTT AAA AAA AAA AAA CCC PPP PPP
MMMMMM MMMMMM TTT AAA AAA AAA AAA CCC PPP PPP
MMMMMM MMMMMM TTT AAA AAA AAA AAA CCC PPP PPP
MMM MMM MMM TTT AAA AAA AAA AAA CCC PPP PPP
MMM MMM MMM TTT AAA AAA AAA AAA CCC PPP PPP
MMM MMM MMM TTT AAA AAA AAA AAA CCC PPP PPP
MMM MMM TTT AAA AAA AAA AAA CCC PPPPPPPPPPPP
MMM MMM TTT AAA AAA AAA AAA CCC PPPPPPPPPPPP
MMM MMM TTT AAA AAA AAA AAA CCC PPPPPPPPPPPP
MMM MMM TTT AAAAAAAAAAAAAAA AAAAAAAAAAAAAAA CCC PPP
MMM MMM TTT AAAAAAAAAAAAAAA AAAAAAAAAAAAAAA CCC PPP
MMM MMM TTT AAAAAAAAAAAAAAA AAAAAAAAAAAAAAA CCC PPP
MMM MMM TTT AAA AAA AAA AAA CCC PPP
MMM MMM TTT AAA AAA AAA AAA CCC PPP
MMM MMM TTT AAA AAA AAA AAA CCC PPP
MMM MMM TTT AAA AAA AAA AAA CCCCCCCCCCCC PPP
MMM MMM TTT AAA AAA AAA AAA CCCCCCCCCCCC PPP
MMM MMM TTT AAA AAA AAA AAA CCCCCCCCCCCC PPP

```
  CCCCCCCC    AAAAAA    LL          DDDDDDDD      AAAAAA    YY      YY  NN      NN    000000
  CCCCCCCC    AAAAAA    LL          DDDDDDDD      AAAAAA    YY      YY  NN      NN    000000
CC           AA      AA  LL          DD      DD  AA      AA  YY      YY  NN      NN  00      00
CC           AA      AA  LL          DD      DD  AA      AA  YY      YY  NN      NN  00      00
CC           AA      AA  LL          DD      DD  AA      AA    YY  YY    NNNN    NN  00      00
CC           AA      AA  LL          DD      DD  AA      AA    YY  YY    NNNN    NN  00      00
CC           AA      AA  LL          DD      DD  AA      AA      YY      NN  NN  NN  00      00
CC           AA      AA  LL          DD      DD  AA      AA      YY      NN  NN  NN  00      00
CC           AAAAAAAAAA  LL          DD      DD  AAAAAAAAAA      YY      NN    NNNN  00      00
CC           AAAAAAAAAA  LL          DD      DD  AAAAAAAAAA      YY      NN    NNNN  00      00
CC           AA      AA  LL          DD      DD  AA      AA      YY      NN      NN  00      00
CC           AA      AA  LL          DD      DD  AA      AA      YY      NN      NN  00      00
  CCCCCCCC   AA      AA  LLLLLLLLLL  DDDDDDDD    AA      AA      YY      NN      NN    000000
  CCCCCCCC   AA      AA  LLLLLLLLLL  DDDDDDDD    AA      AA      YY      NN      NN    000000


LL             IIIIII      SSSSSSSS
LL             IIIIII      SSSSSSSS
LL               II      SS
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
```

```
0000     1          .TITLE  CALDAYNO
0000     2          .IDENT  'V04-000'
0000     3
0000     4  ;
0000     5  ;**********************************************************************
0000     6  ;*                                                                    *
0000     7  ;*  COPYRIGHT (c) 1978, 1980, 1982, 1984 BY                           *
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0000    23  ;*  SOFTWARE ON EQUIPMENT WHICH IS NOT SUPPLIED BY DIGITAL.           *
0000    24  ;*                                                                    *
0000    25  ;*                                                                    *
0000    26  ;**********************************************************************
0000    27  ;
0000    28
0000    29  ;++
0000    30  ;
0000    31  ; Facility:     magnetic tape acp
0000    32  ;
0000    33  ; Abstract:
0000    34  ;       this module calculates the day number since the start date
0000    35  ;
0000    36  ; Environment:
0000    37  ;       starlet operating system, including privileged system services and
0000    38  ;       internal exec routines.
0000    39  ;--
0000    40
0000    41  ;
0000    42  ; Author:       Deborah H. Gillespie,   Creation Date:  23-JUN-1977
0000    43  ;
0000    44  ; Modified By:
0000    45  ;
0000    46  ;       V002    REFORMAT        Ken Henderson   30-JUL-1980     8:00
0000    47  ;               the code was reformatted
0000    48  ;
0000    49  ; 01    -
0000    50  ;--
0000    51  ;
0000    52
0000    53  ;
0000    54  ; Include Files:
0000    55  ;
0000    56
0000    57  ;
```

```
                     0000     58 ; Macros:
                     0000     59 ;
                     0000     60
                     0000     61 ;
                     0000     62 ; Equated Symbols:
                     0000     63 ;
                     0000     64
00000004             0000     65          D1      = 4                     ; first date address
00000008             0000     66          D2      = 8                     ; second date address
                     0000     67
                     0000     68 ;
                     0000     69 ; Own Storage:
                     0000     70 ;
                     0000     71
```

```
                                                ;++
                                                ; CALDAYNO
                                                ;
                                                ;       this routine calculates the binary day number since start date
                                                ;
                                                ; Calling sequence:
                                                ;       caldayno(arg1,arg2)
                                                ;
                                                ; Input Parameters:
                                                ;       arg1 - address of first 64 bit date
                                                ;       arg2 - address of second 64 bit date
                                                ;
                                                ; Implicit Inputs:
                                                ;       none
                                                ;
                                                ; Output Parameters:
                                                ;       arg1 - address of first date which receives binary day number
                                                ;       arg2 - address of second date which receives binary day number
                                                ;
                                                ; Implicit Outputs:
                                                ;       none
                                                ;
                                                ; Routine Value:
                                                ;       none
                                                ;
                                                ; Side Effects:
                                                ;       none
                                                ;
                                                ;--
                                                ;

                                00000000        .PSECT  $CODE$,NOWRT,LONG

                                                CALDAYNO::
                                                                                ; calculate binary day number
                            0004 0000           .WORD   ^M<R2>                  ; save registers
50  04 AC   D0 0002             MOVL    D1(AP),R0               ; get address of first 64 bit date
        07   10 0006             BSBB    CALDAY                  ; negate it
50  08 AC   D0 0008             MOVL    D2(AP),R0               ; get address of second 64 bit date
        01   10 000C             BSBB    CALDAY                  ; negate it
             04 000E             RET                             ; return to caller
```

```
                                000F   117
                                000F   118 ;++
                                000F   119 ; CALDAY
                                000F   120 ;
                                000F   121 ;       this routine calculates the binary day number
                                000F   122 ;
                                000F   123 ; Calling sequence:
                                000F   124 ;       bsbb    calday
                                000F   125 ;
                                000F   126 ; Input Parameters:
                                000F   127 ;       r0 - address of64 bit date;
                                000F   128 ; Implicit Inputs:
                                000F   129 ;       none
                                000F   130 ;
                                000F   131 ; Output Parameters:
                                000F   132 ;       quadword receivesbinary day number
                                000F   133 ;
                                000F   134 ; Implicit Outputs:
                                000F   135 ;       none
                                000F   136 ;
                                000F   137 ; Routine Value:
                                000F   138 ;       none
                                000F   139 ;
                                000F   140 ; Side Effects:
                                000F   141 ;       none
                                000F   142 ;
                                000F   143 ;--
                                000F   144
                                000F   145 CALDAY:                              ; calculate binary day number for one 64 bit
                          51 60 7D 000F   146         MOVQ    (R0),R1           ; get quadword
                                0012   147
                                0012   148 ;
                                0012   149 ; 864000000000 is the number of tenths of a microsecond in a day
                                0012   150 ; divide by 1024 and then 843750000
                                0012   151 ;
                                0012   152
                       51 51 20 0A EF 0012   153         EXTZV   #10,#32,R1,R1     ; divide by 1024
                       52 52 16 0A EF 0017   154         EXTZV   #10,#22,R2,R2
                52 51 51 324A9A70 8F 7B 001C   155         EDIV    #843750000,R1,R1,R2
                             60 51 7D 0025   156         MOVQ    R1,(R0)           ; store quadword
                                05 0028   157         RSB                       ; return
                                0029   158
                                0029   159         .END
```

```
AQB_TYPE        = 00000005
CALDAY            0000000F R     01
CALDAYNO          00000000 RG    01
D1              = 00000004
D2              = 00000008
FCB_TYPE        = 00000000
MVL_TYPE        = 00000004
RVT_TYPE        = 00000003
VCB_TYPE        = 00000002
WCB_TYPE        = 00000001
```

