```
RRRRRRRRRRR      UUU          UUU NNN         NNN      000000000     FFFFFFFFFFFFFF   FFFFFFFFFFFFFF
RRRRRRRRRRR      UUU          UUU NNN         NNN      000000000     FFFFFFFFFFFFFF   FFFFFFFFFFFFFF
RRRRRRRRRRR      UUU          UUU NNN         NNN      000000000     FFFFFFFFFFFFFF   FFFFFFFFFFFFFF
RRR       RRR    UUU          UUU NNN         NNN    000       000   FFF              FFF
RRR       RRR    UUU          UUU NNN.        NNN    000       000   FFF              FFF
RRR       RRR    UUU          UUU NNN         NNN    000       000   FFF              FFF
RRR       RRR    UUU          UUU NNNNNN      NNN    000       000   FFF              FFF
RRR       RRR    UUU          UUU NNNNNN      NNN    000       000   FFF              FFF
RRR       RRR    UUU          UUU NNNNNN      NNN    000       000   FFF              FFF
RRRRRRRRRRR      UUU          UUU NNN    NNN  NNN    000       000   FFFFFFFFFF       FFFFFFFFFF
RRRRRRRRRRR      UUU          UUU NNN    NNN  NNN    000       000   FFFFFFFFFF       FFFFFFFFFF
RRRRRRRRRRR      UUU          UUU NNN    NNN  NNN    000       000   FFFFFFFFFF       FFFFFFFFFF
RRR    RRR       UUU          UUU NNN      NNNNNN    000       000   FFF              FFF
RRR     RRR      UUU          UUU NNN      NNNNNN    000       000   FFF              FFF
RRR      RRR     UUU          UUU NNN      NNNNNN    000       030   FFF              FFF
RRR       RRR    UUU          UUU NNN         NNN    00C       000   FFF              FFF
RRR        RRR   UUU          UUU NNN         NNN    000       000   FFF              FFF
RRR        RRR   UUU          UUU NNN         NNN    000       000   FFF              FFF
RRR         RRR  UUUUUUUUUUUUUUU  NNN         NNN      000000000     FFF              FFF
RRR         RRR  UUUUUUUUUUUUUUU  NNN         NNN      000000000     FFF              FFF
RRR         RRR  UUUUUUUUUUUUUUU  NNN         NNN      000000000     FFF              FFF
```
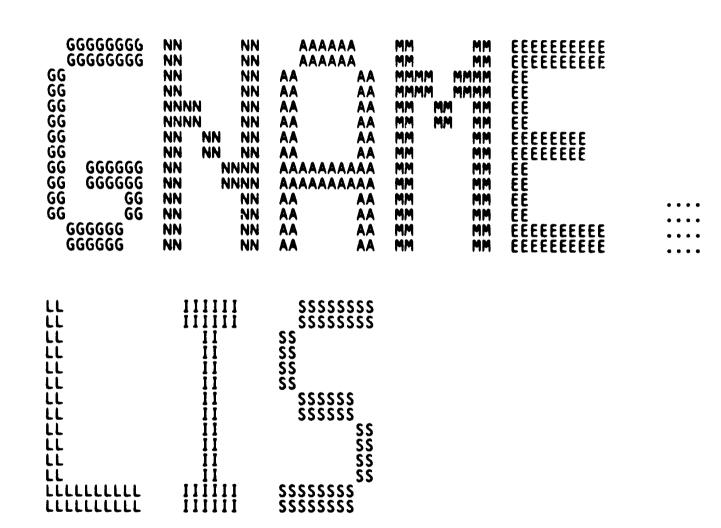
```
GGGGGGGG  NN      NN    AAAAAA    MM      MM  EEEEEEEEEE
GGGGGGGG  NN      NN    AAAAAA    MM      MM  EEEEEEEEEE
GG        NN      NN   AA      AA  MMMM  MMMM  EE
GG        NN      NN   AA      AA  MMMM  MMMM  EE
GG        NNNN    NN   AA      AA  MM  MM  MM  EE
GG        NNNN    NN   AA      AA  MM  MM  MM  EE
GG        NN  NN  NN   AA      AA  MM      MM  EEEEEEEE
GG        NN  NN  NN   AA      AA  MM      MM  EEEEEEEE
GG  GGGGGG NN    NNNN  AAAAAAAAAA  MM      MM  EE
GG  GGGGGG NN    NNNN  AAAAAAAAAA  MM      MM  EE
GG      GG NN      NN  AA      AA  MM      MM  EE
GG      GG NN      NN  AA      AA  MM      MM  EE         ::::
   GGGGGG  NN      NN  AA      AA  MM      MM  EEEEEEEEEE  ::::
   GGGGGG  NN      NN  AA      AA  MM      MM  EEEEEEEEEE  ::::


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
```

```
   1     0001   0 %TITLE 'GNAME - Get name from input string and convert it to uppercase'
   2     0002   0 MODULE gname (   IDENT = 'V04-000'
   3   P 0003   0                  %BLISS32[, ADDRESSING_MODE (EXTERNAL     = LONG_RELATIVE,
   4     0004   0                                              NONEXTERNAL = LONG_RELATIVE)]
   5     0005   0                  ) =
   6     0006   1 BEGIN
   7     0007   1 !
   8     0008   1 !*****************************************************************
   9     0009   1 !*                                                               *
  10     0010   1 !*  COPYRIGHT (c) 1978, 1980, 1982, 1984 BY                      *
  11     0011   1 !*  DIGITAL EQUIPMENT CORPORATION, MAYNARD, MASSACHUSETTS.       *
  12     0012   1 !*  ALL RIGHTS RESERVED.                                         *
  13     0013   1 !*                                                               *
