Introduction to Python

21 February 2022 - 4 March 2022

Instructor: Lucy Havens

Course Structure

Anticipate maximum 6 hours each week

- 2 course meetings per week, 1 hour each
  - 10:00 - 11:00 AM BST Mondays (21/2, 28/2)
  - 10:00 - 11:00 AM BST Fridays (25/2, 4/3)
- 3 assignments total, about 1.5 hours each
- Office hours on Wednesdays

Teams for class, office hours, questions, comments, files

Course Topics: Week 1

Day 1:

- Thinking Like a Computer
- Where to Find Help
- Programming in Python: data types, variables, operators, functions

Day 2:

- Programming in Python: conditionals, loops, error handling, functions vs. methods, modules, recursion

Course Topics: Week 2

Day 3:

Programming in Python: more data types, more functions, measuring equivalence, determining containment

Day 4:

Code reusability and reproducibility

Efficiency and memory considerations

INTRODUCTIONS

Name

Have you programmed before?
If yes, in what language?

Why would you like to learn Python?

Introductions

- Pursuing a PhD in the School of Informatics' ILCC
- AMSc Design Informatics, B.S. Information Systems
- Taught myself programming and data science skills outside courses using online resources

- Please share feedback on the course!

For Participants

- Complete assignments (given today, Friday, and next Monday)
- Ask questions and share work on assignments in class
- **Please Note:** Course meetings won't be recorded
    - Three strike policy
    - Please let me know in advance if you cannot attend!
- Office hours: questions about assignments, your own projects
    - Chat with me on Teams to schedule

DAY 1

Thinking Like a Computer

Learning to program is like learning a new language

Think about programming, or coding, or writing code, as you would about building with Legos

Most importantly, learn how to ask questions!

Let’s play a game...

Software

Python version 3

Jupyter Notebooks - options:

A. Use Noteable: https://www.ed.ac.uk/information-services/learning-technology/noteable/accessing-noteable
B. Use GoogleColab: https://colab.research.google.com
C. Install to your computer: https://jupyter.org/install

Where To Go For Help

Search online

You can even copy & paste excerpts of code, an error message

Software documentation ("Docs"): https://docs.python.org/3/

Stack Overflow: https://stackoverflow.com

Discussions from this platform often appear in search results

Let’s code!

Assignment

python-basics-1.ipynb

Note 1: you don't need to watch the video, but you can if you'd like

Note 2: you don't need to take the quiz at the end of the Jupyter Notebook (we'll take it together in Friday's class)

Further Resources

- **Noteable User Guide:** https://noteable.edina.ac.uk/user_guide/#hide_ge_7
- **Jupyter Notebooks and Noteable:** https://github.com/edina/Exemplars2020/blob/master/TeachingDocs/Tutorials/UsingNoteableBeginner.ipynb
- **Jupyter Notebooks:** https://glam-workbench.github.io/getting-started/
- **Python:** https://programminghistorian.org/en/lessons/introduction-and-installation

THANKS EVERYONE!

Office hours available on Wednesday

Contact me on Teams to schedule

Next class: Friday (25 February)