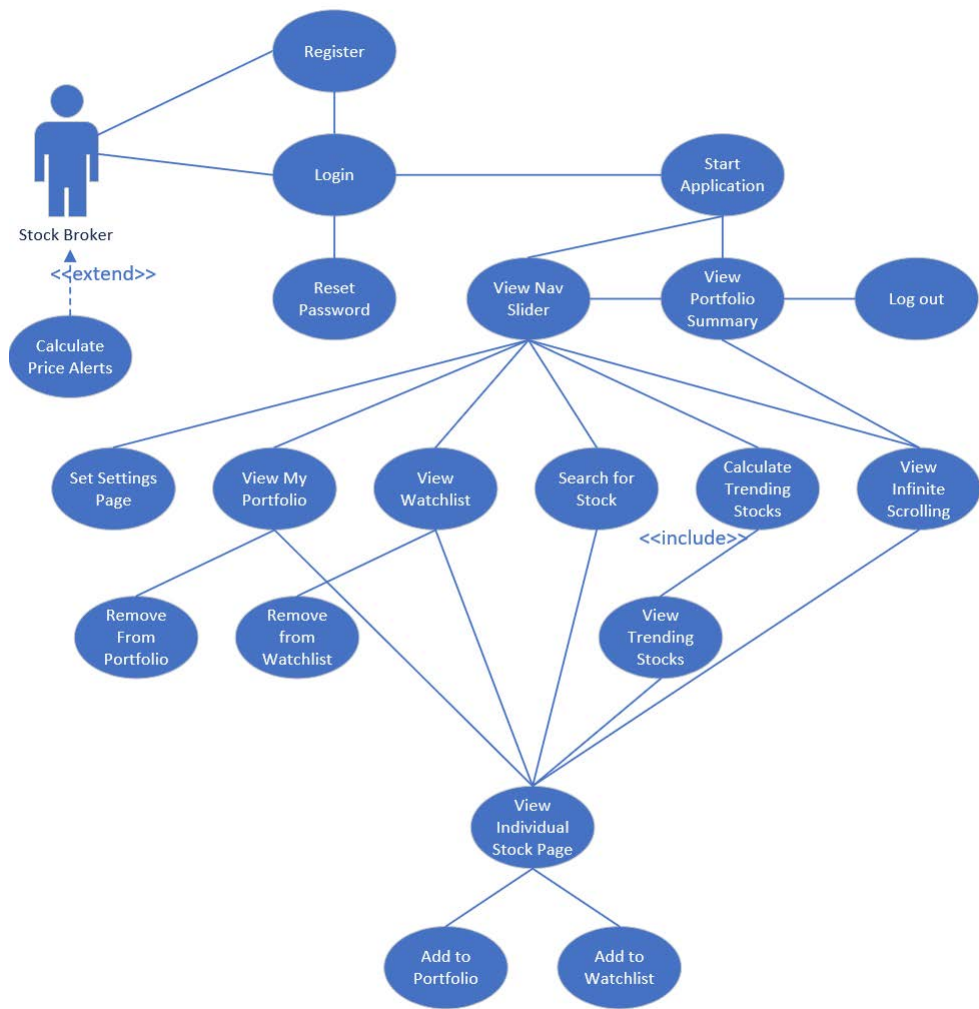


RAD for Stock Application

USE CASE, GLOSSARY, UML DIAGRAM

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(Isaiah) Use case: Register Page

Primary actor: Stockholder

Goal in Context: Allows the user to register for an account.

Preconditions: Need internet connection

Trigger: The client or investor creates an account by pressing the create account button on the login page

Scenario:

1. Actor: Observes the Registration Page
2. Actor: Enters first name, last name, email, and password for the app
3. Actor: The email address or confirmation password is correct
4. Actor: System connects to registration server, verifies no account exists and loads login page
5. Actor: Login page is displayed

Exceptions:

1. Enters wrong confirmation password: User enters wrong conformation password into the Stock App and is sent back to the registration page

Priority: Essentials, must be implemented

When Available: Week 3

Frequency of Use: Many times per day

Open Issues:

1. How long can the password be?
2. How do you confirm the email address?

(Isaiah)Use case: Login Page

Primary actor: Stockholder

Goal in Context: For the client to be able to log into the app at any time they please and be able to see their profile.

