

Project Description:

1. **Application Name:** Financial Tracker
2. **Chosen Dataset:** [AlphaVantage](#) (stock data)
3. **Questions:** Since I chose AlphaVantage API, my main question was in what ways were stock performance influenced by events. I chose Facebook as an IPO since the narrative was clearly displayed. These are most notable when you preview the time series. Also, it was interesting to see how during the pandemic the stock mostly performed well for Facebook, but dropped when technology companies were questioned by congress. Most recently, they were questioned in November, but they were also questioned two prior times for the recent problems with misinformation propagation by social media companies—each time their stock price dropped.
4. **Structure:** The structure of my project consisted of 3 packages and a Display main. The “FinAPI” class did most of the work connecting to the API. Since my API could take infinite calls, I didn’t think it was necessary to store the data. As a result, the JSON file directly interacted with the main and, when starting the application, it is always the most recent data; the “stockpkg” consisted of all the objects for enumerated types and stock classes by date; the “views” package was mostly built to interface with the main and condensing my main application “DisplayStock.”
5. **Design:** My main question was how stocks would perform in a given event. I only pinned it to one that happened multiple times. The time series mostly answered this. As we used enumerated types, I categorized by buckets in a distribution: lowest, low, mid, high. I don’t think this was quite effective since the buckets were vague and not clearly defined. I realized they were not clearly defined because they were static buckets based off Facebook close price data and they did not apply to other stock options. Retrospectively, I should have categorized my data by month or year; however, I could already do it with the API, so I thought this would be redundant.
6. **Future Work:** I should create another scene to directly interact with the API and make calls from the application. I believe this is possible if I use a form, but I didn’t get acquainted with this aspect of JavaFX. I believe it would be worthwhile to complete my application since it offers a better user experience. Additionally, I could drop the enumerated types and simply focus on the time series. I expect to complete the form and directly interact with the API in the future. If the form were completed as a new scene, then this would be more useful, as the user could categorize the data by month or week and change the stock IPO.