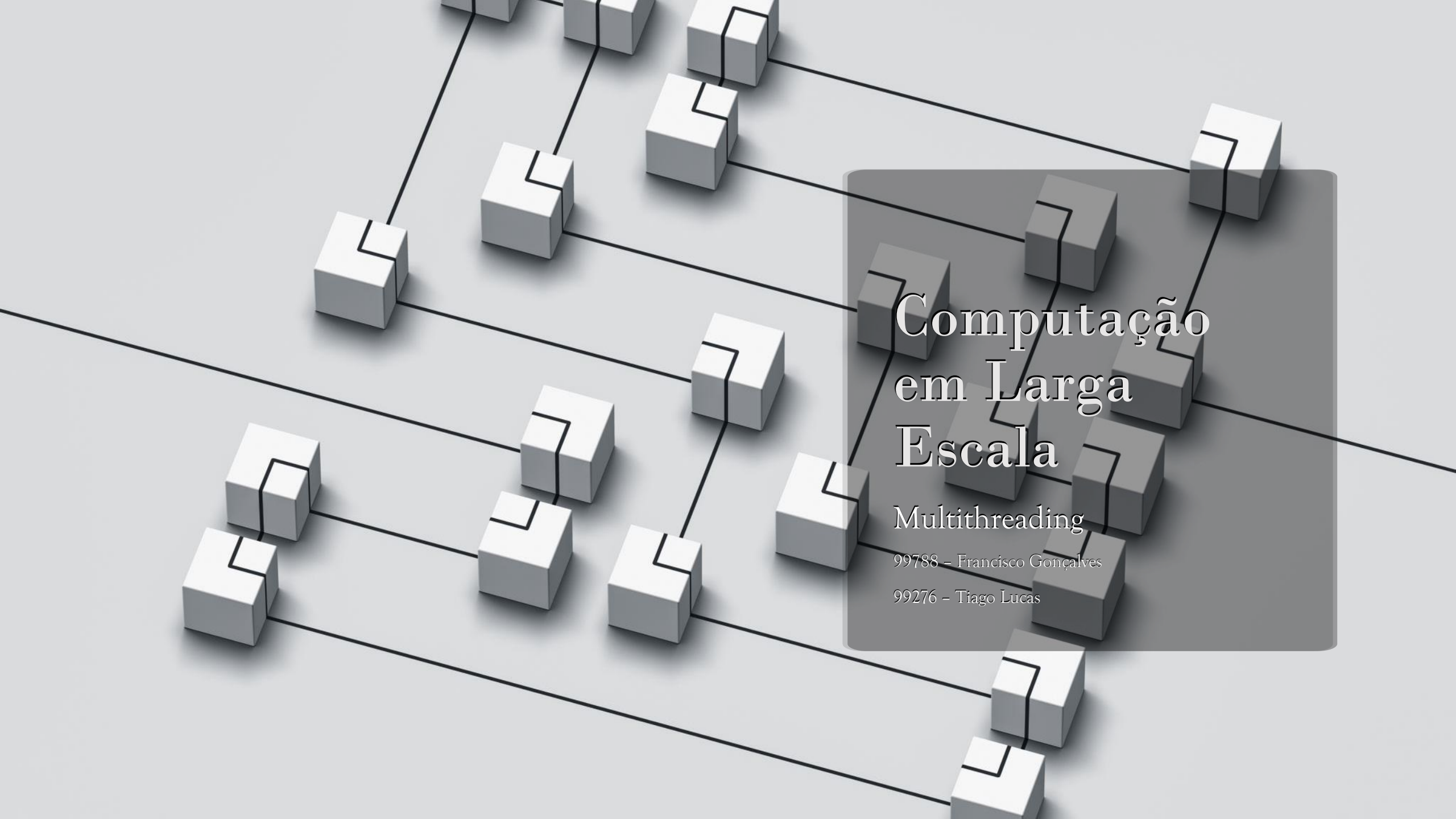

Computação em Larga Escala

Multithreading

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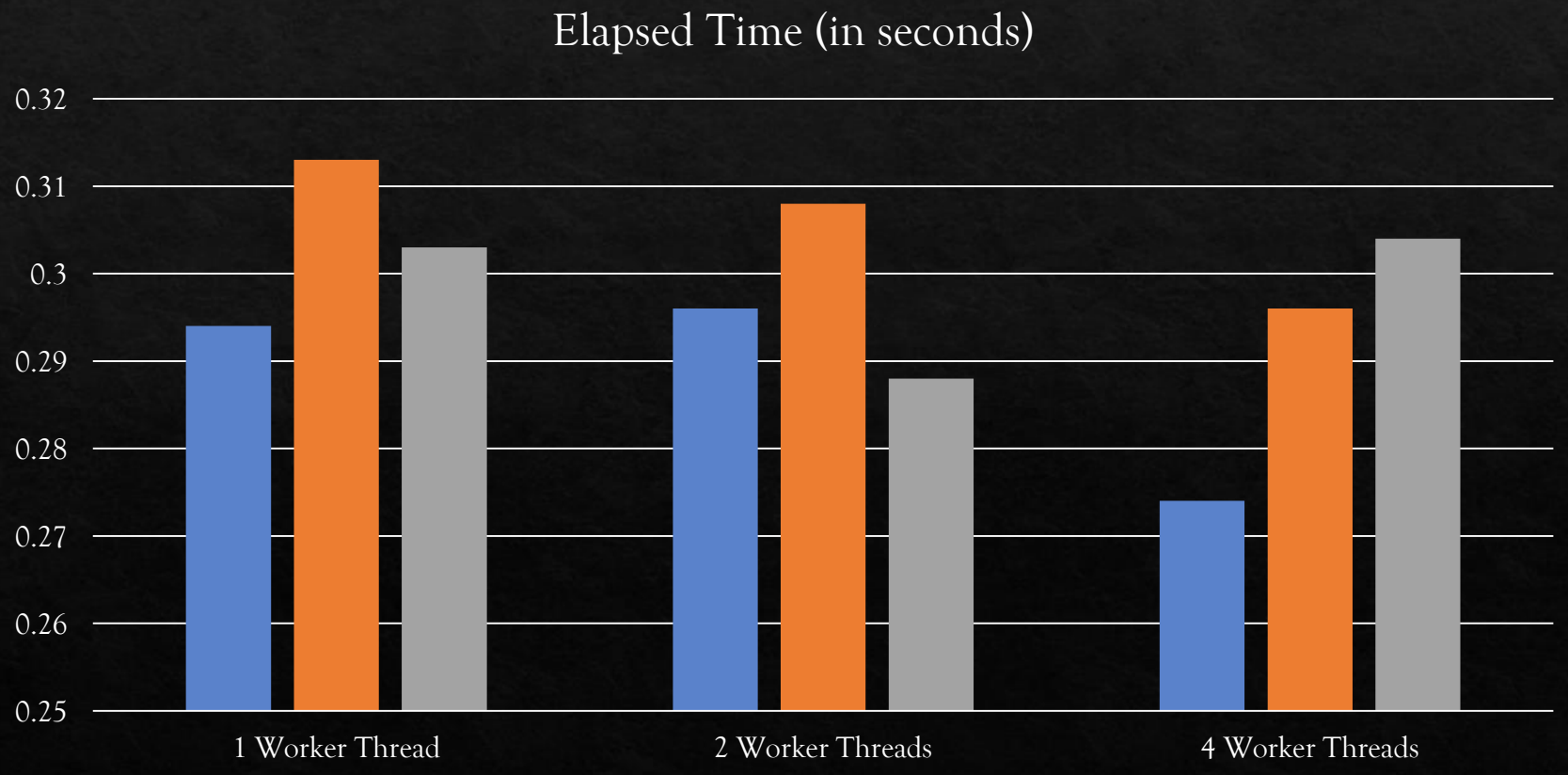
General Problem 1

- In this problem, we are presented with a list of files and should iterate over the data to count the number of vowels per word, categorized by the word length.