Preconditions: User has to be connected to the internet

Trigger: The Stockbroker or investor decides to log into his account, and that can only be done with the characters they have chosen for their username and password

Scenario:

1. Actor: Observes the Login Page
2. Actor: Enters username and password correctly for the app
3. Actor: Verifies by sending that information to the Firebase database
4. Actor: Client is transferred to the My Portfolio Summary use case

Exceptions:

1. Enters information in incorrectly: User enters the wrong username or password into the Stock App and is directed to re-enter username or password. If the user gets the username or password wrong five times, they are asked to enter email to change the password.

Priority: Essentials, must be implemented

When Available: High (Week 1)

Frequency of Use: Many times per day

Open Issues:

1. Can you change a username?
2. How do you change a password?

(Phill) Use case: Reset Password

Primary actor: Stockholder

Goal in Context: Allows the user to reset the password by providing an email address.

Preconditions: User is Connected to the Internet.

Trigger: User clicks on forgot password button.

Scenario:

1. Client: The Confirmation Dialog appears.
2. Client: Enters email address.
3. Client: Client selects 'Reset.'
4. Password Server sends user email with reset password link
5. Client: Reads an email and clicks on it.
6. Client: Observes change password and web page
7. Client: Enters a new password twice and press 'save' button.
8. Client: Is redirected to log in page.

Exceptions:

1. Client does not enter the same password twice

Priority: High

When Available: Week 2

Frequency of Use: Depends if the user forgets the password

Open Issues:

1. Can the user retrieve a one time code to log in?
2. Can the user login with google?
3. Can the user login with Facebook?

(Jarrett) Use Case Name: Start Application use case

Primary Actor: Stockholder

Goal Context: The start application use case will determine if the user has already logged onto the website previously.

Preconditions: The user must be connected to the internet and be connected to the firebase database

Trigger: The client enters the website's URL into a browser of their choice.

Scenario:

1. Determine if the user's password has not changed since last login (i.e., check against firebase database)
2. If Client has logged in before, use browser's password to log user in automatically.
3. Log user in and leave the client to the view navigation slider.

Exceptions:

1. The client could have changed their password: transfer the user to the login page to complete the login process.

Priority: Essential, must be implemented

When available: Week 4

Frequency of use: This feature will be used only when the client loads a new page or logs in for the first time.

Open Issues:

1. Is there a way to have multiple users be cached on a computer at once?
2. Will the application work if the user saves his password through a service like google chrome and be automatically logged in?

(Jarrett) Use Case: View Navigation slider

Primary Actor: Stockholder

Goal Context: The view Navigation slider is a side panel and top bar which houses different panes like the search bar, and links to the trending stocks page, watchlist page, and the portfolio page.

Preconditions: The user must also be connected to the internet.

Trigger: The start application use case will have been triggered for this to occur for the first time.

Scenario:

1. Client: Views the navigation slider page and views search bar use case, user views trending stocks page, watchlist page, and the portfolio page links on the left side of the panel.
2. The client interacts with links: User clicks one of the links which will change one of the panes.

Exceptions:

1. This page will view links and will not contain any user exceptions

Priority: Essential, must be implemented.

When Available: Week 3

Frequency of Use: Many times per day

Open Issues:

1. What happens if the pane within the slider does not load?

(Alyssa) Use Case: View Portfolio Summary

Primary Actor: Stockholder

Goal Context: The Portfolio Summary will display the calculated profit, portfolio growth, net worth, and stock diversity, and four stocks from the client's portfolio.

Preconditions: The user must be connected to the internet. The IEX Trading server and a firebase must be up and running.

Trigger: The user must log into the application, and the start application must be initiated.

Scenario:

1. Four stocks, portfolio growth, stock diversity, net worth, and calculated profit will be displayed on the screen. This will be automatically populated when the Navigation Use case loads.
2. When a user clicks one of the individual stocks that is displayed, see use case (View individual stock use case).

