

Oemof
Workshop Week

Setup of oemof

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Session 1

RLI, 16.09.2019

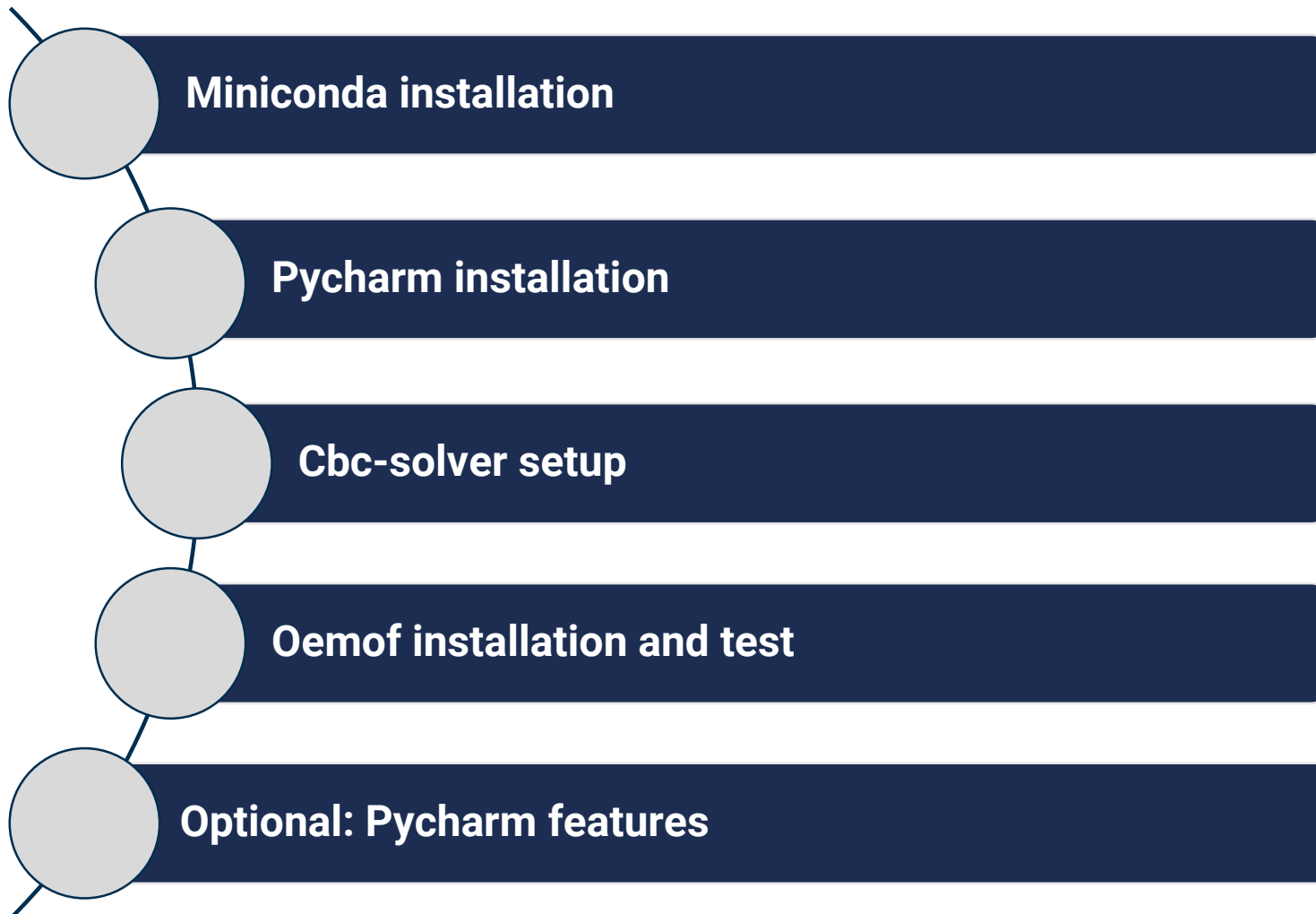


oemof
['ø:moɪ]

