Preparation for Python 3

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Hi all,

you may not have time to completely review any of the three resources listed below in their entirety, but any preparation you do will help you to get up to speed more quickly in the course. It is better to focus on fully understanding a small set of the language than on trying to cover more material with less depth.

There is no need to install Python on your own computer for the examples in this book. It is sufficient and simpler to use an online Python environment; I recommend https://repl.it/languages/python3. Copy-and-paste (or type in) example code into the white pane on the left, and click 'run'; you will see the output, if any, on the right.

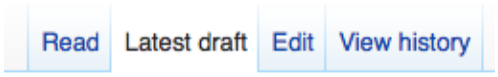
For programming beginners

If you are not very familiar with programming, the Non-Programmer's Tutorial for Python, at https://en.wikibooks.org/wiki/Non-Programmer%27s_Tutorial_for_Python_3, is a good, gentle introduction to the programming language.

Only the first 13 chapters are of interest for the course, listed below.

1 Hello, World
2 Who Goes There?
3 Count to 10
4 Decisions
5 Debugging
6 Defining Functions
7 Advanced Functions Example
8 Lists
9 For Loops
10 Boolean Expressions
11 Dictionaries
12 Using Modules
13 More on Lists

Note that because this book can be edited by readers, it is sometimes in a state of vandalization, where the example programs provided won't work. It is a good idea to keep an eye on the Wiki status at the top of the page. If it looks like this:



and / or has a message like this:

then you are viewing a (possibly vandalized) draft. Click on either 'Read' (next to 'Latest draft') or on 'latest reviewed version' (next to 'was checked in') to view the definitely correct version, rather than the draft.

For proficient Matlab users

If you know Matlab quite well, you will probably be able to work through the wikibook listed above quite quickly. Python is increasingly popular as an alternative to Matlab, and there is a lot of good material on using Python for numerical computation at http://www.scipy-lectures.org/index.html.

As preparation for 4C16, a run-through of the section on 'The Python Language' (http://www.scipy-lectures.org/intro/language/python_language.html) will be adequate.

Video lectures

If you prefer learning from videos, I recommend the 'Introduction to Computer Science and Programming' course from MIT (https://www.youtube.com/playlist?list=PLUl4u3cNGP63WbdFxL8giv4yhgdMGaZNA). These don't move too fast and are properly rigorous.

There is no need to go beyond lecture 5 (Tuples & Lists) for the purposes of 4C16.