

Práctica 3

Multiplicación de matrices

De forma distribuida

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Descripción

- Se deberá subir a la plataforma un archivo ZIP que contenga el código fuente del programa desarrollado
- Un documento PDF con la captura de pantalla de la compilación y ejecución del programa. El archivo PDF deberá incluir una descripción de cada captura de pantalla.

Capturas

Compilación del programa con el archivo Makefile:

```
distribuidos/Joel/Practicas/03_Matrices_distribuido on ʘ Joel [!?]
→ make clean
rm -f *.class

distribuidos/Joel/Practicas/03_Matrices_distribuido on ʘ Joel [!?]
→ make
javac ConsoleColors.java
javac MatrixMultiplication.java

distribuidos/Joel/Practicas/03_Matrices_distribuido on ʘ Joel [!?]
→ █
```

Ejecución simultánea en una sola terminal con un script en bash que ejecuta los 5 nodos en segundo plano, N = 4:

```
distribuidos/Joel/Practicas/03_Matrices_distribuido on ʘ Joel [!?]
→ make run4
java MatrixMultiplication 0 4 5 \
java MatrixMultiplication 1 5 \
java MatrixMultiplication 2 5 \
java MatrixMultiplication 3 5 \
java MatrixMultiplication 4
Trying connecting to localhost at 30000
Trying connecting to localhost at 30000
Trying connecting to localhost at 30000Trying connecting to localhost at 30000

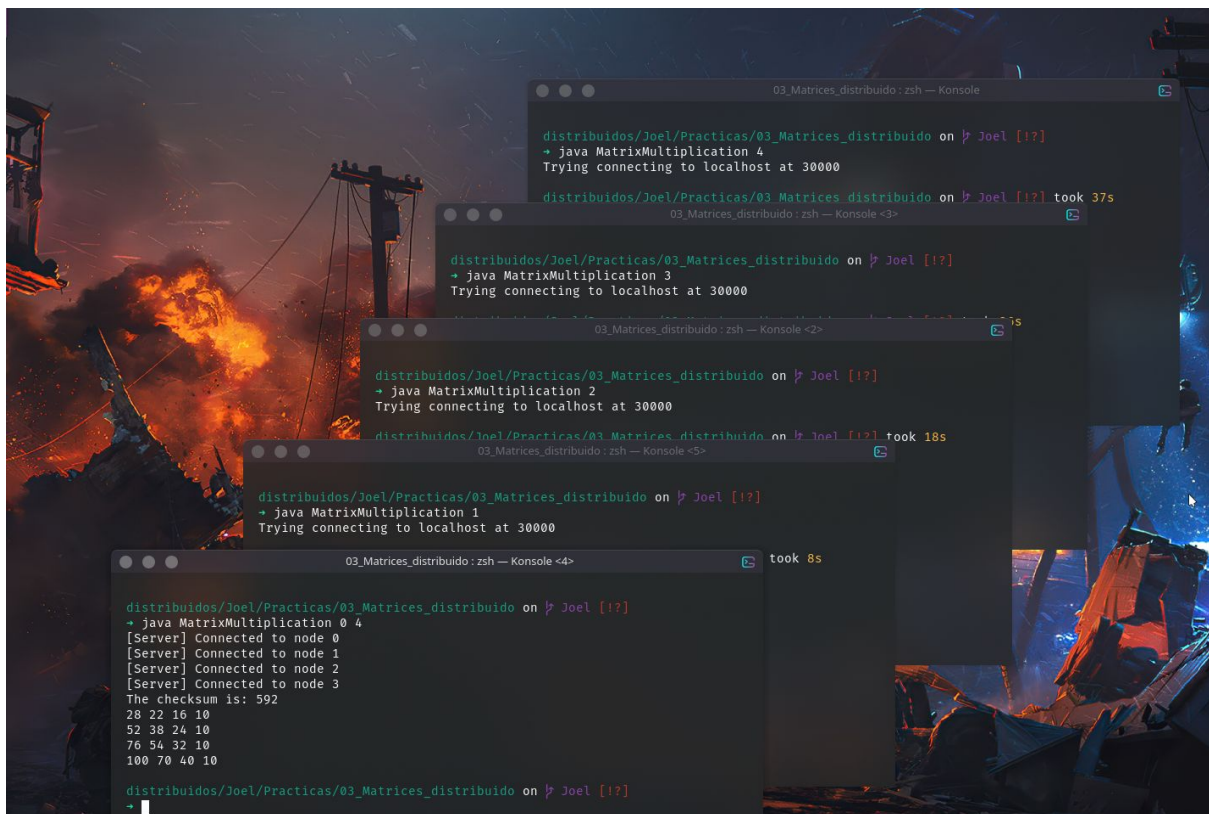
[Server] Connected to node 0
[Server] Connected to node 2
[Server] Connected to node 1
[Server] Connected to node 3
The checksum is: 592
28 22 16 10
52 38 24 10
76 54 32 10
100 70 40 10

distribuidos/Joel/Practicas/03_Matrices_distribuido on ʘ Joel [!?]
→ █
```