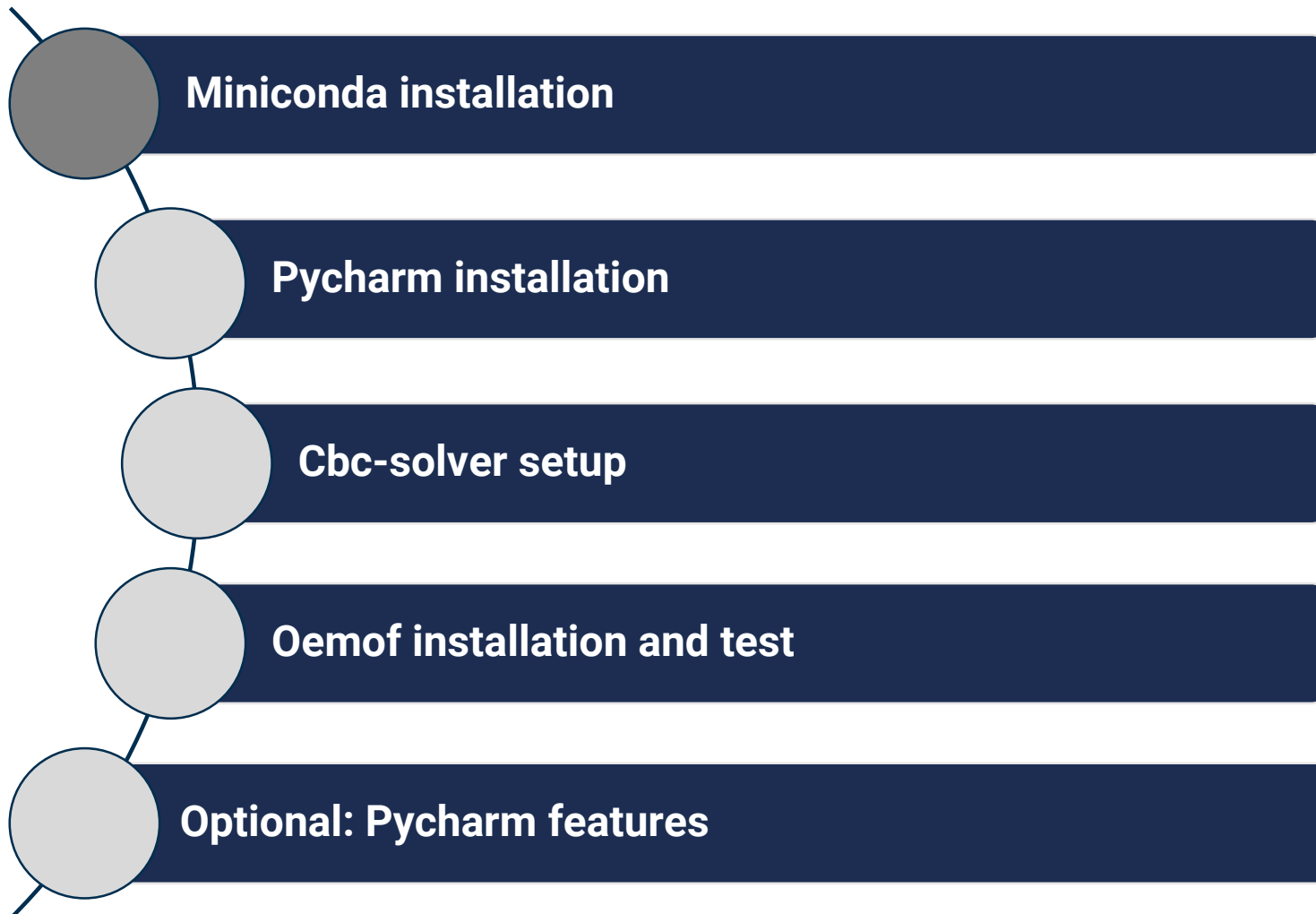
Setup of all necessary
programms and tools for this
workshop

All workshop contents at: https://github.com/smartie2076/oemof_workshop

Agenda of this session



Agenda of this session



Installation of miniconda

- ▶ Installing miniconda*
 - ▶ Installation of python3 on OS
 - ▶ Provides tool for generating virtual environments, which makes package use during programming transparent
 - ▶ Provides a terminal for the execution of python scripts („Anaconda prompt“)

- ▶ <https://docs.conda.io/en/latest/miniconda.html>
 - ▶ Choose according to OS, and Python 3.X

*(alternative: virtualenv)

New virtual environments with Anaconda Prompt

- ▶ Open Anaconda Prompt
- ▶ List all existing environments with:

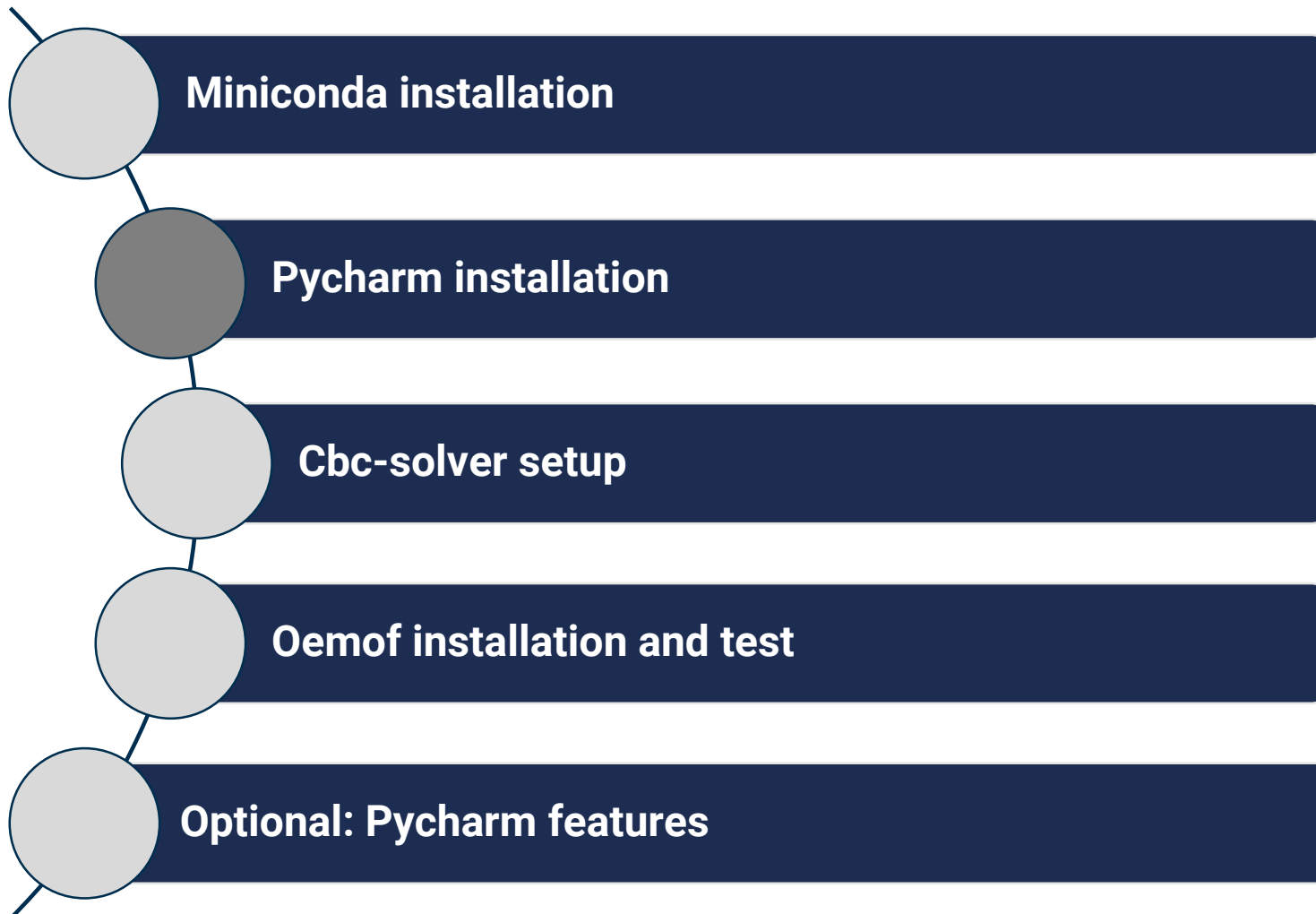
```
conda env list
```
- ▶ Create environment with specific name and python version with:

```
conda create -n [env_name] python=X.X
```
- ▶ Activate environment:

```
activate [env_name]
```
- ▶ Now, only packages specifically installed for your env_name are active. Install from requirements.txt:

```
pip install -r requirements.txt
```

