Financial Technology

HW3: K-Bar

Deadline: 2022/11/15

Grading Policy:

1. In the programing assignment, the code(**.ipynb**) and report(**.pdf**) should be compressed into a **ZIP** file and upload to eeclass website. If your code contains external numerical or image data etc. instead of data stream, it should be contained in the ZIP too. Also, please write a Readme file to explain how to run your code and discuss characteristics in your report.

2. The programming language that can be used on this assignment is Python. Built-in libraries or functions are allowed to use. Please integrate all your code to a main file. **You should have executed it and keep the result.**

3. According to the question requirement, the result should be contained in your **report**. **Completeness of responses will affect your score (Explanation, Process, Results, and Discussion)**

4. 30% off for late submission within one week, not accepted after one week.

5. Discussions are encouraged, **but plagiarism is strictly prohibited.**

Problem:
This dataset is the trading record of Taiwan Index Future in Taiwan Stock Exchange (TWSE). The student should filter “TX”, “expired in Oct”, “8:45-13:45” and plot the bar learned from the lesson. The result should be included in report.

1. Save the filtered dataset as “TX.csv”. The date, time, price, volume should be included.
2. Plot the time bar in the period of “1 Day”.
3. Plot the tick bar in the number of “10k” ticks.
4. Plot the volume bar in the volume of “100k”.
5. Plot the dollar bar every “1B” NTD.

Remark:
1. The color of bar is not limited, but you have to explain it.
2. X and y axis are respectively timestamp and price, **the number of ticks** needs to be shown at the bottom.
3. Any blank is not allowed.

Sample:

Grading Policy: