

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= 26-02-2025 13:09:49								6	
7	MATMUL	COBOL									7	
8	MATMUL	COBOL	FILE= 001 PAGES= 0002 LINES= 000104								8	
9	MATMUL	COBOL									9	
10	MATMUL	COBOL	SYSTEM= LINUX(6.12.13-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= 1.3								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	LL	38
39		MM	M	MM	AAAAAAAAA	TT	MM	M	MM	UU	LL	39
40		MM		MM	AAAAAAAAA	TT	MM		MM	UU	LL	40
41		MM		MM	AA AA	TT	MM		MM	UU	LL	41
42		MM		MM	AA AA	TT	MM		MM	UUUUUUUUU	LLLLLLLLL	42
43		MM		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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