Introduction to Python

ENGSCI233 Lecture 1

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1 Anaconda

- Install the Anaconda Python distribution from Anaconda — Individual Edition
- Take the time to read the *Read Me* and the *Licence* agreement.
- During the installation process, you'll be asked, if you want to install the PyCharm IDE. Yes, plesae install PyCharm.
- My lectures will be based on Python 3.9.7, and I have not checked my code with different Python versions. However, I expect that minor version differences like e.g. Python 3.9.2 shouldn't make any differences.

2 Data types and control flow

A comprehensive introduction into Python's data types and control flow mechanisms gives Moruzzi (2020, Sections 1.1–1.16). The book is available from the University library as PDF: `https://catalogue.library.auckland.ac.nz/permalink/f/t37c0t/uoa_alma51331417520002091`

Please be aware, that in my lecture, I have extended Section 1.4.1 of Moruzzi (2020) by introducing two additional standard data types:

- Sets, and
- Boolean.

3 Non-graded, advanced course work for the programming savvy

I am aware that some of you are already skilled programmers, or have done some Python programming and are seeking to advance their skills. You still have to complete and submit the assignments, but you might be finished ahead of time.

In this case, I suggest that you fill the gap by working through the Python Koans. This is an interactive Python course based on Test Driven Development. We will touch this software development paradigm briefly in the next four weeks, but feel free to hold your breath and take a deep dive into Python:

gregmalcolm/$\text{python}_{\text{koans}}$: Python Koans - Learn Python through TDD

References

Giovanni Moruzzi. *Essential Python for the physicist*. Springer, Cham, 2020. doi: 10.1007/978-3-030-45027-4.