- The function that does this is called “process”.

General Problem 1

- The performance, using the target files provided, is as follows:



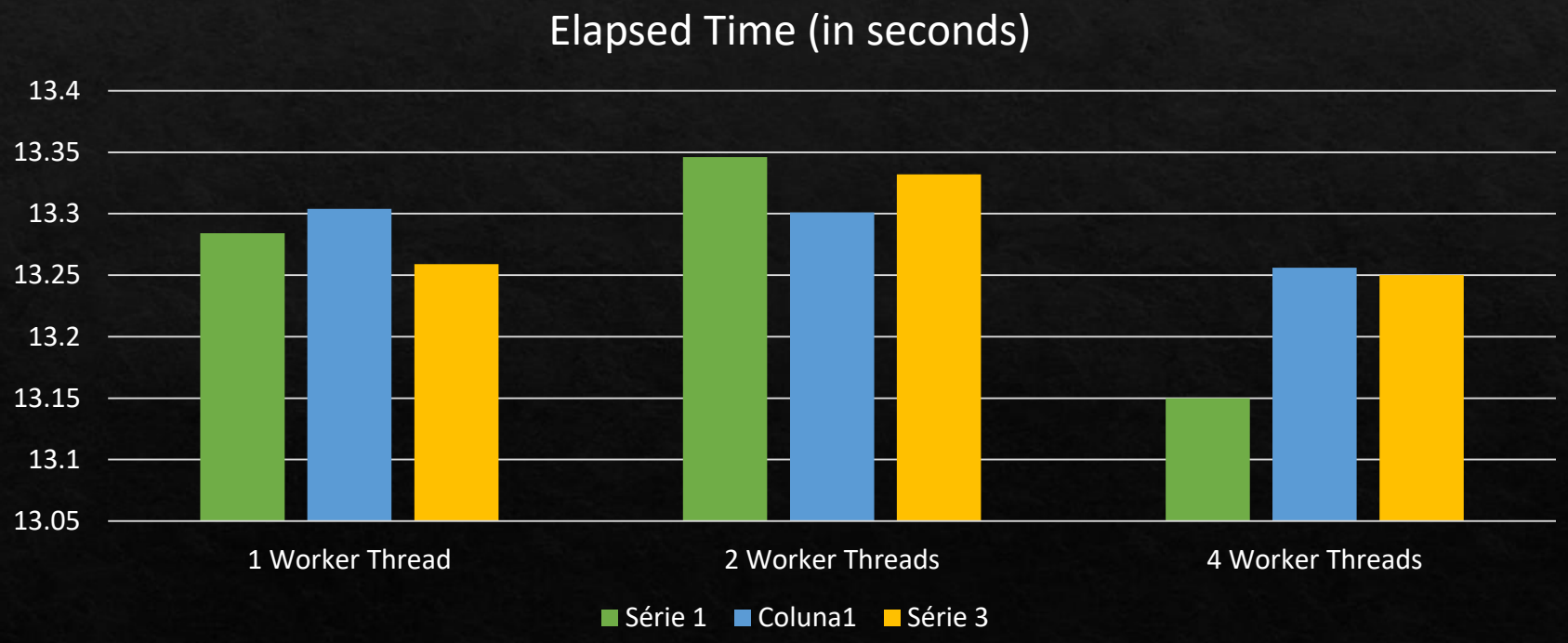
General Problem 2

- In this problem, we are presented with a list of files containing signals. The goal is to retrieve the signals, pair them and calculate the circular cross-correlation of the pair. This result shall be compared to the ones saved in the same file and the diferences pointed out.

- The function that produces the results is called “circularCrossCorrelation” and the one that finds diferences is called “printResults”.

General Problem 2

- The performance, using the biggest target file provided, is as follows:



Conclusions

- The use of multithreading may not always be beneficial. Of course, on the flip side, some jobs gain a lot when it is well implemented.

- There should be a previous analysis, accounting the expected processing times and the time lost in transmission of data, to evaluate the use of multithreading.