F.T.A.H.

Hayden Pour, Julian Beaulieu, Mohamed Rayyan, Padraic Reilly, Nicholas Cardinal

Artifact

Platform: **1**
Platform: 1
Programming Languages: 1

Feature List: **1**
Important Features: 1
Implement if we have time, because we need to use data outside of the database: 2
Sprints:
Sprint 2 2
Sprint 3 3
Sprint 4 6

[Historical daily prices and volumes of all U.S. stocks]

Data we have:

1. Trading Date
2. Opening Price
3. Daily Price (High)
4. Daily Price (Low)
5. Closing Price
6. Volume Sold

Platform:

Web Application / Desktop Application

Programming Languages:

- JavaScript
- HTML
- CSS
- Python

Feature List (Question of Interest):

Important features:

1. ***How does a stock's price change over a given period?***

2. ***How does the volume of stock sold change over a given period?***
3. ***What is the moving average for a stock over a given period?***
4. ***What is the highest/lowest closing price over a given period?***
5. ***Which stock has the largest margin over a given period?***
6. ***What days had the largest increases or decreases in price? (Useful for correlating to real world events)***
7. ***How did a specific stock's daily change compare to the market average change? (High or low performing stocks)***

Implement if we have time, because we need to use data outside of the database:

1. ***How do real-world events affect stock prices?***
2. ***What is the predicted opening and closing price of a stock?***
3. ***What stocks are the best to trade for the day?***

Sprint-2:

Action Items:

- **Client/UI**
  - **JS Promises**
  - **Create import routine for data retrieved from server**
  - **Sort retrieved labels alphabetically**
  - **Sort retrieved data by date**
  - **Display graph from label click**
  - **Display other various information on label click**
- **Server**
  - **Update csv file name to stock ticker name - stock name**
  - **Return labels in chucks to client backend**
  - **Parallel processing when importing from csv**

Tests:

- **Client/UI**
  - **JS Promises**

    Correct Output: The user's data will load completely from server before displaying information to the UI

  - **Create import routine for data retrieved from server**

    Correct Output: The website displays stock information when user clicks the stock they want to view

  - **Sort retrieved labels alphabetically**

    Correct Output: The website will display the stock list in alphabetical order
  - **Sort retrieved data by date**

Correct Output: The data received by the server is properly sorted by date

- **Display graph from label click**

  Correct Output: When a label is clicked, the website will display all pertinent information on the right side of the UI

- **Server**
  - **Update csv file name to stock ticker name - stock name**

    Correct Output: All files in our dataset are renamed correctly

  - **Return labels in chucks to client backend**

    Correct Output: When called, the website requests data from the server and it is returned in a format that can be understood by the website

  - **Parallel processing when importing from csv**

    Correct Output: Multiple files can be read from at any given time

Sprint-3:

Features:

Feature 1:

User Story: As an administrative user, I would like to delete, and insert and reload, new stock data into the CSV files and know when it is done.

Tasks:

Step 1: Get access to new stock data from stock data source
[Completed by]

Step 2: Write functions that inserts lines into CSV and memory
[Completed by]

Step 3: GUI is updated to reflect the newly inserted data
[Completed by]

Step 4: Write function that deletes a selected stock from memory (front and back)
[Completed by]

Step 5: Back up deleted stock by keeping reference in CSV
[Completed by]

Step 6: GUI is updated to reflect the newly deleted data from portfolio
[Completed by]

