


```

SSSSSSSS  TTTTTTTTT  RRRRRRRR  UU      UU  PPPPPPPP  CCCCCCCC  AAAAAA  SSSSSSSS  EEEEEEEEE
SSSSSSSS  TTTTTTTTT  RRRRRRRR  UU      UU  PPPPPPPP  CCCCCCCC  AAAAAA  SSSSSSSS  EEEEEEEEE
SS          TT          RR      RR  UU      UU  PP      PP  CC          AA      AA  SS          EE
SS          TT          RR      RR  UU      UU  PP      PP  CC          AA      AA  SS          EE
SS          TT          RR      RR  UU      UU  PP      PP  CC          AA      AA  SS          EE
SS          TT          RR      RR  UU      UU  PP      PP  CC          AA      AA  SS          EE
SSSSSS    TT          RRRRRRRR  UU      UU  PPPPPPPP  CCCCCCCC  AAAAAA  SSSSSSS  EEEEEEEEE
SSSSSS    TT          RRRRRRRR  UU      UU  PPPPPPPP  CCCCCCCC  AAAAAA  SSSSSSS  EEEEEEEEE
          SS          RR  RR      UU      UU  PP      PP  CC          AAAAAAAAAA  SS          EE
          SS          RR  RR      UU      UU  PP      PP  CC          AAAAAAAAAA  SS          EE
          SS          RR      RR  UU      UU  PP      PP  CC          AA      AA  SS          EE
          SS          RR      RR  UU      UU  PP      PP  CC          AA      AA  SS          EE
SSSSSSSS  TT          RR      RR  UU      UU  PP      PP  CC          AA      AA  SSSSSSSS  EEEEEEEEE
SSSSSSSS  TT          RR      RR  UUUUUUUUU  PP      PP  CCCCCCCC  AA      AA  SSSSSSSS  EEEEEEEEE
SSSSSSSS  TT          RR      RR  UUUUUUUUU  PP      PP  CCCCCCCC  AA      AA  SSSSSSSS  EEEEEEEEE

```

```

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
LLLLLLLLLL IIIIII  SSSSSSSS
LLLLLLLLLL IIIIII  SSSSSSSS

```

```

1 0001 0 MODULE STRUPCASE (           ! copy source to dest and upcase
2 0002 0
3 0003 0             IDENT = '1-006' ! File: STRUPCASE.B32  Edit: DG1006
4 0004 0
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
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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: String support library
34 0034 1
35 0035 1 ABSTRACT:
36 0036 1
37 0037 1 This module takes strings of any supported class or dtype and
38 0038 1 copies the source string to the destination string, upcasing
39 0039 1 all letters a-z and all letters with diacritical marks.
40 0040 1 This routine is needed so that if a user wants any character
41 0041 1 comparison to be case blind, he will first convert both strings
42 0042 1 to upper case.
43 0043 1
44 0044 1 ENVIRONMENT: User mode, AST level or not or mixed
45 0045 1
46 0046 1 AUTHOR: R. Will, CREATION DATE: 1-Dec-79
47 0047 1
48 0048 1 MODIFIED BY:
49 0049 1
50 0050 1 R. Will, 1-Dec-79: VERSION 01
51 0051 1 1-001 - Original
52 0052 1 1-002 - String speedup, status from macros. RW 11-Jan-1980
53 0053 1 1-003 - Enhance to recognize additional classes of descriptors by
54 0054 1 using $STR$GET_LEN ADDR to extract length and address of
55 0055 1 first data byte. Remove string interlocking code.
56 0056 1 RKR 29-APR-1981
57 0057 1 1-004 - Speed up code. RKR 7-OCT-1981.

