Internship Jeopardy (01/03/19)
Topics: Oceanography, GitHub/Atom, Numpy Arrays, Dataset, Miscellaneous

Oceanography

- $100: What is a clockwise eddy called?
  - **Anticyclonic**
- $200: What direction does water move in the center of a cyclonic eddy?
  - **Up (also known as upwelling)**
- $300: How does the center of a clockwise eddy compare to its surroundings? (i.e. is it higher or lower? Warmer or colder?)
  - **Warmer and higher**
- $400: What ”force” causes objects to deflect to the right in the Northern Hemisphere and to the left in the Southern Hemisphere?
  - **The Coriolis effect**
- $500: What is bathymetry?
  - **Submarine (underwater) topography**

GitHub/Atom

- $100: How do you run a line of code in Atom?
  - **Shift-enter**
- $200: What code must come first in Terminal for Git to execute the command?
  - **git**
- $300: What command updates your local repository (on your laptop) with any new files from the master repository?
  - **Git pull upstream master**
- $400: What command sends your changes to your online repository?
  - **Git push origin master**
- $500:
  - **Git add filename**
  - **Git commit -m “message”**

Numpy Arrays

- $100: How do you select the element **-22**?

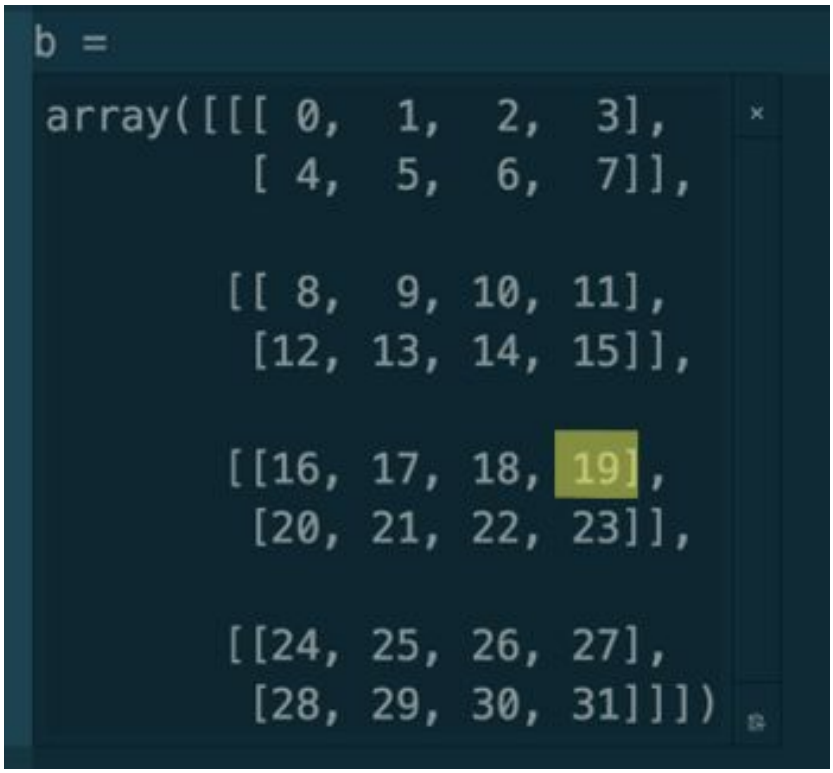
```
a =  array([  1,   2,   4, 129,   1, -22,   7,  10])
```

  - **a[5]**
- $200: How do you select the element **222**?

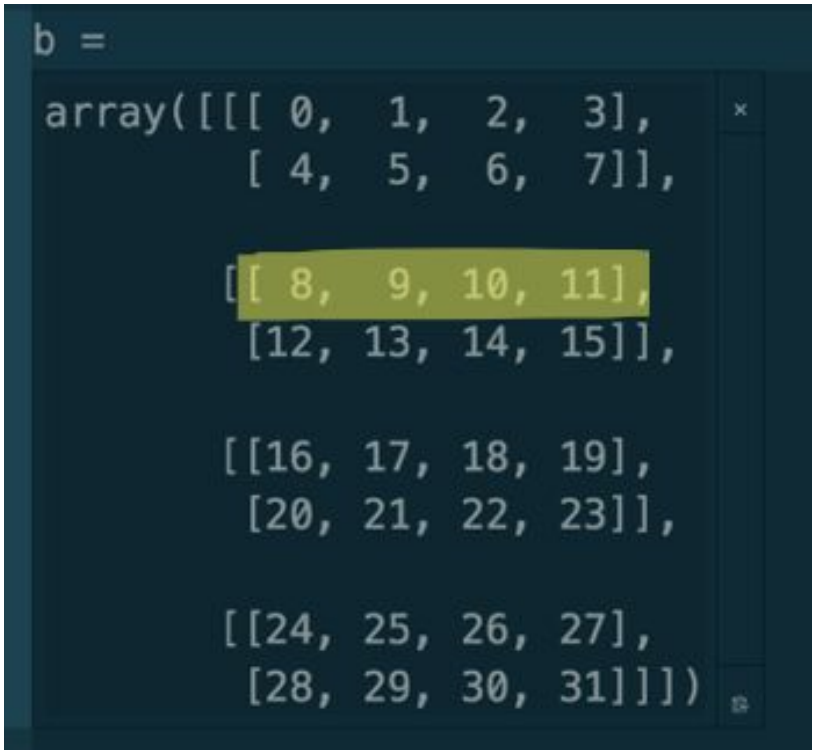
```
a =
array([[  1,   2,  10,  11],
       [  2,   3,   7,   9],
       [222,   1,   3,  14],
       [100, 101, 223,  17]])
```