Exceptions:

1. The user is unable to log into the application: will be transferred to the Portfolio Summary automatically

Priority: High

When available: It will be implemented in the 5th week.

Frequency of use: Every time the user logs into the application.

Open Issues:

1. What if the user's information does not populate?
2. What if the IEX trading API is down?

3. What if the Splunk does not pull all of the data correctly to populate the charts?

(Phill)Use case: Log out

Primary actor: Stockholder

Goal in Context: Allows user to log out and takes them back to the login use case

Preconditions: User is connected to the internet

Trigger: User clicks the logout button to exit the application

Scenario:

1. Client observes logout button on the View Navigation Slider use case
2. Client: Confirmation box appears.
3. Client: Selects yes.
4. Client: is redirected to login page.

Exceptions: Client does not click on logout page, or the client selects 'no' in which the client will be returned to the Navigation slider use case.

Priority: High

When Available: Week 2

Frequency of Use: Every time the user wants to log out.

Open Issues:

1. Can the user auto log out?
2. Can the user logout from his phone?

(Phillip) Use case: Set Settings page

Primary actor: Stockholder

Goal in Context: Allows the user to set their country of origin, the conversion rate, SMS alerts, and the client number.

Preconditions: User is connected to internet

Trigger: User Clicks on settings button to view and change settings which are located in the navigation slider use case.

Scenario:

1. User observes all the different settings (origin setting, conversion rates, SMS alerts, clients phone number)
2. User clicks on which setting they want to change
3. User applies the changes to the settings they want to change
4. User clicks on save button in the window
5. User is returned to main/home screen with changes applied

Exceptions:

1. User does not want to change their country origin or currency

Priority: Medium

When Available: Week 2

Frequency of Use: Whenever the user wants to change their location and the currency they want to use

Open Issues:

1. Can the user set the settings to locate where you are and what currency to use?

(Isaac)Use case: View Portfolio

Primary actor: Stockholder

Goal in Context: The user will be able to see their net worth, portfolio growth, and stock diversity, along with the ability to view the price of individual stocks that the user has previously added to their favorite list.

Preconditions: The application is connected to the internet and the IEX Trading server and the Firebase database are not down.

Trigger: The user clicks the My Portfolio link from the navigation slider use case.

Scenario:

1. The user's portfolio data is pulled from the Firebase database
2. The stock information is pulled from the Lex Trading server
3. The user's net worth is calculated and displayed in a chart (what chart?)
4. The user's portfolio growth is calculated and displayed in a chart
5. The user's stock diversity is calculated and displayed in a pie chart
6. The user's favorite list is pulled from the database
7. The individual stocks the user has favorited are displayed
8. The navigation slider use case is displayed

Exceptions:

1. The user is not logged in. A prompt tells the user to log in if they want to access their portfolio

Priority: High priority

When Available: Week 5

Frequency of Use: Common usage

Open Issues:

1. What happens if the user doesn't have any favorite stocks?
2. Is there a limit to a number of favorite stocks a client can have?

(Isaac)Use case: View Watchlist

Primary actor: Stockholder

Goal in Context: The goal is to show stocks that the user is interested in. The user will be able to quickly view prices and news about individual stocks that are on their watchlist.

Preconditions: The application is connected to the internet, and the IEX Trading server and the Firebase database are not down.

Trigger: The user clicks on the watchlist link on the navigation slider use case.

Scenario:

1. The user's watchlist data is pulled from the Firebase database
2. The stock information is pulled from the IEX server
3. Each stock on the user's watchlist is displayed with its current price
4. A link to the individual stock use case for each stock of the watchlist is displayed
5. The navigation slider use case is displayed

Exceptions:

1. The user is not logged in. A prompt tells the user to log in if they want to access their watchlist
2. The user's watchlist is empty. Text is displayed tell the user that their list is empty

Priority: Medium priority

When Available: Week 6

Frequency of Use: Common usage

Open Issues:

1. Is there a limit to a number of stocks on a watchlist?

(Russell) Use Case: Search for Stock

Primary Actor: Stockholder

Goal in Context: The goal of this use case is to search for stocks in the search bar that resides in the Navigation slider. Once the client has searched for that given stock, the client will be transferred to the view individual stock use case to view information about that given stock.

