On the last screen, we parsed the latitude from the Location 1 column. Now we'll just need to do the same for the longitude.

Once we have both coordinates, we'll need to convert them to numeric values. We can use the pandas.to\_numeric() function to convert them from strings to numbers.

Instructions

* Write a function that:
  + Takes in a string.
  + Uses the regular expression above to extract the coordinates.
  + Uses string manipulation functions to pull out the longitude.
  + Returns the longitude.
* Use the [Series.apply()](https://pandas.pydata.org/pandas-docs/stable/generated/pandas.Series.apply.html" \t "_blank) method to apply the function across the Location 1 column of hs\_directory. Assign the result to the lon column of hs\_directory.
* Use the [to\_numeric()](http://pandas.pydata.org/pandas-docs/version/0.17.0/generated/pandas.to_numeric.html" \t "_blank) function to convert the lat and lon columns of hs\_directory to numbers.
  + Specify the errors="coerce" keyword argument to handle missing values properly.
* Display the first few rows of hs\_directory to verify the results.

answer

import re

def find\_lon(loc):

coords = re.findall("\(.+\)", loc)

lon = coords[0].split(",")[1].replace(")", "").strip()

return lon

data["hs\_directory"]["lon"] = data["hs\_directory"]["Location 1"].apply(find\_lon)

# print(data["hs\_directory"].head())

data["sat\_results"]["SAT Math Avg. Score"] = pd.to\_numeric(data["sat\_results"]["SAT Math Avg. Score"], errors = "coerce")

data["hs\_directory"]["lat"] = pd.to\_numeric(data["hs\_directory"]["lat"], errors = "coerce")

data["hs\_directory"]["lon"] = pd.to\_numeric(data["hs\_directory"]["lon"], errors = "coerce")

print(data["hs\_directory"].head())