# FANSTASY STOCK TRADING  LEAUGE

## Introduction:

My idea is a stock trading simulation game with the title of, 'league of traders', I got this title from league of legends but it will be traders who are trading stocks. In this game, the user will act as a trader managing a portfolio of stocks over a limited timeframe, I'm trying to simulate scalping. Unlike day trading which is usually over 8 hours, scalping is where you trade with stocks in fast bursts, it could be less than a minute but will take a maximum of 5 minutes, at the most. Unlike traditional fantasy football where you're a manger, managing a 'fantast' football team, you will be a trader, focusing on buying and selling a portfolio of stocks, to have the incentive of making a profit while also learning trading concepts. My aim with this project  is to create an engaging game that blends both entertainment and education of the stock market, its volatility and helping the players understand trading strategies, without risking thousands of pounds of their actual currency.

The game will first start with your menu screen. From which the group of players can input how many of them will be playing the game into the program. Each session will simulate how scalping would actually go, with each user given a fixed amount of capital, if the players want, they can change their capital each of them all start with. Ideally, I would need to make it so there is a maximum the players all start with, which should be around a maximum of $50,000

As my app will be for your desktop, you will be mostly using your mouse to control everything and sometimes use your keyboard to maybe input notes. I don't think I will be inputting an option to change your key binds as your keyboard won't be used as much. But I may try to allow users to change their mouse binds as they may have a mouse with extra buttons.

'League of traders' is inspired by my interest in economy and financial markets. This sparked by watching videos on traders who have successfully  grew their capital through disciplined stock trading. One video that especially inspired me was one on a youtuber, named fxalexg, who grew their capital from $100 to $1,000,000 from only day trading with stocks in 90 days and recorded this all threw live streams. This is a summery they made on their YouTube channel on how they did this:

https://www.youtube.com/watch?v=xAJT6cmJ5gs

Furthermore, I want to provide a safe space for beginners to experience market dynamics and develop their trading skills before risking their actual money. I plan to research existing stock market simulators, such as WeBulls, and news sources to identify features or how stocks work and also education information on how stocks are working
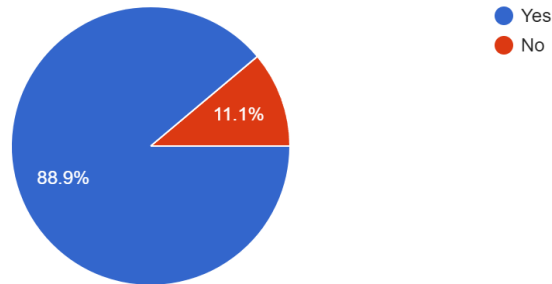
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Questionnaire:



2. Do you have an interest in the stock market?

9 responses

Yes

No

88.9%

11.1%

With the 9 responses I had only one person didn't seem to have an interest in my game idea. This is most likely because they are not really interest in the stock market, and may have an interest in another field within the economy, such as the crypto market, private equity, investment banking etc.



What is your opinion on the stock market?

10 responses

Interesting to see current stocks state and weather any are doing amazing or not.

I am very intrigued on it, and in the future would love to trade with stocks

Cool

I have limited knowledge on it.

its just educated gambling

Doesn't impact my daily life

The questions I nulled, are answers that do not associate with the question. Aside from that I had a pretty even split on the reviewers opinion on the stock market. While 3 of them had a positive opinion on the stock market, another 2 did not really see it impact them and 1 person had a negative impact on the stock market. This is possibly because they have not seen the

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positives on stock market or have not done enough research on the stock market to see it otherwise.

Out of 5  (5 = Definitely and 1 = never) how likely are you to play this game.

10 responses

**Average rating (3.50)**

| 1 | 2 | 3 | 4 | 5 |
|---|---|---|---|---|
| ⭐ | ⭐ | ⭐ | ⭐ (half) | ⭐ (empty) |



Bar chart values:
- 1: 1 (10%)
- 2: 1 (10%)
- 3: 3 (30%)
- 4: 2 (20%)
- 5: 3 (30%)

In my opinion, I had a pretty positive outlook of my game from my reviewers with 3 people definitely wanting to play my game from my idea and only 1 person wanting to never play my game. With most people choosing 3 and 5 I believe this is a good insight on my game and could possibly show it being slightly popular.

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What do you think this game should include

10 responses

Maybe a way to play this game with people around the world.

Buy/sell stock

Trading

fake stocks

The ability to buy and sell stocks and shares. Being able to see friends' progress/portfolios

The ability to see your friend's progress

stocks

Again only showing answers that are related to my question, I had quite a good amount of answers to what people believe I should add to my game. Some ideas I believe that would be good to integrate are :

.Being able to see friends' progress/ portfolios

.Make a way to play the gamer with people around the world

.Fake stocks

These ideas would be amazing to integrate, while the second good idea I am unlikely to add due to its complexity, being able to see the other players progression may be a good way to even the playing field for players who have to play last, it is also an amazing way to add more depth towards the game. While fake stocks I would consider a good idea, it may not be useful to integrate as my game is a way for people to learn how to trade with real stocks.