Precondition: Access to IEX Trading Server and connected the internet

Trigger: Actor hovers the cursor over the search bar.

Scenario:

1. Actor observes My Portfolio Summary use case after logging into his/her account.
2. Actor proceeds to enter the name of the desired stock in the search bar in the top right-hand corner of the page.
3. Actor clicks the search Button
4. The system connects to the IEX server and displays the information on the specified stock.
5. The desired Stock is then displayed on the screen where the Actor can see all the information on the stock or Save the stock to their portfolio

Exceptions:

1. String Value entered in the search bar is not recognized as an actual stock and an error message is displayed.

Priority: Important, as that is how the Actor looks up stocks to place in his/her watchlist.

When Available: After the first increment.

Frequency of use: Many times

Open issues:

1. What will happen if the user inputs anything other than the correct stock symbol

Can the user search for a company instead of the stock symbol?

(Russell) User Case: Calculate Trending Stocks

Primary Actor: Stockholder

Goal in Context: The goal of this use case is to calculate trending stocks by first sorting the user's stocks by how the company categorizes itself within that field.

Trigger: Calculated when Actor clicks on View Trending Stocks

Scenario:

1. Client clicks on View Trending Stocks tab.
2. The computer automatically calculates trending stocks by sorting the User's stocks by categories, then traverses the web to find the trending stocks in that category.

Exceptions:

1. The function does not parse the other websites.
2. CNN money, eTrade, Motley fool websites could be down

Priority: Important, as this forms the basis of the Actor's trending stocks page.

Frequency of use: Whenever the user views the Trending stock page.

When available: With the first increment

Open Issues:

1. What happens if the navigation slider does not load?
2. What happens if the pane within in the slider does not load?

(Isaiah)Use case: View Infinite Scrolling Banner

Primary actor: Stockholder

Goal in Context: For the client to be able to view stocks that are trending, on the bottom of their screen.

Preconditions: The banner only shows the stocks that are trending that day.

Trigger: The Stockbroker or investor decides to click on the scrolling banner and depending on the stock that is chosen, the system will send the stockbroker to that stock's profile.

Scenario:

1. Actor: The banner is scrolling to the left at the bottom of the screen
2. Actor: Clicks on the stock in which they want to observe
3. Actor: They are taken to the profile of the stock
4. Actor: User can decide if he wants to add this stock to his favorites

Exceptions:

1. Bar doesn't scroll: The scroll bar is unmoving, but still displays stocks
2. Bar does nothing when clicked: The stock is chosen, but when clicked it doesn't take you to the stocks page so that you may get more information

Priority: Low Priority, doesn't need to be complete to finish project(week 7)

When Available: First increment

Frequency of Use: Many times per day

Open Issues:

1. How do you stop the bar from scrolling once you have chosen your stock?
2. How many stocks are displayed?

3. How do you display the stocks going up or down?

(Derek) Use Case: Remove from portfolio

Primary Actor: Stockholder

Goal Context: The goal of this use case is to remove a stock from their portfolio. There will be a button on the portfolio page to remove the stock

Preconditions: The client will have to be connected to the firebase database, and be connected to the internet.

Trigger: User selects the remove to portfolio button that will allow you to select from many stocks to add to their portfolio.

Scenario

1. User: User sees there is a remove from portfolio button on the individual stock page to remove the stock from their portfolio.
2. User: User clicks on remove from portfolio button and is given the option to select an individual stock to remove from their portfolio
3. User: When 'Remove from portfolio' is clicked on, it gives the detailed information given to the user and gives a clear, crisp, and precise representation of the personal stock being removed from their portfolio page

Exceptions:

1. Remove from portfolio is not visible on the individual stock page: if the remove to portfolio is not displayed on the individual stock page, then the user will not be able to interact and see their stock removed from their profile
2. Remove from portfolio is visible, but individual stocks are not displayed: this will hinder the user in regards to having a non-working remove from portfolio feature that doesn't show the representation of the individual stocks

3. If user has 'Remove from portfolio' viewed on screen, but it's actually a different function: user selects the remove from portfolio to show information about net worth of stocks, but a different feature is viewed

Priority: Medium

When available: Week 7 and greater

Frequency of use: depends on the customer and if they want to remove stocks frequently. Assumed will be used very frequently

Open Issues:

- 1.Can you remove multiple stocks at once?
- 2.If so, is there a limit on to how many stocks you can remove?