  - **a[2,0]**

- $300: How do you select the element **19**?

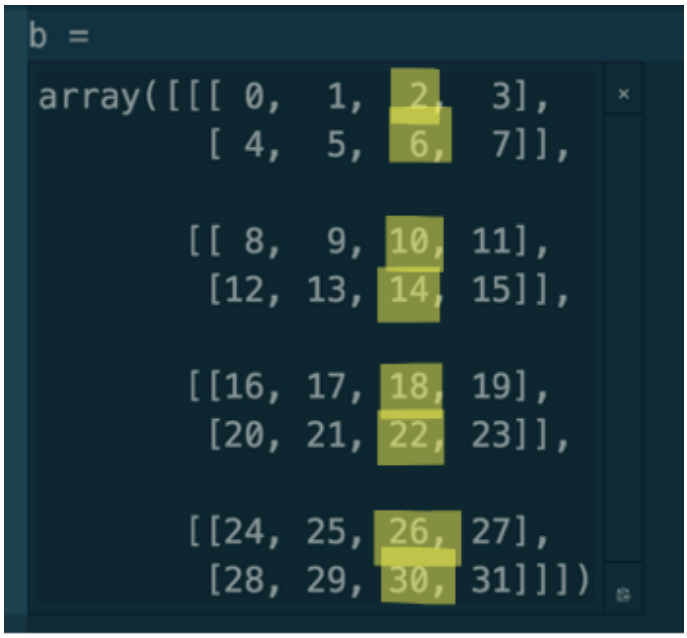


  - **b[2,0,3]**
- $400: How do you select the first row in the second group?



  - **b[1,0,:]**

- $500: How do you select the third column in all groups/rows?



    - **b[:,:,2]**

Dataset

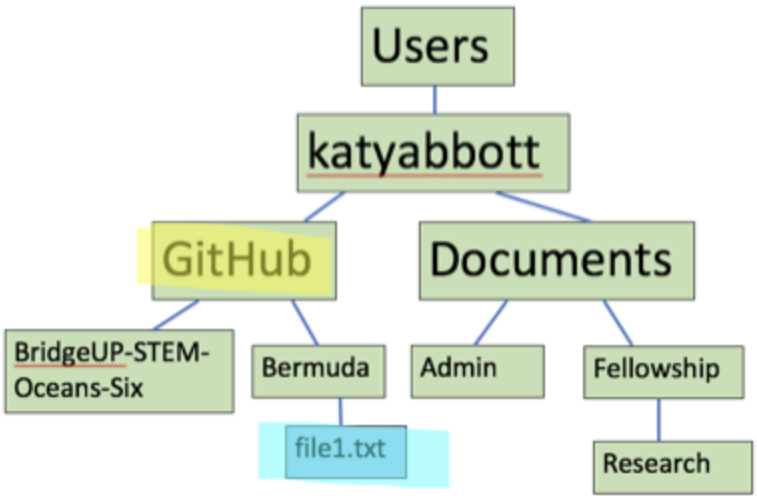
- $100: What is a file format that stores data in arrays for scientists?
    - **netCDF**
- $200: What are the dimensions of our dataset?
    - **Time, latitude and longitude**
- $300: Approximately many years does our dataset span?
    - **~25 years**
- $400: How can you access a specific variable in a netCDF file?
  For example, assume we have imported our dataset and called it *dataset*, and the variable we want to look at is called *sla*
    - **dataset.variables['sla']**
- $500: What Python packages/functions can you use to plot our data?
  (a) 100 bonus points: What are the function's arguments, in the correct order?
    - **Matplotlib, pyplot, pcolor**
    - **(a) (Longitude, latitude, sla), i.e. (x, y, z)**

Miscellaneous

- $100: What state am I originally from?
    - **California**
- $200: What is this an example of?:
  Documents/GitHub/BridgeUP-STEM-Oceans-Six/script.py?
    - **Relative path**

- $300: What kind of animal is this?

    - **Manatee**
- $400: How do you move a file from one location to another? i.e., write the code to move **file1** to **folder2**
    - **mv file1 folder2**
- $500: What is the absolute path to **file.txt**? Additionally, if you are located in the GitHub folder, what is the relative path?



    - **/Users/katyabbott/GitHub/Bermuda/file1.txt**
    - **Bermuda/file1.txt**