Submit by Feb 21, 2022 11:59 PM (midnight) upload to D2L dropbox
Points: 7
The assignment must be done individually

1- Pandas Health Report (4 pts)
We are going to study data collected from 293 patients with heart disease, and extract some meaningful information. You can download the dataset (data.csv) from d2l and if you want to know more about it, you can use the below Kaggle link:
https://www.kaggle.com/imnikhilanand/heart-attack-prediction (uploaded data.csv)

Feature	Description
age	age in years
gender	(1 = male; 0 = female)
cp	chest pain type
trestbps	resting blood pressure (in mm Hg on admission to the hospital)
chol	serum cholestoral in mg/dl
fbs	(fasting blood sugar > 120 mg/dl) (1 = true; 0 = false)
restecg	resting electrocardiographic results
thalach	maximum heart rate achieved
exang	exercise induced angina (1 = yes; 0 = no)
oldpeak	ST depression induced by exercise relative to rest
slope	the slope of the peak exercise ST segment
ca	number of major vessels (0-3) colored by flourosopy
thal	3 = normal; 6 = fixed defect; 7 = reversable defect
num	diagnosis of heart disease (angiographic disease status)

Tasks:

- Report1: what is the average age of patients?
- Report2: report the average chol level of people in intervals of 10 years old ([20,30], [30,40],[40,50],[50,60])
- Report3: report the average trestbps in people with chol of the highest level (the highest 30%) and lowest level(the lowest 30%).
- Report4: report percentage of men and women with a positive diagnosis of heart disease(num=1).

2- WikiQuotes (3 pts)¶

Data set from Kaggle: https://www.kaggle.com/fantop/wikiquote-short-english-quotes/data

Tasks

1. Read the json file `quotes-100-en.json` into a dictionary using the json module
2. Write a function `search_quotes` that takes a string as argument, searches the keys in the quotes dictionary for items containing the search string and prints the matching name (key) and quotes.
3. With the function in 2. you can verify that there are quotes for 'Einstein' and 'Feynman'. Ranking by number of quotes, who of the two is ranked higher and what is their respective rank? To answer this question, build a DataFrame with quotes keys in one column and number of quotes in a second column. With this Dataframe:
    - Sorting the DataFrame by number of quotes,
    - resetting the index
    - and finding both individuals the new index shows the rank.

What to hand in

Upload three python files to D2L dropbox with solutions to the above exercises:
1. A3_1_health_report.py
2. A3_2_wikiQuotes.py
2. data.csv
3. quotes-100-en.json