Introduction into Big Data analytics

Assignment 2

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Task 1 Given a 2D matrix (or list of lists), count how many numbers are present in a given range.

Task 2 Download as many books as possible from the Gutenberg project and:

- count the words in all books,
- compute a histogram of the words.

Task 3 Compute exact digits of π using the Bailey-Borwein-Plouffe algorithm.

Task 4 Calculate the product of two random matrices

All programs should follow the MapReduce model. Use `multiprocessing` module in Python to implement its simple single-server version. Run the programs in both the serialized and parallel manner and compare the execution times.