**Stockman Presentation Script**

**Slide 1:** Our team consisted of Richard Ay and Tony Zeuch

**Slide 2: Elevator Pitch** - Often, due to daily commitments, investments are often only checked after work hours, which is after the markets close. Constantly watching a brokerage site isn’t feasible, and scrolling tickers usually do not provide sufficient information. Stop-loss and stop-limit orders may or may not protect an investment in a down market, and it is also important to know if an investment is rapidly increasing in value. There is a need for an application where an investor can set upper and lower limits on various investment parameters, which can serve as an alert that immediate action on a full-scale brokerage site is necessary.

**Slide 3: The User Story** - As an investor, I want an efficient way to monitor my investments without logging onto a brokerage website. I want to specify a list of important investments with minimum and maximum values for key parameters, and have an application (running on my phone, tablet, or computer) indicate when an investment value moves outside this range. I can then pursue further research on a full-service brokerage site.

**Slide 4: Application Concept** - The application permits the specification of up to 5 stocks and 5 crypto-currencies. For each investment, a number of parameter minimum and maximum ranges can be specified. A timer runs in the background to monitor the current value of each investment’s parameters, and if a parameter is out of range, an “alert” flag is set, and an alarm sound is played, to indicate further study is needed.

**Slide 5: Processes, Technologies, Challenges, Successes** – We used Bulma as our framework, with Fontawesome and moment.js for presentation and timing. The API-endpoints we used for data include: AlphaAdvantage, FinnHub, and Nomics. Project work was divided evenly between team members. The biggest challenge we faced was the limitation on access imposed by some API-endpoints. Other issues were of the usual flavor – promise chaining, number formatting and numeric object names. These were all overcome, resulting in a working application that satisfied our project goals.

**Slide 6: Application Details** – The home page allows the user to define the investments of interest. If a specified ticker is not found, a modal is used to display an appropriate error message. Additional detail pages (actually tabs) are used for equity and crypto-currency detailed display. These pages employ modals allowing the user to define minimum and maximum ranges for significant investment parameters. Investment data is updated every 10 minutes, and if current parameters are outside of the specified ranges alert symbols are placed next to the offending parameter and the alert alarm is played. Investments and parameter ranges are saved and retrieved from local storage for continued usage. These additional pages also allow the removal (deletion) of investments.

The application consists of an HTML file, a CSS file, and four JavaScript files. Each file addresses one feature or one capability of the application.

**Slide 7: Application Demonstration** – Items to show and highlight include:

* Data is retrieved from local storage at startup, this initial data should include parameters in as well as out of the defined ranges.
* Investment data can be added, and duplicates are prevented.
* Parameter ranges can be defined.
* An investment can be deleted
* The alert column indicates if a parameter is in or out of the defined range.
* Note that equity data is not updated outside of market hours (8:30am – 3:00pm CST).
* Crypto-currency data is updated 24x7.

**Slide 8: Future Development** – We have identified a number of improvements that can be made to this application for professional use:

* Users can subscribe to paid APIs – more data can be obtained on a more frequent basis, and more investments can be monitored.
* Technologies other than API-endpoints can be used (such as website widgets).
* Other investments besides equities and crypto-currencies can be monitored (bonds, warrants, and options).
* Back-end technologies can be investigated to alert the user if a parameter range is exceeded, without active monitoring of the browser window.

**Slide 9: Important Links** – This slide just shows the (required) submission links.

**Slide 10: Questions** – Let’s see what comes back.