

LAB 02: CONCORRÊNCIA E PARALELISMO (11158)

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Aims:

To learn the fundamentals behind developing algorithms/programs that make use of **parallel** programming and **concurrency** techniques

Labs:

Experiment with **technologies** and **frameworks** that allow us to build parallel programs

Intended outcomes:

1. To be able to **analyse** and **identify** situations in which programs could benefit from parallelism and concurrency
2. To be able to **scientifically reason** about how parallelism has impacted performance

- ◇ We got to know `git` and `GitHub`
- ◇ We ran a `Monte Carlo` simulation to estimate the value of π in Java
- ◇ We experimented with running the monte carlo simulation in parallel using threads
- ◇ Assignment PDF:
<https://github.com/MEI-CP/lab-assignments/>



- ◇ We will tackle the same problem but using C as the programming language.
- ◇ Use `pthread`s to instantiate parallelism
- ◇ Try to `reason` about your `results`

Why are they like this?
- ◇ Assignment PDF:
<https://github.com/MEI-CP/lab-assignments/>



<https://aulas.alxdavids.xyz/pergunta/qa0308a>



<https://aulas.alxdavids.xyz/pergunta/q82cc5e>



<https://aulas.alxdavids.xyz/pergunta/qce9c73>



Don't worry if you didn't reach a complete solution

Next week we will be working on the same problem but using OpenMP

A framework that can parallelise loops in different languages

Remember: My office hours are 14:00-16:30 on Tuesdays (P2:17)

See you next week!