

# Stock Market Investment Fantasy League

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## Group 18 Project Proposal

**Project URL:** <https://softwareengineeringgroup18.yolasite.com>

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### *Team Profile*

Joseph Coleman: Experienced in Java and C coding, interested in the stock market due to a background in cryptocurrency.

Murali Gunti: Versed in front-end web development, Java, investing and stock market.

Matthew Jackson: Project website designer. Individual strengths are design, documentation, and management/organization. Some experience with Java, HTML and CSS.

Himateja Madala: Experienced in Java, SQL, and several years of experience investing in the stock market.

Andrew Marfitsin: Familiarity with statistics, data visualization and some market analytics, experience in Java and SQL.

Akshaykumar Patil: Prior Experience with Java and SQL.

Paul Stanik: Some experience with Java and C++, experience with the stock market, experience running a trading platform.

David Wang: Experience in Java, C++, HTML, CSS, Javascript, Data structures

### *Problem Diagnosis*

Investing can be very intimidating for anyone starting out, especially when real money is involved. Investing without experience is best compared to gambling. If an individual invests recklessly without any prior investing background, it could result in a huge cut in personal funds and possibly reduce interest in any future investing. Also, when investing, extensive research is necessary to decide how best to invest in both an educated and intelligent manner. Real investing is done with actual money, but as a beginner it is much more efficient and safe to get exposed to investing without it costing as much. It is the same as with a sport or taking a test, in which you

have an environment to experiment with different possibilities and face real world problems without having any real consequences.

### *Proposed Treatment:*

In order to prevent investment failures from happening, we will provide a more comfortable and fun investment platform that gets rid of any investing anxieties and bridges the gap between higher and lower level investing. One good way to introduce a novice to the world of investing is through a simulation that would feature true-to-life trading mechanics, but involve fantasy money. This way, the investor-to-be has the opportunity to learn from mistakes and explore market trends without putting real money on the line. To make the experience more engaging and exciting, in-game achievements will be implemented, rewarding the user for successful investing strategies. These achievements could range in difficulty from something like “first week with a net portfolio value gain” to “first 5% profit”. The user would also be shown achievements that have not yet been reached, and the requirements for them, giving the user concrete goals to work towards. The user would also be offered insightful tools to aid in stock buying decisions including, per-stock price charts and a historic value chart for the user’s portfolio. The user could additionally compare their own portfolio against ETFs or index funds, to observe the behavior of the market at large and evaluate how their trading decisions compare. These statistics could show the user whether or not professionally managed investment products (such as mutual funds) are really worth the price of entry. Experience with our data products could help investors decide whether they prefer long-term planning, riskier short term, high payoff investments, or another trading strategy. Knowing this and having a general concept of the profit margins the user can expect with their strategy could later help in the investor’s choice of brokerage account or investment product. In general, these are common tools offered by brokerage accounts to their users, and a functionality that the investor should become comfortable using.

#### Functional Features:

- Invest in and sell stocks, mutual funds, or exchange-traded funds using fantasy money.
- Earn achievements and rewards for successful investments.
- Look up current or recent stock prices using candlestick charts and previous ones through historical charts.
- Investment portfolio list view
- Invest online through the website
- Companies wishing to advertise their product can do so through the website.

## *Plan of Work and Product Ownership*

Portfolio and market insight tools, achievements: Andrew Marfitsin, Himateja Madala

- Stock price lookup with historic price chart
- Own portfolio value chart
- Own portfolio vs. stock/ETF/index/mutual fund chart
- User's list of achievements, accomplished and incomplete

Website operator and advertiser interaction: Matthew Jackson, Paul Stanik

- Manage the webapp
- Monitor advertisers who want to sign up to get their products displayed on the website
- Track advertisers' balances due

Product Functionality: David Wang, Paul Stanik, Murali Gunti

- Buying and selling stocks
- Creating/deleting a portfolio
- Detecting Low/High price, executing sell/buy based on said prices
- Making sure achievements are triggered

GUI Management: Joseph Coleman, Akshaykumar Patil

- Ensuring the user has a smooth and easy interaction with software
- Putting together a clear and coherent manual describing how to use software