Week 5 Seminar Questions

The following operation can be implemented in the Python Jupyter Notebook or Spyder and submit it to your own Github repo.

1. Download the one-year historical daily data for The Apple Inc. (AAPL) from Yahoo Finance. Save the data as a ‘csv’ file.

2. Calculate the normal daily returns and log-returns by using ‘numpy’. Then provide the annualized return and standard deviation of AAPL.

3. Plot the daily closing price by using ‘matplotlib’.

4. Plot the daily log return by using ‘matplotlib’.

5. (1) Download the one-year historical daily data for Tesla Inc. (TSLA), Amazon.com, Inc. (AMZN), and BlackRock (BLK) from Yahoo Finance. Save the data as three ‘.csv’ files. (2) Importing the saved three ‘.csv’ files, renaming three series of closing price as ‘closeP\_TSLA’, ‘closeP\_AMZN’, and ‘closeP\_BLK’, respectively. (3) Concatenating three series into one DataFrame. (4) Calculating the log returns for the three stocks by ‘pandas’ and creating three new series in the table for the three log return series. (5) Calculating the differences between the log returns for Tesla and for BlackRock, and the differences between the log returns for Amazon and for BlackRock on each day, then calculating the mean differences over the entire period.