Prerequisites / Installation
Overview

Required:
- Python
- Python Package pyBIS

Highly Recommended:
- JupyterLab for interactive use

Recommended:
- MS Visual Studio Code
  (or other IDE) for development

Python: programming language and environment

Python module/package: package of code for a specific purpose to be used in python (may depend on other packages)

pyBIS: python package for interaction with openBIS
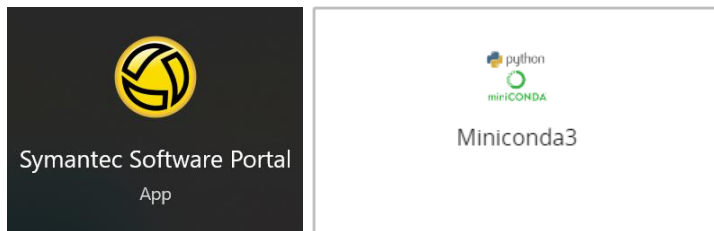
IDE: Integrated Development Environment – code editor and tools for software development
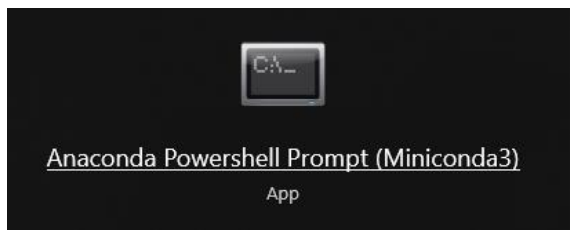
Prerequisites / Installation
Python with Anaconda / Miniconda

Preferred method:

1. Request installation of *Miniconda3* in the Software Portal

2. Wait for installation to finish
3. Check if *Anaconda Powershell Prompt* is available

Anaconda: software system to install and manage python and python packages and it's dependencies (not free for BAM)

Miniconda: stripped down version of Anaconda without graphical tools - free to use at BAM!

Hint: manual Miniconda/Anaconda or pure python installations may also work, but on the BAM client the Software Portal should be used to install python

Prerequisites / Installation
pyBIS package

1. Open *Anaconda Powershell Prompt*, a terminal window with a command prompt will appear:
   `(base) PS C:\Users\mmusterm>`

2. Type `pip install pybis` and press ENTER.

3. The pybis package and ist dependencies will be installed. This may run for some seconds or even minutes, depending on your system and internet connection, please be patient

4. After installtion there will be output like `Successfully installed…` and the command prompt.

Hint: if the newest/default version of pyBIS has some errors, try enforce installation of a specific version:
`pip install pybis=1.36.3`

Expert Hint: if you already use Anaconda you may create a special environment just for the datastore without changing your existing environment(s):
`conda create dst python=3.11`
`conda activate dst`
`pip install pybis`
Don't forget to activate this environment when you need it.

Prerequisites / Installation
JupyterLab package

1. Open *Anaconda Powershell Prompt*, a terminal window with a command prompt will appear:
   `(base) PS C:\Users\mmusterm>`

2. Type `pip install jupyterlab` and press ENTER.

3. The jupyter-lab package and its dependencies will be installed. This may run for some minutes, depending on your system and internet connection, please be patient

4. After installtion there will be output like `Successfully installed…` and the command prompt.

JupyterLab: browser-based system to handle code, documentation and results in one document (a.k.a. **Notebook**).

Jupyter: a large software ecosystem that deals with notebooks (Jupyter-Notebooks, Jupyter-Hub, JupyterLab, JupyterLab-Desktop, …).

Hint: there is a JupyterLab extension for openBIS (*jupyterlab-openbis*). Unfortunately it is not compatible with recent JupyterLab versions.
Pleas do not try to install it!