Todays agenda



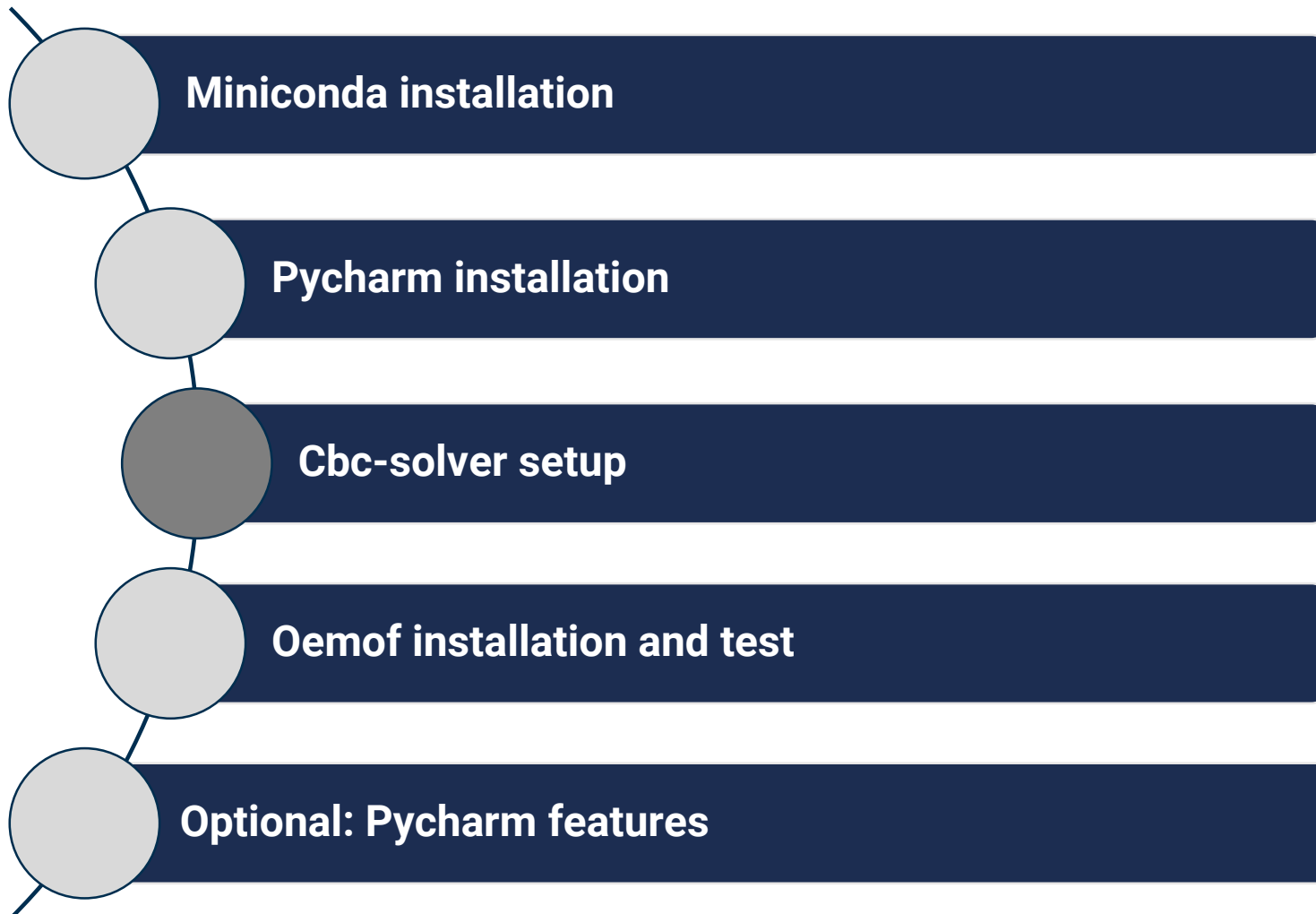
Installing Pycharm

- ▶ Pycharm...
 - ▶ Is a GUI for programming
 - ▶ Can process, validate and highlight many file and programming styles
 - ▶ Includes file versioning and git features
- ▶ Install from:
<https://www.jetbrains.com/pycharm/download/>



Logo from: JetBrains - <https://www.jetbrains.com/company/press/>,
Gemeinfrei, <https://commons.wikimedia.org/w/index.php?curid=53185677>