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How many people would you play this game with? (Leave blank if your answer is not here)

6 responses



- 2-3
- 4-5
- 6+

16.7%
16.7%
66.7%
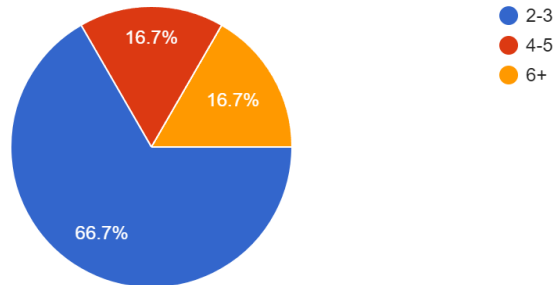
This is possibly my most important question as it is a way for my to gauge how many people my reviewers would play with. Based off the answers, it seems most people would play with either 2 and 3 players and the rest would player with 4 and 5 players or 6 and above. With this information, I am certain that I will integrate this game specifically for smaller groups, 2 – 3 players, as this is what my reviewers want.

Do you believe this game should be single player, if so, why?  (Leave blank if this does not apply to you)

4 responses

| Sure, some people have no friends |
|---|
| Yes |
| Sure |
| yes - you cant trade stocks with others unles there is enough to simulate the market |

The people who didn't have an answer for the previous answer, would rather play single players. While people had valid reason, such as not being able to play with others. A reason that was valid was how the actual stock market worked. You never trade stocks with other players, it is only you trading on your own unless others in the market are also trading that stock with you. That's why a single player mode may be much better for you to learn, however it will ruin the game aspect of my game.

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Do you think I should add other markets, not just the stock market e.g. crypto, real estate, bonds etc?

10 responses



- Yes
- No

40%

60%
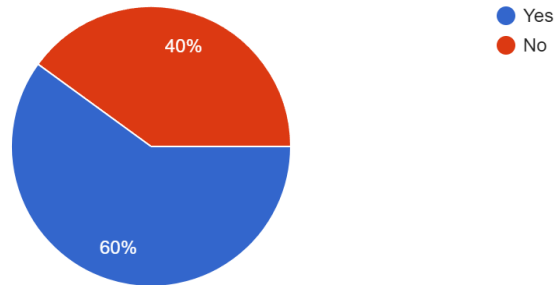
This question surprised me. When dealing with trading you don't usually trade with other markets at the same time, such as, forex, bonds, crypto. But the people answering my questionnaire wanted me to integrate more markets into my game. This may possibly be a good idea as it would allow me to include other players to the game and increase my consumer base. However it may also be even more complex and possibly make the game clunky if a player is trading with many different markets at the same time.
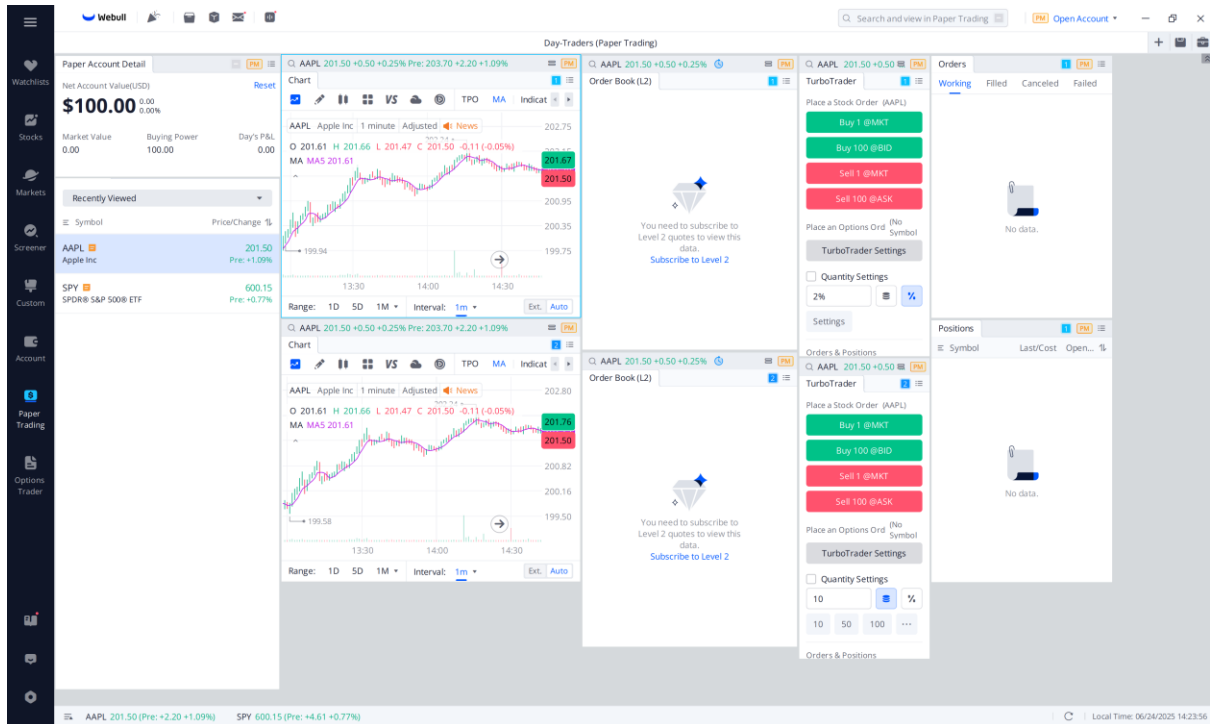
## Research

