


```
0000 1 .TITLE MATCHNAME Match General Wild Card Filename Specification
0000 2 .IDENT 'V04-000'
0000 3
0000 4
0000 5 *****
0000 6 *
0000 7 * COPYRIGHT (c) 1978, 1980, 1982, 1984 BY *
0000 8 * DIGITAL EQUIPMENT CORPORATION, MAYNARD, MASSACHUSETTS. *
0000 9 * ALL RIGHTS RESERVED. *
0000 10 *
0000 11 * THIS SOFTWARE IS FURNISHED UNDER A LICENSE AND MAY BE USED AND COPIED *
0000 12 * ONLY IN ACCORDANCE WITH THE TERMS OF SUCH LICENSE AND WITH THE *
0000 13 * INCLUSION OF THE ABOVE COPYRIGHT NOTICE. THIS SOFTWARE OR ANY OTHER *
0000 14 * COPIES THEREOF MAY NOT BE PROVIDED OR OTHERWISE MADE AVAILABLE TO ANY *
0000 15 * OTHER PERSON. NO TITLE TO AND OWNERSHIP OF THE SOFTWARE IS HEREBY *
0000 16 * TRANSFERRED. *
0000 17 *
0000 18 * THE INFORMATION IN THIS SOFTWARE IS SUBJECT TO CHANGE WITHOUT NOTICE *
0000 19 * AND SHOULD NOT BE CONSTRUED AS A COMMITMENT BY DIGITAL EQUIPMENT *
0000 20 * CORPORATION. *
0000 21 *
0000 22 * DIGITAL ASSUMES NO RESPONSIBILITY FOR THE USE OR RELIABILITY OF ITS *
0000 23 * SOFTWARE ON EQUIPMENT WHICH IS NOT SUPPLIED BY DIGITAL. *
0000 24 *
0000 25 *
0000 26 *****
0000 27
0000 28 :++
0000 29
0000 30 : FACILITY: Mtaacp
0000 31
0000 32 : ABSTRACT:
0000 33
0000 34 : This routine performs the general embedded wild card matching
0000 35 : algorithm.
0000 36
0000 37 : ENVIRONMENT:
0000 38
0000 39 : VAX/VMS Operating System
0000 40
0000 41 :--
0000 42
0000 43
0000 44 : AUTHOR: Andrew C. Goldstein, CREATION DATE: 10-Aug-1979 11:36
0000 45
0000 46 : MODIFIED BY:
0000 47
0000 48 : V02-002 DMW0005 David Michael Walp 13-JAN-1981
0000 49 : This was taken from the Files-11 Structure Level 2 ACP. No code
0000 50 : was changed at this time, only comments.
0000 51
0000 52 :**
```

```

0000 54 :++
0000 55 :
0000 56 : Functional Description:
0000 57 :
0000 58 :     This routine performs the general embedded wild card matching
0000 59 :     algorithm.
0000 60 :
0000 61 : Calling Sequence:
0000 62 :     JSB
0000 63 :
0000 64 : Input Parameters:
0000 65 :     R2 = length of candidate string
0000 66 :     R3 = address of candidate string
0000 67 :     R4 = length of pattern string
0000 68 :     R5 = address of pattern string
0000 69 :
0000 70 : Implicit Inputs:
0000 71 :     none
0000 72 :
0000 73 : Output Parameters:
0000 74 :     none
0000 75 :
0000 76 : Implicit Outputs:
0000 77 :     none
0000 78 :
0000 79 : Routines Called:
0000 80 :     none
0000 81 :
0000 82 : Routine Value:
0000 83 :     1 if the strings match
0000 84 :     0 if not
0000 85 :
0000 86 : Side Effects:
0000 87 :     R1-R5 destroyed
0000 88 :
0000 89 :--
0000 90 :
00000000 91 : .PSECT $CODE$,NOWRT,EXE,WORD
0000 92 :
0000 93 FMG$MATCH NAME::
03C0 8F BB 0000 94 PUSHR #^M<R6,R7,R8,R9> : Save registers
50 01 D0 0004 95 MOVL #1,R0 : Assume success
  56 D4 0007 96 CLRL R6 : Clear saved string count
  1C 11 0009 97 BRB 60$ : Dive into the loop
  000B 98 :
51 85 9A 000B 99 10$: MOVZBL (R5)+,R1 : Get next character in pattern string
2A 51 91 000E 100 CMPB R1,#^A'^*' : Check for wild string
  29 13 0011 101 BEQL 80$ : Branch if so
  07 52 F4 0013 102 20$: SOBGEQ R2,50$ : Count an input char, br if not done
  50 D4 0016 103 30$: CLRL R0 : Out of input chars - match fails
03C0 8F BA 0018 104 40$: POPR #^M<R6,R7,R8,R9> : Restore registers
  05 001C 105 RSB :
  001D 106 :
83 51 91 001D 107 50$: CMPB R1,(R3)+ : Check target against input
  05 13 0020 108 BEQL 60$ : Branch if match
25 51 91 0022 109 CMPB R1,#^A'^*' : Check if single wildcard match
  07 12 0025 110 BNEQ 70$ : Branch if no match