```

STRUPCASE
1-006

K 8
16-Sep-1984 01:51:14 VAX-11 Bliss-32 V4.0-742
14-Sep-1984 12:40:17 [LIBRTL.SRC]STRUPCASE.B32;1

Page 2
(1)

```
: 58      0058 1 : 1-005 - Use STR$COPY R R8 for copying. Use $STR$SIGNAL_FATAL  
: 59      0059 1 :      instead of $STR$CHECK STATUS. RKR 18-NOV-1981.  
: 60      0060 1 : 1-006 - Enhance to use DEC Multinational Char. Set. DG 1-Nov-1983.  
: 61      0061 1 : --  
: 62      0062 1 :  
: 63      0063 1 : <BLF/PAGE>
```

_S

Ps

--

SC

SP

-L

-L

-L

MS

MS

MS

```
65 0064 1 |
66 0065 1 | SWITCHES:
67 0066 1 |
68 0067 1 |
69 0068 1 | SWITCHES ADDRESSING MODE
70 0069 1 | (EXTERNAL = GENERAL, NONEXTERNAL = WORD_RELATIVE);
71 0070 1 |
72 0071 1 |
73 0072 1 | LINKAGES:
74 0073 1 |
75 0074 1 |
76 0075 1 | REQUIRE 'RTLIN:STRLNK';           ! Use require file with string linkage
77 0260 1 |
78 0261 1 |
79 0262 1 | TABLE OF CONTENTS:
80 0263 1 |
81 0264 1 |
82 0265 1 | FORWARD ROUTINE
83 0266 1 | STRUPCASE;                       ! convert lowercase to uppercase
84 0267 1 |
85 0268 1 |
86 0269 1 | INCLUDE FILES:
87 0270 1 |
88 0271 1 |
89 0272 1 | REQUIRE 'RTLIN:RTLPSECT';        ! Declare PSECTS code
90 0367 1 |
91 0368 1 | REQUIRE 'RTLIN:STRMACROS';       ! use string macros to code
92 1284 1 |
93 1285 1 | LIBRARY 'RTLSTARLE';            ! STARLET library for macros and symbol
94 1286 1 |
95 1287 1 |
96 1288 1 | MACROS: NONE
97 1289 1 |
98 1290 1 |
99 1291 1 |
100 1292 1 | EQUATED SYMBOLS: NONE
101 1293 1 |
102 1294 1 |
103 1295 1 |
104 1296 1 | PSECT DECLARATIONS
105 1297 1 |
106 1298 1 |
107 1299 1 | DECLARE_PSECTS (STR);
108 1300 1 |
109 1301 1 |
110 1302 1 | OWN STORAGE: NONE
111 1303 1 |
112 1304 1 |
113 1305 1 |
114 1306 1 | EXTERNAL REFERENCES:
115 1307 1 |
116 1308 1 |
117 1309 1 | EXTERNAL ROUTINE
118 1310 1 | LIB$STOP,                         ! signal errors
119 1311 1 | STR$COPY_R_R8 : STR$JSB_COPY_R ;  ! Routine to do the copy
120 1312 1 |
121 1313 1 | EXTERNAL LITERAL
```


: 238 1429 2
: 239 1430 2
: 240 1431 2
: 241 1432 2
: 242 1433 2
: 243 1434 2
: 244 1435 2
: 245 1436 2
: 246 1437 2
: 247 1438 2
: 248 1439 2
: 249 1440 2
: 250 1441 1

218, 209, 210, 211, 212, 213, 214, 215, 216, 217, ! lower to upper

.OUT_LEN,
.OUT_ADDR,
STR\$K_FILL_CHAR,
.OUT_LEN,
.OUT_ADDR);

! translate to self
! from destination
! never used since same
! string
! to destination

RETURN .RETURN_STATUS;
END;

