PythonM2_JosephVargovich

August 21, 2020

1 Author: Joseph Vargovich

[6]:
```
#Import libraries I will be using
import math
import requests
import pandas as pd
```

1.1 Exercise 1:

1.1.1 Create a data frame "by hand" with the names, ages, and heights of your own family.

[7]:
```
#Create a dictionary to convienently map row,col pairs.
familyDict = {"Name": ["Joe", "Mom", "Ash", "Peanut", "Kitty", "BigNasty"],
              "Age" : [21, 55, 22, 10, 11, 4],
              "Height" : [74, 64, 68, 12, 12, 9]}
#Make a data frame with the dictionary.
familyDF = pd.DataFrame(familyDict)
#Simply print the head of the frame.
familyDF.head()
```

[7]:

	Name	Age	Height
0	Joe	21	74
1	Mom	55	64
2	Ash	22	68
3	Peanut	10	12
4	Kitty	11	12

1.2 Exercise 2:

1.2.1 Find the mean age of the family.

[8]:
```
#Select the Age column and call the mean function on it.
familyDF["Age"].mean()
```

[8]: 20.5

1.3 Exercise 3:

1.3.1 Import and parse csv to dataframe from remote source on GH.

[9]:
```
#Here we specify a download url to pull a csv from. This is an addresses csv.
download_url = "https://raw.githubusercontent.com/dereksonderegger/570L/master/
 ↪data-raw/Example_1.csv"
#This will be the file name of our imported csv.
csv_name = "Example_1.csv"

#Grab the csv from the url above.
response = requests.get(download_url)
#This will stop execution if the url is not valid.
response.raise_for_status()
with open(csv_name, "wb") as f:
    f.write(response.content)

#Read the address csv and store it here.
example1DF = pd.read_csv("Example_1.csv")
#Print the head of the dataset.
example1DF.head()
```

[9]:

	Girth	Height	Volume
0	8.3	70	10.3
1	8.6	65	10.3
2	8.8	63	10.2
3	10.5	72	16.4
4	10.7	81	18.8

Here is a demo of a 404 error returned due to a faulty link.

[13]:
```
#Here is a demo of the exception raised with an invalid link.
download_url = "https://raw.githubusercontent.com/dereksonderegger/570L/master/
 ↪data-raw/Examplefsdafsdfsadadsf_1.csv"
#This will be the file name of our imported csv.
csv_name = "bug.csv"

response = requests.get(download_url)
#This will stop execution as the url is not valid.
response.raise_for_status()
#This will not run, the exception raised will terminate execution.
with open(csv_name, "wb") as f:
    f.write(response.content)
```

```
 ␣
↪---------------------------------------------------------------------------
```

```
       HTTPError                                 Traceback (most recent call␣
↪last)

       <ipython-input-13-8d81b167ed3a> in <module>
         6 response = requests.get(download_url)
         7 #This will stop execution as the url is not valid.
   ----> 8 response.raise_for_status()
         9 #This will not run, the exception raised will terminate execution.
        10 with open(csv_name, "wb") as f:


       ~\anaconda3\lib\site-packages\requests\models.py in␣
↪raise_for_status(self)
       939
       940         if http_error_msg:
   --> 941             raise HTTPError(http_error_msg, response=self)
       942
       943     def close(self):


       HTTPError: 404 Client Error: Not Found for url: https://raw.
↪githubusercontent.com/dereksonderegger/570L/master/data-raw/
↪Examplefsdafsdfsadadsf_1.csv
```

As expected, we have a 404 error as the link was invalid.