

[illegible]


```
1 0001 0 MODULE getlin ( IDENT = 'V04-000'
2 P 0002 0 %BLISS32[, ADDRESSING_MODE (EXTERNAL = LONG_RELATIVE,
3 0003 0 NONEXTERNAL = LONG_RELATIVE)]
4 0004 0 ) =
5 0005 1 BEGIN
6 0006 1
7 0007 1
8 0008 1 *****
9 0009 1 *
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27 0027 1 *
28 0028 1 *
29 0029 1 *****
30 0030 1
31 0031 1
32 0032 1 ++
33 0033 1 FACILITY: DSR (Digital Standard RUNOFF) / DSRPLUS
34 0034 1
35 0035 1 ABSTRACT: Picks up a line of text and centers it for output.
36 0036 1
37 0037 1 ENVIRONMENT: Transportable
38 0038 1
39 0039 1 AUTHOR: R.W.Friday CREATION DATE: July, 1978
40 0040 1
41 0041 1
```

GETLIN
V04-000

Revision History

G 2
16-Sep-1984 00:39:00
14-Sep-1984 13:06:31

VAX-11 Bliss-32 V4.0-742
[RUNOFF.SRC]GETLIN.BLI;1

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: 43
: 44
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0042 1 %SBTTL 'Revision History'
0043 1
0044 1
0045 1
0046 1
0047 1
0048 1
0049 1
0050 1
0051 1
0052 1
0053 1
0054 1

MODIFIED BY:

005 KFA00005 Ken Alden 16-Mar-1983
PUSH/POP_SCA now visible to DSR.
004 RER00004 Ron Randall 07-Mar-1983
Global edit of all modules. Updated module names, idents,
copyright dates. Changed require files to BLISS library.