!End of STR\$UPCASE

.TITLE STR\$UPCASE
.IDENT \1-006\

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

OE	OD	OC	OB	OA	O9	O8	O7	O6	O5	O4	O3	O2	O1	O0	00000	P.AAA:	.BYTE
1D	1C	1B	1A	19	18	17	16	15	14	13	12	11	10	0F	0000F		
2C	2B	2A	29	28	27	26	25	24	23	22	21	20	1F	1E	0001E		
3B	3A	39	38	37	36	35	34	33	32	31	30	2F	2E	2D	0002D		
4A	49	48	47	46	45	44	43	42	41	40	3F	3E	3D	3C	0003C		
59	58	57	56	55	54	53	52	51	50	4F	4E	4D	4C	4B	0004B		
48	47	46	45	44	43	42	41	60	5F	5E	5D	5C	5B	5A	0005A		
57	56	55	54	53	52	51	50	4F	4E	4D	4C	4B	4A	49	00069		
86	85	84	83	82	81	80	7F	7E	7D	7C	7B	7A	79	78	00078		
95	94	93	92	91	90	8F	8E	8D	8C	8B	8A	89	88	87	00087		
A4	A3	A2	A1	A0	9F	9E	9D	9C	9B	9A	99	98	97	96	00096		
B3	B2	B1	B0	AF	AE	AD	AC	AB	AA	A9	A8	A7	A6	A5	000A5		
C2	C1	CO	BF	BE	BD	BC	BB	BA	B9	B8	B7	B6	B5	B4	000B4		
D1	DO	CF	CE	CD	CC	CB	CA	C9	C8	C7	C6	C5	C4	C3	000C3		
CO	DF	DE	DD	DC	DB	DA	D9	D8	D7	D6	D5	D4	D3	D2	000D2		
CF	CE	CD	CC	CB	CA	C9	C8	C7	C6	C5	C4	C3	C2	C1	000E1		
FE	DD	DC	DB	DA	D9	D8	D7	D6	D5	D4	D3	D2	D1	F0	000F0		
														FF	000FF		