(Isaac)Use case: Remove from Watchlist

Primary actor: Stockholder

Goal in Context: The goal of this use case is to remove a stock from the watchlist.

Preconditions: The application is connected to the internet, and the IEX Trading server and the Firebase database are not down.

Trigger: The user clicks a button on the watchlist use case or the individual stock use case

Scenario:

1. The user's watchlist is pulled from the firebase database
2. The client searches for the stock that the user wants to be removed
3. The stock is removed from the watchlist
4. The use case the user was on previously, whether that be the individual stock or the watchlist use case, is displayed
5. If the user is on the watchlist use case, the stock that was removed from the database is removed from the displayed list. If the user is on the individual stock use case, the button is switched to 'add' mode

Exceptions:

1. The user is not logged in. A prompt tells the user to log in if they want to access their watchlist

Priority: Medium

When Available: Week 6

Frequency of Use: low usage

Open Issues:

1. There are currently no open issues on this use case.

(Isaiah) Use case: View Trending Stocks

Primary actor: Stockholder

Goal in Context: The client will be able to view information about trending stocks that will be pulled from numerous sites like CNN Money, Motley Fool, and Yahoo Money.

Preconditions: There is only a certain number of trending stocks that is recommended to that individual.

Trigger: The Stockbroker or investor decides to click on the Trending stocks page from the Navigation Slider use case and view the trending stocks that are displayed.

Scenario:

1. Actor: Will be able to view information about that stock:
 1. Stock symbol with price
 2. Percentage growth that particular day.
2. Actor: Will be able to click on one of the stocks to view individual information about that given stock (See Individual Stock use case)

Exceptions:

1. This page will view links and will not contain any user exceptions

Priority: Medium Priority

When Available: Week 2

Frequency of Use: Many times per day

Open Issues:

1. How do you add more personalized trending stocks?
2. How many stocks can you have trending?
3. How do you remove stock from the trending stocks?

(Jarrett) Use case: View Individual Stock Page

Primary actor: Stockholder

Goal in Context: To create a page that holds information about one given stock that includes information like view stock growth over months, view current stock price, current stock symbol, upcoming news, dividends, and peers.

Preconditions: The client will have to be connected to the internet. The client will need access to the IEX trading server.

Trigger: The actor either searches for a given stock or finds one of interest from the portfolio page, main screen, watchlist page, or trending stock page.

Scenario:

1. The system connects to the IEX server and retrieves the following information:
 - a) view stock growth chart
 - b) view current stock price
 - c) current stock symbol
 - d) upcoming news
 - e) Dividends
 - f) peers
2. The page will display the view stock growth in the middle of the pane. The view current stock price will be to the left of the view stock growth chart. The pane will also contain the current stock symbol above the chart next to the stock price. The upcoming news is displayed underneath and to the right of the view stock growth chart. The list of peers will be displayed to the left of the upcoming news. And the dividend information will be displayed below that.

Exceptions:

1. This page will view links and will not contain any user exceptions

Priority: Essential, must be implemented.

When Available: Week 3

Frequency of Use: Many times per day

Open Issues:

1. If the personal information from the Database does not pull, what will take its place?
2. Can the user access individual stocks if the Actor does not have access to the internet?

(Derek)Use Case: Add to portfolio

Primary Actor: Stockholder

Goal Context: The add to portfolio feature will allow the user to be able to add individual stocks to their portfolio

Preconditions: Have to be connected to the firebase database, and be connected to the internet.

Trigger: User selects the add to portfolio button that will be viewed with an Individual stock page which will add that particular stock to their portfolio.