Module Level Declarations

```

57 0055 1 %SBTTL 'Module Level Declarations'
58 0056 1
59 0057 1
60 0058 1 TABLE OF CONTENTS:
61 0059 1
62 0060 1 INCLUDE FILES:
63 0061 1
64 0062 1 LIBRARY 'NXPORT:XPORT';      ! XPORT Library
65 0063 1 REQUIRE 'REQ:RNODEF';      ! RUNOFF variant definitions
66 0194 1
67 U 0195 1 %IF DSRPLUS %THEN
68 U 0196 1 LIBRARY 'REQ:DPLLIB';      ! DSRPLUS BLISS Library
69 0197 1 %ELSE
70 0198 1 LIBRARY 'REQ:DSRLIB';      ! DSR BLISS Library
71 0199 1 %FI
72 0200 1
73 0201 1
74 0202 1 EXTERNAL REFERENCES:
75 0203 1
76 0204 1 EXTERNAL LITERAL
77 0205 1 RINTES : UNSIGNED (8);
78 0206 1
79 0207 1 EXTERNAL
80 0208 1 GCA : GCA_DEFINITION,
81 0209 1 MRA : REF_FIXED_STRING,
82 0210 1 SCA : SCA_DEFINITION,
83 0211 1 TSF : TSF_DEFINITION,
84 0212 1 TTABLE : COUNTED_LIST;
85 0213 1
86 0214 1 EXTERNAL ROUTINE
87 0215 1 ENDCHR,
88 0216 1 ENDWRD,
89 0217 1 ERMA,
90 0218 1 ERML,
91 0219 1 OUTNJ,
92 0220 1 SCANT,
93 0221 1 SETCAS;
94 0222 1
95 0223 1 EXTERNAL LITERAL      !Error messages
96 0224 1 RNFCJL,
97 0225 1 RNFTTL;
98 0226 1
99 0227 1
100 0228 1 OWN STORAGE:
101 0229 1
102 0230 1 OWN
103 0231 1 PP_SCA : $H_R_SCA_BLOCK;    !Used in PUSH_SCA, POP_SCA macros (defined in SCA.REQ).
```



```
105 0232 1 GLOBAL ROUTINE GETLIN (PRESCAN, DO_CASE, TRANSLATION, DO_OUTPUT) : NOVALUE =
106 0233 1
107 0234 1 ++
108 0235 1 FUNCTIONAL DESCRIPTION:
109 0236 1
110 0237 1 Starting with the current position, GETLIN parses up to
111 0238 1 the first ';' or end-of-line; the resulting line is
112 0239 1 centered and output.
113 0240 1
114 0241 1 FORMAL PARAMETERS:
115 0242 1
116 0243 1 PRESCAN - If true, scanning stops when the first '.'
117 0244 1 is found. Otherwise, scanning goes to the
118 0245 1 end of the record.
119 0246 1 DO_CASE - If true, then TRANSLATION indicates which
120 0247 1 case rules are to be applied.
121 0248 1 TRANSLATION -
122 0249 1 DO_OUTPUT - If true, then output the scanned text,
123 0250 1 else, skip output related code.
124 0251 1
125 0252 1 IMPLICIT INPUTS: None
126 0253 1
127 0254 1 IMPLICIT OUTPUTS: None
128 0255 1
129 0256 1 ROUTINE VALUE:
130 0257 1 COMPLETION CODES: None
131 0258 1
132 0259 1 SIDE EFFECTS: None
133 0260 1 --
134 0261 1
135 0262 2 BEGIN
136 0263 2 LOCAL
137 0264 2 HOLD TAB_COUNT,
138 0265 2 SCA_HOLD: VECTOR [SCA_SIZE];
139 0266 2
140 0267 2 !Preserve SCA so flags in text don't cause changes
141 0268 2 !to the formatting environment.
142 0269 2
143 0270 2 PUSH_SCA: !Save the Special SAVED SCA bits.
144 0271 2
145 0272 2 INCR I FROM 0 TO SCA_SIZE - 1 DO
146 0273 2 SCA_HOLD [I] = SCA [I];
147 0274 2
148 0275 2 !Set up SCA so SCANT preserves white space; lots of room
149 0276 2 !is provided so a new line doesn't get started unless
150 0277 2 !the user makes an error.
151 0278 2 SCA_FILL = FALSE;
152 0279 2 SCA_JUSTIFY = FALSE;
153 0280 2 SCA_LM = 0;
154 0281 2 SCA_RM = 150; !Maximum width line.
155 0282 2 SCA_PRESCAN = .PRESCAN; !Indicate when processing stops.
156 0283 2
157 0284 2 IF .DO_CASE
158 0285 2 THEN
159 0286 2 SETCAS (.TRANSLATION); !Establish specified case rules.
160 0287 2
161 0288 2 !Preserve tab count; temporarily set it to zero
```



```
: 162      0289      2      !so tabs get treated like spaces.
: 163      0290      2      HOLD TAB COUNT = .TTABLE [CL_INDEX];
: 164      0291      2      TTABLE [CL_INDEX] = 0;
: 165      0292      2
: 166      0293      2      SCANT ();      !Scan one input line.
: 167      0294      2
: 168      0295      2      ! Drop trailing spaces, unless at least one of them is
: 169      0296      2      ! underlined.  SCA_WRD_CPEND is equal to RINTES if a space/tab
: 170      0297      2      ! was encountered after the last character on the line.
: 171      0298      2
: 172      0299      2      IF .SCA_WRD_CPEND EQL RINTES
: 173      0300      2      THEN
: 174      0301      2
: 175      0302      2      IF .SCA_WRD_LST_UND EQL 0
: 176      0303      2      THEN
: 177      0304      2      !None of the trailing spaces were underlined.
: 178      0305      2      !This means that it is safe to drop them.
: 179      0306      2      SCA_WRD_LST_SP = 0;
: 180      0307      2
: 181      0308      2      !The call on ENDWRD is made here, rather than letting
: 182      0309      2      !OUTNJ do it.  The reason it's done here is so that
: 183      0310      2      !TSF_EXT_HL gets updated, so that the length of the
: 184      0311      2      !text can be obtained.
: 185      0312      2      ENDWRD (FALSE, FALSE, FALSE);
: 186      0313      2
: 187      0314      2      !Check to see that the text retrieved is not too long
: 188      0315      2      IF .TSF_EXT_HL GTR .GCA_LWIDTH
: 189      0316      2      THEN
: 190      0317      2      BEGIN
: 191      0318      2      ERMA (RNFTTL, FALSE);      !Text cannot possibly be centered
: 192      0319      2      TSF_EXT_HL = 0;      !Fix up TSF_EXT_HL. The entire line still gets printed.
: 193      0320      2      END;
: 194      0321      2
: 195      0322      2      !Restore SCA so actual margins can be used.
: 196      0323      2      INCR I FROM SCA_CASE_SIZE TO SCA_SIZE - 1 DO      !NOTE: modified case rules 'play through'.
: 197      0324      2      SCA [I] = .SCA_HOLD [I];
: 198      0325      2
: 199      0326      2      POP_SCA;      !Restore the special SAVED SCA bits.
: 200      0327      2
: 201      0328      2      TTABLE [CL_INDEX] = .HOLD_TAB_COUNT;      !Restore tab count
: 202      0329      2
: 203      0330      2      IF NOT .DO_OUTPUT      ! If output was not wanted,
: 204      0331      2      THEN RETURN;      ! it best we return now.  Otherwise, proceeding
: 205      0332      2      ! beyond here will generate output.
: 206      0333      2
: 207      0334      2      !Compute and validate number of spaces that have to
: 208      0335      2      !be inserted on the left to center the line
: 209      0336      2      TSF_ADJUST = .SCA_LM + (.SCA_RM - .SCA_LM - .TSF_EXT_HL)/2;
: 210      0337      2
: 211      0338      2      IF .TSF_ADJUST LSS 0
: 212      0339      2      THEN
: 213      0340      2      BEGIN
: 214      0341      2      ERML (RNFCJL);      !It's not possible to center the line.
: 215      0342      2      TSF_ADJUST = 0;      !Setting tsf_adjust to zero causes the line
: 216      0343      2      END;      !to go out against the left edge of the page.
: 217      0344      2
: 218      0345      2      !Force out the line of text
```