0	1	2	3	4	5	6	7	8	9	10	11	12	-	...
13	14	15	16	17	18	19	20	21	22	...	...	...	...	...
23	24	25	26	27	28	29	30	31	32	...	...	...	...	...
33	34	35	36	37	38	39	40	41	42	...	...	...	...	...
43	44	45	46	47	48	49	50	51	52	...	...	...	...	...
53	54	55	56	57	58	59	60	61	62	...	...	...	...	...
63	64	65	66	67	68	69	70	71	72	...	...	...	...	...
73	74	75	76	77	78	79	80	81	82	...	...	...	...	...
83	84	85	86	87	88	89	90	91	92	...	...	...	...	...
93	94	95	96	97	98	99	00	01	02	...	...	...	...	...
01	02	03	04	05	06	07	08	09	0A	...	...	...	...	...
11	12	13	14	15	16	17	18	19	1A	...	...	...	...	...
21	22	23	24	25	26	27	28	29	2A	...	...	...	...	...
31	32	33	34	35	36	37	38	39	3A	...	...	...	...	...
41	42	43	44	45	46	47	48	49	4A	...	...	...	...	...
51	52	53	54	55	56	57	58	59	5A	...	...	...	...	...
61	62	63	64	65	66	67	68	69	6A	...	...	...	...	...
71	72	73	74	75	76	77	78	79	7A	...	...	...	...	...
81	82	83	84	85	86	87	88	89	8A	...	...	...	...	...
91	92	93	94	95	96	97	98	99	9A	...	...	...	...	...
0B	0C	0D	0E	0F	10	11	12	13	14	...	...	...	...	...
1B	1C	1D	1E	1F	20	21	22	23	24	...	...	...	...	...
2B	2C	2D	2E	2F	30	31	32	33	34	...	...	...	...	...
3B	3C	3D	3E	3F	40	41	42	43	44	...	...	...	...	...
4B	4C	4D	4E	4F	50	51	52	53	54	...	...	...	...	...
5B	5C	5D	5E	5F	60	61	62	63	64	...	...	...	...	...
6B	6C	6D	6E	6F	70	71	72	73	74	...	...	...	...	...
7B	7C	7D	7E	7F	80	81	82	83	84	...	...	...	...	...
8B	8C	8D	8E	8F	90	91	92	93	94	...	...	...	...	...
9B	9C	9D	9E	9F	00	01	02	03	04	...	...	...	...	...
00	01	02	03	04	05	06	07	08	09	...	...	...	...	...
10	11	12	13	14	15	16	17	18	19	...	...	...	...	...
20	21	22	23	24	25	26	27	28	29	...	...	...	...	...
30	31	32	33	34	35	36	37	38	39	...	...	...	...	...
40	41	42	43	44	45	46	47	48	49	...	...	...	...	...
50	51	52	53	54	55	56	57	58	59	...	...	...	...	...
60	61	62	63	64	65	66	67	68	69	...	...	...	...	...
70	71	72	73	74	75	76	77	78	79	...	...	...	...	...
80	81	82	83	84	85	86	87	88	89	...	...	...	...	...
90	91	92	93	94	95	96	97	98	99	...	...	...	...	...
00	01	02	03	04	05	06	07	08	09	...	...	...	...	...
10	11	12	13	14	15	16	17	18	19	...	...	...	...	...
20	21	22	23	24	25	26	27	28	29	...	...	...	...	...
30	31	32	33	34	35	36	37	38	39	...	...	...	...	...
40	41	42	43	44	45	46	47	48	49	...	...	...	...	...
50	51	52	53	54	55	56	57	58	59	...	...	...	...	...
60	61	62	63	64	65	66	67	68	69	...	...	...	...	...
70	71	72	73	74	75	76	77	78	79	...	...	...	...	...
80	81	82	83	84	85	86	87	88	89	...	...	...	...	...
90	91	92	93	94	95	96	97	98	99	...	...	...	...	...
00	01	02	03	04	05	06	07	08	09	...	...	...	...	...
10	11	12	13	14	15	16	17	18	19	...	...	...	...	...
20	21	22	23	24	25	26	27	28	29	...	...	...	...	...
30	31	32	33	34	35	36	37	38	39	...	...	...	...	...
40	41	42	43	44	45	46	47	48	49	...	...	...	...	...
50	51	52	53	54	55	56	57	58	59	...	...	...	...	...
60	61	62	63	64	65	66	67	68	69	...	...	...	...	...
70	71	72	73	74	75	76	77	78	79	...	...	...	...	...
80	81	82	83	84	85	86	87	88	89	...	...	...	...	...
90	91	92	93	94	95	96	97	98	99	...	...	...	...	...
00	01	02	03	04	05	06	07	08	09	...	...	...	...	...
10	11	12	13	14	15	16	17	18	19	...	...	...	...	...
20	21	22	23	24	25	26	27	28	29	...	...	...	...	...
30	31	32	33	34	35	36	37	38	39	...	...	...	...	...
40	41	42	43	44	45	46	47	48	49	...	...	...	...	...
50	51	52	53	54	55	56	57	58	59	...	...	...	...	...
60	61	62	63	64	65	66	67	68	69	...	...	...	...	...
70	71	72	73	74	75	76	77	78	79	...	...	...	...	...
80	81	82	83	84	85	86	87	88	89	...	...	...	...	...
90	91	92	93	94	95	96	97	98	99	...	...	...	...	...
00	01	02	03	04	05	06	07	08	09	...	...	...	...	...
10	11	12	13	14	15	16	17	18	19	...	...	...	...	...
20	21	22	23	24	25	26	27	28	29	...	...	...	...	...
30	31	32	33	34	35	36	37	38	39	...	...	...	...	...
40	41	42	43	44	45	46	47	48	49	...	...	...	...	...
50	51	52	53	54	55	56	57	58	59	...	...	...	...	...
60	61	62	63	64	65	66	67	68	69	...	...	...	...	...
70	71	72	73	74	75	76	77	78	79	...	...	...	...	...
80	81	82	83	84	85	86	87	88	89	...	...	...	...	...
90	91	92	93	94	95	96	97	98	99	...	...	...	...	...
00	01	02	03	04	05	06	07	08	09	...	...	...	...	...
10	11	12	13	14	15	16	17	18	19	...	...	...	...	...
20	21	22	23	24	25	26	27	28	29	...	...	...	...	...
30	31	32	33	34	35	36	37	38	39	...	...	...	...	...
40	41	42	43	44	45	46	47	48	49	...	...	...	...	...
50	51	52	53	54	55	56	57	58	59	...	...	...	...	...
60	61	62	63	64	65	66	67	68	69	...	...	...	...	...
70	71	72	73	74	75	76	77	78	79	...	...	...	...	...
80	81	82	83	84	85	86	87	88	89	...	...	...	...	...
90	91	92	93	94	95	96	97	98	99	...	...	...	...	...
00	01	02	03	04	05	06	07	08	09	...	...	...	...	...
10	11	12	13	14	15	16	17	18	19	...	...	...	...	...
20	21	22	23	24	25	26	27	28	29	...	...	...	...	...
30	31	32	33											