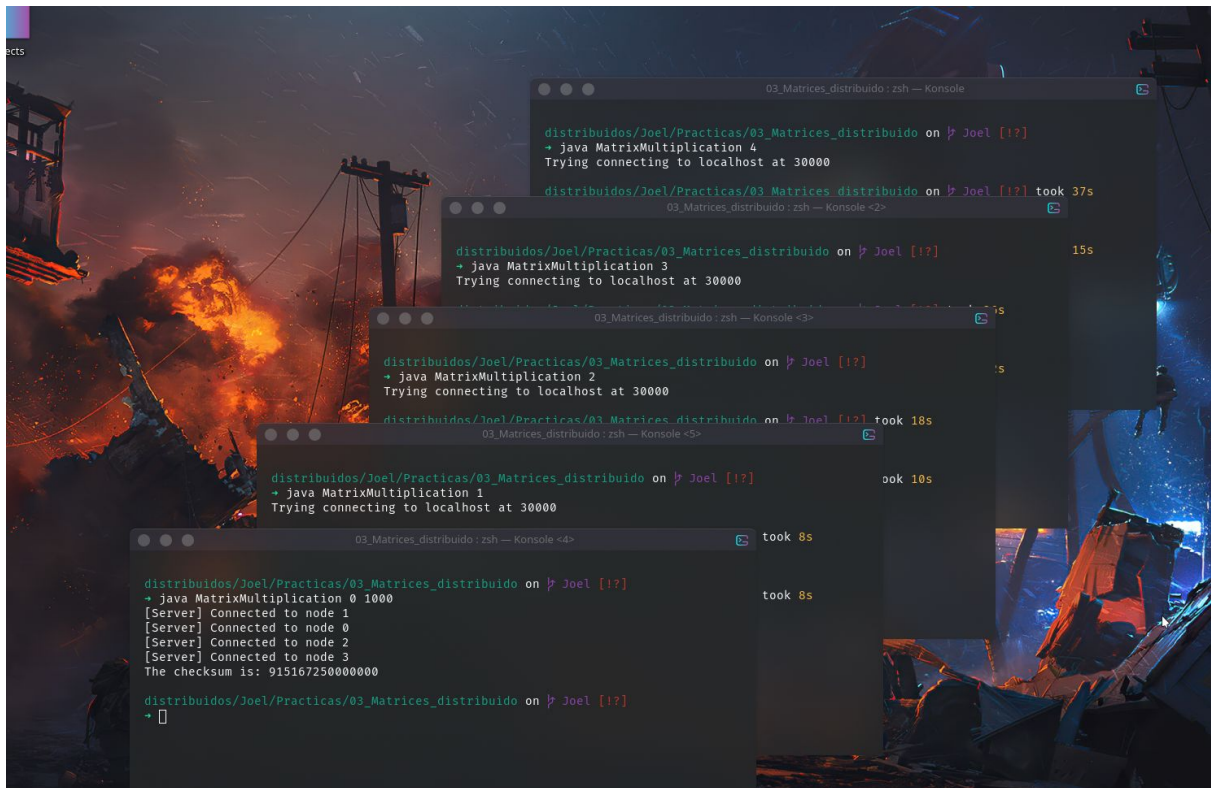
Ejecución simultánea en una sola terminal con un script en bash que ejecuta los 5 nodos en segundo plano, $N = 1000$

```
distribuidos/Joel/Practicas/03_Matrices_distribuido on  Joel [!?]
→ make run1000
java MatrixMultiplication 0 1000 & \
java MatrixMultiplication 1 & \
java MatrixMultiplication 2 & \
java MatrixMultiplication 3 & \
java MatrixMultiplication 4 & \
wait
Trying connecting to localhost at 30000
Trying connecting to localhost at 30000
Trying connecting to localhost at 30000
Trying connecting to localhost at 30000
[Server] Connected to node 0
[Server] Connected to node 1
[Server] Connected to node 2
[Server] Connected to node 3
The checksum is: 915167250000000
distribuidos/Joel/Practicas/03_Matrices_distribuido on  Joel [!?]
→
```

Ejecución del programa en 5 terminales distintas ($N = 4$):



Ejecución del programa en 5 terminales distintas (N = 1000):



```
distribuidos/Joel/Practicas/03_Matrices_distribuido on p Joel [!?]
+ java MatrixMultiplication 4
Trying connecting to localhost at 30000
distribuidos/Joel/Practicas/03_Matrices_distribuido on p Joel [!?] took 37s

distribuidos/Joel/Practicas/03_Matrices_distribuido on p Joel [!?]
+ java MatrixMultiplication 3
Trying connecting to localhost at 30000
distribuidos/Joel/Practicas/03_Matrices_distribuido on p Joel [!?] took 18s

distribuidos/Joel/Practicas/03_Matrices_distribuido on p Joel [!?]
+ java MatrixMultiplication 2
Trying connecting to localhost at 30000
distribuidos/Joel/Practicas/03_Matrices_distribuido on p Joel [!?] took 18s

distribuidos/Joel/Practicas/03_Matrices_distribuido on p Joel [!?]
+ java MatrixMultiplication 1
Trying connecting to localhost at 30000
distribuidos/Joel/Practicas/03_Matrices_distribuido on p Joel [!?] took 8s

distribuidos/Joel/Practicas/03_Matrices_distribuido on p Joel [!?]
+ java MatrixMultiplication 0 1000
[Server] Connected to node 1
[Server] Connected to node 0
[Server] Connected to node 2
[Server] Connected to node 3
The checksum is: 9151672500000000
distribuidos/Joel/Practicas/03_Matrices_distribuido on p Joel [!?]
+ []
took 8s
```