
Solution for Project 4

HPC Lab — Submission Instructions
(Please, notice that following instructions are mandatory:
submissions that don't comply with, won't be considered)

- Assignments must be submitted to iCorsi (i.e. in electronic format).
- Provide sources (e.g. C/C++ files, Matlab). If you are using libraries, please add them in the file. Sources must be organized in directories called:
Project_number_lastname_firstname
and the file must be called:
project_number_lastname_firstname.zip
project_number_lastname_firstname.pdf
- The TAs will grade your project by reviewing your project write-up, and looking at the implementation you attempted, and benchmarking your code's performance.
- You are allowed to discuss all questions with anyone you like; however: (i) your submission must list anyone you discussed problems with and (ii) you must write up your submission independently.

1. Task: Ring maximum using MPI [10 Points]
2. Task: Ghost cells exchange between neighboring processes [15 Points]
3. Task: Parallelizing the Mandelbrot set using MPI [20 Points]
4. Task: Parallel matrix-vector multiplication and the power method [40 Points]
5. Task: Quality of the Report [15 Points]