			50	08	AC	DO	00009		MOVL	SRC_DESC, R0	1376
			02	03	A0	91	0000D		CMPB	3(R0), #2	
					09	1A	00011		BGTRU	1\$	
			53		60	3C	00013		MOVZWL	(R0), IN_LEN	
			52	04	A0	DO	00016		MOVL	4(R0), IN_ADDR	
					08	11	0001A		BRB	2\$	
					6A	16	0001C	1\$:	JSB	STR\$ANALYZE_SDESC_R1	
			53		50	DO	0001E		MOVL	R0, R3	
			52		51	DO	00021		MOVL	R1, R2	
			59	04	AC	DO	00024	2\$:	MOVL	DEST_DESC, R9	1382
			51		53	DO	00028		MOVL	IN_LEN, R1	
			50		59	DO	0002B		MOVL	R9, R0	
					00	16	0002E		JSB	STR\$COPY_R_R8	
			56		50	DO	00034		MOVL	R0, RETURN_STATUS	
			10		56	E8	00037		BLBS	RETURN_STATUS, 3\$	1383
04		56	03		00	ED	0003A		CMPZV	#0, #3, RETURN_STATUS, #4	
					09	12	0003F		BNEQ	3\$	
					56	DD	00041		PUSHL	RETURN_STATUS	
		00000000G	00		01	FB	00043		CALLS	#1, LIB\$STOP	
			02	03	A9	91	0004A	3\$:	CMPB	3(R9), #2	1388
					09	1A	0004E		BGTRU	4\$	
			50		69	3C	00050		MOVZWL	(R9), OUT_LEN	
			51	04	A9	DO	00053		MOVL	4(R9), OUT_ADDR	
					05	11	00057		BRB	5\$	
			50		59	DO	00059	4\$:	MOVL	R9, R0	
					6A	16	0005C		JSB	STR\$ANALYZE_SDESC_R1	
FE9B	CF		61		50	2E	0005E	5\$:	MOVTC	OUT_LEN, (OUT_ADDR), #32, P.AAA, OUT_LEN, -	1438
			61		50		00065			(OUT_ADDR)	
			50		56	DO	00067		MOVL	RETURN_STATUS, R0	1440
					04	0006A			RET		1441

: Routine Size: 107 bytes, Routine Base: _STR\$CODE + 0100

```

: 251      1442  1
: 252      1443  1 END
: 253      1444  1
: 254      1445  0 ELUDOM
!End of module

```

PSECT SUMMARY

Name	Bytes	Attributes
_STR\$CODE	363	NOVEC, NOWRT, RD, EXE, SHR, LCL, REL, CON, PIC, ALIGN(2)

Library Statistics

File	----- Symbols -----		Pages Mapped	Processing Time
	Total	Loaded Percent		

