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```
DATE: 11-15-2025 21:24:05      USER: COBOL      JOB: MATMUL      PAGE: 0000
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1412THE

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1  
2  
3  
4 MATMUL COBOL FILE NAME/TYPE= /COBOL/MATH/MATMUL.COB  
5 MATMUL COBOL  
6 MATMUL COBOL CREATION DATE/TIME= 11-15-2025 21:24:05  
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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19  
20  
21  
22 CCCCCCCC 0000000 BBBBBBBB 0000000 LL  
23 CCCCCCCCCC 000000000 BBBBBBBB 000000000 LL  
24 CC CC 00 00 BB BB 00 00 LL  
25 CC 00 00 BB BB 00 00 LL  
26 CC 00 00 BBBBBBBB 00 00 LL  
27 CC 00 00 BBBBBBBB 00 00 LL  
28 CC 00 00 BB BB 00 00 LL  
29 CC CC 00 00 BB BB 00 00 LL  
30 CCCCCCCCCC 000000000 BBBBBBBB 000000000 LLLLLLLL  
31 CCCCCCCC 0000000 BBBBBBBB 0000000 LLLLLLLL
```

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32  
33  
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 MM AA AA TT MM MM MM UU UU LL  
39 MM M MM AAAAAAAA TT MM M MM UU UU LL  
40 MM MM AAAAAAAA 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 UUUUUUUU LLLLLLLL  
43 MM MM AA AA TT MM MM UUUUUU LLLLLLLL
```

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44  
45  
46 00000 00000 1  
47 0000000 0000000 11  
48 00 00 00 00 111  
49 00 00 00 00 11  
50 00 00 00 00 11  
51 00 00 00 00 11  
52 00 00 00 00 11  
53 00 00 00 00 11  
54 0000000 0000000 111111  
55 00000 00000 111111
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56  
57  
58 *****  
59 *****  
60 *****
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1 000001 IDENTIFICATION DIVISION.  
2 000002 PROGRAM-ID. MatrixCalculation.  
3  
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      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
```