APSCALE: Installation

Install APSCALE

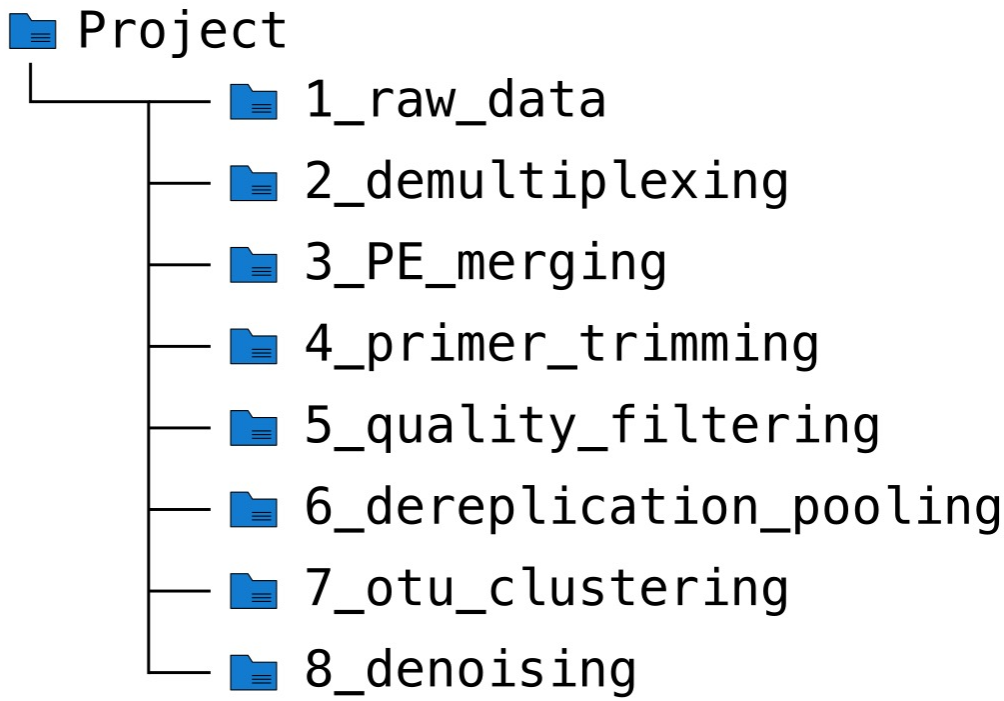
1. Open a terminal (depending on your operating system)
2. Make sure python version 3.7 or higher is installed
3. Type following commands in your terminal (the way python is called may differ on your system):

```
python3.7 –m pip install numpy
python3.7 –m pip install apscale
python3.7 –m pip install apscale_gui
```

4. Make sure VSEARCH is installed (click here for more information):

```
vsearch –version
>> vsearch v2.20.0_macos_x86_64, 16.0GB RAM, 8 cores
```

