**Juan Camarillo**

**Purpose**

Use VBA macro code to analyze stock market data from various corporations. To accomplish this task, I refactor the original scrip so that it can run through numerous sheets of data and return results faster. Datasets provided include stock market information from 2017 and 2018.

**Results**

Refactoring the VBA macro, we repurposed the code to be able to analyze large stock market datasets. To test the VBA macro, we performed the analysis on the green stock dataset that contains data for 12 green energy stocks during the years 2017 and 2018. The execution times between the original and refactored scripts were also different.

**Stock Market Performance between 2017 and 2018**

After the analysis we can see that in 2017 only one unsuccessful return was reported, while in 2018 the outcome reported only two successful outcomes among 12 green energy stock companies. The largest returns were for DQ and SEDG companies in 2017 but both had losses in 2018, while ENPH and RUN companies kept their returns to a high degree relative to other stocks and RUN even multiplied its return nearly 15 times.

**Summary**

The refactored VBA script reduced the execution time of the script in analyzing the data set. Refactoring was an essential part of the coding process used to make the code more efficient.

**Refactoring Code**

The obvious advantage of refactoring is the opportunity to relook previous code and make it more efficient by taking fewer steps and uses less memory. Additionally refactoring improves the logic of the code for future use and makes code more maintainable.

A disadvantage would be a lack of mastery of the syntax makes it very difficult to understand the logic and intent of the previous coder, particularly because it is not easily intuitive. The refactoring process may affect outcomes of the data. You can potentially introduce bugs that your tests won't catch.

**How do these pros and cons apply to refactoring the original VBA script**

The key benefit was the educational aspect of reworking our code. It also did speed up the runtime on the original script and make it easier to understand.