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  15     0015   1 !*  ONLY IN  ACCORDANCE WITH  THE  TERMS  OF  SUCH  LICENSE  AND WITH THE  *
  16     0016   1 !*  INCLUSION OF THE ABOVE COPYRIGHT NOTICE. THIS SOFTWARE OR  ANY  OTHER  *
  17     0017   1 !*  COPIES THEREOF MAY NOT BE PROVIDED OR OTHERWISE MADE AVAILABLE TO ANY  *
  18     0018   1 !*  OTHER PERSON.  NO TITLE TO AND OWNERSHIP OF  THE  SOFTWARE IS  HEREBY  *
  19     0019   1 !*  TRANSFERRED.                                                  *
  20     0020   1 !*                                                               *
  21     0021   1 !*  THE INFORMATION IN THIS SOFTWARE IS  SUBJECT TO CHANGE WITHOUT NOTICE  *
  22     0022   1 !*  AND  SHOULD  NOT  BE  CONSTRUED AS  A COMMITMENT BY DIGITAL EQUIPMENT  *
  23     0023   1 !*  CORPORATION.                                                  *
  24     0024   1 !*                                                               *
  25     0025   1 !*  DIGITAL ASSUMES NO RESPONSIBILITY FOR THE USE  OR  RELIABILITY OF ITS  *
  26     0026   1 !*  SOFTWARE ON EQUIPMENT WHICH IS NOT SUPPLIED BY DIGITAL.       *
  27     0027   1 !*                                                               *
  28     0028   1 !*                                                               *
  29     0029   1 !*****************************************************************
  30     0030   1 !
  31     0031   1 !++
  32     0032   1 ! FACILITY:     DSR (Digital Standard RUNOFF) / DSRPLUS
  33     0033   1 !
  34     0034   1 ! ABSTRACT:     Collects letters and digits to construct a name.
  35     0035   1 !
  36     0036   1 ! ENVIRONMENT:  Transportable
  37     0037   1 !
  38     0038   1 ! AUTHOR:       R.W.Friday      CREATION DATE: April, 1978
  39     0039   1 !
  40     0040   1 !
```

```
   42      0041   1  %SBTTL 'Revision History'
   43      0042   1
   44      0043   1  ! MODIFIED BY:
   45      0044   1  !
   46      0045   1  !       006     REM00006        Ray Marshall     7-Jun-1984
   47      0046   1  !               Modified previous fix to test for the substitution flag instead
   48      0047   1  !                of a hard coded dollar sign.
   49      0048   1  !
   50      0049   1  !       005     REM00005        Ray Marshall     6-Jun-1984
   51      0050   1  !               Modified Ken's fix.  Now it checks to see that the first
   52      0051   1  !                character is a letter or a dollar sign (for DSRPLUS).  The
   53      0052   1  !                other way caused all .IFs and related directives to process
   54      0053   1  !                a null parameter and can also ACCVIO if the user attempted to
   55      0054   1  !                pop the IF stack too many times (with .ENDIFs) with null
   56      0055   1  !                parameters.  This was because a null parameter was causing
   57      0056   1  !                this routine to return normal. All other places that call
   58      0057   1  !                this routine test the length of the input string first and
   59      0058   1  !                know that there is data in it.  Only the call from IFIFNE
   60      0059   1  !                failed.
   61      0060   1  !
   62      0061   1  !       004     KFA00004        Ken Alden        23-Sep-1983
   63      0062   1  !               For DSRPLUS, removed first character restriction.
   64      0063   1  !
   65      0064   1  !       003     RER00003        Ron Randall      07-Mar-1983
   66      0065   1  !               Global edit of all modules. Updated module names, idents,
   67      0066   1  !               copyright dates. Changed require files to BLISS library.
   68      0067   1  !
   69      0068   1  !--
   70      0069   1
```