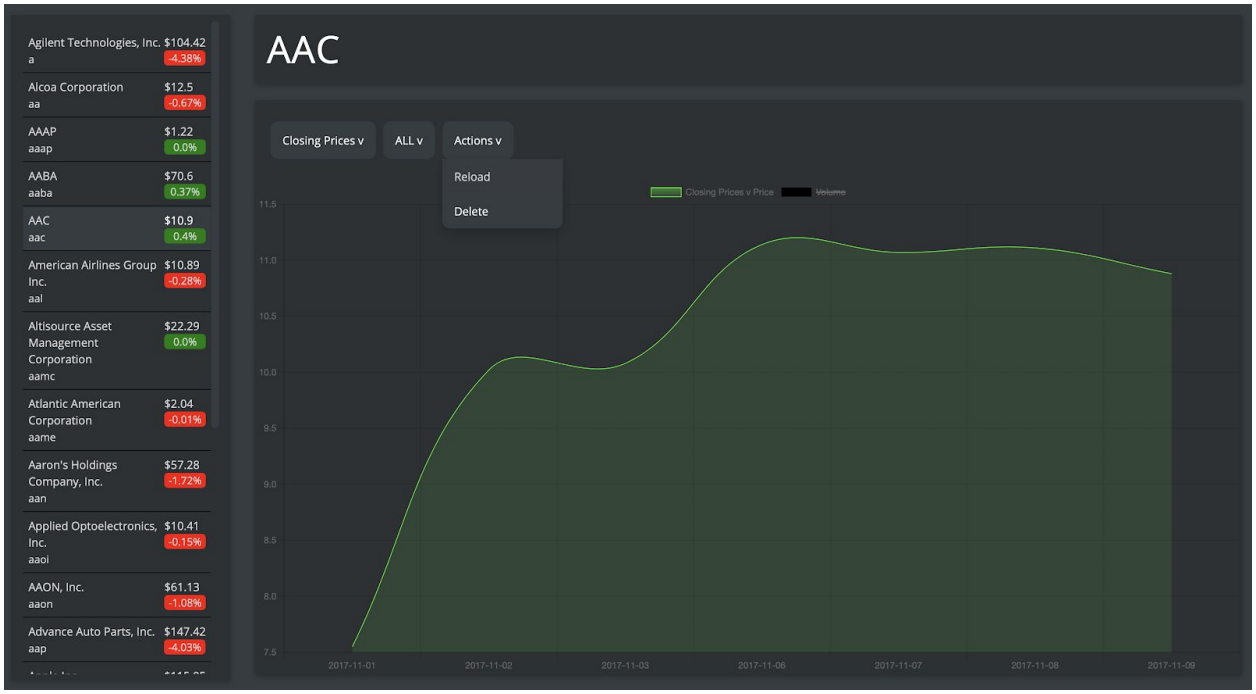
Step 7: Write function that reloads a selected stock from server
[Completed by]

Step 8: Reload chart with newly imported data
[Completed by]

Tests:

- Step 1 Test: Get access to new stock data from stock data source
  Correct Output: Backend server can receive data from some stock data source
  [Completed by]
- Step 2 Test: (INSERT) Write functions that inserts records to CSV file
  Correct Output: The inserted records are successfully written to the CSV file
  [Completed by]
- Step 3 Test: (INSERT) Stock chart UI is updated with new data
  Correct Output: The chart now shows the latest data after the data was pulled from server
  [Completed by]
- Step 4 Test: (DELETE) Write functions that delete records (server and local)
  Correct Output: Once the delete function is ran, the server's dictionary should have one less record
  [Completed by]
- Step 5 Test: (DELETE) Stock List UI will remove deleted stock from list
  Correct Output: The chart now shows one less stock in the stock list and the chart data is cleared
  [Completed by]
- Step 6 Test: (RELOAD) Write function that reloads a selected stock from server
  Correct Output: Local datastore now hold a newly pulled set of data from the server
  [Completed by]
- Step 7 Test: (RELOAD) Reload chart with newly imported data
  Correct Output: Once the data is reloaded from the server the chart is reloaded for the user to see.
  [Completed by]

UI Example


Agilent Technologies, Inc. $104.42 -4.38%
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Alcoa Corporation $12.5 -0.67%
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AAAP $1.22 0.0%
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AABA $70.6 0.37%
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AAC $10.9 0.4%
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American Airlines Group Inc. $10.89 -0.28%
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Altisource Asset Management Corporation $22.29 0.0%
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Aaron's Holdings Company, Inc. $57.28 -1.72%
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Applied Optoelectronics, Inc. $10.41 -0.15%
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AAON, Inc. $61.13 -1.08%
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Advance Auto Parts, Inc. $147.42 -4.03%
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8.0
7.5
2017-11-01
2017-11-02
2017-11-03
2017-11-06
2017-11-07
2017-11-08
2017-11-09

