py1

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outline

misc

thinking of Earth as a sphere (3D object)

merging data

Google Places API

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Python

- I feel that the last week Python's introduction might have not been enough....
- are there any Python questions?
- were you able to run the code?
- anything we should cover again?

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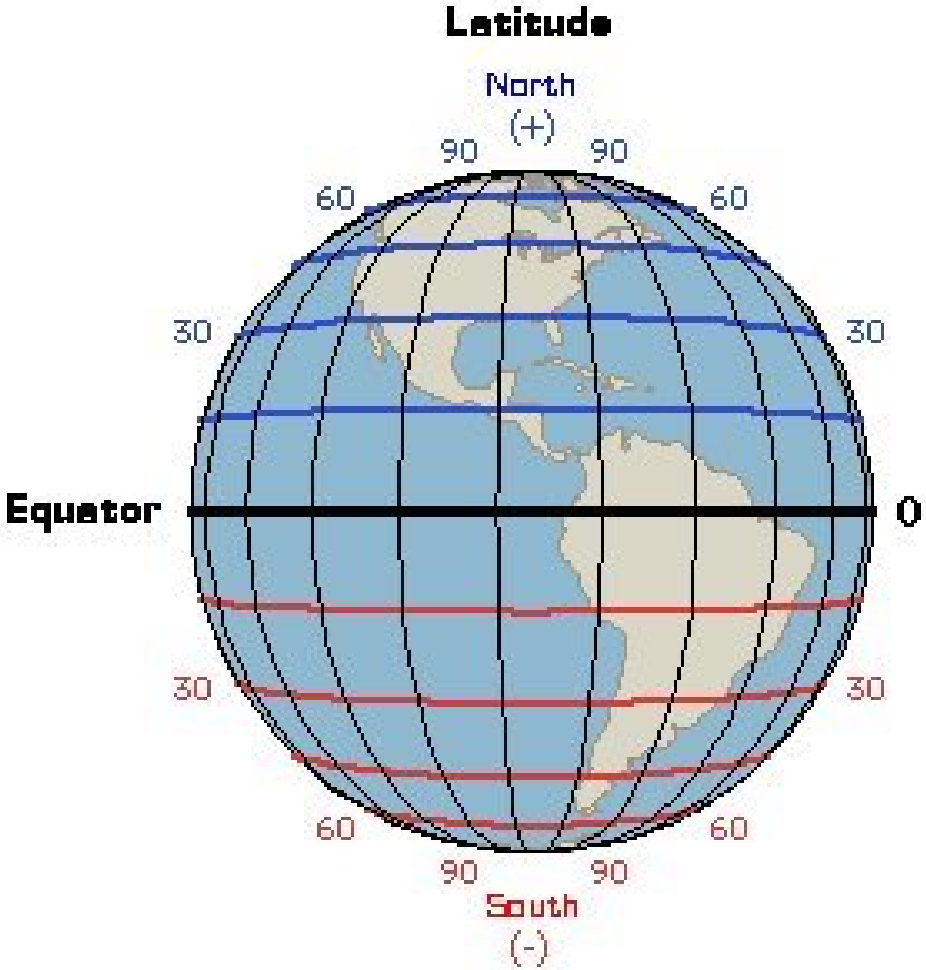
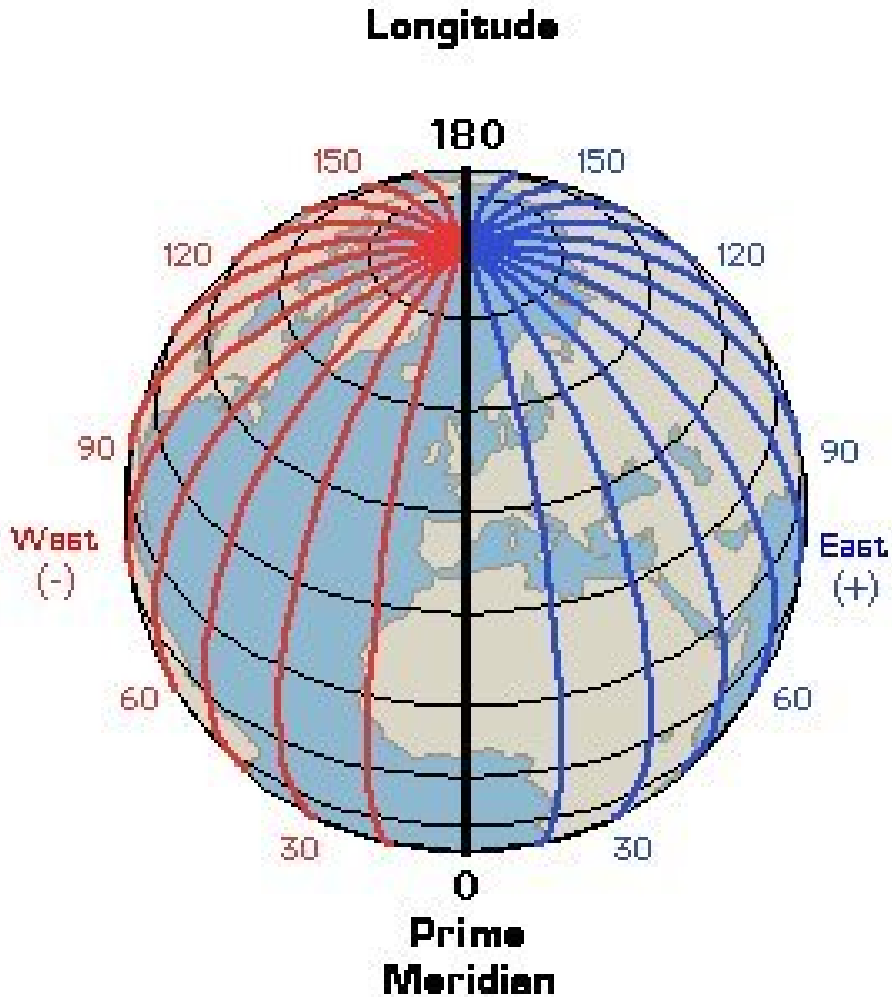
matplotlib basemap

- we will use matplotlib basemap (maybe pyngl later)
- it was made for earth sciences (e.g. oceanographers, meterologists)
  - it usually deals with a big chunk of Earth (currents, winds, oceans, continents, etc)
  - so it makes you think about a sphere, as opposed to plane
- matplotlib basemap looks mature/stable and firendly (pyngl, too)
  - and we can use it for social scienc purposes
  - (it reads shapefiles)
- ref: `http://matplotlib.org/basemap/users/intro.html`

coordinates again





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- note $+$ and $-$

coordinates again

- latitude (North) is how far are we "above" equator
- longitude (West) is how far West are we from London (Greenwich), England
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how do i find coordinates for a place?

- google “camden nj coordinates”
- 39.9258 N, 75.1200 W
- which is LAT=40; LON=-75

basemap is not necessary

- if you work at a local level, say of size of NJ
- you don't need to display a basemap, just import shapefile

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it is one of the key skills

- again, it is very easy but not very useful to produce a map when all data are in the shapefile already...
- one of the keyt skills that you should get from thsi class is the ability to merge “regular” and “gis data”
- unfortunately yuo have seen that merging data in qgis is painful
- this is where Python comes in handy

example: zillow housing prices

- remember example with zillow housing prices
- we have done in qgis
- let's do it again in Python
- see code under "merging" in matplotlib_basemap.py
- let's go over it slowly
- ask questions
- make comments in the code
- again, merging data is important

health across US counties

- also see in matplotlib_basemap.py
- example from my research: health across US counties

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to be continued...