Agenda of this session



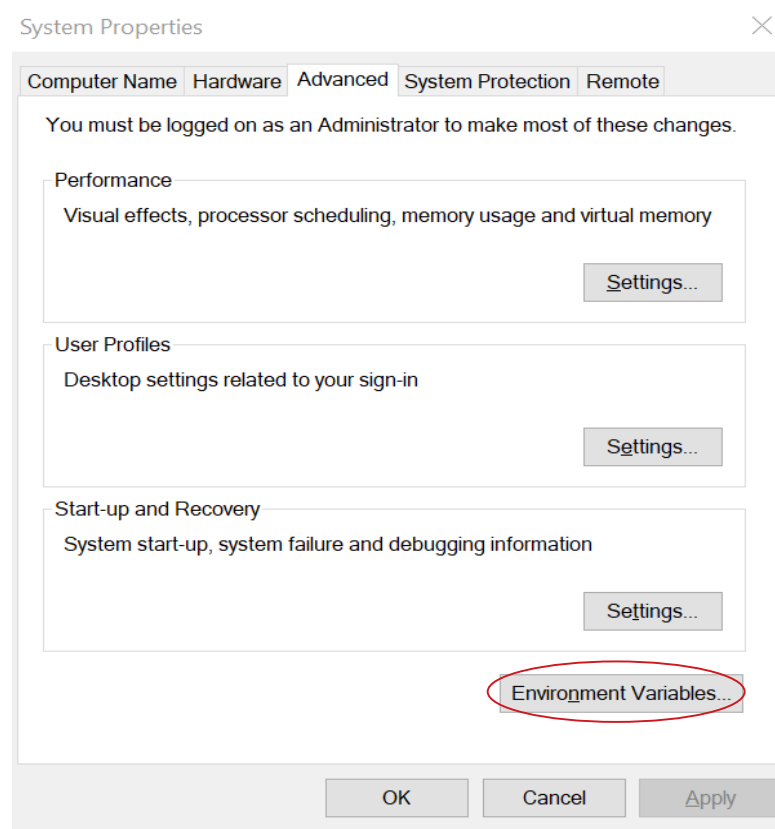
Installation of cbc-solver (Windows)

- ▶ Recommended solver for oemof is coin-or-cbc*:
<https://projects.coin-or.org/Cbc>
- ▶ Download cbc-solver:
 - ▶ 64bit: <http://ampl.com/dl/open/cbc/cbc-win64.zip>
 - ▶ 32bit: <http://ampl.com/dl/open/cbc/cbc-win32.zip>
- ▶ Unzip into chosen path
- ▶ Add solver path to system environment variables, as described on following slides
 - Local admin rights required

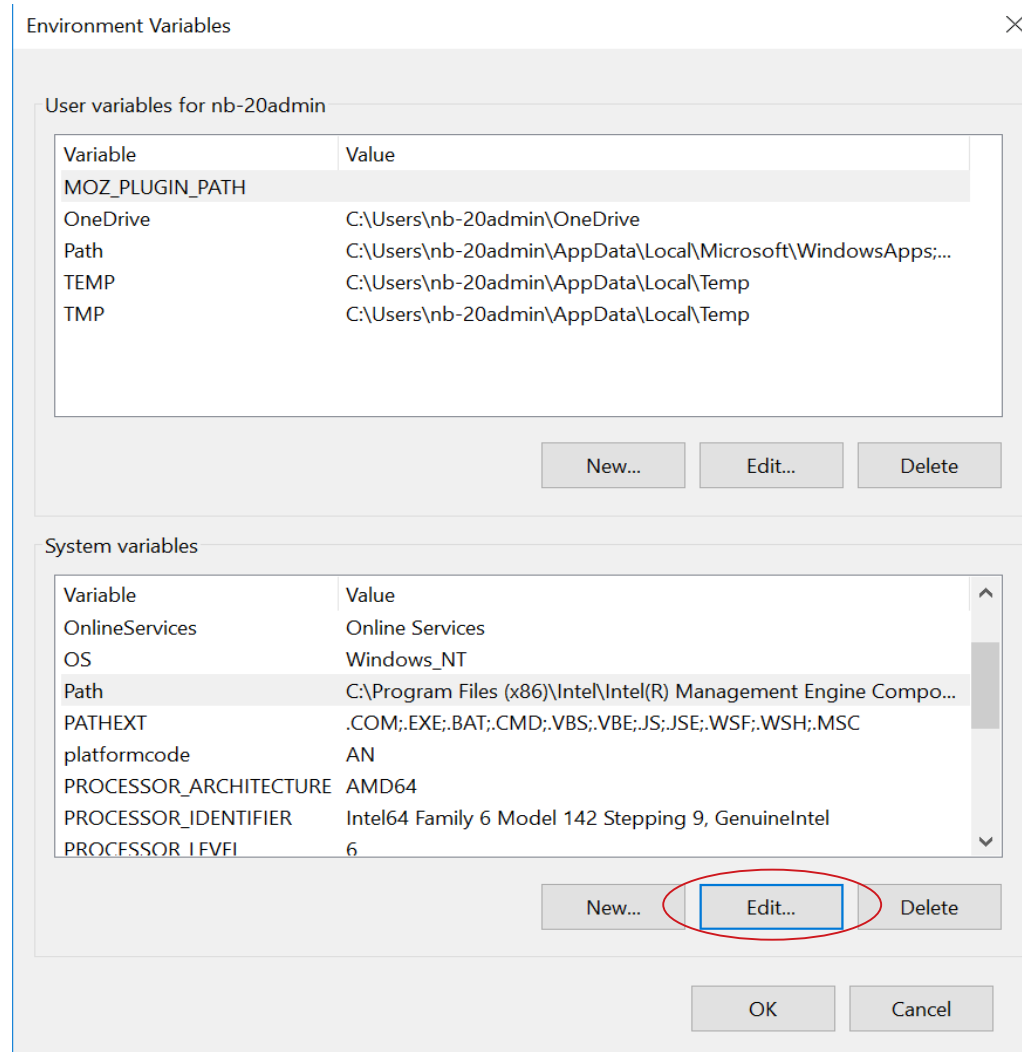
*(alternatives: CPLEX, Gurobi, GLPK)

Windows: Add to system environment variables (I)