F 8

GNAME   GNAME - Get name from input string and convert 16-Sep-1984 00:42:38   VAX-11 Bliss-32 V4.0-742   Page 3
V04-000   Module Level Declarations   14-Sep-1984 13:06:36   DISK$VMSMASTER:[RUNOFF.SRC]GNAME.BLI;1   (3)

```
       72          0070   1 %SBTTL 'Module Level Declarations'
       73          0071   1 !
       74          0072   1 !
       75          0073   1 ! TABLE OF CONTENTS:
       76          0074   1 !
       77          0075   1 ! INCLUDE FILES:
       78          0076   1 !
       79          0077   1 LIBRARY 'NXPORT:XPORT';                    ! XPORT Library
       80          0078   1 REQUIRE 'REQ:RNODEF';                      ! RUNOFF variant definitions
       81          0209   1
       82    U     0210   1 %IF DSRPLUS %THEN
       83    U     0211   1 LIBRARY 'REQ:DPLLIB';                      ! DSRPLUS BLISS Library
       84          0212   1 %ELSE
       85          0213   1 LIBRARY 'RFQ:DSRLIB';                      ! DSR CLISS Library
       86          0214   1 %FI
       87          0215   1
       88          0216   1 !
       89          0217   1 ! EXTERNAL REFERENCES:
       90          0218   1 !
       91          0219   1 EXTERNAL
       92          0220   1     flgt            : flgt_definition,     ! Flag characters.
       93          0221   1     khar;
       94          0222   1
```

```
 96    0223  1  GLOBAL ROUTINE GNAME (INPUT_STRING, OUTPUT_STRING) =
 97    0224  1
 98    0225  1  !++
 99    0226  1  ! FUNCTIONAL DESCRIPTION:
100    0227  1  !
101    0228  1  !       GNAME processes an unbroken sequence of letters
102    0229  1  !       and digits, stopping when
103    0230  1  !               1) a nonletter or nondigit is found, or
104    0231  1  !               2) the end of the INPUT_STRING is reached, or
105    0232  1  !               3) OUTPUT_STRING is about to overflow.
106    0233  1  ! All characters accepted are transferred to OUTPUT_STRING.
107    0234  1  !
108    0235  1  ! GNAME also checks to be sure that the first character is
109    0236  1  ! indeed a letter in RUNOFF only.
110    0237  1  !
111    0238  1  ! FORMAL PARAMETERS:
112    0239  1  !
113    0240  1  !       INPUT_STRING is where the name is to come from.
114    0241  1  !       The collected string of letters is left in OUTPUT_STRING.
115    0242  1  !
116    0243  1  ! IMPLICIT INPUTS:        None
117    0244  1  !
118    0245  1  ! IMPLICIT OUTPUTS:       None
119    0246  1  !
120    0247  1  ! ROUTINE VALUE:
121    0248  1  ! COMPLETION CODES:
122    0249  1  !
123    0250  1  !       See GNCC.REQ for completion codes returned.
124    0251  1  !
125    0252  1  ! SIDE EFFECTS:           None
126    0253  1  !--
127    0254  1
128    0255  2      BEGIN
129    0256  2      MAP
130    0257  2          output_string : REF fixed_string;
131    0258  2      BIND
132    0259  2          ira = input_string : REF fixed_string;
133    0260  2
134    0261  2      FS_INIT (OUTPUT_STRING);
135    0262  2
136    0263  4      IF  (NOT letter (.khar)              ! First character must be a letter.
137  U 0264  4  %IF DSRPLUS %THEN
138  U 0265  4          OR                              ! or a substitution flag character
139  U 0266  4          .khar NEQ .flgt [sub_flag, flag_character]
140    0267  3  %FI)
141    0268  2      THEN
142    0269  2          RETURN gname_no_name;
143    0270  2      WHILE 1 DO
144    0271  3          BEGIN
145    0272  3
146    0273  3          IF  ( NOT LETTER (.KHAR)) AND
147    0274  4              ( NOT DIGIT (.KHAR))                    !Stop on an illegal character
148    0275  3          THEN
149    0276  3              RETURN GNAME_NORMAL;
150    0277  3
151    0278  3          IF  .FS_LENGTH (OUTPUT_STRING) EQL .FS_MAXSIZE (OUTPUT_STRING)
152    0279  3          THEN
```

