



CEMES



FemtoUP 2021 Install Party Sébastien Weber



Setting up a python environment

On your computer :

py27env



Environment related to python 2.7 old packages

py35env



- Environment related to python 3.5
- For a specific use

py38env



- Environment related to python 3.9
- For latest features testing

Various python installed :

- Some are system wide
- Located within programs (e.g. Inkscape...)
- Some versions required for specific programs (v2.7 for old ones, 32bits version, specific packages not compatible...)

Solution : using an environment manager

Using conda as environment manager

py38env



- Environment related to python 3.9
- For latest features testing
- Package1
- Package2
- ...

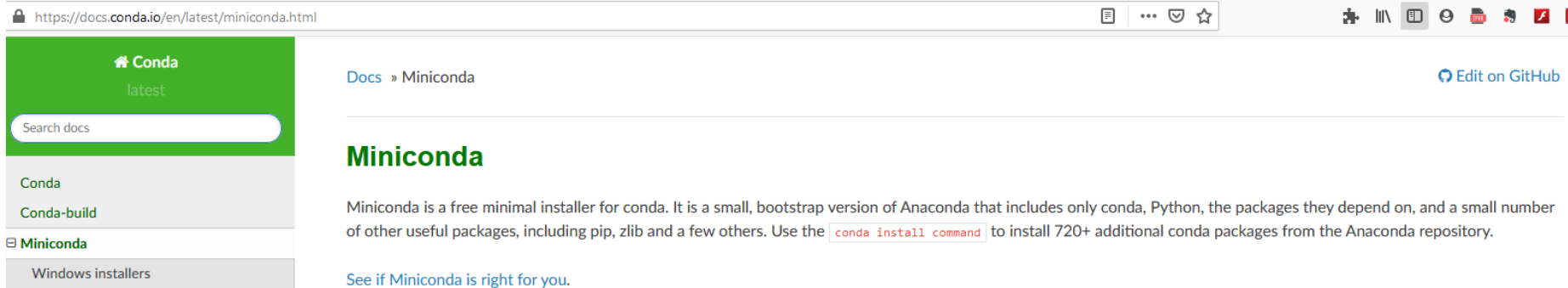
Managing environment (conda or venv):

- One python version
- Given packages

Managing packages (conda or pip):

- Specific packages on given servers
- Conda server using conda
- PyPi server using pip

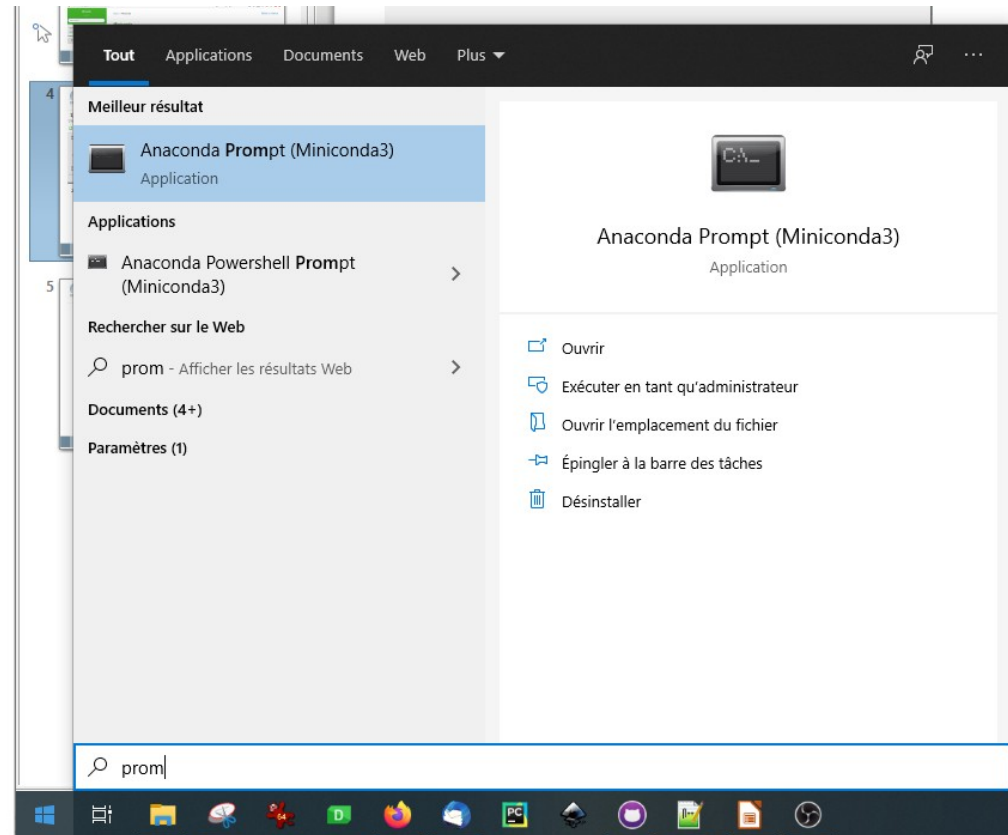
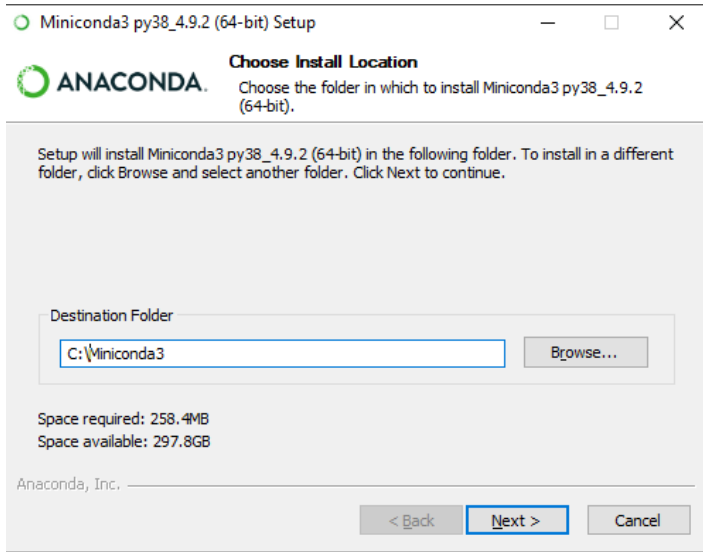
Lightweight conda : Miniconda



