Stock Market Recommender

You will be building the frontend of an app that can provide a buy, hold or sell recommendation when given a stock symbol. The recommendation adjusts itself based on data.

Technical Requirements

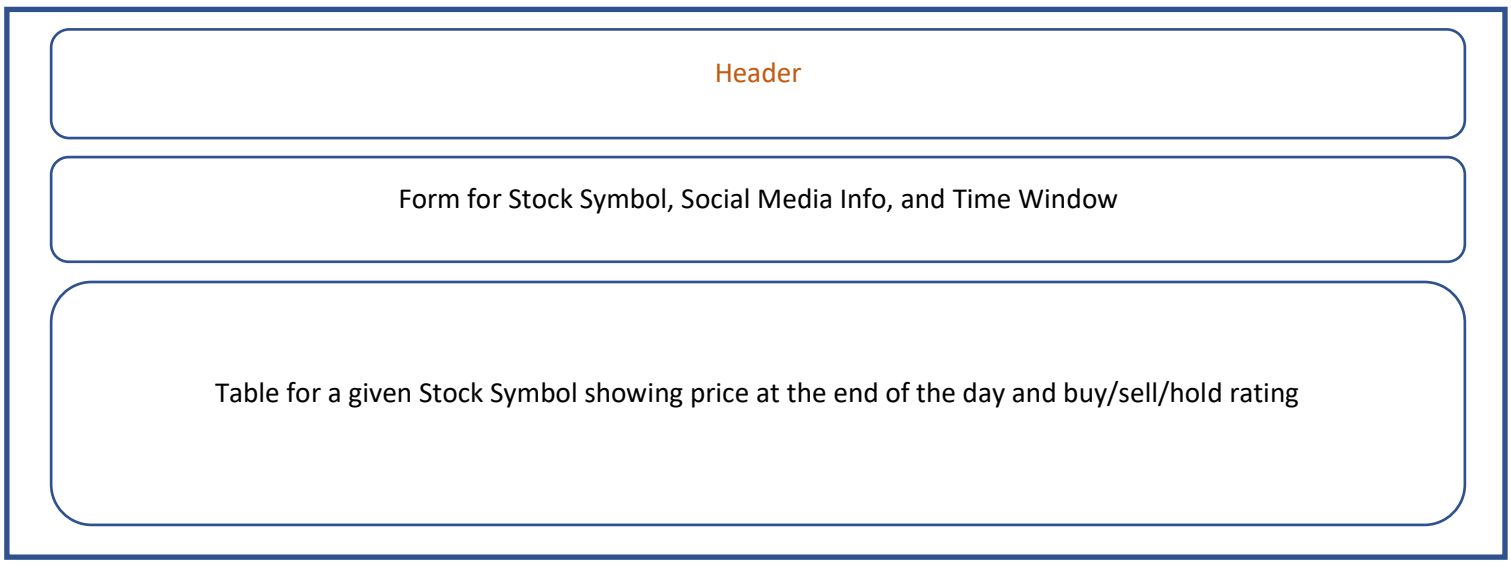
- Use the frontend framework of your choice.
- Create mock data using *Math.random*. Be sure to keep your code maintained in such a way that you can later replace it with a backend API. You must have data for:
    - Stock price for a given stock and date.
    - Social media count for a given stock and date.
- Define a recommendation algorithm:
    - Using the stock price and social media counts, generate a Buy/Hold/Sell recommendation.
- Maintainability: This is the foundation for an app given an entire team will work on.
- Quality: You want to make sure your recommendation algorithm is bulletproof, and thus write some tests for it.

Visual Requirements

The app works with a lot of data. It needs to be presented to the user in a digestible way. Even though you have access to multiple CSS libraries, you've decided to show off your skills and write out your styles directly in CSS/SASS/LESS/CSS-in-JS. You only care about keeping the app's footprint to a minimum and would do anything to speed up the initial load times.

There needs to be separate sections showing:

- A user input for stock symbol, a time window that is defaulted to 10 days (including today),
- A count of social media posts and the stock price over 10 days,
- Recommendations for when to buy, hold (do nothing), or sell in those 10 days



Optional Challenges

These are challenges you may choose to tackle but are fully optional. Take them as hints for questions we may ask around extending the architecture of your solution.

- Test components in addition to the recommendation algorithm.
- Allow your users to add / remove any social media service from the system on the fly.
- Architect your app such that recommendation algorithms are easily switched.
- Some of your customers might be visually impaired. It would be nice if they're able to use the app as well.
- Build a graph (feel free to use a library to help with this part) indicating the points where your algorithm will change the buy/hold/sell recommendation.
- Recommendation algorithms may require more than just price and social media counts. In the app, account for how different algorithms can require different parameters.