Existing solution 1:

WeBull offer a very similar idea to how my game works. While WeBull don't have a entertainment aspect to their paper trading simulation. It effectively does the same thing my program is hoping to do. You trade with stocks while also trying to learn how it works without risking an actual currency and having the incentive to make profit. Furthermore, while its UI is highly complicated, my UI will most likely be the same. It will just have less clutter and be more targeted towards a game aspect instead focusing purely on trading. Furthermore, unlike how my program works, WeBull allows you to have cross platform where you can trade both on your

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phone or your desktop, even though the desktop UI is not great,



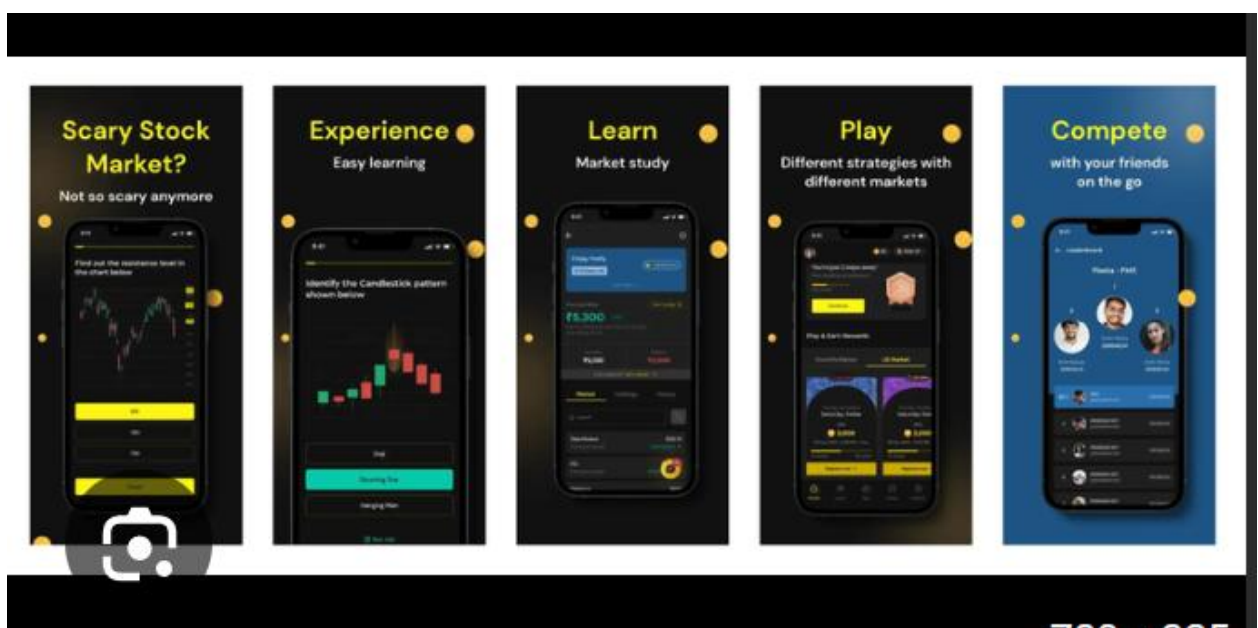| What I would adapt into my project | What I would not adapt into my project |
|---|---|
| I would adapt the graph into my project, allowing you to see the graph in the range form the past few minutes, or if you want to find more data believing it would help you, the past 5 days. | In my opinion I find the UI very confusing and hard to navigate around with its complex graphs, how to actually trade etc. |
| The ability for you to add a certain amount of funds with in your account and it not being fixed at a certain amount. So it allows you to have more bold choices when you want a small amount in your account, or you feel more safe with a larger amount. | I would not add pay walls to my program, I want the players to be able to access everything they need, so adding a paywall would be more of a hindrance to them and prevents them from having a real experience when doing simulated trading. |
| Being able to choose how much of a share you want to buy. Instead of only being able to hold 1 entre share, you can hold half a share or smaller. | I would reduce the max amount of money a player can hold, while I want a player to have freedom while trading, I don't want them able to hold an unnecessarily large amount of cash as it reduces the purpose my game and makes it very unrealistic to what my target audience are. |
| The ability for it to track  where the stock is at in real time. So you don't just have historical data but real time data. | I only want my players to trade purely stocks. WeBull also allows you to trade with ETF's which are bonds. I will not be |