Sprint-4:

Features:

Feature 1:

User Story: As a user, I would like to view my stock data in a candle graph

Tasks:

Step 1: Display Candle Chart on web page with dummy data
[Completed by]
Step 2: Create a function to gather correct data to display on chart
[Completed by]
Step 3: Create function to reload chart with newly filtered data
[Completed by]

Tests:

- Step 1 Test: Display Candle Chart on web page with dummy data
Correct Output: The website will display a candle chart
[Completed by]
- Step 2 Test: Create a function to gather correct data to display on chart
Correct Output: The website will display a candle chart with data selected the user
[Completed by]
- Step 3 Test: Create function to reload chart with newly filtered data
Correct Output: The websites UI will refresh when the user requests a change in stock
[Completed by]

Feature 2:

User Story: As a user, I would like to know a year over year percent change by stock

Tasks:

Step 1: Add YOY to date selector drop down
[Completed by]
Step 2: Calculate year over year percentage on backend by ticker
[Completed by]
Step 3: Pass data back to front end and store in object
[Completed by]

Step 4: Display year over year percentage on chart
[Completed by]

Tests:

- Step 1 Test: Add YOY to date selector drop down
  Correct Output: Year Over Year list item is visible in UI drop down
  [Completed by]
- Step 2 Test: Calculate year over year percentage on backend by ticker
  Correct Output: Python script to confirm accuracy of YOY percentages
  [Completed by]
- Step 3 Test: Pass data back to front end and store in object
  Correct Output: Data is retrieved from server and output to console in the correct format
  [Completed by]
- Step 4 Test: Display year over year percentage on chart
  Correct Output: Data that is retrieved from server in previous step is visible and accurate on the chart tool
  [Completed by]

Feature 3:

User Story: As a user, I would like to be able to switch between stocks and ETFs

Tasks:

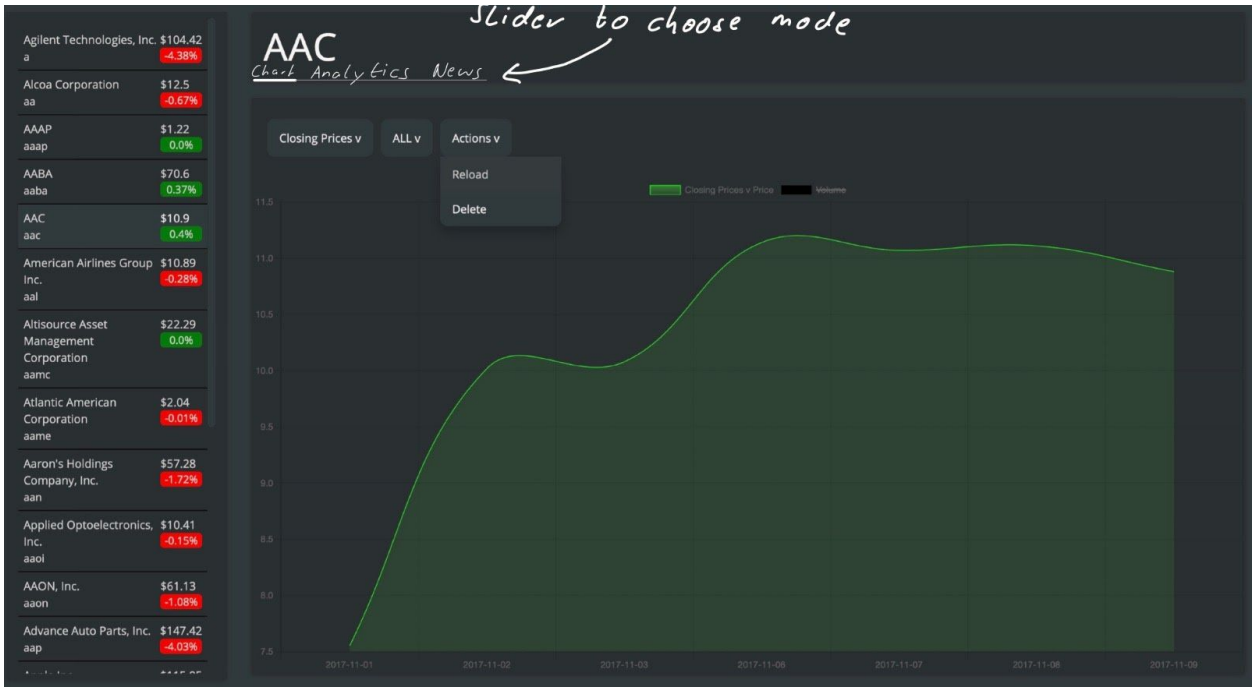
Step 1: Create UI object to switch between ETF and Stock
[Completed by]
Step 2: Create a function that loads ETF or Stock depending on UI
[Completed by]
Step 3: Create function to reload stock list with newly filtered data
[Completed by]