APSCALE: Project management



APSCALE: Command line

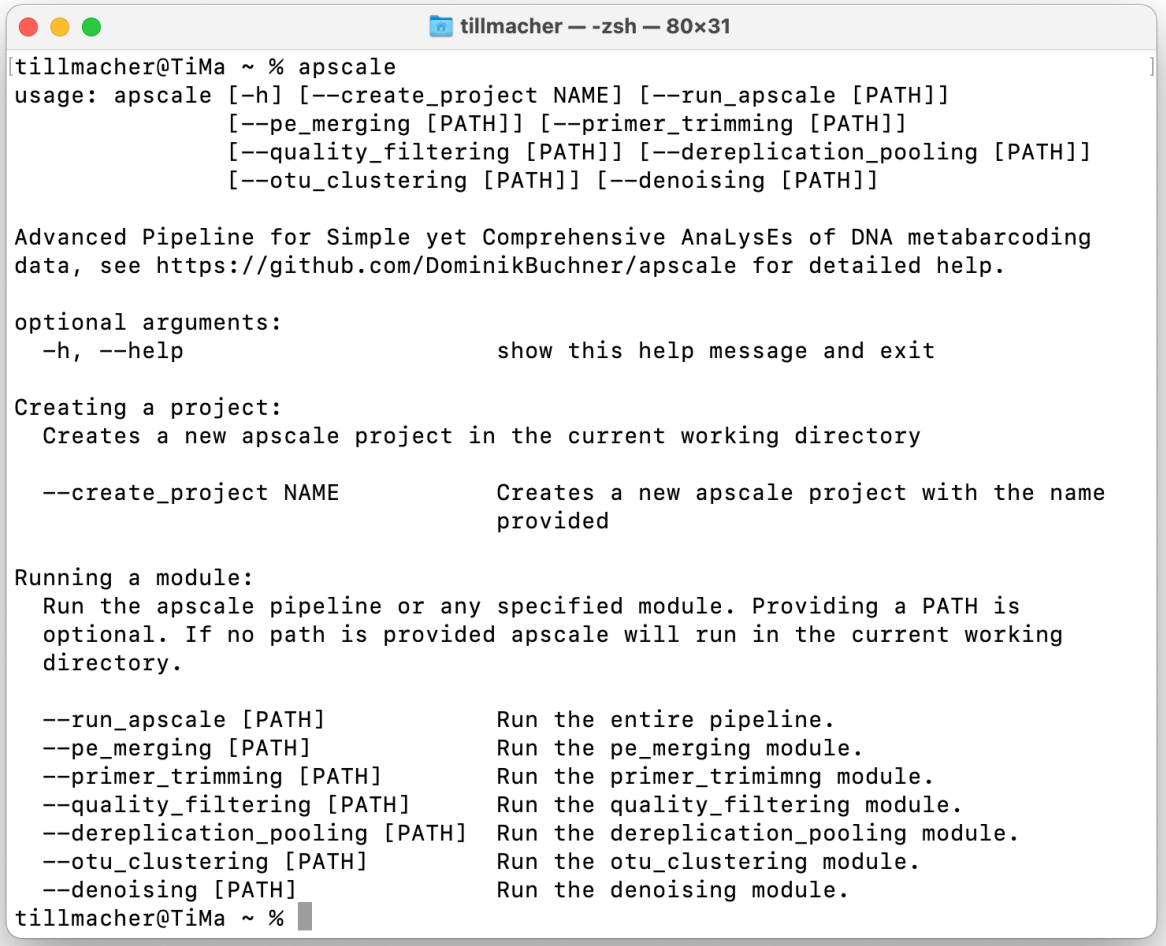
1. Start APSCALE from the terminal:

   ```
   apscale
   ```

2. This will print a detailed help message on how to run APSCALE from the command line
3. New projects are created with:

   ```
   apscale –create_project tutorial
   ```

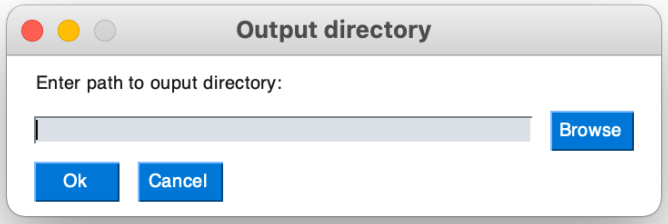
4. Alternatively start the APSCALE-GUI as follows



