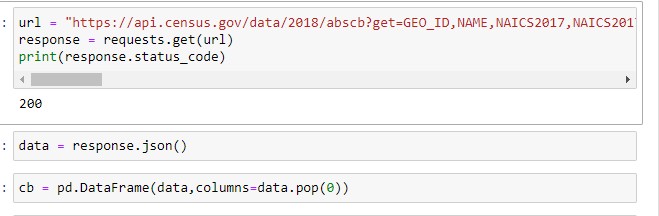
STEPS:

1. Import Pandas (import pandas as pd), Import matplotlib (import matplotlib.pyplot as plt), Import Requests (import requests), Import seaborn (import seaborn as sns)
2. Obtain a key from the census website
3. With the key, request the characteristics of business census API and make it into a data frame
   1. Website = "https://api.census.gov/data/2018/abscb?get=GEO\_ID,NAME,NAICS2017,NAICS2017\_LABEL,SEX,SEX\_LABEL,ETH\_GROUP,ETH\_GROUP\_LABEL,RACE\_GROUP,RACE\_GROUP\_LABEL,VET\_GROUP,VET\_GROUP\_LABEL,QDESC,QDESC\_LABEL,BUSCHAR,BUSCHAR\_LABEL,YEAR,FIRMPDEMP,FIRMPDEMP\_F,FIRMPDEMP\_PCT,FIRMPDEMP\_PCT\_F,RCPPDEMP,RCPPDEMP\_F,RCPPDEMP\_PCT,RCPPDEMP\_PCT\_F,EMP,EMP\_F,EMP\_PCT,EMP\_PCT\_F,PAYANN,PAYANN\_F,PAYANN\_PCT,PAYANN\_PCT\_F,FIRMPDEMP\_S,FIRMPDEMP\_S\_F,FIRMPDEMP\_PCT\_S,FIRMPDEMP\_PCT\_S\_F,RCPPDEMP\_S,RCPPDEMP\_S\_F,RCPPDEMP\_PCT\_S,RCPPDEMP\_PCT\_S\_F,EMP\_S,EMP\_S\_F,EMP\_PCT\_S,EMP\_PCT\_S\_F,PAYANN\_S,PAYANN\_S\_F,PAYANN\_PCT\_S,PAYANN\_PCT\_S\_F&for=us:\*&QDESC\_LABEL=SPOUSES
   2. Ex code:



1. For the first question about Business Characteristics, create a new data frame(cbq1) and set it equal first data frame (cb in the example above)
2. Change the numemployees column in cbq1 to a float data type
3. Then filter cbq1 to only have ETHNIC\_GROUP\_LABEL and EMP as columns
4. Remove rows that have Equally Hispanic/non-Hispanic, Unclassifiable, and Classifiable for ethnic groups
5. Make the data frame group by ETHNIC\_GROUP\_LABEL count.
6. Create a bar graph using ax=[dataframe\_name].plot(title = 'Number of Employees that are Hispanic and non-Hispanic',kind='bar')
7. Add labels for the x axis label, y axis label, title, column values[ax.bar\_label(ax.containers[0], label\_type='edge', fmt='%d')], and rotate the x axis labels horizontally.
8. For the second question create a new data frame(cbq2) and set it equal to cb
9. Filter cbq2 to have only contain NAICS2017 and EMP columns
10. Remove rows that have ‘Total for all sectors’ and ‘Industries not classified’ as NAICS2017
11. Use a groupby for the count of NAICS2017
12. Create a horizontal bar graph
    1. ex: ax2 = ree2.plot(title = 'NUMBER OF EMPLOYEES BY NAICS',kind='barh')
13. Add x and y axis labels, titles, and make the x axis labels horizontally
14. For the third question using the same key before, make a data frame from the characteristics of business owners census data
    1. [https://api.census.gov/data/2018/abscbo?get=GEO\_ID,NAME,NAICS2017,NAICS2017\_LABEL,OWNER\_SEX,OWNER\_SEX\_LABEL,OWNER\_ETH,OWNER\_ETH\_LABEL,OWNER\_RACE,OWNER\_RACE\_LABEL,OWNER\_VET,OWNER\_VET\_LABEL,QDESC,QDESC\_LABEL,OWNCHAR,OWNCHAR\_LABEL,YEAR,OWNPDEMP,OWNPDEMP\_F,OWNPDEMP\_PCT,OWNPDEMP\_PCT\_F,OWNPDEMP\_S,OWNPDEMP\_S\_F,OWNPDEMP\_PCT\_S,OWNPDEMP\_PCT\_S\_F&for=us:\*&QDESC\_LABEL=YRACQBUS&key=](https://api.census.gov/data/2018/abscbo?get=GEO_ID,NAME,NAICS2017,NAICS2017_LABEL,OWNER_SEX,OWNER_SEX_LABEL,OWNER_ETH,OWNER_ETH_LABEL,OWNER_RACE,OWNER_RACE_LABEL,OWNER_VET,OWNER_VET_LABEL,QDESC,QDESC_LABEL,OWNCHAR,OWNCHAR_LABEL,YEAR,OWNPDEMP,OWNPDEMP_F,OWNPDEMP_PCT,OWNPDEMP_PCT_F,OWNPDEMP_S,OWNPDEMP_S_F,OWNPDEMP_PCT_S,OWNPDEMP_PCT_S_F&for=us:*&QDESC_LABEL=YRACQBUS&key=)
15. Merge the data frames from both websites together and call it ‘merged’
16. Change EMP and OWNPEMP to float types
17. Make a scatter plot with OWNPEMP on the x-axis and EMP on the y-axis
    1. Ex:

