Introduction to the Python programming language

GC3: Grid Computing Competence Center,
University of Zurich

Welcome!

Prerequisites

This course assumes a basic experience with computer programming.

Any language should do, as long as you are already familiar with the concepts of variables and functions.

Where to find the course material

These slides and all the example files can be downloaded from the course web page at:
http://www.gc3.uzh.ch/teaching/gc3pie2012/python.html

Better keep a browser tab open on that page.

(After the course is over, please rate it and the material using the feedback form on that same page)

Further reading

- **The Python tutorial**,
  http://docs.python.org/tutorial/
- The Zen of Python in 3 days,
  http://pixelmonkey.org/pub/python-training/
- Python for Java programmers, http://python4java.necaiseweb.org/Main/TableOfContents

See http://www.gc3.uzh.ch/teaching/gc3pie2012/python/refs.html for an extensive and commented list.

Typographical conventions, I

The orange color is used for clickable links; this should make it easy to download sample files, etc.

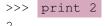Other **colors** and backgrounds are used for highlighting text in slides.

Typographical conventions, II

Commentary text appears
on the right.

```python
# This is how Python
# code looks like

def hello(name):
  print ("Hello, " + name)
```

Typographical conventions, III

```
>>> print 2
2
```

This is an example of using the Python interactive shell.

You should only type the highlighted part; the rest is provided by the Python interpreter.

Typographical conventions, IV

```
>>> print 2
2
```

This is an example of using the Python interactive shell.

The highlighted part is what the Python intepreter should reply to your command.

Typographical conventions, V

```
>>> print """A very
... long message."""
```

This is an example of using the Python interactive shell.

The triple dots signal continuation lines, for when a Python command extends over multiple lines.

Python 2 *vs* Python 3

There are currently two major versions of Python available, with slightly different syntax and features.

Python 2.7 is the last release in the 2.x series.

Python 3.x has a more polished syntax, removing inconsistencies and some historical baggage.

But Python 2.x is still the default on most Linux distributions and some major Python packages have not yet been ported to Py3, so **we shall focus on Py2 syntax**.

Next steps

The course will be structured as a mixture of slides and hands-on sessions for practicing Python programming. The GC3 folks are here to help: ask them questions!

So, the very next step is to set up your workstation so that you can edit files and run Python code.