

DATE: 15-11-2025 21:24:04 USER: COBOL JOB: MATMUL PAGE: 0000

1412THE

```
4 MATMUL COBOL FILE NAME/TYPE= /COBOL/MATH/MATMUL.COB
5 MATMUL COBOL
6 MATMUL COBOL CREATION DATE/TIME= 15-11-2025 21:24:04
7 MATMUL COBOL
8 MATMUL COBOL FILE= 001 PAGES= 0002 LINES= 000104
9 MATMUL COBOL
10 MATMUL COBOL SYSTEM= LINUX(6.16.8+KALI-AMD64)
11 MATMUL COBOL
12 MATMUL COBOL SYSID= ACID SYSUSER= ACID
13 MATMUL COBOL
14 MATMUL COBOL FORM= SMALL
15 MATMUL COBOL
16 MATMUL COBOL CHAR= FONTMONO
17 MATMUL COBOL
18 MATMUL COBOL PRT1403 VERSION= 1.5.PRE-RELEASE
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21
22     CCCCCCCC 00000000 BBBB BBBB 00000000 LL
23     CCCCCCCCCC 0000000000 BBBB BBBB BBBB 0000000000 LL
24     CC   CC 00    00 BB    BB 00    00 LL
25     CC   00    00 BB    BB 00    00 LL
26     CC   00    00 BBBB BBBB 00    00 LL
27     CC   00    00 BBBB BBBB 00    00 LL
28     CC   00    00 BB    BB 00    00 LL
29     CC   CC 00    00 BB    BB 00    00 LL
30     CCCCCCCCCC 0000000000 BBBB BBBB BBBB 0000000000 LLLLLLLL
31     CCCCCCCC 00000000 BBBB BBBB 00000000 LLLLLLLL
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34	M	M	AAA	TTTTTTTT	M	M	UU	UU	LL	
35	MM	MM	AAAAAA	TTTTTTTT	MM	MM	UU	UU	LL	
36	MMM	MMM	AA AA	TT	MMM	MMM	UU	UU	LL	
37	MMMM	MMMM	AA AA	TT	MMMM	MMMM	UU	UU	LL	
38	MM	MM	AA AA	TT	MM	MM	MM	UU	UU LL	
39	MM	M	MM	AAAAAAAAAA	TT	MM	M	MM	UU	UU LL
40	MM	MM	AAAAAAAAAA	TT	MM	MM	UU	UU	LL	
41	MM	MM	AA AA	TT	MM	MM	UU	UU	LL	
42	MM	MM	AA AA	TT	MM	MM	UUUUUUUUUU	LLLLLLLL	LL	
43	MM	MM	AA AA	TT	MM	MM	UUUUUUUU	LLL	LLL	

46	00000	00000	1
47	0000000	0000000	11
48	00	00	00
	00	00	111
49	00	00	00
50	00	00	00
51	00	00	00
52	00	00	00
53	00	00	00
54	0000000	0000000	111111
55	00000	00000	111111

The image shows a large grid of characters. The top row has the number '58' at its left edge. The bottom row has the number '1' at its left edge. The right edge of the grid has the number '59' at its top. The rest of the grid is filled with the character '*'.

1 000001 IDENTIFICATION DIVISION.
2 000002 PROGRAM-ID. MatrixCalculation.
3
4 000004 ENVIRONMENT DIVISION.
5 000005 DATA DIVISION.
6
7 000007 WORKING-STORAGE SECTION.
8
9 000009 01 M-SIZE PIC 9(4) COMP VALUE 400.
10
11 000011 01 RESULT1 PIC S9(14) COMP VALUE 0.
12 000012 01 RESULT2 PIC S9(14) COMP VALUE 0.
13
14 000014 01 TIME1 COMP-2 VALUE 0.
15 000015 01 TIME2 COMP-2 VALUE 0.
16
17 000017 01 M1.
18 000018 05 M1-ROW OCCURS 400 TIMES.
19 000019 10 M1-ELEMENTS OCCURS 400 TIMES PIC S9(10) COMP.
20
21 000020 01 M2.
22 000021 05 M2-ROW OCCURS 400 TIMES.
