


```

LL      IIIIII  BBBB8888  CCCCCCCC  RRRRRRRR  CCCCCCCC  TTTTTTTTTT  AAAAAA  BBBB8888
LL      IIIIII  BBBB8888  CCCCCCCC  RRRRRRRR  CCCCCCCC  TTTTTTTTTT  AAAAAA  BBBB8888
LL      II      BB      BB  CC      RR      RR  CC      TT      AA      AA  BB      BB
LL      II      BB      BB  CC      RR      RR  CC      TT      AA      AA  BB      BB
LL      II      BB      BB  CC      RR      RR  CC      TT      AA      AA  BB      BB
LL      II      BB      BB  CC      RR      RR  CC      TT      AA      AA  BB      BB
LL      II      BBBB8888  CC      RRRRRRRR  CC      TT      AA      AA  BBBB8888
LL      II      BBBB8888  CC      RRRRRRRR  CC      TT      AA      AA  BBBB8888
LL      II      BB      BB  CC      RR      RR  CC      TT      AAAAAAAAAA  BB      BB
LL      II      BB      BB  CC      RR      RR  CC      TT      AAAAAAAAAA  BB      BB
LL      II      BB      BB  CC      RR      RR  CC      TT      AA      AA  BB      BB
LL      II      BB      BB  CC      RR      RR  CC      TT      AA      AA  BB      BB
LLLLLLLLLLLL  IIIIII  BBBB8888  CCCCCCCC  RR      RR  CCCCCCCC  TT      AA      AA  BBBB8888
LLLLLLLLLLLL  IIIIII  BBBB8888  CCCCCCCC  RR      RR  CCCCCCCC  TT      AA      AA  BBBB8888

```

```

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
LLLLLLLLLLLL  IIIIII  SSSSSSSS
LLLLLLLLLLLL  IIIIII  SSSSSSSS

```

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```



```

1 0001 0 MODULE LIB$CRC TABLE (%TITLE'Library CRC table generator'
2 0002 0 IDENT = '1-003' ! File: LIBCRCTAB.B32 Edit: SBL1003
3 0003 0 LINKAGE(FORTRAN)
4 0004 0 ) =
5 0005 1 BEGIN
6 0006 1
7 0007 1
8 0008 1 *****
9 0009 1 *
10 0010 1 * COPYRIGHT (c) 1978, 1980, 1982, 1984 BY *
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27 0027 1 *
28 0028 1 *
29 0029 1 *****
30 0030 1
31 0031 1
32 0032 1 +-
33 0033 1 FACILITY: General Utility Library
34 0034 1
35 0035 1 ABSTRACT:
36 0036 1
37 0037 1
38 0038 1 Given a polynomial, a table is constructed which can be
39 0039 1 used by the LIB$CRC module for generating the CRC value for an
40 0040 1 input stream.
41 0041 1
42 0042 1 ENVIRONMENT: User Mode - AST re-entrant
43 0043 1
44 0044 1 AUTHOR: Donald G. Petersen, CREATION DATE: 09-Jan-78
45 0045 1
46 0046 1 MODIFIED BY:
47 0047 1
48 0048 1 Donald G. Petersen, 09-Jan-78: VERSION 0
49 0049 1 01 - original
50 0050 1 0-02 - Change REQUIRE files for VAX system build. DGP 28-Apr-78
51 0051 1 0-03 - Change file name to LIBCRCTAB, and change the name of
52 0052 1 the require file similarly. JBS 14-NOV-78
53 0053 1 1-001 - Update version number and copyright notice. JBS 16-NOV-78
54 0054 1 1-002 - Don't use arithmetic shift for right shift. SBL 4-Dec-1979
55 0055 1 1-003 - Use prologue file. SBL 24-June-1983
56 0056 1 --

