**Java**

Size after 5x5, the program did not require the user to set the values for each elements in the matrix

**Addition**

|  |  |  |  |
| --- | --- | --- | --- |
| Size | Language | Time | Function |
| 2 x 2 | Java | 5002 Millisecond | Addition |
| 5 x 5 | Java | 27003 Millisecond | Addition |
| 100 x 100 | Java | 1866 Millisecond | Addition |

**Subtraction**

|  |  |  |  |
| --- | --- | --- | --- |
| Size | Language | Time | Function |
| 2 x 2 | Java | 5231 Millisecond | Subtraction |
| 5 x 5 | Java | 26928 Millisecond | Subtraction |
| 100 x 100 | Java | 1703 Millisecond | Subtraction |

**Multiplication**

|  |  |  |  |
| --- | --- | --- | --- |
| Size | Language | Time | Function |
| 2 x 2 | Java | 4980 Millisecond | Multiplication |
| 5 x 5 | Java | 22909 Millisecond | Multiplication |
| 100 x 100 | Java | 2069 Millisecond | Multiplication |

**C++**

**Addition**

|  |  |  |  |
| --- | --- | --- | --- |
| Size | Language | Time | Function |
| 2 x 2 | Java | 4502 Millisecond | Addition |
| 5 x 5 | Java | 26904 Millisecond | Addition |
| 100 x 100 | Java | 1602 Millisecond | Addition |

**Subtraction**

|  |  |  |  |
| --- | --- | --- | --- |
| Size | Language | Time | Function |
| 2 x 2 | Java | 4318 Millisecond | Subtraction |
| 5 x 5 | Java | 22625 Millisecond | Subtraction |
| 100 x 100 | Java | 1703 Millisecond | Subtraction |

**Multiplication**

|  |  |  |  |
| --- | --- | --- | --- |
| Size | Language | Time | Function |
| 2 x 2 | Java | 2668 Millisecond | Multiplication |
| 5 x 5 | Java | 22011 Millisecond | Multiplication |
| 100 x 100 | Java | 2069 Millisecond | Multiplication |

**Part Two with pointers)**

**Addition**

|  |  |  |  |
| --- | --- | --- | --- |
| Size | Language | Time | Function |
| 2 x 2 | Java | 4392 Millisecond | Addition |
| 5 x 5 | Java | 24204 Millisecond | Addition |
| 100 x 100 | Java | 1429 Millisecond | Addition |

**Subtraction**

|  |  |  |  |
| --- | --- | --- | --- |
| Size | Language | Time | Function |
| 2 x 2 | Java | 4290 Millisecond | Subtraction |
| 5 x 5 | Java | 21225 Millisecond | Subtraction |
| 100 x 100 | Java | 1523 Millisecond | Subtraction |

**Multiplication**

|  |  |  |  |
| --- | --- | --- | --- |
| Size | Language | Time | Function |
| 2 x 2 | Java | 4420 Millisecond | Multiplication |
| 5 x 5 | Java | 22021 Millisecond | Multiplication |
| 100 x 100 | Java | 2291 Millisecond | Multiplication |

**Part Three with ADT)**

**Addition**

|  |  |  |  |
| --- | --- | --- | --- |
| Size | Language | Time | Function |
| 2 x 2 | Java | 4328 Millisecond | Addition |
| 5 x 5 | Java | 25304 Millisecond | Addition |
| 100 x 100 | Java | 1422 Millisecond | Addition |

**Subtraction**

|  |  |  |  |
| --- | --- | --- | --- |
| Size | Language | Time | Function |
| 2 x 2 | Java | 4918 Millisecond | Subtraction |
| 5 x 5 | Java | 24375 Millisecond | Subtraction |
| 100 x 100 | Java | 1293 Millisecond | Subtraction |

**Multiplication**

|  |  |  |  |
| --- | --- | --- | --- |
| Size | Language | Time | Function |
| 2 x 2 | Java | 2428 Millisecond | Multiplication |
| 5 x 5 | Java | 25921 Millisecond | Multiplication |
| 100 x 100 | Java | 2942 Millisecond | Multiplication |