APPY Setup

1 Install Anaconda

Conda is a *environment* and *package* management system. An environment in Conda is a self-contained directory that contains a specific collection of Python packages along with their dependencies. This is useful to handle multiple projects since most surely each will require different packages in order to work properly.

Anaconda provides a convenient and comprehensive environment for working with Python for scientific computing and data analysis. It simplifies the process of setting up a Python environment for these purposes and includes many popular packages for data science, machine learning, and scientific computing pre-installed, as well as Conda with a graphical interface for managing environments and installing packages. I also provides a command-line interface for interacting with Conda. This last feature is specially useful for Windows.

1. Download Anaconda installer.
2. Follow these steps.
3. Verify your installation. Open **Anaconda Prompt** (on Windows) or the **terminal** (on Mac/Linux; if you had it open, close it and open it again). When you are there, enter

   ```
   $ conda list
   ```

   If Anaconda is installed and working, this will display a list of installed packages and their versions.

2 Create an environment

There are two options

- You can use the Anaconda graphical interface for creating an environment called `APPY2025`. You can do this on the list of environments (there should be a default environment named `base`).
- Alternatively, open Anaconda Prompt or the terminal and run

  ```
  $ conda create --name APPY2025 python=3.12.7
  ```

  This will create an environment named `APPY2025`, where we will install all needed packages when necessary. The idea is to use this environment as a playground for the worksessions. To make sure you are working in this environment, run

  ```
  $ conda activate APPY2025
  ```

3 Install Pytest

There are two options:

- You can use the Anaconda graphical interface install the package `pytest` in the environment `APPY2025`. For this you have to additionally add the `conda-forge` channel to the `APPY2025` environment: click on `APPY2025` → click on `Channels` → `Add Channel` → Write `conda-forge` → Press Enter. Afterwards you should install the `pytest` package.
- Alternatively, open Anaconda Prompt or the terminal. First, make sure you are working in the `APPY2025` environment

  ```
  $ conda activate APPY2025
  ```

  and then and then install the `pytest` package in two steps:

  ```
  $ conda config --add channels conda-forge

  $ conda install pytest
  ```

4 Install Visual Studio Code

Visual Studio Code is a powerful text editor with a variety of very useful extensions.

1. Download and install VSCode.
2. Open VSCode and click on the Extensions tab on the left. Install the Python extension. This will install Python, Python Debugger and Pylance.
3. Configure Pylance: press ⌘+, or ctrl+, and type `typechecking`. Select the `basic` option.

5 Working with Conda and VSCode

The final step is to tell VSCode to use the Python interpreter from our environment. Go to VSCode, press ⌘+⇧+P or ctrl+⇧+P and type in the word `interpreter`. Select the one tagged as `APPY2025` as the Python interpreter.