GNAME
V04-000

GNAME - Get name from input string and convert   16-Sep-1984 00:42:38   VAX-11 Bliss-32 V4.0-742   Page 5
Module: del Declarations   14-Sep-1984 13:06:36   DISK$VMSMASTER:[RUNOFF.SRC]GNAME.BLI;1 (4)

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GT
VO

```
153   0280  4        (WHILE (LETTER (.KHAR) OR DIGIT (.KHAR)) DO
154   0281  3            (KCNS ()); RETURN GNAME_TOO_LONG);        !Throw away excess characters.
155   0282  3
156 P 0283  3      FS_WCHAR (OUTPUT_STRING,                    !Convert to upper case and output the character.
157 P 0284  3          (IF LOWER_LETTER (.KHAR)
158 P 0285  3          THEN
159   0286  3              UPPER_CASE (.KHAR) ELSE .KHAR));
160   0287  3
161   0288  4      KCNS ()                                    !Get next character.
162   0289  3      END                                        !end of processing loop.
163   0290  3
164   0291  1    END;                                         !End of GNAME
```

```
                                                    .TITLE   GNAME GNAME - Get name from input string and co
                                                                  nvert
                                                    .IDENT   \V04-000\

                                                    .EXTRN   FLGT, KHAR, RINTES

                                                    .PSECT   $CODE$,NOWRT,2

                                    003C 00000      .ENTRY   GNAME, Save R2,R3,R4,R5        ; 0223
                 55 00000000G  EF  9E 00002         MOVAB    KHAR, R5
                 50        08  AC  D0 00009         MOVL     OUTPUT_STRING, R0              ; 0261
                 0C        A0  D4 0000D             CLRL     12(R0)
                 60        10  A0  9E 00010         MOVAB    16(R0), (R0)
           04    A0        60  D0 00014             MOVL     (R0), 4(R0)
                 51        65  D0 00018             MOVL     KHAR, R1
     00000041   8F        51  D1 0001B             CMPL     R1, #65               ; 0263
                 09        19 00022                 BLSS     1$
     0000005A   8F        51  D1 00024             CMPL     R1, #90
                 16        15 0002B                 BLEQ     3$
     00000061   8F        51  D1 0002D 1$:         CMPL     R1, #97
                 09        19 00034                 BLSS     2$
     0000007A   8F        51  D1 00036             CMPL     R1, #122
                 04        15 0003D                 BLEQ     3$
                 50        02  D0 0003F 2$:         MOVL     #2, R0                ; 0269
                           04 00042                 RET
                 52        04  AC  D0 00043 3$:     MOVL     IRA, R2               ; 0288
                 54        0C  A2  9E 00047         MOVAB    12(R2), R4
                 51        65  D0 0004B 4$:         MOVL     KHAR, R1              ; 0273
     00000041   8F        51  D1 0004E             CMPL     R1, #65
                 09        19 00055                 BLSS     5$
     0000005A   8F        51  D1 00057             CMPL     R1, #90
                 20        15 0005E                 BLEQ     8$
     00000061   8F        51  D1 00060 5$:         CMPL     R1, #97
                 09        19 0006u                 BLSS     6$
     0000007A   8F        51  D1 00069             CMPL     R1, #122
                 0E        15 00070                 BLEQ     8$
                 30        51  D1 00072 6$:         CMPL     R1, #48               ; 0274
                 05        19 00075                 BLSS     7$
                 39        51  D1 00077             CMPL     R1, #57
                 04        15 0007A                 BLEQ     8$
                 50        01  D0 0007C 7$:         MOVL     #1, R0                ; 0276
                           04 0007F                 RET
           08    A0        0C  A0  D1 00080 8$:     CMPL     12(R0), 8(R0)         ; 0278
```

