





MATCHKEY  
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- MATCH A STRING AGAINST A KEY

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DECLARATIONS  
MATCH KEY

```
0000 1 .TITLE MATCHKEY - MATCH A STRING AGAINST A KEY
0000 2 .IDENT 'V04-000'
0000 3
0000 4
0000 5 :*****
0000 6 :*
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0000 24 :*
0000 25 :*
0000 26 :*****
0000 27 :
0000 28
0000 29 :++
0000 30 : FACILITY: GENERAL PURPOSE UTILITY SUBROUTINE
0000 31 :
0000 32 : ABSTRACT: MATCH A STRING AGAINST A TABLE OF KEYS
0000 33 :
0000 34 :
0000 35 : ENVIRONMENT: USER MODE/NON-PRIVILEGED CODE
0000 36 :
0000 37 : AUTHOR: W.H.BROWN, CREATION DATE:3-JUN-1977
0000 38 :
0000 39 : MODIFIED BY:
0000 40 :
0000 41 : : VERSION
0000 42 : 01 -
0000 43 :--
```

```
0000 45 .SBTTL DECLARATIONS
0000 46 :
0000 47 : INCLUDE FILES:
0000 48 :
0000 49 :
0000 50 : MACROS:
0000 51 :
0000 52 :
0000 53 : EQUATED SYMBOLS:
0000 54 :
00000004 0000 55 : TABLE = 4
00000008 0000 56 : DESC = 8
0000000C 0000 57 : ADDR = 12
0000 58 :
0000 59 : OWN STORAGE:
0000 60 :
0000 61 : NONE

: ADDRESS OF KEYWORDS
: ADDRESS OF DESCRIPTOR FOR STRING
: ADDRESS TO STORE RESULT
```

```

0000 63 .SBTTL MATCH KEY
0000 64 :++
0000 65 : FUNCTIONAL DESCRIPTION:
0000 66 :
0000 67 : THIS ROUTINE ACCEPTS A LIST OF COUNTED STRINGS
0000 68 : AND A DESCRIPTOR FOR A VARIABLE LENGTH STRING.
0000 69 : AN ATTEMPT IS MADE TO FIND A STRING IN THE LIST
0000 70 : THAT MATCHES THE VARIABLE STRING CHECKING THE
0000 71 : LENGTH OF THE SHORTER STRING. IF A MATCH IS NOT FOUND,
0000 72 : A ZERO IS RETURNED. IF MORE THAN 1 VALUE MATCHES, THE
0000 73 : INDEX TO THE FIRST MATCH IS RETURNED A NEGATIVE NUMBER.
0000 74 : OTHERWISE THE INDEX IN THE TABLE OF STRINGS IS RETURNED,
0000 75 : AS A VALUE STARTING WITH 1.
0000 76 :
0000 77 : CALLING SEQUENCE:
0000 78 :
0000 79 : CALLS #2,LIB$MATCHKEY ; RETURN INDEX IN R1
0000 80 :
0000 81 : INPUT PARAMETERS:
0000 82 :
0000 83 : THE ADDRESS OF THE LIST OF COUNTED STRINGS FOLLOWED BY A 0 BYTE
0000 84 : THE ADDRESS OF A QUADWORD DESCRIPTOR DESCRIBING THE STRING TO MATCH
0000 85 :
0000 86 : IMPLICIT INPUTS:
0000 87 :
0000 88 : NONE
0000 89 :
0000 90 : OUTPUT PARAMETERS:
0000 91 :
0000 92 : R0 IS RETURNED AS THE INDEX TO THE MATCH
0000 93 :
0000 94 : IMPLICIT OUTPUTS:
0000 95 :
0000 96 : NONE
0000 97 :
0000 98 : COMPLETION CODES:
0000 99 :
0000 100 : A ZERO INDICATES NO MATCH, A MINUS NUMBER IS MORE THAN 1 MATCH
0000 101 :
0000 102 : SIDE EFFECTS:
0000 103 :
0000 104 : NONE
0000 105 :
0000 106 :--
0000 107 : .PSECT LIB_CODE EXE, RD, NOWRT
0000 108 :
0000 109 LIB$MATCHKEY::
0000 110 .WORD ^M<R2,R3,R4,R5,R6> ; MATCH KEYWORD
54 08 BC 007C 0000 111 MOVQ @DESCP(AP),R4 ; REGISTERS TO SAVE
56 04 AC D0 0006 112 MOVL TABLE(AP),R6 ; GET DESCRIPTOR FOR THE STRING
; THE INPUT STRINGS
; TRY FOR FIRST MATCH
; SAVE THE INDEX
; BR IF NO MATCH
; TRY FOR AMBIGUOUS MATCH
; NOT AMBIGUOUS
; CHANGE TO NEGATIVE
; GET INDEX
; BSBB 100$
; PUSHL R0
; BEQL 10$
; BSBB 100$
; BEQL 10$
7E 03 13 0012 117 BEQL 10$
; MNEGL (SP)+, -(SP)
01 01 BA 0017 118 MNEGL (SP)+, -(SP)
10$: POPR #^M<R0>