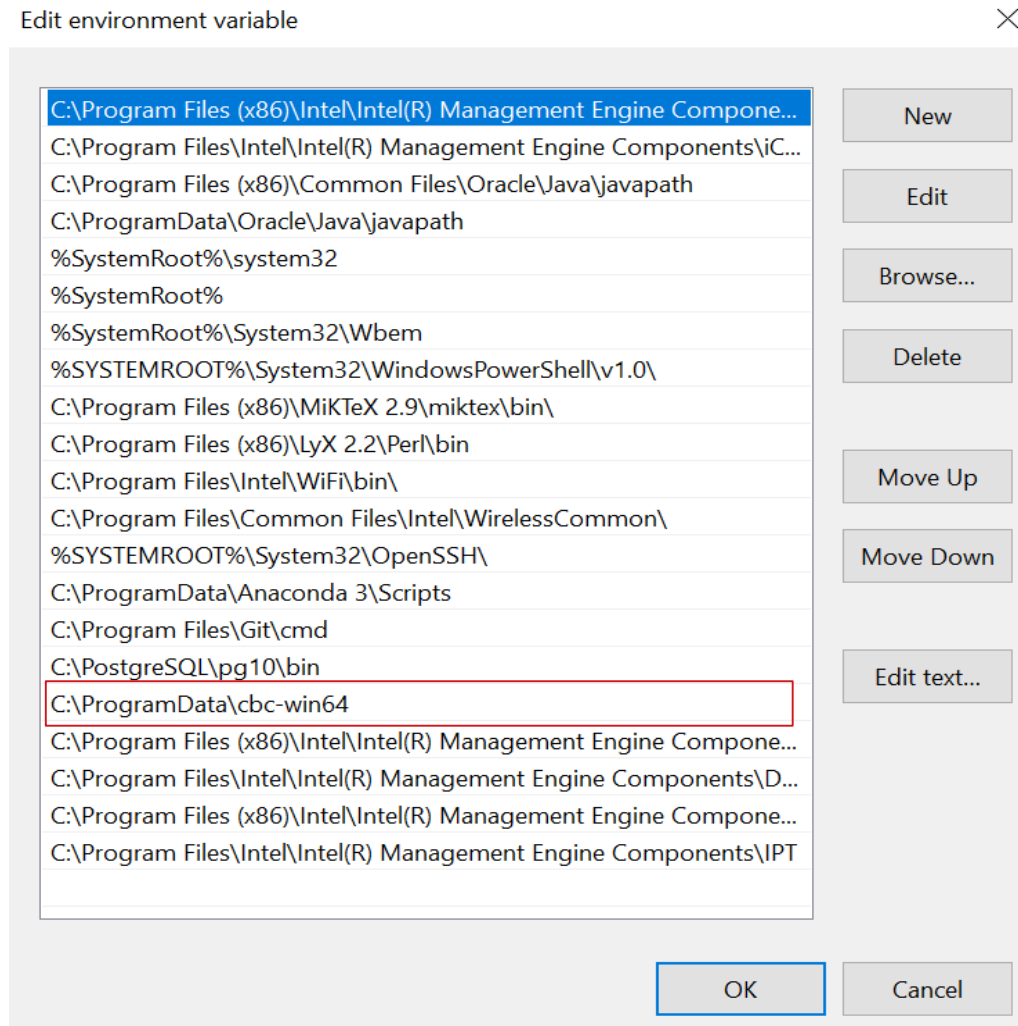
- Open “System Properties” --> “Advanced”--> “Environment Variables”



Windows: Add to system environment variables (II)



Windows: Add to system environment variables (III)