The screenshot shows the Miniconda documentation page in a web browser. The address bar displays <https://docs.conda.io/en/latest/miniconda.html>. The page has a green sidebar on the left with the 'Conda' logo and a search bar. The main content area has a breadcrumb 'Docs » Miniconda' and a link to 'Edit on GitHub'. The title 'Miniconda' is in green. The text describes Miniconda as a free minimal installer for conda, a small bootstrap version of Anaconda. It mentions that it includes conda, Python, and their dependencies, along with a small number of other useful packages like zlib. It provides the command `conda install command` to install 720+ additional conda packages from the Anaconda repository. A link 'See if Miniconda is right for you.' is at the bottom.

Installation using Miniconda

1) Installing Miniconda (on root folder for ease)



2) Starting the Command Prompt

Creating and using environment

In the anaconda prompt

- Create a new environment

```
(base) C:\Users\weber>conda create -n femtoup python=3.8.5
```

- Activate it



```
(base) C:\Users\weber>conda activate femtoup
```

```
(femtoup) C:\Users\weber>
```

- Install packages

One should install :

- Spyder (using conda)
- Jupyterlab (using pip)
- Pymodaq (using pip)






```
(femtoup) C:\Users\weber>conda install spyder
```

```
(femtoup) C:\Users\weber>pip install jupyterlab
```


Environment file


 [Ecole-Femto-2021 / installation](https://github.com/Ecole-Femto-2021/installation)

<https://github.com/Ecole-Femto-2021/installation/>

 Code  Issues  Pull requests  Actions  Projects

 main  [installation](#) / [env_install.yml](#)

 [seb5g](#) Update env_install.yml

 1 contributor

10 lines (9 sloc) | 126 Bytes

```
1 name: femtoupfile
2 dependencies:
3   - python=3.8
4   - pip
5   - numpy==1.9.3
6   - spyder
7
8   - pip:
9     - pymodaq
10    - jupyterlab
```

Environment name

Packages installed using conda server : « conda install mypackage »

Packages installed using pip server : « pip install mypackage »

```
(base) C:\Users\weber>conda env create -f env_install.yml
```

Updating the Environment

If for some reason, the environment file is modified, you'll need to download it again and update the environment using :

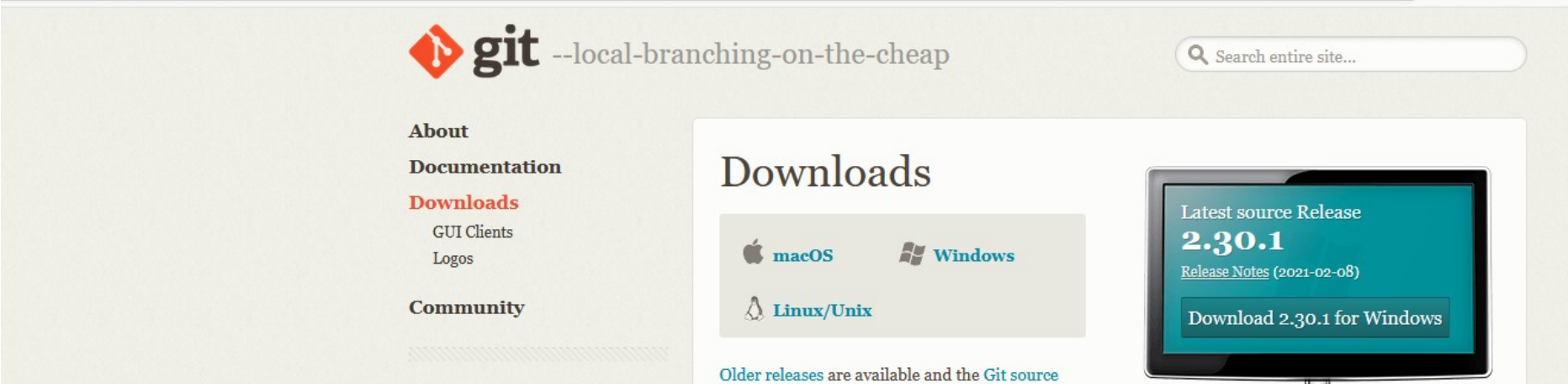
```
(femtoupfile) C:\Users>conda env update --prefix ./env --file env_install.yml --prune
```


Now is your turn!



Other required software: Git

https://git-scm.com/downloads



Required to get last development packages for the practicals

(Mac and Linux users may already have it on their computer!)
To check this enter « `git --version` » on your command line

```
(base) C:\Users\weber\Labo\Programmes Python\Git_others\FemtoUP2021\installation>git --version
git version 2.26.0.windows.1
```