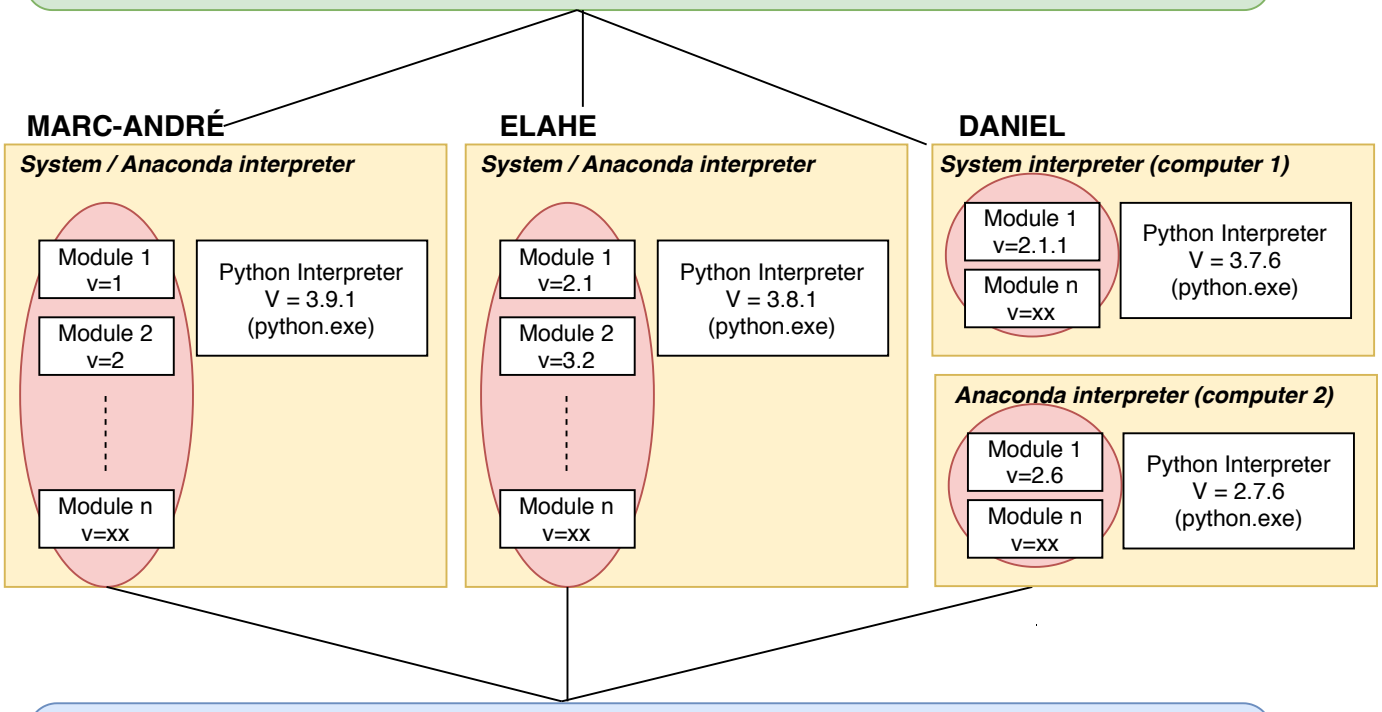
Marc, Elahe and Daniel work on a project. They all need to have a Pyton Interpreter and the necessary modules installed (e.g. numpy, scipy, matplotlib...) So, they all install them, using anaconda or installing them manually. Elahe just installed anaconda, which means she has all the new packages and modules, but the project was founded 2 years ago, when the version of the packages were different... Daniel modules version are all over the place, because he has old, new, future projects, all on different computers, so no version is neither recent nor old...So, we have a situation where:



- Python interpreter version are different (not so bad if V > 3.6)
- module versions are different (can be really bad if version have major differences)
- You can only have one version of the module installed at the time.
- You will have the same version of the module for ALL your projects on YOUR computer.
- You project robustness is dependent of : the time you installed anaconda, your computer setting...

