LAB 01: CONCORRÊNCIA E PARALELISMO (11158)

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7th March, 2023

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I'm Alex, a Professor Auxiliar in the department since February 2023

I'm from the United Kingdom originally

Previously, I worked as a cryptography researcher in the technology industry

I do research in the area of developing practical Internet protocols with privacy-preserving properties

INTRODUCTION TO ME

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

- For ∼eight[1] weeks, you will be given an assignment on a new theme to complete
  - The assignments are **not graded**, and are intended only to develop your understanding
- In the remaining weeks, you will be working on a **graded** project to complete
  - The project task will use the same principles and methods that will be used in completing each of the assignments
- Every week, I will be here to help with questions, problems, and anything else

[1] Exact number may change.

STRUCTURE OF LABS

https://aulas.alxdavids.xyz/pergunta/qfcc375

A QUICK QUESTION...

To run a Monte Carlo simulation to estimate the value of π

- Assignment PDF: https://github.com/MEI-CP/lab-assignments/
- The assignment will first introduce you to using `git` and `GitHub`
- After that, you will proceed with the main task

Remember: **git** and **GitHub** are your friends.

TODAY'S LAB TASK

After you first download the source code for the assignment:

- `./gradlew build` (builds dependencies etc.)
- `./gradlew check` (checks code for errors)
- `./gradlew test` (runs unit tests)

https://aulas.alxdavids.xyz/pergunta/q440e4e

https://aulas.alxdavids.xyz/pergunta/qbc4850

FINAL PROGRESS CHECK

https://aulas.alxdavids.xyz/pergunta/q68cedd

FEEDBACK

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

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

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

See you next week!