

1											1
2											2
3											3
4	MATMUL	COBOL	FILE NAME/TYPE= /COBOL/MATH/MATMUL.COB								4
5	MATMUL	COBOL									5
6	MATMUL	COBOL	CREATION DATE/TIME= 2025-11-15 22:00:22								6
7	MATMUL	COBOL									7
8	MATMUL	COBOL	FILE= 001 PAGES= 0002 LINES= 000104								8
9	MATMUL	COBOL									9
10	MATMUL	COBOL	SYSTEM= LINUX(6.16.8+KALI-AMD64)								10
11	MATMUL	COBOL									11
12	MATMUL	COBOL	SYSID= ACID SYSUSER= ACID								12
13	MATMUL	COBOL									13
14	MATMUL	COBOL	FORM= SMALL								14
15	MATMUL	COBOL									15
16	MATMUL	COBOL	CHAR= FONTMONO								16
17	MATMUL	COBOL									17
18	MATMUL	COBOL	PRT1403 VERSION= 1.5.PRE-RELEASE								18
19											19
20											20
21											21
22		CCCCCCC	0000000	BBBBBBBBB	0000000	LL					22
23		CCCCCCCCC	000000000	BBBBBBBBBB	000000000	LL					23
24		CC CC	00 00	BB BB	00 00	LL					24
25		CC	00 00	BB BB	00 00	LL					25
26		CC	00 00	BBBBBBBBB	00 00	LL					26
27		CC	00 00	BBBBBBBBB	00 00	LL					27
28		CC	00 00	BB BB	00 00	LL					28
29		CC CC	00 00	BB BB	00 00	LL					29
30		CCCCCCCCC	000000000	BBBBBBBBBB	000000000	LLLLLLLLL					30
31		CCCCCCC	0000000	BBBBBBBBB	0000000	LLLLLLLLL					31
32											32
33											33
34		M M	AAA	TTTTTTTTT	M M	UU UU	LL				34
35		MM MM	AAAAA	TTTTTTTTT	MM MM	UU UU	LL				35
36		MMM MMM	AA AA	TT	MMM MMM	UU UU	LL				36
37		MMMM MMMM	AA AA	TT	MMMM MMMM	UU UU	LL				37
38		MM MMM MM	AA AA	TT	MM MMM MM	UU UU	LL				38
39		MM M MM	AAAAAAAAA	TT	MM M MM	UU UU	LL				39
40		MM	AAAAAAAAA	TT	MM	MM UU	LL				40
41		MM	AA AA	TT	MM	MM UU	LL				41
42		MM	AA AA	TT	MM	MM UUUUUUUUU	LLLLLLLLL				42
43		MM	AA AA	TT	MM	MM UUUUUUU	LLLLLLLLL				43
44											44
45											45
46			00000	00000	1						46
47			0000000	0000000	11						47
48			00 00	00 00	111						48
49			00 00	00 00	11						49
50			00 00	00 00	11						50
51			00 00	00 00	11						51
52			00 00	00 00	11						52
53			00 00	00 00	11						53
54			0000000	0000000	111111						54
55			00000	00000	111111						55
56											56
57											57
58	*****										58
59	*****										59
60	*****										60

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1 000001 IDENTIFICATION DIVISION.
2 000002 PROGRAM-ID. MatrixCalculation.
3 000003
4 000004 ENVIRONMENT DIVISION.
5 000005 DATA DIVISION.
6 000006
7 000007 WORKING-STORAGE SECTION.
8 000008
9 000009 01 M-SIZE PIC 9(4) COMP VALUE 400.
10 000010
11 000011 01 RESULT1 PIC S9(14) COMP VALUE 0.
12 000012 01 RESULT2 PIC S9(14) COMP VALUE 0.
13 000013
14 000014 01 TIME1 COMP-2 VALUE 0.
15 000015 01 TIME2 COMP-2 VALUE 0.
16 000016
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 000020 01 M2.
21 000021 05 M2-ROW OCCURS 400 TIMES.
22 000022 10 M2-ELEMENTS OCCURS 400 TIMES PIC S9(10) COMP.
23 000023 01 M3.
24 000024 05 M3-ROW OCCURS 400 TIMES.
25 000025 10 M3-ELEMENTS OCCURS 400 TIMES PIC S9(10) COMP.
26 000026
27 000027 01 I PIC S9(10) COMP.
28 000028 01 J PIC S9(10) COMP.
29 000029 01 K PIC S9(10) COMP.
30 000030
31 000031 01 START-TIME PIC S9(10) COMP.
32 000032 01 END-TIME PIC S9(10) COMP.
33 000033
34 000034 01 TEMP PIC S9(10) COMP.
35 000035
36 000036 01 RESULT1_TXT PIC 9(14).
37 000037 01 RESULT2_TXT PIC 9(14).
38 000038 01 TIME1_TXT PIC 9(3).9(6).
39 000039 01 TIME2_TXT PIC 9(3).9(6).
40 000040
41 000041 PROCEDURE DIVISION.
42 000042
43 000043 * -----
44 000044
45 000045 ACCEPT START-TIME FROM TIME.
46 000046
47 000047 MOVE 0 TO RESULT1.
48 000048
49 000049 PERFORM VARYING I FROM 1 BY 1 UNTIL 100 < I
50 000050 PERFORM VARYING J FROM 1 BY 1 UNTIL 1000000 < J
51 000051 ADD J TO RESULT1
52 000052 END-PERFORM
53 000053 END-PERFORM.
54 000054
55 000055 ACCEPT END-TIME FROM TIME.
56 000056 COMPUTE TIME1 = (END-TIME - START-TIME) / 100.
57 000057
58 000058 * -----
59 000059
60 000060 ACCEPT START-TIME FROM TIME.
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1 000061
2 000062      PERFORM VARYING I FROM 1 BY 1 UNTIL M-SIZE < I
3 000063          PERFORM VARYING J FROM 1 BY 1 UNTIL M-SIZE < J
4 000064              ADD I TO J GIVING M1-ELEMENTS(I, J)
5 000065              ADD I TO J GIVING M2-ELEMENTS(I, J)
6 000066          END-PERFORM
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
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