```

		04	0019	120		RET		:
			001A	121				
	50	01	DD 001A	122	100\$:	PUSHL #1		: GET A INITIAL VALUE
		86	9A 001C	123	110\$:	MOVZBL (R6)+,R0		: GET THE LENGTH
		18	13 001F	124		BEQL 130\$		: BR IF END OF STRING
	51	56	D0 0021	125		MOVL R6,R1		: SET ADDRESS
	56	50	C0 0024	126		ADDL R0,R6		: POINT AT NEXT
	54	50	D1 0027	127		CML R0,R4		: SEE WHICH IS BIGGER
		03	15 002A	128		BLEQ 120\$		: BR IF TARGET IS SHORTER
	50	54	D0 002C	129		MOVL R4,R0		: SET INPUT LENGTH
65	61	50	29 002F	130	120\$:	CMPC3 R0,(R1),(R5)		: CHECK FOR MATCH
		06	13 0033	131		BEQL 140\$		: BR IF FOUND A MATCH
		6E	D6 0035	132		INCL (SP)		: COUNT THE ITERATIONS
		E3	11 0037	133		BRB 110\$		: TRY AGAIN
		6E	D4 0039	134	130\$:	CLRL (SP)		: SET ZERO INDEX
		50	8ED0 003B	135	140\$:	POPL R0		: GET THE VALUE
			05 003E	136		RSB		: RETURN WITH CONDITION CODE SET
			003F	137				
			003F	138		.END		

MATCHKEY  
Symbol table

- MATCH A STRING AGAINST A KEY

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[CLIUTL.SRC]MATCHKEY.MAR;1

(3)

ADDR = 0000000C  
DESCP = 00000008  
LIBSMATCHKEY 00000000 RG 01  
TABLE = 00000004

-----  
! Psect synopsis !  
-----

PSECT name	Allocation	PSECT No.	Attributes														
ABS	00000000 ( 0.)	00 ( 0.)	NOPIC USR	CON	ABS	LCL	NOSHR	NOEXE	NORD	NOWRT	NOVEC	BYTE					
LIB_CODE	0000003F ( 63.)	01 ( 1.)	NOPIC USR	CON	REL	LCL	NOSHR	EXE	RD	NOWRT	NOVEC	BYTE					

-----  
! Performance indicators !  
-----

Phase	Page faults	CPU Time	Elapsed Time
Initialization	10	00:00:00.07	00:00:01.50
Command processing	75	00:00:00.86	00:00:04.65
Pass 1	65	00:00:00.48	00:00:02.80
Symbol table sort	0	00:00:00.00	00:00:00.00
Pass 2	49	00:00:00.29	00:00:02.15
Symbol table output	2	00:00:00.01	00:00:00.01
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	205	00:00:01.74	00:00:11.13

The working set limit was 750 pages.  
1705 bytes (4 pages) of virtual memory were used to buffer the intermediate code.  
There were 10 pages of symbol table space allocated to hold 4 non-local and 6 local symbols.  
138 source lines were read in Pass 1, producing 11 object records in Pass 2.  
0 pages of virtual memory were used to define 0 macros.

-----  
! Macro library statistics !  
-----

Macro library name	Macros defined
-\$255\$DUA28:[CLIUTL.OBJ]CLIUTL.MLB;1	0
-\$255\$DUA28:[SYS.OBJ]LIB.MLB;1	0
-\$255\$DUA28:[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\$:MATCHKEY/OBJ=OBJ\$:MATCHKEY MSRC\$:MATCHKEY/UPDATE=(ENHS:MATCHKEY)+EXECMLS/LIB+LIB\$:CLIUTL/LIB