Scenario

1. Client: User sees there is an add to portfolio button on the individual stock page to add the stock to their portfolio.
2. Client: User clicks on add to portfolio button and is given the option to select an individual stock to pin to their portfolio
3. Client: When 'Add to the portfolio' is clicked on, it gives the detailed information given to the user and gives a clear, crisp, and precise representation of the personal stock added to the portfolio page.

Exceptions:

1. Add to portfolio is not visible on the individual stock page: If the add to portfolio is not displayed on the individual stock page, then the user will not be able to interact and see their stock added to their profile
2. Add to portfolio is visible, but individual stocks are not displayed: this will hinder the user in regards to having a non-working add to portfolio feature that doesn't show the representation of the individual stocks

3. If user has the 'Add to portfolio' viewed on screen, but it's a different function:
user selects the add to portfolio to show information about net worth of stocks,
but a different feature is viewed

Priority: Medium

When available: Week 7

Frequency of use: Depends on the customer and if they want to add stocks frequently.

Assumed will be used very frequently

Open Issues:

1. Can you add multiple stocks at once?
2. If you can add multiple stocks at once, is there a limit on to how many stocks you
can add?
3. Will the top trending stocks be displayed on the add to portfolio feature as well?
Or just the stocks that they choose?

(Isaac)Use case: Add to Watchlist

Primary actor: Stockholder

Goal Context: The goal of this use case is to add a stock to the user's watchlist.

Preconditions: The application is connected to the internet, and the IEX Trading server and the Firebase database are not down.

Trigger: The user clicks a button on the individual stock use case

Scenario:

1. The user's watchlist is pulled from the Firebase database
2. The stock to be added is appended to the end of the user's watchlist
3. The individual stock use case stays open
4. The button previously used is switched to 'remove' mode

Exceptions:

1. The user is not logged in. A prompt tells the user to log in if they want to access their watchlist

Priority: Medium

When Available: Week 6

Frequency of Use: low usage

Open Issues:

1. There are no open issues at this time.

(Russell) Use Case: Calculate Price Alert

Primary Actor: Stockholder

Goal in Context: To calculate how much the Client's stock price fluctuated and send the Actor an automated alert.

Trigger: When the Client's Stock on his/her watch list or trending page goes up/down a certain percentage.

Scenario Watchlist Stocks:

1. The computer automatically notices a 5% increase/decrease in select stocks in the watchlist/trending stocks page.
2. The computer then sends an SMS message to the Actor via the telephone number provided in Register.

Priority: Optional, as the Actor could decide not to have SMS message alerts turned on for any of his/her stocks.

Frequency of use: Initialization- seldom because the Actor will not need to turn it on or off constantly. If Alerts are on frequent, the user will receive multiple texts concerning their stocks.

Open Issues:

1. What happens if settings page does not integrate from the client's preferences?
2. What happens if the SMS API does not work or breaks?

Glossary:

1. **Dividends:** a sum of money regularly paid (typically quarterly) by a company to its shareholders out of its profits (or reserves).
2. **Stock symbol:** unique series of letters assigned to security for trading purposes.
3. **Peers:** a group of individuals or entities who share similar characteristics and interests.
4. **IEX trading server:** is the API we are using to pull information for the stock information.
5. **Stock Diversity:** The differences in a stock page compared to other stocks
6. **Trending stocks:** Stock that is doing well and being looked at by many people
7. **Net Worth of portfolio:** Book value or shareholders equity
8. **Pane:** is the page in which the navigation slider use case encloses.
9. **Firebase Database:** Defines who has access to the data and how they can access it
10. **Stockholder:** A shareholder
11. **Stock Portfolio:** a group of financial assets such as stocks
12. **Stock Watchlist:** Stocks that are being added to a list so they can be seen faster
13. **View Calculated Profit:** (I.E., what this means for our app) Being able to see the profit of each stock on your profile
14. **View stock growth:**(I.E., what this means for our app) being able to see the growth in your stock over time
15. **Portfolio Summary:** is the main menu of the stock app so that you can see any stocks at the same time