Introduction to Programming with Python

I'm still not feeling well and I really don't want to get anyone sick... so I will not be holding the lab in-person today. Instead, you will work on the following exercises during our class time. **Please join me at 6pm EST in my Zoom room.** I will go over announcements and instructions for how to work through the material we will be covering.

Here is a series of tutorials on the basics of programming in Python. You will watch these asynchronously. Note: This is a four hour long video -- you **do not** need to watch all of it. Please follow the timestamps below, and if you have trouble with where to start/stop watching let me know!

- **Introduction to Working With Numbers in Python** (watch until 48:26 - Getting Input From Users):
- https://youtu.be/rfscVS0vtbw?t=906
- **Introduction to Lists and Functions** (watch until 1:34:11 - Return Statement):
- https://youtu.be/rfscVS0vtbw?t=3790
- **Introduction to Comments** (watch until 3:04:17 - Try / Except):
- https://youtu.be/rfscVS0vtbw?t=10818

If you have questions, pop back into my Zoom room. I will be available there from 6-9pm. Next, you will get some hands-on coding practice in this Google Collab notebook: https://colab.research.google.com/github/data-psl/lectures2020/blob/master/notebooks/01_python_basics.ipynb

What is Google Collab?

> Colaboratory, or “Colab” for short, is a product from Google Research. Colab allows anybody to write and execute arbitrary python code through the browser, and is especially well suited to machine learning, data analysis and education. More technically, Colab is a hosted Jupyter notebook service that requires no setup to use, while providing access free of charge to computing resources including GPUs.

I think the exercises at the end of each section are a little tricky, so don't worry about completing those. Just focus on running each cell (don't forget the hidden ones)! If you have questions, pop back into my Zoom room. I will be available there from 6-9pm.

After working through the Collab Notebook tutorial, you will make your own Notebook: https://colab.research.google.com/

The purpose of this exercise is to give you an introduction to coding in Python, not to make you into a programming whiz overnight. I want you to explore coding and have fun! In your notebook, I would like you to (1) print a list of numbers, (2) print a string, (3) come up with a function that returns something (you choose!), and (4) practice making comments in your code. We will talk more about how to submit this when we meet initially on Zoom. As you work on this, remember, if you have questions, *pop back into my Zoom room*. I will be available there from 6-9pm!

Just for your convenience, here is how to submit your Collab Notebook (Note: You don't need to submit the tutorial, just your exploratory notebook) to Courseworks:

1. Find and click the 'Share' button on the upper righthand corner
2. Make sure I can view it by changing the General Access settings from 'Restricted' to 'LionMail'
3. Copy the shared link, just like a GoogleDoc link. Paste it into a word doc/PDF, and upload to the Courseworks Lab 2 folder. Submissions will be open until Friday at midnight, and you can re-upload if you made a submission mistake.