| | planning on adding that into my game as I don't see my target audience trading with ETF's during scalping. |
|---|---|
| Being able to plot the graphs in different ways like adding arrows to see trends, how the grid looks etc. It will allow the user to perform strategies if they want to. | Finally, I will be making my simulated trading more desktop compatible. ,Most paper trading simulations are quite awful with how they run on desktop compared to mobile, so I want my one to be more desktop compatible and not really compatible with a mobile phone. |

Existing solution 2:

One solution that has a very similar approach tom one where it blends both a game experience and educational purpose is StockPe. It is a strategy based market game in which you can create a 'team' of stocks and crypto (which I don't want to do) and then play in live tournaments worldwide. However my game won't be handling real currency and won't be online, which StocklPe does both of.

https://stockpe.app/

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| What I would adapt into my project | What I would not adapt into my project |
|---|---|
| I will adapt their UI, as indicated, it is very simple and allows users how don't understand how a regular trading UI would look, can get an idea of a simpler version. | This game handles real money which I don't want to use for my game, as I purely want to use it as a way to learn with no loss. Allowing for no risk high reward while you play. |
| I would love to adapt a tournament aspect to my game which is found here. Being able to have a leaderboard and track points even after the game has finished will promote competitiveness and push the loosing players to do better, find better strategies and learn more. | This game also handles crypto which I do not want to use as it is even more volatile compared to stocks, so if someone who is new to trading plays a game with crypto, they may struggle greatly. |
| Being able to create a portfolio of your chosen stocks is a great idea I will definitely adapt into my game. This is a plan I already had and has been reiterated through this game. It is a good idea as it allows other people to use different stocks and work with different ways to trade with each stock. | This UI is heavily compatible with only mobile phone, and since I'm only making my game accessible to desktop users, I wont be able to use a similar UI and will have to think of my own one. |
| With you learning stocks and also playing a game, it encourages education and being able to perform new strategist or recognize patterns you saw earlier, this is something I want to be able to adapt into my game. | This game is only online, as in you will be playing with people around the world. I don't want to do this as I doubt I will be able to make my game perform with a multiplayer. I purely want my game to be turn based and where everyone can do it at the same place. |
| It makes trading seem less of a way to learn and more of a way to get entertainment. Unlike WeBull which at times may be monotonous with its paper trading, being able to trade while also having a game aspect will being entertainment. | The game is made through the use of a webpage. This means it has used HTML, javascipt and css to make the web game. My game will purely be a program that is run only through executing it in an IDE, therefore I will not be using HTML to make my program. |

Exisiting solution 3:

Another game I found that has a very similar premise to mien is made by the website market watch

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https://www.marketwatch.com/

called 'virtual stock exchange'

https://www.marketwatch.com/games

Like the name indicates, you will have a portfolio of virtual stocks in which you invest with and play with other players as you all tackle those stocks with each other trying to make a profit. This is a team based multiplayer game in which you work together with other when you try to make virtual money. You can either join existing games or create your own game with your own target.

Your Profile                                                    Current Rank  **N/A**

## Taran Singh  ME

| Net Worth | Today's Gains | Overall Gains | Overall Returns |
|---|---|---|---|
| $10,000,000.00 | 0.00% | $0.00 | 0.00% |

| Cash Remaining ? | Buying Power ? | Short Reserve ? | Cash Borrowed ? |
|---|---|---|---|
| $10,000,000.00 | $20,000,000.00 | $0.00 | $0.00 |

Portfolio Allocation

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n                                                                              ✕

