Python as a second language

Introduction to Python

Thank You

- Geert Jan Bex
  - https://github.com/gjbex/training-material/tree/master/Python
  - https://creativecommons.org/licenses/by/4.0/deed.ast#
- Slides + demo-files
  - https://franklbvp.github.io/python_intro/

What will be covered in this session?

Scope

- Teach programming in Python
  - prerequisite: you should know how to program in some other language, if not consider first completing
    - CodeAcademy
      https://www.codecademy.com/catalog/language/python
    - LearnPython
      https://www.learnpython.org/
- These sessions won't teach you how to program, how to find algorithms, … that's beyond the scope
- *Taken from GJ Bex*

Content

- Environment
  - User environment
  - Command line
  - Spyder
  - Notebook
  - *Slides: Python_intro-userEnvironments*

Content

- Basic syntax
  - *Slides: Python_intro-programming-syntax*
- Variables
- Operators
  - *Slides: Python_intro-programming-variables_operators*
- Built-in atomic Data types
  - *Slides: Python_intro-programming-builtin_datatypes*
- Data structures
  - Lists
  - Tuples
  - Sets
  - Dictionaries
  - *Slides: Python_intro-programming-datastructures*

Content

- Flow control
  - Basic flow control commands
    - *Slides: Python_intro-programming-control_flow*
  - Functions
    - *Slides: Python_intro-programming-functions*
- IO
  - *Slides: Python_intro-programming-io*

Using the demo files

- Using the demo notebooks
- Download the zip file
- Unzip the file a local disk (Windows ex. in c:\Temp)
- Notebook
  - Start Anaconda powershell
    - 'cd' to the folder with ipynb files
    - `jupyter notebook`
- `py` source files
  - 'cd' to the folder with py files
  - Start editor / IDE
  - Run from command line

More in other courses

- Text-based formats
  - goals: reading & writing text-based file formats
- Scientific file formats
  - goals: reading & writing HDF5
- Linear algebra, numerical analysis
  - goals: various numerical analysis algorithms
- Scientific visualization
  - goals: creating 2D and 3D plots from Python