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## **CS35L Project Proposal**

# Description

BWH is an IOS/Android stock investment simulator and social platform. It will include a login and registration feature, the ability to view your own and other user's stock portfolios, save specific stocks, and most importantly, invest with fake currency into real stocks. Each user will be allocated a certain amount of money they can invest with, which will translate to a leaderboard showing how successful each user has been with their investments. The motivation for this is a fun way to learn about the risks of investing and compete with others without the risk of losing actual money. We plan on using Firebase to store real time stock data , React-Native and Expo as our frontend framework to display data to users, and Node.js as our backend pipeline to collect data from Firebase. We also plan to use a GitHub repository for version control of our project. We will use Finnhub, a stock API, to pull stock data to display, search, and chart.

# Features

The application displays dynamic data from the stock market using the Finnhub API, displaying the current price of the particular stock at a certain time. The application uploads user data such as their "investments," favorited stocks, and portfolios onto the backend server. It also searches through stocks to find and display the one the user is looking for. Other distinct features include:

1. Liking specific stocks, which are added to your Homepage "Watchlist"
2. Buying/Selling stocks with in-app currency
3. Viewing other people's profiles, which shows what stocks they have invested in
4. Leaderboard
  - a. Each user is allocated a certain amount of money to be invested
  - b. Shows whose investments have made the most money
5. Interactive chart on stock's info page that displays its price for the past week
  - a. Scroll on the chart to display the price at that particular time

# Milestones

1. Reading in stock data
  - a. Frontend skeleton made
2. Differentiating users
3. Leaderboard

# Frameworks / Languages

- Expo + React Native
  - Front-end
  - Display dynamic data to user
  - HTML, CSS
- Firebase
  - Stores real-time data to ensure data “persists”
- Finnhub
  - Pulls real-time stock data
- Node.js
  - Back-end
  - Collects data from Firebase
  - Algorithms, searching through server-side data
    - Search for specific stocks, what the user wants to choose to invest in
  - Store name for account
- Git
  - Keep track of all our work