Displaying 10 results

| NVDA | 155.02 | |
| NVIDIA Corp. | 0.71 0.46% | TRADE |

| NFLX | 1,306.67 | |
| Netflix Inc. | 31.42 2.46% | TRADE |

| NOW | 1,011.44 | |
| ServiceNow Inc. | 6.28 0.62% | TRADE |

| NEE | 70.99 | |
| NextEra Energy Inc. | 0.65 0.92% | TRADE |

| NKE | 62.54 | |
| Nike Inc. Cl B | 1.71 2.81% | TRADE |

| NEM | 59.19 | |
| Newmont Corp. | 1.13 1.95% | TRADE |

| NET | 190.96 | |
| Cloudflare Inc. Cl A | 0.84 0.44% | TRADE |

| NOC | 493.66 | |
| Northrop Grumman Corp. | 6.74 1.38% | TRADE |

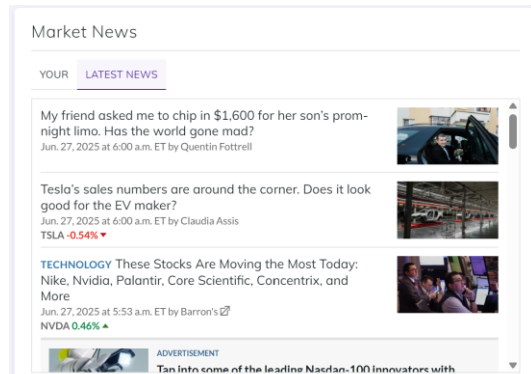| NSC | 255.51 | |
| Norfolk Southern Corp. | 0.30 0.12% | TRADE |

| What I would adapt into my project | What I would not adapt into my project |
|---|---|
| The UI is amazing for pc as it is integrated for desktops. I will personally try and integrate a similar design. | This game is purely team playing. While it is a good way for you to learn with your friends, in my opinion it doesn't make the game as competitive, reducing how quick you are on your feet once you try to buy or sell some of the stock you own. |
| It is also a game allowing you to have entertainment while also learning stocks and how they work. | This game is also online, so you are unable to all play at the same computer, which I am not a fan of and not planning on integrating into my own program. |

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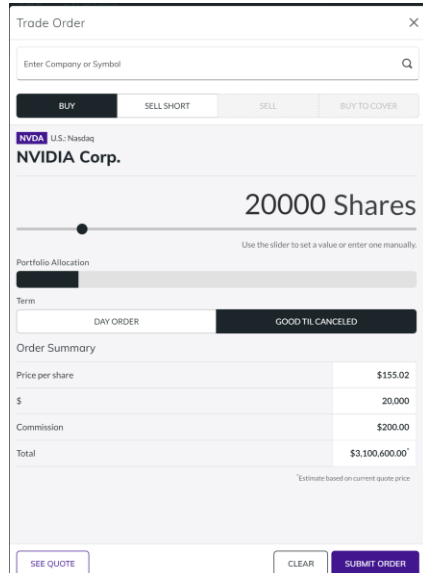| | |
|---|---|
| Your able to create your own portfolio of stocks and start trading with them once you have them. | This game is purely investing stocks, not trading stocks. So while this game has an amazing UI for investing stocks, it doesn't give you a candle stick graph to trade with your portfolio of stocks. |
| You get given a section of the game that shows you the latest news of the stocks market, and the economy in general. It is amazing as it also shows you if a stock has gone down or up in price and why it has:<br><br>Market News<br><br>YOUR  LATEST NEWS<br><br>My friend asked me to chip in $1,600 for her son's prom-night limo. Has the world gone mad?<br>Jun. 27, 2025 at 6:00 a.m. ET by Quentin Fottrell<br><br>Tesla's sales numbers are around the corner. Does it look good for the EV maker?<br>Jun. 27, 2025 at 6:00 a.m. ET by Claudia Assis<br>TSLA -0.54% ▼<br><br>TECHNOLOGY These Stocks Are Moving the Most Today: Nike, Nvidia, Palantir, Core Scientific, Concentrix, and More<br>Jun. 27, 2025 at 5:53 a.m. ET by Barron's<br>NVDA 0.46% ▲<br><br>ADVERTISEMENT<br>Tap into some of the leading Nasdaq-100 innovators with | While the games news shows news related to stocks, it also has a lot of information related to the economy in general. I only plan on including information purely on stocks as I don't believe having news on the economy will be beneficial to the consumer. |
| You are able to make an order of a certain amount of shares of a stock with the money you have , the price per share and how much the shares you bought cost:<br><br>Trade Order ✕<br><br>Enter Company or Symbol 🔍<br><br>BUY  SELL SHORT  SELL  BUY TO COVER<br><br>NVDA U.S.: Nasdaq<br>NVIDIA Corp.<br><br>20000 Shares<br><br>Use the slider to set a value or enter one manually.<br><br>Portfolio Allocation<br><br>Term<br>DAY ORDER  GOOD TIL CANCELED<br><br>Order Summary<br>Price per share $155.02<br>$ 20,000<br>Commission $200.00<br>Total $3,100,600.00<br>*Estimate based on current quote price<br><br>SEE QUOTE  CLEAR  SUBMIT ORDER | This game allows you to join multiple different games from other people. I will not be integrating this into my program, My program will purely have one ongoing game and once that is finished it will collect the games data and put it into a history, and then you will make a new game. |