Psect synopsis

PSECT name	Allocation	PSECT No.	Attributes
. ABS .	00000000 (0.)	00 (0.)	NOPIC USR CON ABS LCL NOSHR NOEXE NORD NOWRT NOVEC BYTE
$CODE$	00000029 (41.)	01 (1.)	NOPIC USR CON REL LCL NOSHR EXE RD NOWRT NOVEC LONG

Performance indicators

Phase	Page faults	CPU Time	Elapsed Time
Initialization	39	00:00:00.13	00:00:00.39
Command processing	136	00:00:00.68	00:00:04.49
Pass 1	85	00:00:00.76	00:00:02.91
Symbol table sort	0	00:00:00.00	00:00:00.00
Pass 2	41	00:00:00.59	00:00:03.20
Symbol table output	2	00:00:00.02	00:00:00.02
Psect synopsis output	2	00:00:00.02	00:00:00.02
Cross-reference output	0	00:00:00.00	00:00:00.00
Assembler run totals	308	00:00:02.20	00:00:11.03

The working set limit was 900 pages.
2962 bytes (6 pages) of virtual memory were used to buffer the intermediate code.
There were 10 pages of symbol table space allocated to hold 10 non-local and 0 local symbols.
342 source lines were read in Pass 1, producing 11 object records in Pass 2.
7 pages of virtual memory were used to define 6 macros.

Macro library statistics

Macro library name	Macros defined
_255DUA28:[SYS.OBJ]LIB.MLB;1	0
_255DUA28:[SYSLIB]STARLET.MLB;2	0
TOTALS (all libraries)	0

0 GETS were required to define 0 macros.

There were no errors, warnings or information messages.

```
MACRO/LIS=LIS$:CALDAYNO/OBJ=OBJ$:CALDAYNO MSRC$:MTADEF1/UPDATE=(ENH$:MTADEF1)+MSRC$:CALDAYNO/UPDATE=(ENH$:CALDAYNO)+EXECML$/LIB
```

CALDAYNO
LIS

SYSFAC
DAT

ACPCTR
LIS

ALLOCB
LIS

SYSMSG
LIS

CHKACC
LIS

MTAACP

ACCESS
LIS

MTAAACP
MAP

ACCFL
LIS

CALCTV
LIS

BLOCK
LIS

CLOSFL
LIS

MTADEF
B32 -

CHKDMO
LIS