The application proposes to calculate the sum of a matrix elements.

The sequential approach will use the java programming language.

The parallel approach will use the C++ programming language and MPI.

Resolving this problem with CUDA and C++.

Operating system: Windows 10

Processor Architecture: Intel Core i7-3537U

RAM Memory: 8 GB

Java Version: 17

IDE: IntelliJ IDEA Ultimate version 2022.2.1

**Experimental results**

Matrix dimension: 5x5

Execution time: 28 ms

Matrix dimension: 20x20

Execution time: 35 ms

Matrix dimension: 80x80

Execution time: 65 ms

Matrix dimension: 160x160

Execution time: 83 ms

Matrix dimension: 320x320

Execution time: 263 ms