Development Scenario

High Level Requirements

An application should open a data file and parse the historical financial data of a particular stock, perform some analysis to answer a few questions, and write the answers to an output file.

Functional Requirements

1. Application should open, parse and cache the financial data file provided. The file contains the following data fields:
    1. Date – Date data type
    2. Open – Decimal data type ($)
    3. High – Decimal data type ($)
    4. Low – Decimal data type ($)
    5. Close – Decimal data type ($)
    6. Volume – Number data type
2. Application should answer the following questions:
    1. What day was there the largest variance between the High and Low?
    2. What was the average volume for the month of July 2020?
    3. Return all months where the performance was the same (both net positive or net negative) year over year. (Performance can be measured by comparing the first Open to the last Close of the month.)
    4. Return the maximum Volume, by month, for only days where the intra-day change (High vs Low) is greater than 1.5. Which day had the highest intra-day change and volume?
    5. (*Optional*) What is the maximum profit potential per share? And what day(s) would you have had to buy low and sell high to get this maximum profit?
3. Application should output the answers to the above questions to an output file.

Technical Requirements

1. Should run within Node.JS or Python.
2. Input file is tab delimited, and an SQL table or a data layer should be created to correspond.
3. Output file should be in a text (txt) format.
4. Should be submitted as a zip directory of all necessary files, via email. (*Extra credit*: create a private github repo and grant access to WambiDataTest account)

You will be evaluated on the following qualities:

1. Code documentation
2. Code reusability & stability
3. Code organization
4. Code readability