CA3: Final Assessment

This assignment is worth 40% of the total marks that are available for this module.

This is an individual assignment. (estimated workload (outside class time): 10 hours.)

Most people have heard of Cryptocurrencies but very few understand how volatile they are and how their value has changed over time. You have been tasked to analyse a dataset "**consolidated_coin_data.csv",** which contains the Consolidated financial information for the top 10 cryptocurrencies by market cap. Pulled from CoinMarketCap.com. Attributes include:

- Currency name (e.g. bitcoin)
- Date
- Open
- High
- Low
- Close
- Volume
- Marketcap

The answers to the questions below must be communicated to 2 distinct age groups (So 2 visualizations for each Question):

- 17-35-year olds
- 60+ age group.

Requirements

You are required to use the dataset contained within the file "**consolidated_coin_data.csv"** and then perform the following analysis:

1. You are then required to explain what you plan on doing with the data. E.g. Why did you chose the specific visualizations, what are the specific differences and design choices made for each age group and their visualizations etc **This must be detailed in the Mark-down of the Jupyter Notebook and include the rational for your choice**.

2. Generate a plot that details change in the "High" value for **all the Currencies** over time (On the same visualization)
3. Plot a graph depicting the "Volume" by Currency between 2016 and 2019 for the top 3 Currencies Only. (On the same visualization)

No additional output will be graded.

You must complete ALL data exploration PROGRAMATICALLY and not using any other tool than python.

NOTE This is an Individual Assessment and there are multiple ways to complete it

Higher grades will be assigned for interactivity, good, rationalized design choices etc Any References MUST be in HARVARD Style (inc code references)

Marking Scheme (on a sliding scale)

Rationale	**Logical, Concise** Explanation of Your Plan for working with the data (Min 500 Words)	20
	Logical, Concise Explanation of Your Choice of each Visualization (Min 100 Words per age group for each visualization)	20
	Clear, working, explained, code process	10
	Solution to Requirement 2	20
	Solution to Requirement 3	20
	Inclusion of correct Title, axis title, annotation etc, suitable for the visualization chosen	10
	TOTAL MARKS:	100

Deadline

This assignment is due at 23:55 on **Tuesday 30th March 2020**.

Late submission will be graded as per CCT policy. Failure to upload your assignment will result in a 0% grade for this assessment.

Required Files

You are required to upload to Moodle:

1. **a Jupyter Notebook File**, yourName_DV_CA4.ipynb.