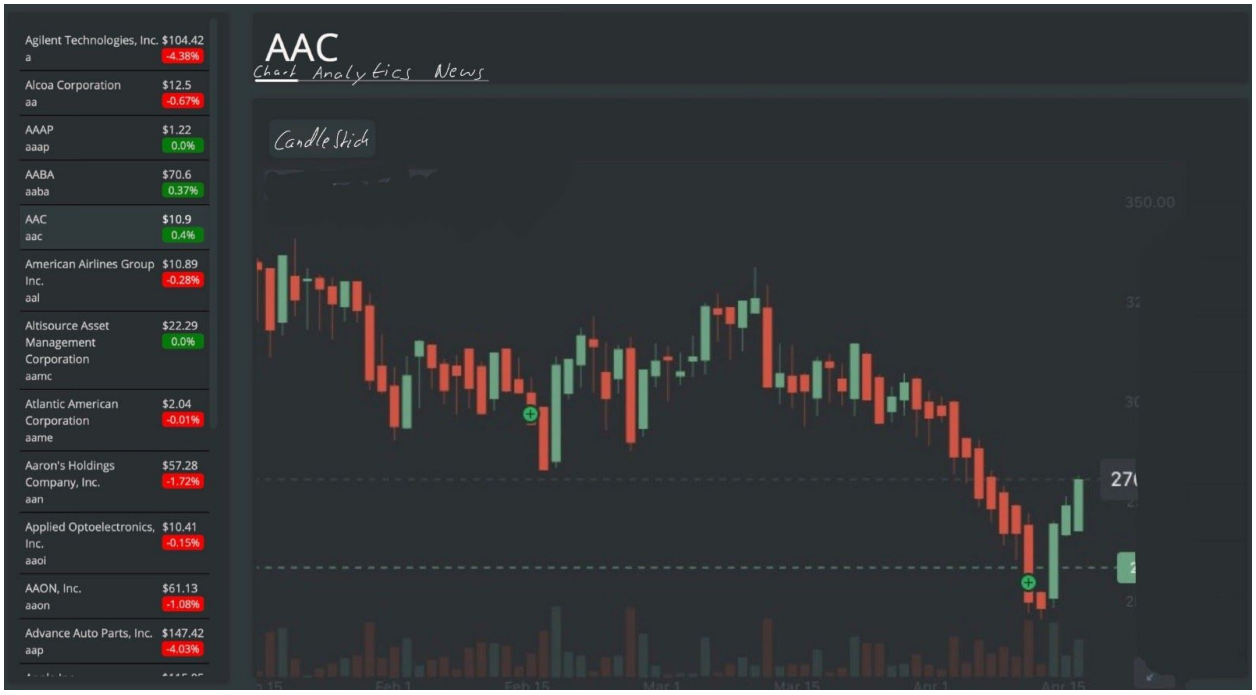
Tests:

- Step 1 Test: Create UI object to switch between ETF and Stock
  Correct Output: The website would display radio buttons that say “ETF” and “Stocks”
  [Completed by]
- Step 2 Test: Create a function that loads ETF or Stock depending on UI
  Correct Output: The server will return the selected type of data to the client
  [Completed by]

- Step 3 Test: Create function to reload stock list with newly filtered data
  Correct Output: The website will refresh the stock list when the user changes the selected type
  [Completed by]

UI Example

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AAC aac $10.9 0.4%
American Airlines Group Inc. aal $10.89 -0.28%
Altisource Asset Management Corporation aamc $22.29 0.0%
Atlantic American Corporation aame $2.04 -0.01%
Aaron's Holdings Company, Inc. aan $57.28 -1.72%
Applied Optoelectronics, Inc. aaoi $10.41 -0.15%
AAON, Inc. aaon $61.13 -1.08%
Advance Auto Parts, Inc. aap $147.42 -4.03%
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Chart Analytics News
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Feb 15
Mar 1
Mar 15
Apr 1
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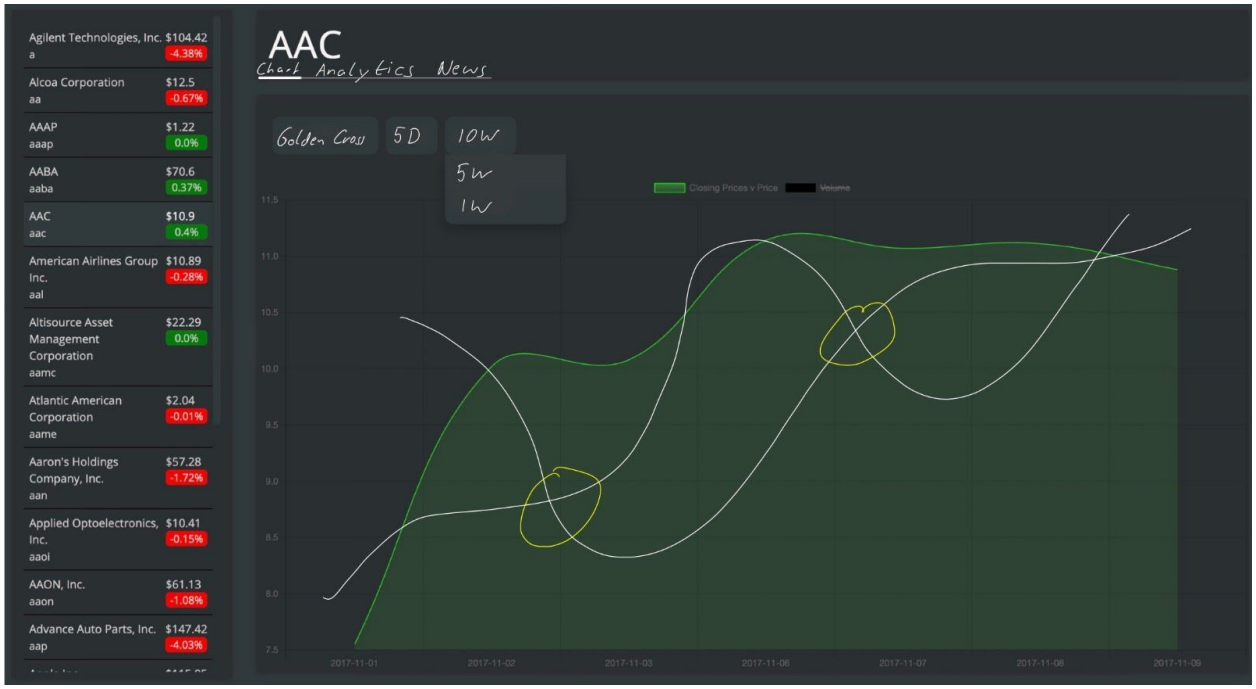
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Chart Analytics News
Golden Cross
5D
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5W
1W
Closing Prices v Price
Volume
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2017-11-01
2017-11-02
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