Introduction to Python

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Information

- My research focuses on two areas: Political and Development Economics. In my research, I deal with tons of data and (lots of) text data -> programming with Python. That's why this course.
- Introduce yourself. What are your expectations? Why are you here? What kind of data you are currently using or plan to use?

Plan for this course

- Introduction to Python foundations

The team

- Arieda Muço: MucoA@ceu.edu. Office: Quellenstrasse, 51
- Adam Nasli (TA): adam.nasli@brokerchooser.com

Arieda

Adam

We encourage you to ask questions via Slack. When needed we'll set meetings via Zoom.

Grading

Final assessment will consist of the following:

- **Quizzes in Class** (20% of final grade)
- **Problem Sets** (40% of final grade)
- **Individual Project** (40% of final grade) – On last 100 of class. Based only on material covered in class, quizzes and problem sets.
  I expect most cameras on. Experiment with virtual backgrounds.

Slack

Slack will be our communication tool for this course

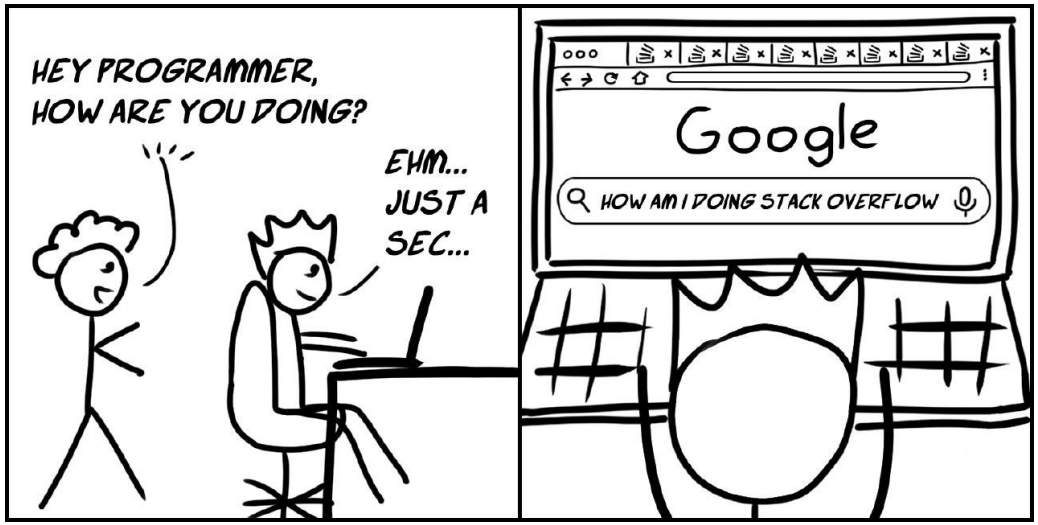
- Post questions and answers in respective channels
- Keep a close eye on channels on quizzes and assignments
- Make sure you reply in thread when needed.
- We strongly encourage peer learning. Feel free to post in the Slack channel if you think some information is of common interest. People that active help others figure out solutions and post material of common interest get up to 10 bonus points.

Submissions

- Past deadline submissions will get graded. You will be penalized -1 point for each hour past the deadline. (Example if deadline is at 12 and you submit at 12.10 you get -1 point. If you submit at 13.25 you get -2 points.)
- Email for meetings, questions etc
- Emails/Questions: You will get a reply if you send an email but send it 24 hours before a deadline (no response otherwise)
- Stick to requests asked in the problemset/quiz. If asked to submit a .txt file named 'name_surname' and you submit 'surname_name.xls' you will be deducted -5 points for each improperly named file.

Rules

- Ask questions and feel free to google
  - Don't feel bad about this. Even software developers spend a lot of their coding time googling programming related questions
  - Important to know how to read error messages
    - ★ or google them
  - Stack Overflow is a programmer's best friend


HEY PROGRAMMER,
HOW ARE YOU DOING?
EHM...
JUST A
SEC...
Google
HOW AM I DOING STACK OVERFLOW

Recommended Material

- Codecademy is the place to start
- Automate the Boring Stuff with Python and The Real Python are great sources
- A Shaw, Zed. "Learn Python the hard way"
- Al Sweigart. "Automate the Boring Stuff with Python"
- Allen B. Downey. "Think Python: How to Think Like a Computer Scientist"

A bit about Python

- Programming language intended for general-purpose high-level language
- Web development, scientific and numeric education, desktop graphical user interface, software development
- Free and open source
- You can do everything that you can do in a programming language
- Big community (Google, Youtube, Nasa...)
- High readability (more than R or C)
- Python was first released in early 1980
  - Python 2 in 2000 and Python 3 in 2008

Black Holes and Python

Annoying things in Python

- Python 3 is not backward compatible with Python 2
  - In this course we will use Python 3. Python 2 is not supported anymore
  - If you are starting a new project, do so in Python 3
- Pandas Library (more on this next time)
  - But very useful
- + some minor things we'll cover throughout the course
  - example: split() vs join()
    - sentence = "We will rock you!"
    - words = sentence.split(" ") but sentence = " ".join(words) (?)

Purpose of the course

- Programming in Python is (mildly put) very broad topics, and we will not be able to cover many(!) things
- Build strong foundations such that in the future you get confidence in starting to dig deeper into these topics