**VBA Challenge**

Overview of Project:

For this project, code that was made for Steve to analyze his data sets is being refactored to be more efficient. To see how efficient this refactored code is, the runtime will be looked at.

Results:

The runtime for the original code that analyzed both the 2017 and 2018 data sets is shown to be 0.5625 seconds in Figure 1.

Figure 1

Graphical user interface, text, application

Description automatically generated

The runtime for the refactored code that analyzed the 2017 or 2018 data sets is shown to be around 0.089 seconds for the 2017 data set and 0.093 for the 2018 data set, which can be seen in Figures 2 and 3.

Figure 2

Graphical user interface, text, application, chat or text message

Description automatically generated

Figure 3

Graphical user interface, text, application

Description automatically generated

From looking at the figures it can be seen that the refactored code runs in a lot less time than the original code.

Summary:

An advantage for refactoring code can be seen through the runtimes in this project. Shorter runtimes can help programs run more smoothly however refactoring code takes time and the more code the more time. Also depending on what is being done reducing the runtime might not be necessary.

The original code got the job don when it came to analyzing the data and it showed both the 2017 and 2018 data. If more data was added the code would still work unless more tickers were added. Also, the original code would not work for other years. The refactored code similarly would work with more data except tickers however it only analyzes one year at a time but it could work for other years.