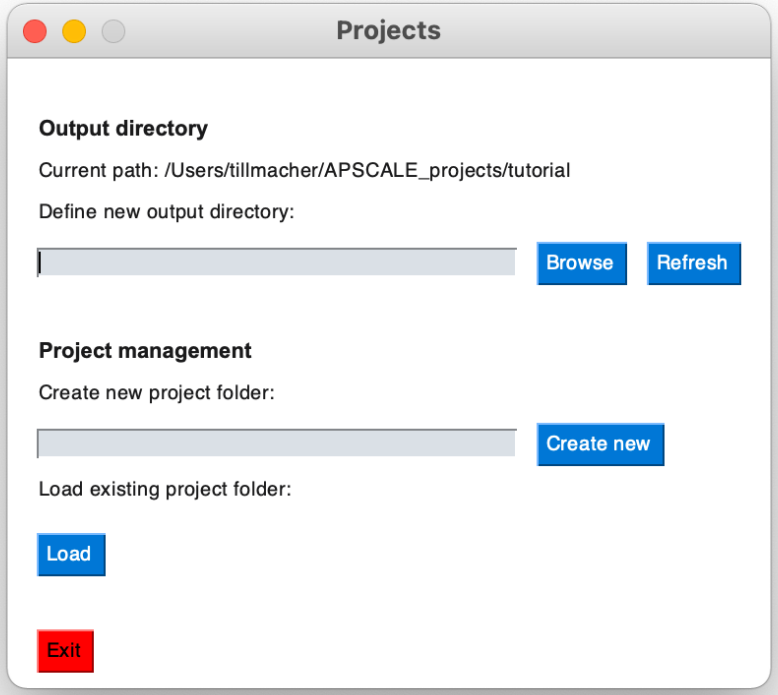
APSCALE: Graphical user-interface

1. Start APSCALE-GUI from the terminal:

```
apscale_gui
```



2. Select an APSCALE working directory.
3. All your projects will be saved here

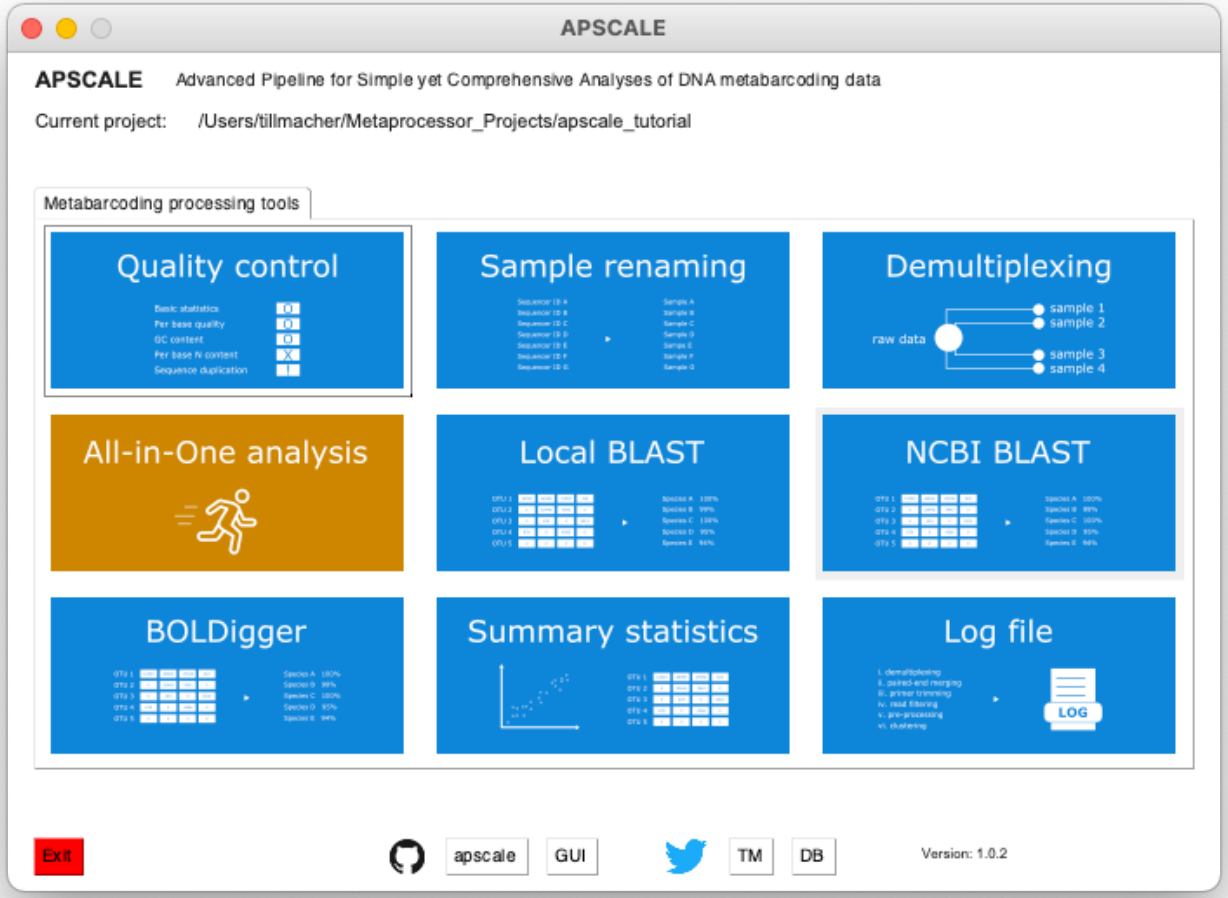


4. Now you can either:
   - create a new project
   - load an existing project

APSCALE: Graphical user-interface

Various modules are available in the GUI:

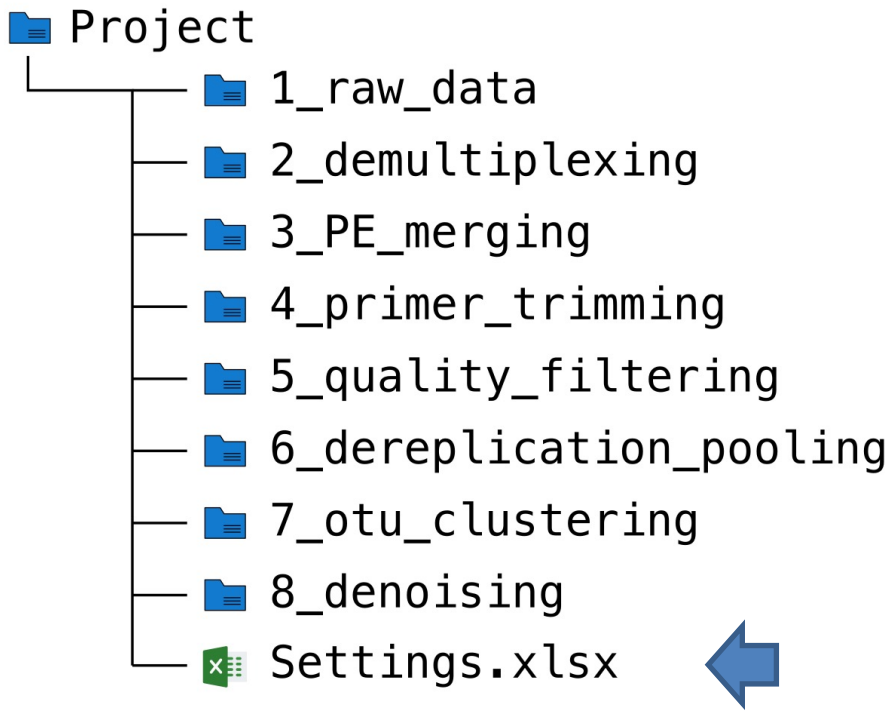
- Quality control
- Sample renaming
- Demultiplexing
- Metabarcoding All-in-One analysis
- Local BLAST
- NCBI BLAST
- BOLDigger
- Summary statistics



Before you start: Settings

Initially, some settings are required to be specified in the respective Settings.xlsx file of the project:

Setting	Defaul value
Number of cores	6
Compression level	6
maxdiffpct	25
maxdiff	199
minovlen	5
P5 Primer (5' - 3')	
P7 Primer (5' - 3')	
Anchoring	False
maxEE	1
min length	
max length	
min size to pool	5
pct id	97
alpha	2
minsize	8



Before you start: Settings

Settings can either be changed by:

- Opening the Settings.xlsx in Excel.
- Starting the All-in-One analysis in the GUI, entering the new settings and applying them to the Excel file.

- APSCALE will automatically read your settings from the Settings.xlsx when starting the data processing.
- Detailed information on how to choose the settings are explained later in the tutorial.