23 000022 10 M2-ELEMENTS OCCURS 400 TIMES PIC S9(10) COMP.
24
25 000023 01 M3.
26 000024 05 M3-ROW OCCURS 400 TIMES.
27 000025 10 M3-ELEMENTS OCCURS 400 TIMES PIC S9(10) COMP.
28
29
30
31 000026 01 I PIC S9(10) COMP.
32 000027 01 J PIC S9(10) COMP.
33 000028 01 K PIC S9(10) COMP.
34
35
36 000029 01 START-TIME PIC S9(10) COMP.
37 000030 01 END-TIME PIC S9(10) COMP.
38
39 000031 01 TEMP PIC S9(10) COMP.
40
41 000032 01 RESULT1_TXT PIC 9(14).
42 000033 01 RESULT2_TXT PIC 9(14).
43 000034 01 TIME1_TXT PIC 9(3).9(6).
44 000035 01 TIME2_TXT PIC 9(3).9(6).
45
46 000036 01 PROCEDURE DIVISION.
47
48 000037 * -----
49 000038 ACCEPT START-TIME FROM TIME.
50 000039 MOVE 0 TO RESULT1.
51 000040 PERFORM VARYING I FROM 1 BY 1 UNTIL 100 < I
52 000041 PERFORM VARYING J FROM 1 BY 1 UNTIL 1000000 < J
53 000042 ADD J TO RESULT1
54 000043 END-PERFORM
55 000044 END-PERFORM.
56 000045 ACCEPT END-TIME FROM TIME.
57 000046 COMPUTE TIME1 = (END-TIME - START-TIME) / 100.
58 000047 * -----
59 000048 ACCEPT START-TIME FROM TIME.
60 000049

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1 000061      PERFORM VARYING I FROM 1 BY 1 UNTIL M-SIZE < I
2 000062      PERFORM VARYING J FROM 1 BY 1 UNTIL M-SIZE < J
3 000063          ADD I TO J GIVING M1-ELEMENTS(I, J)
4 000064          ADD I TO J GIVING M2-ELEMENTS(I, J)
5 000065      END-PERFORM
6 000066
7 000067      END-PERFORM.
8 000068
9 000069      PERFORM VARYING I FROM 1 BY 1 UNTIL M-SIZE < I
10 000070      PERFORM VARYING J FROM 1 BY 1 UNTIL M-SIZE < J
11 000071          MOVE 0 TO M3-ELEMENTS(I, J)
12 000072          PERFORM VARYING K FROM 1 BY 1 UNTIL M-SIZE < K
13 000073              MULTIPLY M1-ELEMENTS(I, K) BY M2-ELEMENTS(K, J)
14 000074                  GIVING TEMP
15 000075          ADD TEMP TO M3-ELEMENTS(I, J)
16 000076      END-PERFORM
17 000077      END-PERFORM
18 000078      END-PERFORM.
19 000079
20 000080          MOVE 0 TO RESULT2.
21 000081
22 000082      PERFORM VARYING I FROM 1 BY 1 UNTIL M-SIZE < I
23 000083      PERFORM VARYING J FROM 1 BY 1 UNTIL M-SIZE < J
24 000084          ADD M3-ELEMENTS(I, J) TO RESULT2
25 000085      END-PERFORM
26 000086      END-PERFORM.
27 000087
28 000088          ACCEPT END-TIME FROM TIME.
29 000089          COMPUTE TIME2 = (END-TIME - START-TIME) / 100.
30 000090
31 000091      * -----
32 000092
33 000093          MOVE RESULT1 TO RESULT1_TXT
34 000094          MOVE RESULT2 TO RESULT2_TXT
35 000095          MOVE TIME1 TO TIME1_TXT
36 000096          MOVE TIME2 TO TIME2_TXT
37 000097
38 000098          DISPLAY 'COBOL : Result= ' RESULT1_TXT
39 000099              ', Time= ' TIME1_TXT ' sec'
40 000100              ', Result= ' RESULT2_TXT
41 000101              ', Time= ' TIME2_TXT ' sec'.
42 000102
43 000103      STOP RUN.
44 000104
```