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Stake holders:

My game will be targeted towards older teens and young adults with the age range of 17 - 20. This game will be aimed at students who admire the economy and specifically the stock market and how trading with precisely stocks. Explicitly, I want these students to either be studying Alevel economics, math's, accounting or Alevels similar to working with numbers. Furthermore, if they are now adults and have completed their Alevels, they are studying something within the economics field and a university degree or doing an apprenticeship within the finance and or accounting field. However, they also must have a passion with wanting to trade as possible a hobby or as their full time job once they're an adult or already an adult and have already learnt how to trade with stocks. My main reason for this is because my game will have them trading with simulated stocks, but stocks that are figures from the actual market. Therefore, I want students who have a passion for the stock market and able to understand how the stock market works, while also being used to work with complex and large numbers and percentages.

I want my target audience to be using this game in their free time, and they must have people to play with, preferably 4 – 6 players. It will be an educational game that brings both entertainment and competitiveness for players trying to win, make the most profit. While also allowing the players to lean on the stock market without having to use real money while trading. It allows them to trade without the thought of possibly loosing thousand of a real currency, instead learning with a virtual currency.

This game is, in my opinion, appropriate for the stakeholders I chose because it directly correlates to their already known, interest, skills and most important their future career aspirations. College students and young adults who have already an existing knowledge of stocks, math's and definitely the economy can use this to highly benefit them and apply it to the stock trading market. If this is through seeing the sheer amount of numbers, percentages and graphs, and being able to correctly identify winning stocks and loosing stocks, principles within the stock market, like when you would see a candle stick graph go up or down and finally look at recent articles or data to see if buying a certain stock. Then playing this game will highly benefit them with being in a risk free environment and applying these factors into their game to gain even more insight and understand the stock market even more. To where they will finally feel comfortable enough to trade with real money on the stocks they trader with prior, with fake money.

The competitive elements to this game is what makes it engaging for the audience I am targeting. Who are of a younger age a]being 17 – 20. Furthermore with my question it

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was clear the target audience I targeting enjoyed the stock market and also found this game interesting enough to potentially play and grow from.

**User requirements**

The features my game must include to work:

- A section of my game will have a box including all stock market related news

- A part of my code that allows the data of each game to be saved by the specific players who played via a login system, so the next time these players login they are able to see their saved data.

- A menu screen that gives you the ability to decide how many players you will have in your round

- A previous history screen where it will tell you, if you have done a round before, your previous scores for your players, profits, players etc.

-The entire stock market, this allows each player to choose the stocks they would like to use

- A system that decides whether which player gets to pick their stock first, possible by using a coin flip system

- While each player is choosing their stock, they can choose stocks depending on their tiers to make the game more fair. So a player can only choose 1 A* - D stock from each tier. This is so the first player cant choose the top 5 stocks to try maximize their profit.

- A tier system for each stock that can be ranked by:

Volatility:

.Volatility is how quick a stock will go up or down a candle stick graph and how far up or down it goes down.

.High volatility stocks will be in a higher tier placement, high risk, high reward.

.Lower volatility stocks will be in  a lower tier placement, low risk, low reward.

Liquidity

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.Liquidity refers to how easily you can buy or sell that stock in your market without causing a big change in its price.

.Higher liquidity stocks will be more saturated with traders ie, they will be of a higher tier.

.Lower liquidity stocks will be less saturated with traders ie, they will be of a lower tier.

Recent performance trends:

.Stocks that have shown great growth, will be in higher tiers as they would be sought after to buy or sell.

.Inconsistent growth or possible negative growth will be stocks in lower tier, this will being a challenge for the players to trade with and allow them to learn more.

Stability:

.Stocks with little to no stability will be places in higher tiers as that could possible indicate high volatility.

.Stocks which are very stable will be places in lower tiers as they will be much harder to trade with as they don't go up and down much.

This is so each stock can be categorized into their tiers

- A candle stick graph, so as you play it will show you how the stocks, you have chosen, are doing to help you determine whether you need to buy or sell.

- I need my game to be turn based as everyone will be playing on one computer, I cannot have everyone playing at the same time.

- The placement of each player

Feature I will add if I have the ability and time to:

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- After each player is done with their round, they have a 3 minute period to be able to write notes on their turn, in which they can see after the game has finished.

- The ability for the group of players who were playing to delete their previous game data, if they want to. This can include, past player results, stocks they used, the information on those stocks at the time, how the graph looked etc.

- Trying to include historical data of each stock so players can look at how they acted previously

- I could make an actual leaderboard, showing further information on each player analytics and then their placement to give more information on which stock made them the most profit, how they placed etc.

-  In a separate menu with your stocks, you can go to a part that lets you predict how powerful that stock may be in the future based of historical data.