```

```

E1 54 F4 0027 111 60$: SOBGEQ R4,10$ ; Pattern string exhausted?
    52 D5 002A 112 ; TSTL R2 ; Input string exhausted?
    EA 13 002C 113 ; BEQL 40$ ; Branch if yes - success
        002E 114 :
        002E 115 : We have detected a mismatch, or we are out of pattern string while there
        002E 116 : is input left. Back up to the last '*', advance a character of the input,
        002E 117 : and try again.
        002E 118 :
    56 D7 002E 119 70$: DECL R6 ; Count a character from saved input
    E4 19 0030 120 ; BLSS 30$ ; Branch if no saved input
    57 D6 0032 121 ; INCL R7 ; Set to try next input character
52 56 7D 0034 122 ; MOVQ R6,R2 ; Restore pointers to backup point
54 58 7D 0037 123 ; MOVQ R8,R4 ; to retry matching with next char
    EB 11 003A 124 ; BRB 60$
        003C 125 :
        003C 126 : We have encountered a * in the pattern string. Save the string pointers
        003C 127 : for backup and retry.
        003C 128 :
    54 D5 003C 129 80$: TSTL R4 ; Pattern string null after "*"
    D8 13 003E 130 ; BEQL 40$ ; "*" at end of pattern matches all.
56 52 7D 0040 131 ; MOVQ R2,R6 ; Save current string pointers
58 54 7D 0043 132 ; MOVQ R4,R8 ; of both strings for backup
    DF 11 0046 133 ; BRB 60$ ; and continue testing
        0048 134
        0048 135
        0048 136
        0048 137
        .END
    
```

AQB_TYPE = 00000005
 FCB_TYPE = 00000000
 FMG\$MATCH_NAME = 00000000 RG 01
 MVL_TYPE = 00000004
 RVT_TYPE = 00000003
 VCB_TYPE = 00000002
 WCB_TYPE = 00000001

 ! Psect synopsis !

PSECT name	Allocation	PSECT No.	Attributes
. ABS .	00000000 (0.)	00 (0.)	NOPIC USR CON ABS LCL NOSHR NOEXE NORD NOWRT NOVEC BYTE
\$CODE\$	00000048 (72.)	01 (1.)	NOPIC USR CON REL LCL NOSHR EXE RD NOWRT NOVEC WORD

 ! Performance indicators !

Phase	Page faults	CPU Time	Elapsed Time
Initialization	41	00:00:00.05	00:00:01.60
Command processing	139	00:00:00.66	00:00:04.65
Pass 1	89	00:00:00.75	00:00:03.06
Symbol table sort	0	00:00:00.00	00:00:00.13
Pass 2	40	00:00:00.52	00:00:02.51
Symbol table output	2	00:00:00.02	00:00:00.02
Psect synopsis output	1	00:00:00.01	00:00:00.01
Cross-reference output	0	00:00:00.00	00:00:00.00
Assembler run totals	315	00:00:02.02	00:00:11.98

The working set limit was 900 pages.
 3025 bytes (6 pages) of virtual memory were used to buffer the intermediate code.
 There were 10 pages of symbol table space allocated to hold 7 non-local and 8 local symbols.
 320 source lines were read in Pass 1, producing 11 object records in Pass 2.
 7 pages of virtual memory were used to define 6 macros.

 ! Macro library statistics !

Macro library name	Macros defined
_\$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\$:MATCHNAME/OBJ=OBJ\$:MATCHNAME MSRC\$:MTADEF1/UPDATE=(ENH\$:MTADEF1)+MSRC\$:MATCHNAME/UPDATE=(ENH\$:MATCHNAME)+EXECMLS/LIB

