Introduction to Python programming

April 8-10, 2024
Cineca

General overview and installation instructions

The course is divided into three sessions, in which both the theoretical part and exercises will be presented. During the course it will be required to install a Python distribution on your laptop, in order to be able to execute the Python exercises and read the slides.

If you're running a Linux-based OS on your laptop you can install the latest version of Python 3 package available on your package manager. You can do the same if you're using Homebrew in order to install packages on your macOS.

If you're running either Windows or macOS (without Homebrew), we suggest to install Miniconda from the following link:

https://docs.conda.io/en/latest/miniconda.html

PLEASE NOTE CAREFULLY: During the Miniconda installation you will be prompted to choose between admin and non-admin installation. We strongly suggest to install everything as normal user (i.e. non-admin user).
- on Windows you can run "Anaconda Powershell" from your start menu and type "conda list"; you should see a list of packages on the terminal;
- on macOS you can check in the end if everything was right by typing "conda list" inside your terminal; you should see a list of packages on the terminal;

If possible, please try to execute the steps above before the course; however, if not possible, we will complete all the steps together (and try to fix any inconvenience) during the first day morning session.

Agenda

Monday, April 8

Teachers: Renato Assante (r.assante@cineca.it), Caterina Caravita (c.caravita@cineca.it), Moreno Guernelli (m.guernelli@cineca.it)

9.30-13.00
>   Introduction
>   Environment
>   Interpreter
>   Python program files
>   Built-in types and operations

14.00-17.30
>   Built-in containers
>   Control flow

Tuesday, April 9

Teachers: Renato Assante (r.assante@cineca.it), Moreno Guernelli (m.guernelli@cineca.it), Fabio Pitari (f.pitari@cineca.it)

9.30-13.00
>   Functions
>   Introspection

14.00-17.30
Modules
Classes

Wednesday, April 10

Teachers: Caterina Caravita (c.caravita@cineca.it), Moreno Guernelli (m.guernelli@cineca.it), Fabio Pitari (f.pitari@cineca.it)

9.30-13.00
>   Error handling
>   String formatting
>   Input/output

14.00-17.30
>   Standard library
>   Scientific Modules
>   Decorators

NB: the agenda may be subject to changes that will be communicated to the students as soon as possible.