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**VBA Project Summary**

The input and output to this macro is an excel spreadsheet (or multiple worksheets within a workbook).

All versions do one primary action, accumulate the total volume of individual stocks throughout the year. Change in stock price from the beginning of the year to the end is also calculated and the percentage of that change as well. This information is displayed in a summary table at the top of the worksheet, to the right of the input data.

**Version1** – Under the assumption of processing edited records, opening price for the first occurrence of each ticker was used to set the year open value and close price for the last occurrence was used to set the year end price. Percentage changed is calculated as year end price divided by year open price, then subtract one.

**Version2** - Adds a second summary underneath the first one that displays the stocks with the greatest total volume, greatest percentage of increase, and greatest percentage of decrease. The assumption of edited input data still stands.

**Version3** - Adds the ability to run the macro on all worksheets in the workbook at once by adding a simple for-loop based on the worksheet index number. This is also when an issue arose with dividing by a zero valued year open price. A simple solution was taken to use a low value of one cent as year open price.

**Version4** - A more thorough approach to the issue of no open price on the first record was taken. An internal loop was created checking subsequent days stock records for a non-zero opening price and using that for the year open value. Two errors were also accounted for and if necessary, error messages will print at the top of the worksheet, to the right of the summary table. In addition to the error line the %change cell will show an error msg (1. Having a closing price on the last record but never finding an open price on any: “ERROR” is inserted in the %change cell for this record. 2. Having a zero-value year end price and a non-zero-year open price, mathematically just zero but “0-ERR” is put in the %change cell).

Obviously, this is a homework assignment with the issue of dividing by zero popping up to get us to deal with problems we probably didn’t account for ahead of time. Just as an approach was taken to look for an open price, the close price could be put in a hold field if it’s not zero, overlaid with each record, there in case the last record had a zero value in the close price, which is where I take my year end value from. More importantly, the data should be edited and stocks with “bad” records pulled out and fixed.

All in all, a fun and interesting assignment leading to lots of learning about VBA for excel, I wish I had more time to play around with it but Python awaits.