Topic Outline: Python Fundamentals 1

Revised: February 14, 2016

Materials

- Today's handouts: this outline, book chapter, code practice, red/green stickers
- All posted on *Topic list & links* page of website (except the stickers).

Thinking about data

Not something we'll talk about much in class for a while, but it should be in the back of your mind over the next 3-4 weeks. Keep your eyes open for data you want to work with. Skim the Data sources page of our website. Ask for help if you find something you can't handle; we're putting together a collection of programs that read in a variety of datasets, would be happy to add yours to the list.

Our approach

- One step at a time
- Ask for help if you need it
- Newbies: skip things labelled challenging until you're up to it

Preliminaries

- Tools and buzzwords
  - Google fu, Spyder, syntax, calculations, assignments, strings, lists, built-in functions, methods, tab completion, object inspector
- **Exercise**
  - Put red sticker on your laptop
  - Start Spyder
  - Point out editor and IPython console
  - Open new (empty) file, save as `bootcamp_class_pyfun1.py` in `Data_Bootcamp` directory/folder. This will serve as your notes for the class.
  - Replace red sticker with green when you're set
- Python programs
  - Syntax: the rules of Python are less flexible than (say) English
  - Not like Excel: they run line by line, like a book
  - Ours will include: data input, data management, graphics
  - Examples: Maddison data, OECD healthcare indicators

Python fundamentals 1

We'll follow the book chapter.

- Calculations
- Assignments
- The `print()` function
- Strings
- Spyder
- Help
- Code cells
- Comments
- Quotes
- Lists
- Tuples
- Built-in functions: `len()`, `type()`, conversions
- Objects and methods, tab completion
- Python 2 and 3
- Review
  - Put red sticker on, replace with green when done
  - Exercises marked challenging are optional

After class

- Required
  - Code Practice #1 due next week (should take about an hour) (we count best 2 of 3)
- Recommended (after every class)
  - **Write**: Write down everything you remember without using your notes.
  - **Review:** Reread the chapter and fill in anything you missed.