

# Notes on the project

## Notebooks

Jupyter notebooks can be found in the `Numerical work` folder. They use the simulation implementation files to execute simulations and answer questions.

### Task notebooks

- 001-notebook-task1
- 002-notebook-task2
- 003-notebook-task3
- 004-notebook-task4

### Simulation related

- 012-notebook-benchmark

## Markdown

Markdown reports are available in the numerical work. They are used when no computations are required.

- 010-Technical-Report
- 011-writeup\_better\_implementation

## Reports

Reports can be found the PDF format in the `PDF reports` folder. Additionally, HTML versions can be found in `Numerical work/HTML reports`. Notebooks can also be found and ran directly in `Numerical Work`.

Markdown files can be found in `HTML reports`.

`graphs` folder are identical and contain image ressources used in markdown inside of the notebook of task 2.

## Python files

Multiple python files can be found in `Numerical Work` .

## **Simulation related**

- task2and3 : Single-threaded version of the simulation used in task 2 and 3.
- task2\_parallel : Parallel version of the simulation used in task 2 and 3.
- task4\_parallel : Parallel version of the simulation used in task 4.

## **Other files**

- cluster : Sandbox file, code version used on the cluster. was modified multiple time.
- video\_converter : can be used to convert hdf5 data from simulation to mp4 videos.
- test : self explanatory

## **Saved data format.**

Saved data are stored in hdf5 files using the h5 extension.