I 8

GNAME   GNAME - Get name from input string and convert   16-Sep-1984 00:42:38   VAX-11 Bliss-32 V4.0-742   Page 6
V04-000   Module Level Declarations   14-Sep-1984 13:06:36   DISK$VMSMASTER:[RUNOFF.SRC]GNAME.BLI;1 (4)

```
                                55 12 00085        BNEQ    15$
                      52    04  AC D0 00087        MOVL    IRA, R2              :  0281
                      53    0C  A2 9E 0008B        MOVAB   12(R2), R3
                      51        65 D0 0008F 9$:    MOVL    KHAR, R1             :  0280
          00000041    8F        51 D1 00092        CMPL    R1, #65
                                09 19 00099        BLSS    10$
          0000005A    8F        51 D1 0009B        CMPL    R1, #90
                                1C 15 000A2        BLEQ    12$
          00000061    8F        51 D1 000A4 10$:   CMPL    R1, #97
                                09 19 000AB        BLSS    11$
          0000007A    8F        51 D1 000AD        CMPL    R1, #122
                                0A 15 000B4        BLEQ    12$
                      30        51 D1 000B6 11$:   CMPL    R1, #48
                                1D 19 000B9        BLSS    14$
                      39        51 D1 000BB        CMPL    R1, #57
                                18 14 000BE        BGTR    14$
                                63 D5 000C0 12$:   TSTL    (R3)                :  0281
                                09 14 000C2        BGTR    13$
                      65    00G 8F 9A 000C4        MOVZBL  #RINTES, KHAR
                      63        01 CE 000C8        MNEGL   #1, (R3)
                                C2 11 000CB        BRB     9$
                      65    04  B2 9A 000CD 13$:   MOVZBL  @4(R2), KHAR
                            04  A2 D6 000D1        INCL    4(R2)
                                63 D7 000D4        DECL    (R3)
                                B7 11 000D6        BRB     9$
                      50        03 D0 000D8 14$:   MOVL    #3, R0
                                   04 000DB        RET
                      51        65 D0 000DC 15$:   MOVL    KHAR, R1            :  0286
          00000061    8F        51 D1 000DF        CMPL    R1, #97
                                0C 19 000E6        BLSS    16$
          0000007A    8F        51 D1 000E8        CMPL    R1, #122
                                03 14 000EF        BGTR    16$
                      51        20 C2 000F1        SUBL2   #32, R1
                      04    B0  51 90 000F4 16$:   MOVB    R1, @4(R0)
                            04  A0 D6 000F8        INCL    4(R0)
                            0C  A0 D6 000FB        INCL    12(R0)             :  0288
                                64 D5 000FE        TSTL    (R4)
                                09 14 00100        BGTR    17$
                      65    00G 8F 9A 00102        MOVZBL  #RINTES, KHAR
                      64        01 CE 00106        MNEGL   #1, (R4)
                                09 11 00109        BRB     18$
                      65    04  B2 9A 0010B 17$:   MOVZBL  @4(R2), KHAR
                            04  A2 D6 0010F        INCL    4(R2)
                                64 D7 0C112        DECL    (R4)
                             FF34 31 00114 18$:    BRW     4$
```

; Routine Size: 279 bytes,   Routine Base: $CODE$ + 0000

```
;   165      0292 1
;   166      0293 1 END                                        .End of module
;   167      0294 0 ELUDOM
```

J 8

PSECT SUMMARY

Name	Bytes	Attributes
$CODE$	279	NOVEC,NOWRT, RD , EXE,NOSHR, LCL, REL, CON,NOPIC,ALIGN(2)

Library Statistics

File	Total	Symbols Loaded	Percent	Pages Mapped	Processing Time
_255DUA28:[SYSLIB]XPORT.L32;1	590	0	0	252	00:00.2
_255DUA28:[RUNOFF.SRC]DSRLIB.L32;1	1248	24	1	86	00:00.3

COMMAND QUALIFIERS

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

Size: 279 code + 0 data bytes
Run Time: 00:05.7
Elapsed Time: 00:20.9
Lines/CPU Min: 3073
Lexemes/CPU-Min: 16055
Memory Used: 80 pages
Compilation Complete

GETQC
LIS

GNAME
LIS

INDEX
LIS

GLBDAT
LIS

GETLIN
LIS

GETONE
LIS

LAYOUT
LIS

GTABS
LIS

GLNM
LIS

GETQS
LIS

IFIFNE
LIS

GETDD
LIS

GSLU
LIS

LIT
LIS

LIST
LIS

GETNUM
LIS

HEADER
LIS