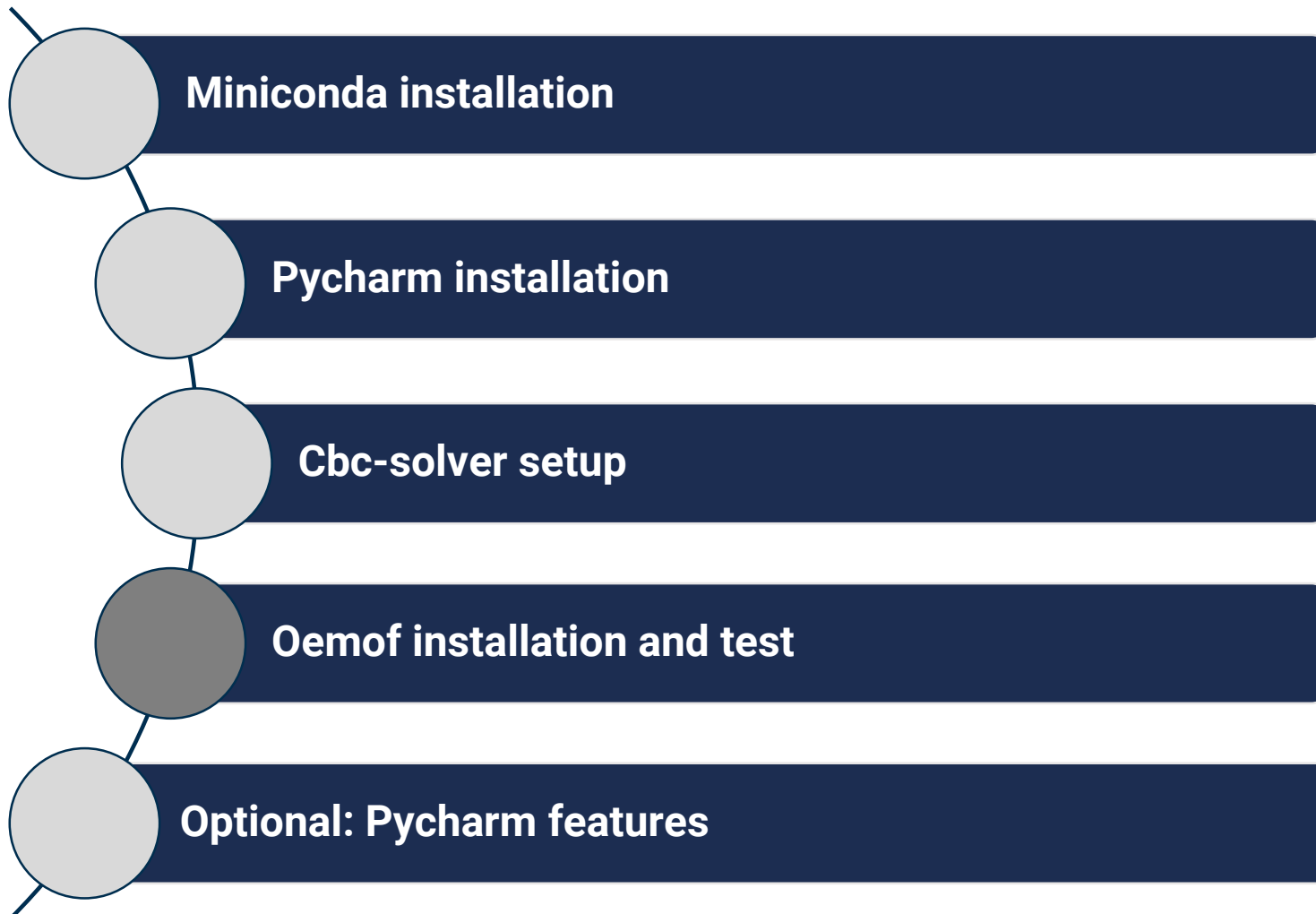


Installation of cbc-solver (Linux)

- Open terminal and execute:

```
sudo apt-get install coinor-cbc
```

Agenda of this session



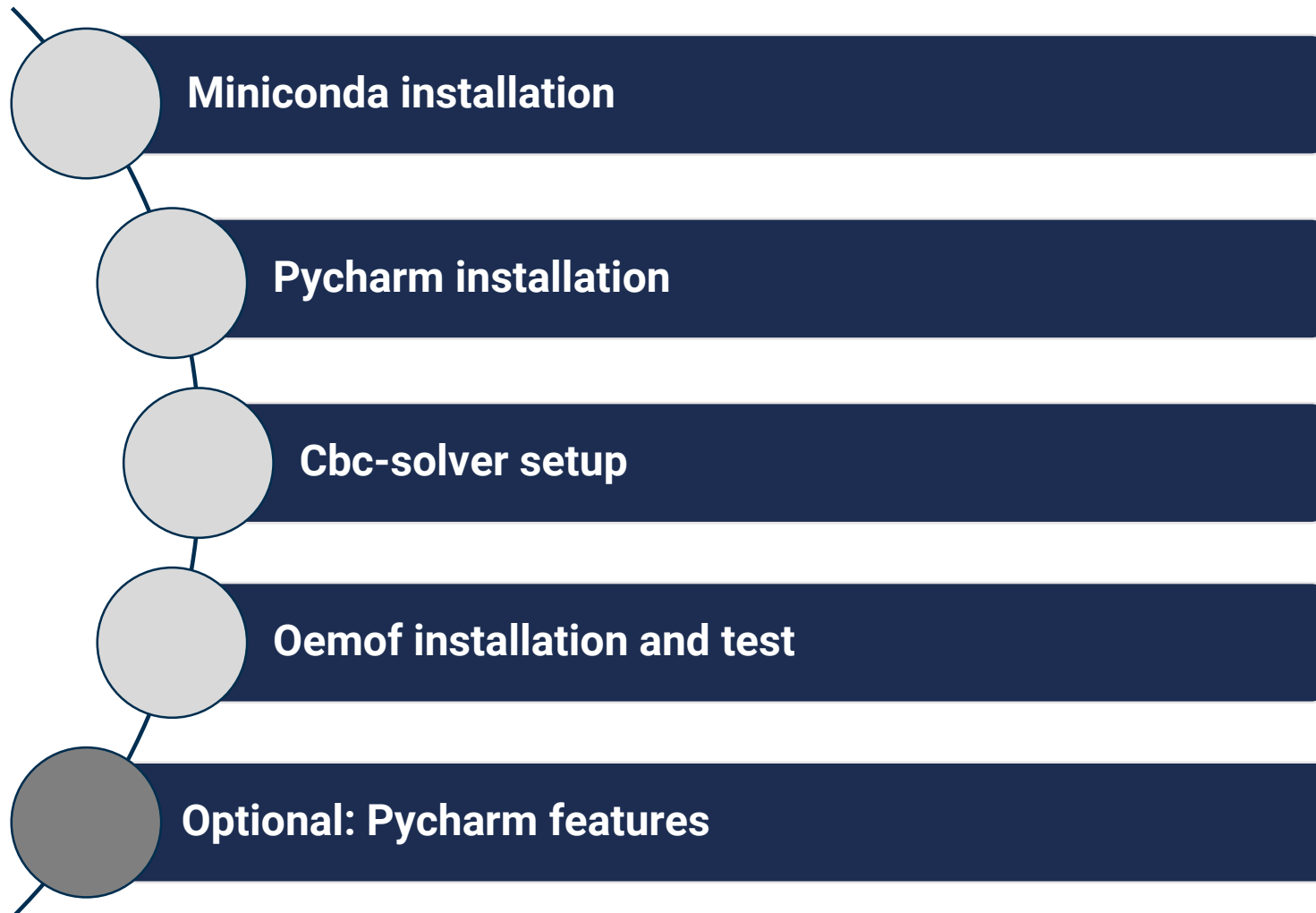
- ▶ Installation via anaconda prompt:

```
activate [env_name]  
pip3 install oemof
```

- ▶ Testing oemof installation:

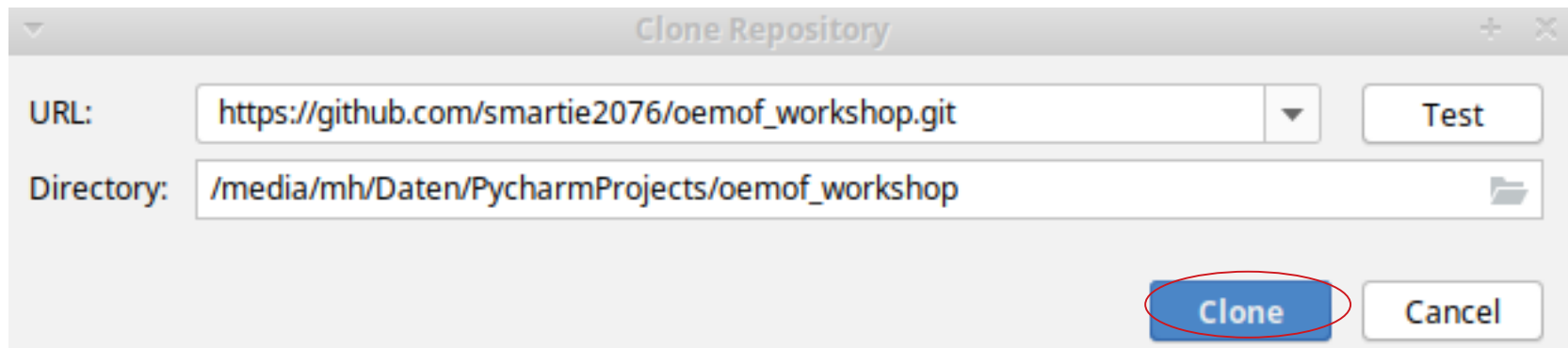
```
oemof_installation_test
```


Agenda of this session



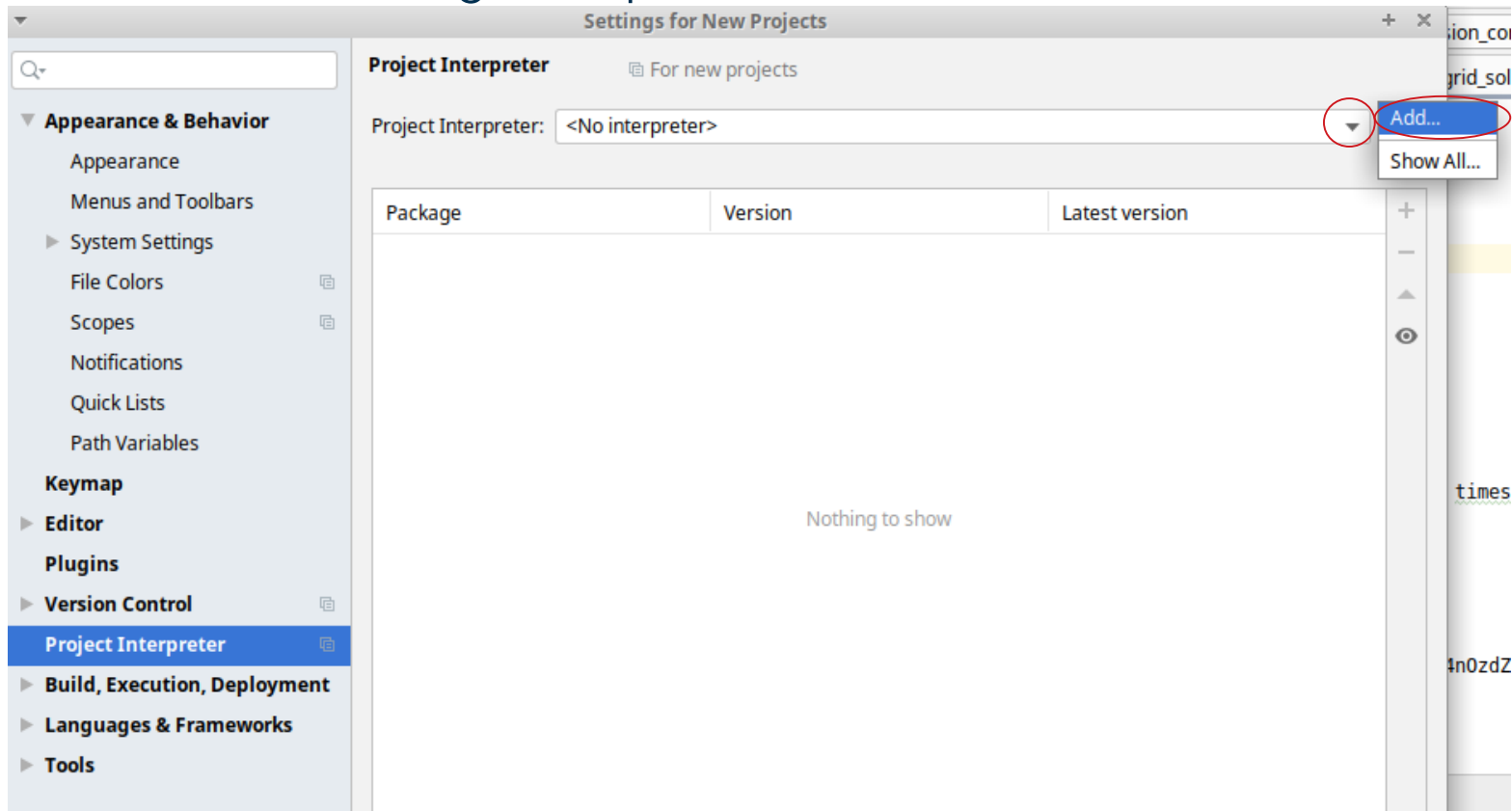
Create a pycharm project: Clone git repository

- ▶ Install gitbash from <https://git-scm.com/download/win>
- ▶ Start pycharm and copy link to git repository and insert, choose path:



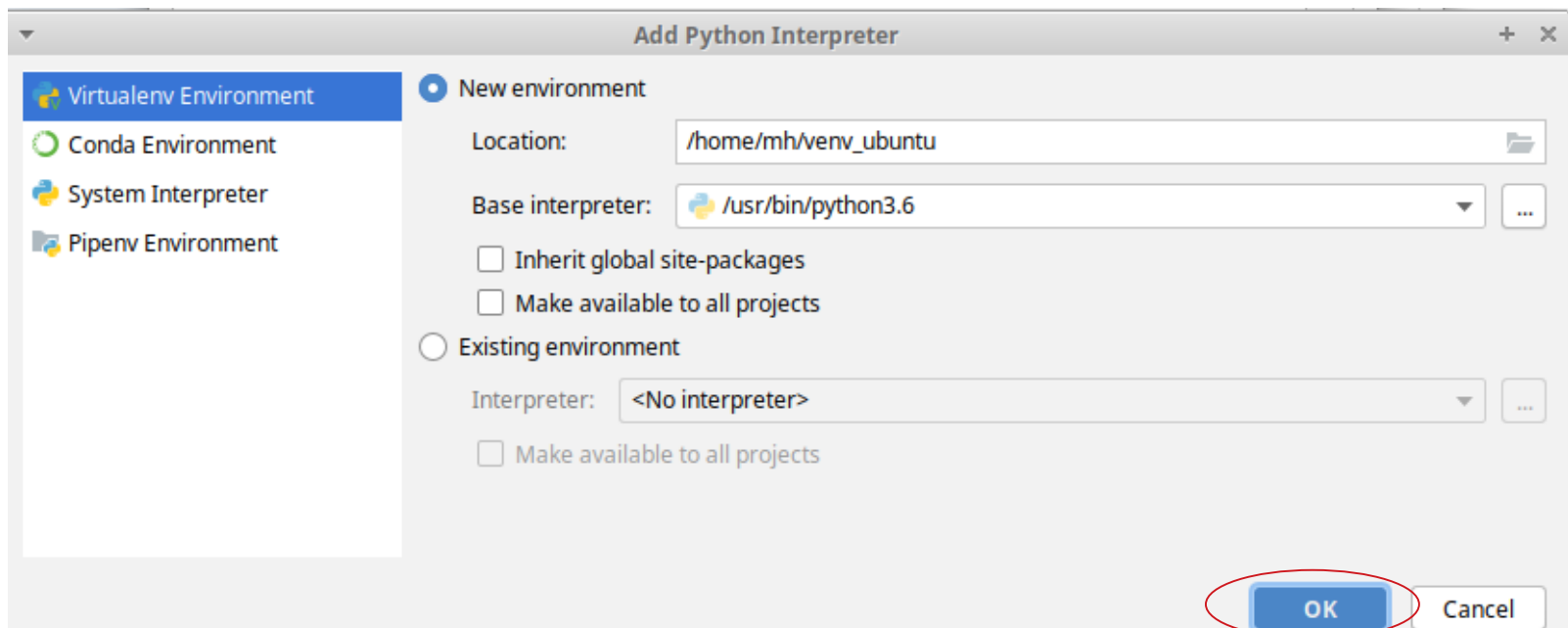
Setup of a project interpreter (I)

- ▶ File → Settings → Project: [your project] → Project interpreter
- ▶ Choose existing interpreter or create new:



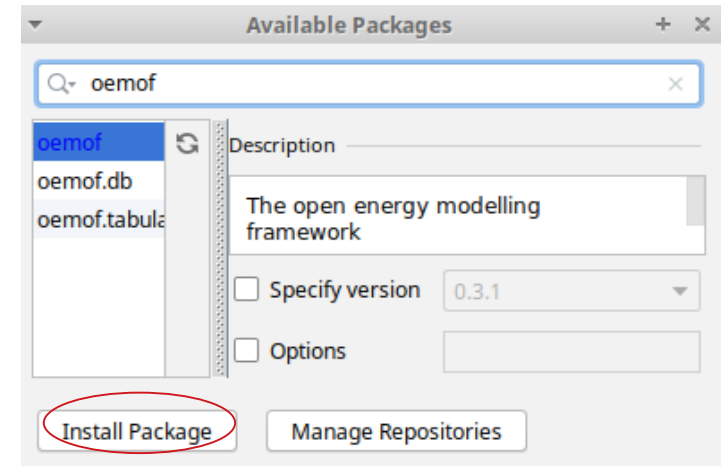
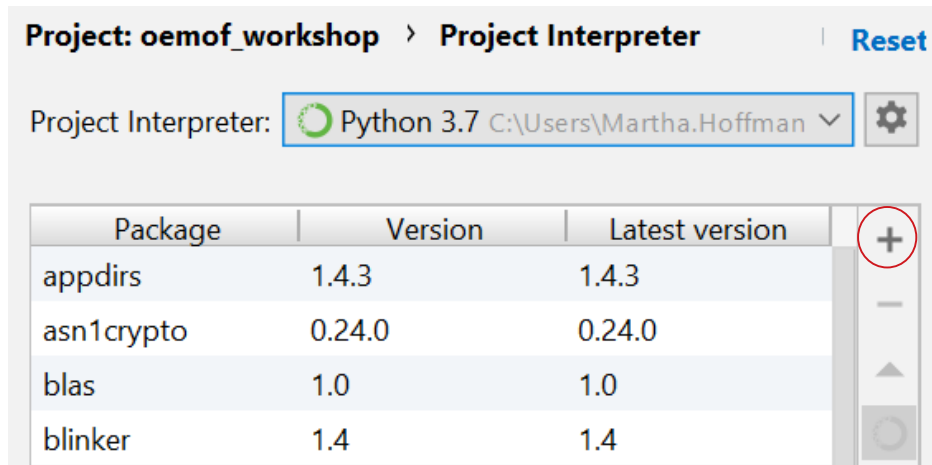
Setup of a project interpreter (II)

- ▶ Add interpreter with your package management tool (virtualenv/miniconda)
- ▶ Choose location, environment name and python version



Installation of packages

- Installation via pycharm in your specific project:
File → Settings → Project: [your project] → Project interpreter



- Alternative: Use pycharm terminal to install packages manually or with requirements.txt



THANK YOU FOR YOUR ATTENTION !

How to follow Oemof's activities?

Website: <https://oemof.org/>

Github: <https://github.com/oemof>

Or join our mailing list!



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