```

```
58 0057 1 |  
59 0058 1 | PROLOGUE FILE:  
60 0059 1 |  
61 0060 1 |  
62 0061 1 | REQUIRE 'RTLIN:LIBPROLOG'; ! LIB$ definitions  
63 0132 1 |  
64 0133 1 |  
65 0134 1 | TABLE OF CONTENTS:  
66 0135 1 |  
67 0136 1 |  
68 0137 1 | FORWARD ROUTINE  
69 0138 1 | LIB$CRC_TABLE:NOVALUE; ! CRC table build routine  
70 0139 1 |  
71 0140 1 |  
72 0141 1 | MACROS:  
73 0142 1 |  
74 0143 1 | NONE  
75 0144 1 |  
76 0145 1 | EQUATED SYMBOLS:  
77 0146 1 |  
78 0147 1 | NONE  
79 0148 1 |  
80 0149 1 | OWN STORAGE:  
81 0150 1 |  
82 0151 1 | NONE  
83 0152 1 |  
84 0153 1 | EXTERNAL REFERENCES:  
85 0154 1 |  
86 0155 1 | NONE
```

```
88 0156 1 GLOBAL ROUTINE LIB$CRC_TABLE ( ! Build a table for the CRC routine
89 0157 1 POLY ! ADR of CRC polynomial input
90 0158 1 TABLE ! ADR of where table is to be built
91 0159 1 :NOVALUE = ! No value is returned
92 0160 1 !++
93 0161 1 FUNCTIONAL DESCRIPTION:
94 0162 1
95 0163 1 The input polynomial is used to produce a table with 16 longword entries
96 0164 1 which is the proper format to be used by the LIB$CRC routine for
97 0165 1 calculating the CRC for a data stream.
98 0166 1
99 0167 1 FORMAL PARAMETERS:
100 0168 1
101 0169 1 poly.rl.r input CRC polynomial
102 0170 1 table.wl.ar ADR of where table of 16 longwords
103 0171 1
104 0172 1 IMPLICIT INPUTS:
105 0173 1
106 0174 1 NONE
107 0175 1
108 0176 1 IMPLICIT OUTPUTS:
109 0177 1
110 0178 1 NONE
111 0179 1
112 0180 1 ROUTINE VALUE:
113 0181 1 COMPLETION CODES:
114 0182 1
115 0183 1 NONE
116 0184 1
117 0185 1 SIDE EFFECTS:
118 0186 1
119 0187 1 NONE
120 0188 1
121 0189 1 !--
122 0190 1
123 0191 2 BEGIN
124 0192 2 MAP
125 0193 2 TABLE: REF VECTOR [16],
126 0194 2 POLY: REF VECTOR [1];
127 0195 2 LOCAL
128 0196 2 TMP, ! temporary
129 0197 2 X, ! used as a flag
130 0198 2 INDEX, ! index into the CRC table
131 0199 2 I, ! iteration index for making each entry
132 0200 2 INCR INDEX FROM 0 TO 15 DO
133 0201 3 BEGIN
134 0202 3 TMP = .INDEX;
135 0203 3 INCR I FROM 1 TO 4 DO
136 0204 4 BEGIN
137 0205 4 X = .TMP AND 1;
138 0206 4 TMP = .TMP<1,3I>; ! Equivalent to .TMP ^ -1
139 0207 4 IF .X EQL 1 THEN
140 0208 4 TMP = .TMP XOR .POLY[0]
141 0209 3 END;
142 0210 3 TABLE[.INDEX] = .TMP
143 0211 2 END;
144 0212 2 RETURN;
```

LIB\$CRC_TABLE Library CRC table generator
1-003

K 4
16-Sep-1984 00:40:16 VAX-11 Bliss-32 V4.0-742
14-Sep-1984 12:38:28 [LIBRTL.SRC]LIBCRCTAB.B32;1

Page 4
(3)

LIB
V03

: 145 0213 1 END;

.TITLE LIB\$CRC_TABLE Library CRC table generator
.IDENT \1-003\

.PSECT _LIB\$CODE, NOWRT, SHR, PIC, 2

				000C 00000	.ENTRY LIB\$CRC_TABLE, Save R2,R3	: 0156
			50 D4 00002		CLRL INDEX	: 0210
		52	50 D0 00004	1\$:	MOVL INDEX, TMP	: 0202
		51	01 D0 00007		MOVL #1, I	: 0203
53	52	01	00 EF 0000A	2\$:	EXTZV #0, #1, TMP, X	: 0205
52	52	1F	01 EF 0000F		EXTZV #1, #31, TMP, TMP	: 0206
		01	53 D1 00014		CMPL X, #1	: 0207
			04 12 00017		BNEQ 3\$	
		52	04 BC CC 00019	04	XORL2 @POLY, TMP	: 0208
	E9	51	04 F3 0001D	3\$:	AOBLEQ #4, I, 2\$: 0207
		08 BC40	52 D0 00021		MOVL TMP, @TABLE[INDEX]	: 0210
	DA	50	0F F3 00026		AOBLEJ #15, INDEX, 1\$: 0213
			04 0002A		RET	

: Routine Size: 43 bytes, Routine Base: _LIB\$CODE + 0000

: 146 0214 1 END
: 147 0215 0 ELUDOM

PSECT SUMMARY

Name	Bytes	Attributes
_LIB\$CODE	43	NOVEC, NOWRT, RD, EXE, SHR, LCL, REL, CON, PIC, ALIGN(2)

Library Statistics

File	Total	Symbols Loaded	Percent	Pages Mapped	Processing Time
_\$255\$DUA28:[SYSLIB]STARLET.L32;1	9776	0	0	581	00:00.7
_\$255\$DUA28:[LIBRTL.OBJ]RTLLIB.L32;1	36	0	0	8	00:00.1

COMMAND QUALIFIERS

BLISS/CHECK=(FIELD,INITIAL,OPTIMIZE)/NOTRACE/LIS=LISS:LIBCRCTAB/OBJ=OBJ\$:LIBCRCTAB MSRCS:LIBCRCTAB/UPDATE=(ENHS:LIBCRCTAB)

: Size: 43 code + 0 data bytes
: Run Time: 00:02.3
: Elapsed Time: 00:14.0
: Lines/CPU Min: 5733
: Lexemes/CPU-Min: 10000
: Memory Used: 40 pages
: Compilation Complete

.....

0204 AH-BT13A-SE
VAX/VMS V4.0

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This image displays a grid of 100 small terminal windows, arranged in 10 rows and 10 columns. Each window shows a different library (LIB) name and associated data, likely representing a list of libraries available on a VAX/VMS system. The libraries are listed in the following order from top-left to bottom-right:

- LIBVTDX LIS
- LIBRETAB LIS
- LIBCUTD? LIS
- LIBCUSTOM LIS
- LIBCREDIT LIS
- LIBCOMMON LIS
- LIBCUTMAC LIS
- LIBCUTAB LIS
- LIBCREDIT LIS
- LIBCREDIT LIS

Each window also contains various data fields, including file names, sizes, and other system-related information, though the text is too small to read in detail. The overall appearance is that of a multi-screen terminal session showing a directory listing or a similar system utility.