**Cryptocurrency Valuations vs. Traditional Financial Assets**

In this project we are comparing valuations of popular cryptocurrencies vs more traditional assets: stocks, gold and oil. To do this, we will first extract data, transform it and then load it all into a database. In this instance, we chose to load the data into MySQL.

**Extract**

The sources that we are pulling data are CSV, JSON and XLSX format.

* Cryptocurrency data was obtained from a CSV containing daily market value prices from 2013 to 2018.
* Crude oil data was obtained from an XLSX file containing daily market value from the period of 2017 to 2018.
* Gold data was obtained from a JSON file containing daily market value from a period of 1978 to 2019. The price reflected the price of a troy ounce in USD
* Stock data was obtained as a CSV file from Kaggle. The dataset contained data from 2013 to 2018.

**Transform**

While the stock data and crypto data contained information on open, close, and volume, the gold and oil data only contained data as an average for the day. Therefore we decided to focus on closing price of crypto and stocks so that they could be compared to the commodities. Additionally we decided to join the tables on date. This meant that we had to transform the date strings into date objects so they could compared between datasets. This conversion was performed in Jupyter, using Pandas and the datetime library. We also transformed the data by removing unnecessary data and then combined all of the data into a single large data set.

**Load**

The final production database is called FINANCIALS. The database will be a relational database in MySQL database. There will be separate tables for each data sources data that we are pulling from. The table names are as follows:

* CRYPTO
* GOLD
* STOCKS
* OIL

The database tables will be joined and database views will be created for frequently used reports.