: 219
: 220

```
0346 2 OUTNJ ();
0347 1 END;
```

```
!End of GETLIN
```

K 2
16-Sep-1984 00:39:00
14-Sep-1984 13:06:31

VAX-11 Bliss-32 v4.0-742
[RUNOFF.SRC]GETLIN.BLI;1

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```
.TITLE      GETLIN
.IDENT      \V04-000\

.PSECT      $OWNS$,NOEXE,2

.BLKBB      48

.EXTRN      RINTES, GCA, MRA
.EXTRN      SCA, TSF, TTABLE
.EXTRN      ENDCHR, ENDWRD, ERMA
.EXTRN      ERML, OUTNJ, SCANT
.EXTRN      SETCAS, RNFCJL, RNFTTL
```

```
.PSECT $CODE$,NOWRT,2
```

```
.ENTRY GETLIN, Save R2,R3,R4,R5,R6
```

```

MOVAB    TABLE+4, R6
MOVAB    TSF, R5
MOVAB    PP_SCA, R4
MOVAB    SCA+116, R3
MOVAB    -384(SP), SP
MOVL     @SCA+100, PP_SCA
MOVL     @SCA+104, PP_SCA+4
MOVL     @SCA+108, PP_SCA+8
MOVL     @SCA+112, PP_SCA+12
MOVL     @SCA+116, PP_SCA+16
MOVL     @SCA+120, PP_SCA+20
MOVL     @SCA+124, PP_SCA+24
MOVL     @SCA+128, PP_SCA+28
MOVL     @SCA+132, PP_SCA+32
MOVL     @SCA+136, PP_SCA+36
MOVL     @SCA+140, PP_SCA+40
MOVL     @SCA+144, PP_SCA+44

```

```
CLRL      I
MOVL      SCA[I], SCA_HOLD[I]
```

```
AOBLEQ      #95, 1, 1$
CLRL        @SCA+104
CLRL        @SCA+100
CLRL        @SCA+116
MOVZBL      #150, @SCA+120
MOVL        PRESCAN, SCA+172
BLBC        DO CASE, 2$
PUSHL       TRANSLATION
CALLS       #1, SETCAS
```