-  The ability to do this game purely in single player so you can expand and learn on your own. While it wont really be a game nor have the competitive aspect, it will be more like paper trading, allowing you to trade on your own. Furthermore, it will keep your history of each time you played to see if your improving your notes etc.

Features Im unlikely to add:

 -If you currently have no one to play with, you can play against bots and simulated players

- Your able to pick a difficulty of the bots you're playing with, if you're a beginner to trading you can play with easier bots and if you have done trading for quite a long time and have learnt it well you can play against harder bots to match your skill level.

- A online version of this game so you can play with other people for different communities, they could be a variety of ages.

- Being able to run different games at the same time, so you can have multiple different host where you will join one of them and play their game.

- A tutorial that allows you to run through the game with your team, or on your own (if possible),

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User Requirements Table:

| | Feature | | Sub-features | Explanation | Justification | Importance |
|---|---|---|---|---|---|---|
| 1 | Menu Screen | A | Start button | Just a button that takes the players into the menu screen in which they start the game | With the two of the three games I showed on my research section, they had some sort of way for you to access it, if it was via a link or a button that prompts you to actually get in the game. Furthermore, with other games you see, there is usually some type of button you have to click before you get into the game, like clicking play on any steam game before going into the games menu. So I believe it's natural to have a button you have to click before you get into the menu screen. | Desirable |
| | | B | Background | A back screen that is linked towards the theme of your program | Other than having an interesting concept. You need a background that can give the user a visual representation on what your game may look like. A background can give both that an a pleasing overall look to your game, other then having a, possibly boring, dull back screen. | Essential |
| | | C | Title | What the program will be called, its name. | With apps, especially games, you need a name to identify it, so people are able to easily search it up and remember it. It is a very easy feature to have, which is essential and allows you to tie it to a short, easy to type name. For example my title will be called, league of traders. | Essential |

| | | | | | | |
|---|---|---|---|---|---|---|
| | | D | Player picker | Will be something similar to a dice roll that allows you to pick the first player. | When having turn based games where all the players play on one computer, such as bored games like monopoly, you need a fait way to have get a first player and last player. With a random player picker, you can get a first and last player without  taking away a unfair playing environment. While, its not essential for me to have a piece of code that has a player picker, because they could just do a player picker outside the game, it brings more depth to the game and makes it slightly better. | Desirable (not really needed but gives more depth) |
| | | E | Help tutorial | An interactive help tutorial that navigates you around the games ui and gives you all the essential information needed to play the game | While I could just have a list of steps on how to play the game, having an interactive tutorial may be better. This is because it will help with player engagement, reduce a lot of words within the game and make it visually easier to understand how to play the game. | Not needed (Would be good to have) |
| 2 | Gameplay | A | News section | Will be a portion of the game showing all stock market related news. | This is very essential. In general, when you trade stocks, you will always have a tab open showing you the most recent news on the stock your trading with. This is because, news is one of the ways that a stock will change and weather you should buy or sell. Therefore once the game starts for a player, it will be essential they can also have news related information on their chosen stocks. | Essential |
| | | B | Candle stick graph | When trading with stocks you will have a candle stick graph which will show the current state of the graph | When you ever trade with stocks, you will always having a graph that shows the state of a stock and whether you need to buy or sell your stock. This is ESSENTIAL, when trading with stocks as it is the key way for |  Essential |

| | | | | | you to know what to do with your current stocks, without it, it will be nearly impossible to trade while making a profit. This will be a key sub feature within the game and will be what is used to know what to do with your stock. | |
|---|---|---|---|---|---|---|
| | | C | Interactable buttons | Weathers its buy or sell, news info or choosing stocks, they all will consists of buttons | Not only is this essential, it is possibly the most important part of any game. When you have games, especially turn based, it often uses a lot of buttons, my game is no exception. You will have buttons that are used to buy or sell, click on the news info, play game button and many other interactable buttons. While you may not see it as a 'gameplay' sub feature, it will be a prominent part of your gameplay. | Essential |
| | | D | General information | Information stating, stocks you have, profit or loss you have accumulated etc. | With most games, you may have information showing things like damage you have done on an enemy. For me I will show information targeted to my game. This will be needed so you can actually see how well you are currently doing and how long you are currently been playing for,. This is a essential feature in this game and without it you will be in the blur on whether or not you are doing well. | essential |
| | | E | Singleplayer | A way to only play on your own and trade by self, similar to paper trading | Similar to what you see in paper trading, I could have a single player mode where you trade on your own but still having all the other features of my game aspect. This is so you can get a more realistic way to play the game so its similar to how real trading will be like. Furthermore, it will allow | Not needed |

| | | | | | people who don't want to play with others and only want to play on their own. | |
|---|---|---|---|---|---|---|
| | | F | AI players | Play against robotic players with their own levels. | If you want to challenge your self or have an easier time, you can play against an ai player that gives you both the game aspect and the learning aspect of the game without playing with other players. This would be amazing to integrate as it adds more sub features to my game that players my want, which is based off information from my questionnaire. | Not needed |

