

# LAB 06: CONCORRÊNCIA E PARALELISMO (11158)

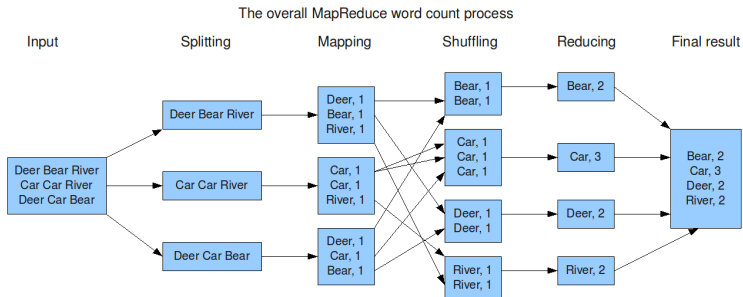
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11th April, 2023

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- ◇ Various mechanisms for parallelising programmes: Java, C, C++, OpenMP
- ◇ Various problems: Monte Carlo simulations, Game of Life, N-body problem
- ◇ Visualisation of results: plotting execution times, assessing speed-ups
- ◇ Performance profiling tools: analyse which parts of programmes are CPU expensive

## We are moving on to MapReduce



A **programming model** for processing and generating big data sets with a parallel, distributed algorithm on a cluster.

- ◇ Use jupyterlab to complete MapReduce exercises

- ▶ Word frequency counts
- ▶ Web log analysis

Local web application for running applications as isolated code segments



- ◇ Assignment PDF:

<https://github.com/MEI-CP/lab-assignments/>

- ◇ Key tasks:

- ▶ Install jupyterlab
- ▶ Work on MapReduce exercises using local Hadoop cluster

<https://aulas.alxdavids.xyz/pergunta/q8a8a14>



**Key takeaways:** Develop understanding of MapReduce, and how to use it to solve different tasks.

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

**See you next week!**