```

CALLS
MOVL    TTABLE+4, HOLD_TAB_COUNT

```

```
CLRL      TTABLE+4
CALLS     #0, SCANT
CMLP      SCA+280, #RINTES
```

BNEQ
TSTL

35

CLRL SCA+332
CLRQ -(SP)

CERK (SP)

: 0232

: 0265

: 0272

: 0273

: 0278

: 0279

: 0280
: 0281: 0281
: 0282: 0282
: 0284: 0284
: 0286

0286

: 0290

: 0291

: 0293

: 0299

0303

: 0302

0306

0312

00000000G	EF		7E	D4	000B2	CLRL	-(SP)			
	50		03	FB	000B4	CALLS	#3, ENDWRD			
00000000G	FF	04	65	D0	000BB	MOVL	TSF, R0	0315		
			A0	D1	000BE	CMPL	4(R0), @GCA+140			
			15	15	000C6	BLEQ	4\$			
			7E	D4	000C8	CLRL	-(SP)	0318		
00000000G	EF	00000000G	8F	DD	000CA	PUSHL	#RNFTTL			
	50		02	FB	000D0	CALLS	#2, ERMA			
			65	D0	000D7	MOVL	TSF, R0			
			A0	D4	000DA	CLRL	4(R0)	0319		
	50		19	D0	000DD	MOVL	#25, I	0323		
F2	8C	A340	6E40	D0	000E0	MOVL	SCA_HOLD[I], SCA[I]	0324		
	50	0000005F	8F	F3	000E6	AOBLEQ	#95, I, 5\$			
	F0	B3	64	D0	000EE	MOVL	PP_SCA, @SCA+100			
	F4	B3	04	A4	D0	000F2	MOVL	PP_SCA+4, @SCA+104		
	F8	B3	08	A4	D0	000F7	MOVL	PP_SCA+8, @SCA+108		
	FC	B3	0C	A4	D0	000FC	MOVL	PP_SCA+12, @SCA+112		
	00	B3	10	A4	D0	00101	MOVL	PP_SCA+16, @SCA+116		
	04	B3	14	A4	D0	00106	MOVL	PP_SCA+20, @SCA+120		
	08	B3	18	A4	D0	0010B	MOVL	PP_SCA+24, @SCA+124		
	0C	B3	1C	A4	D0	00110	MOVL	PP_SCA+28, @SCA+128		
	10	B3	20	A4	D0	00115	MOVL	PP_SCA+32, @SCA+132		
	14	B3	24	A4	D0	0011A	MOVL	PP_SCA+36, @SCA+136		
	18	B3	28	A4	D0	0011F	MOVL	PP_SCA+40, @SCA+140		
	1C	B3	2C	A4	D0	00124	MOVL	PP_SCA+44, @SCA+144		
	66		52	D0	00129	MOVL	HOLD TAB COUNT, TTABLE+4	0328		
	32		10	AC	E9	0012C	BLBC	DO OUTPUT, 7\$	0330	
	50		65	D0	00130	MOVL	TSF, R0	0331		
51	04	B3	00	B3	C3	00133	SUBL3	@SCA+116, @SCA+120, R1	0336	
	51		04	A0	C2	00139	SUBL2	4(R0), R1		
	51		02	C6	0013D	DIVL2	#2, R1			
28	A0	51	00	B3	C1	00140	ADDL3	@SCA+116, R1, 40(R0)	0338	
			13	18	00146	BGEQ	6\$	0338		
		00000000G	8F	DD	00148	PUSHL	#RNFCJL	0341		
	00000000G	EF	01	FB	0014E	CALLS	#1, ERML			
		50	65	D0	00155	MOVL	TSF, R0			
			A0	D4	00158	CLRL	40(R0)	0342		
	00000000G	EF	00	FB	0015B	CALLS	#0, OUTNJ	0346		
			04	00162	7\$:	RET		0347		

; Routine Size: 355 bytes, Routine Base: \$CODE\$ + 0000

:	221	0348	1		
:	222	0349	1	END	!End of module
:	223	0350	0	ELUDOM	

PSECT SUMMARY

Name	Bytes	Attributes
\$OWN\$	48	NOVEC, WRT, RD ,NOEXE,NOSHR, LCL, REL, CON,NOPI,ALIGN(2)

GETLIN
V04-000

Module Level Declarations

M 2
16-Sep-1984 00:39:00
14-Sep-1984 13:06:31

VAX-11 Bliss-32 V4.0-742
[RUNOFF.SRC]GETLIN.BLI;1

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: \$CODE\$ 355 NOVEC,NOWRT, RD , EXE,NOSHR, LCL, REL, CON,NOPIC,ALIGN(2)

Library Statistics

File	----- Total	Symbols Loaded	----- Percent	Pages Mapped	Processing Time
_\$255\$DUA28:[SYSLIB]XPORT.L32;1	590	0	0	252	00:00.2
_\$255\$DUA28:[RUNOFF.SRC]DSRLIB.L32;1	1248	47	3	86	00:00.3

COMMAND QUALIFIERS

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

: Size: 355 code + 48 data bytes
: Run Time: 00:09.6
: Elapsed Time: 00:28.8
: Lines/CPU Min: 2185
: Lexemes/CPU-Min: 18293
: Memory Used: 95 pages
: Compilation Complete

0342 AH-BT13A-SE
VAX/VMS V4.0

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GETQC
LIS

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LIS

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LIS

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GLNM
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GETQS
LIS

IFIFNE
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GETDD
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GSLU
LIS

LIT
LIS

LIST
LIS

GETNUM
LIS

HEADER
LIS