Limitations:

| Limitations | Explanations |
|---|---|
| Single player | I will limit myself to only having the game where you have to play with at least one more person. This is to ensure that may game does not become to complicated and possibly burden other aspects of my program. This is because if I was to implement single player, I would also have to implement a robot that can vs one player. Not only this is incredibly complicated, it will be really hard to make a robot that can perform certain task for its on accord. |
| Crypto currency | Another limit I will be adding to my self is only using stocks and no other markets such a crypto. Due to me trying to make a beginner friendly game, adding crypto will be quite useless and may even burden the players. This is because when you usually start trading with crypto with real money you have to put at least a $25,000 deposit, my target audience, college and university students most likely will not have. Furthermore crypto is a lot more volatile then stocks, I don't want my players to get disheartened if they play multiple games in a row only lose money. |
| Online play | One more limit I plan on adding to my self is the inability of making this game also online. One reason for this is because python is not that good for making online games, as it being an interpreter, it can lead to slower execution speeds compared to other programming languages that compile, such as C++. Furthermore while it is still beginner friendly coding, coding online games is still in credibly difficult and my burden me in the long run. |
| Day trading | As I want my game to be very fast pace, I don't plan on having each player trade for hours. That's why I have chose my trading method to purely be scalping. This is why I am not adding a day trading method, as those types of |

| | |
|---|---|
| | trading usually last 6 – 8 hours. Furthermore, as my game is turn based and trading last only the first half of the day, each game could go on for days, which is not integra table into a game. Therefore I will not be using it. |
| Real currency | My whole point of creating this game is to make it a safe environment for beginner traders, to be able to trade without the overly competitive nature, terrible losses and over all losing moral for trading. So by making this game run purely on a real currency will defeat its purpose. This is because by making the player have to use their hard earned money, it makes players more anxious, this could prevent them from trying out new strategies or finding out better ways to trade and implementing it. This is why im limiting my self only to a virtual currency. |
| Mobile phones | As my game is purely being run on python, I will not be integrating a cross platform method where you can play this game on your phone. This is because python is not a very suitable language to use with your phones as python based games usually have larger app storage, it runs slower on phones, and my ui in general will be purely fit for desktop players. |

Software and hardware:

As described in my introduction, I have chosen python as my programming language to code with and pygame to access my gui and actually play the game. Furthermore I will be making this game on windows and integrating it Soley for desktop users.

Software:

.I will share my game via github through an .exe file. They will then be able to install the .exe file and play my game.

.There are no specific software requirements to play my game, other than having a graphical interface.

.While python is able to be run on a mobile phone I don't plan on integrating a ui specific for mobile phone. So you will not be able to play on phone, and if you were to, it may be a bad experience.

Hardware:

.Due to this being a low running game, and personal computer with low specifications can be used, this game will not need high tech graphics card, cpu etc.

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.You will only be able to use inputs with your mouse and will rarely use your keyboard, unless you need to type something, like your player name or specific stocks your using.

.You do not need to have speakers to play my game, but I may add some light music in the background.

.This game is very unlikely to need a lot of storage.

Computational methods:

.In my opinion I believe this will be a computable problem. This is because my stocks will be moving in a 'random' way shown on a candle stick graph. This cant be done by a human as stocks move based off any recent news, that being stock relate in general, economics news or any news that is tied to that specific stock. Furthermore stocks move usually every second, a human will not be able to extract all this data while also moving the stocks price up and down, only a computer can perform such multitasking.

.Furthermore, there will be decomposition where all the stocks will then be broken down into there sperate stocks, which will then be broken down into their tier (how good it is), which is derived from the stocks volatility, recent news, price of stock etc. Also the players will be broken down into their specific portfolio of stocks and separate between one another so each player can play when it's their turn.

. There will be abstraction, where the user will only be provide with their stock information, They won't be seeing there competitors stocks, the entire stock market etc as it will be useless for them. Furthermore, when they read the news related information, they won't see the entire recent news, not even the entire economic related news, but mainly stock related news and possibly some economics news that is loosely related to the stock market. Additionally, I will combine this abstraction with visualization as I will only show the stock graphs related to the players stocks on I will not let them access graphs for other stocks as there will not be a need to and just complicate the player.

.Finally another reason why the compatibility of my program is reinforced is through the multitasking the program will have to perform. The computer will need to show a candle stick graph running at 1 second intervals, that changes based of recent stock market

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news, that then allows the user to buy or sell with that stock, which ill further show if the user is making a profit, if the stock is currently a red or green candlestick.