BAD

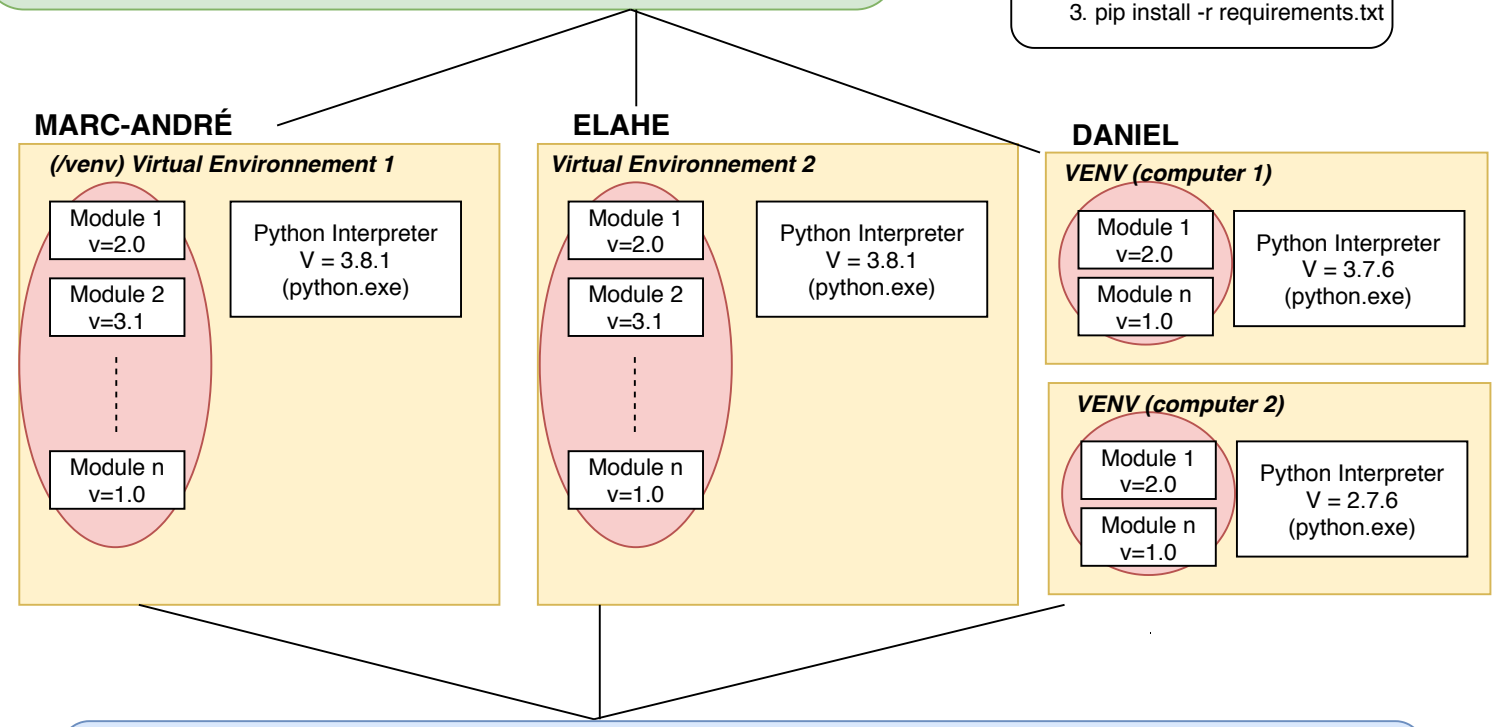
Marc, Elahe and Daniel all work on a same project. They all have numerous packages and different computer. In order to be sure they all have the version for ALL the modules and packages, they use VENV (virtual environnements). They share a common text file ***requirements.txt***. In this file, all the package versions are specified. When they clone the project, they have to create the VENV and install the packages inside the venv. It is done with 6 very *simple commands.*

under Windows

1. python -m venv myvenv
2. myvenv\Scripts\activate
3. pip install -r requirements.txt

under MacOS

1. python -m venv myvenv
2. source myvenv/bin/activate
3. pip install -r requirements.txt



- Python interpreter version are different (not so bad if V > 3.6)
- module version are ALL the same on different computers!
- Impossible to have module and packages version problems
- Someone wants to join the project, you 1 file to send them (requirements.txt)
- You can install multiple versions of the module in differents VENV! (perfect if you work on 10 projects on the same computer)

GOOD