# Benchmarking MAtrix Multiplication Outputs

- **Java benchmark**

```
------------------------------------------------------------------------------------------------ benchmark: 2 tests -------------------------------------------------------------------------------------------------
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Name (time in us)                          Min                  Max                 Mean              StdDev              Median               IQR            Outliers
       OPS            Rounds  Iterations
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-----------------------------------------
test_matrix_multiplication              106.3000 (1.0)       184.0000 (1.0)       155.9900 (1.0)       24.4500 (1.0)       161.8500 (1.0)       10.9001 (1.0)          3;2
 6,410.6678 (1.0)          10          1
test_matrix_multiplication_numpy     11,090.5000 (104.33)   32,900.8000 (178.81)   13,785.6500 (88.38)    6,734.7402 (275.45)   11,768.5000 (72.71)    943.1001 (86.52)       1;1
    72.5392 (0.01)         10          1
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Legend:
  Outliers: 1 Standard Deviation from Mean; 1.5 IQR (InterQuartile Range) from 1st Quartile and 3rd Quartile.
  OPS: Operations Per Second, computed as 1 / Mean
```

- **Python benchmark**

```
Benchmark                          (n)  Mode  Cnt     Score     Error  Units
testBenchmark.Matrix.testMethod     10  avgt   10     0,001 ±   0,001  ms/op
testBenchmark.Matrix.testMethod    100  avgt   10     0,830 ±   0,178  ms/op
testBenchmark.Matrix.testMethod   1000  avgt   10  1708,460 ± 228,352  ms/op
```

- **C benchmark**

```
event syntax error: 'cpu_core/TOPDOWN.SLOTS,metric-id=cpu_core!3TOPDOWN.SLOTS..'
                     \___ Bad event or PMU

Unable to find PMU or event on a PMU of 'cpu_core'

 Performance counter stats for './matrix':

             79,78 msec task-clock                       #    0,970 CPUs utilized
                13      context-switches                 #  162,940 /sec
                 0      cpu-migrations                   #    0,000 /sec
             6.196      page-faults                      #   77,660 K/sec
   <not supported>      cycles
   <not supported>      instructions
   <not supported>      branches
   <not supported>      branch-misses

       0,082291594 seconds time elapsed

       0,022254000 seconds user
       0,045956000 seconds sys
```