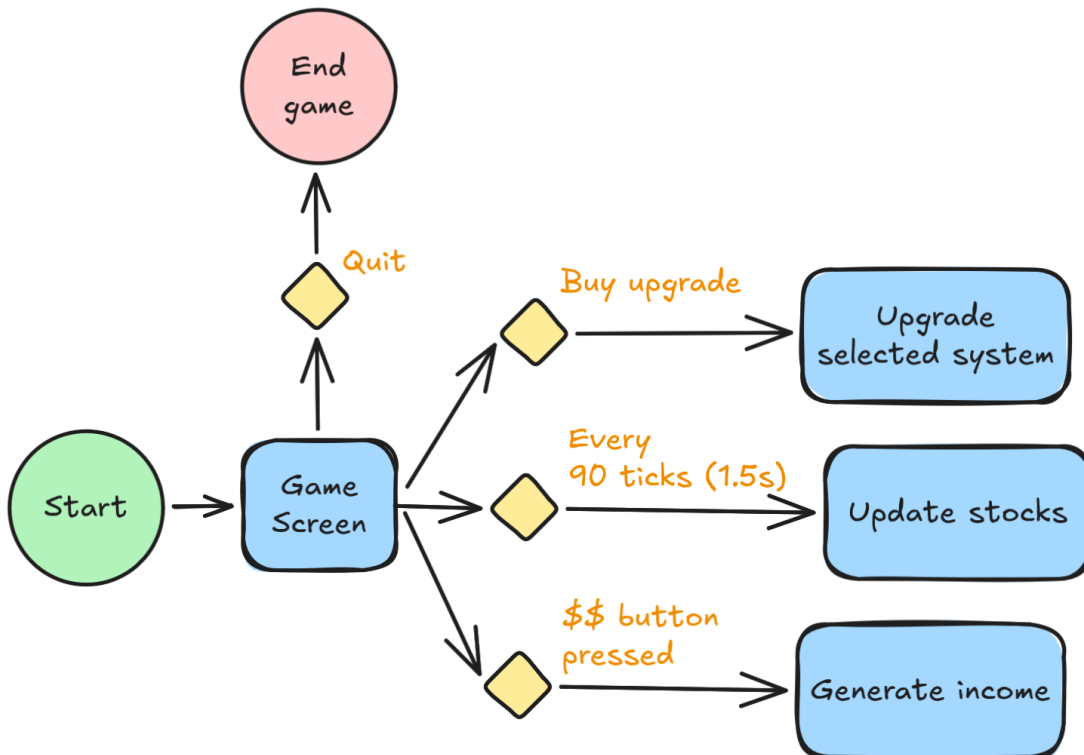


# Project Report - StockClicker

## 1.1 Game Description

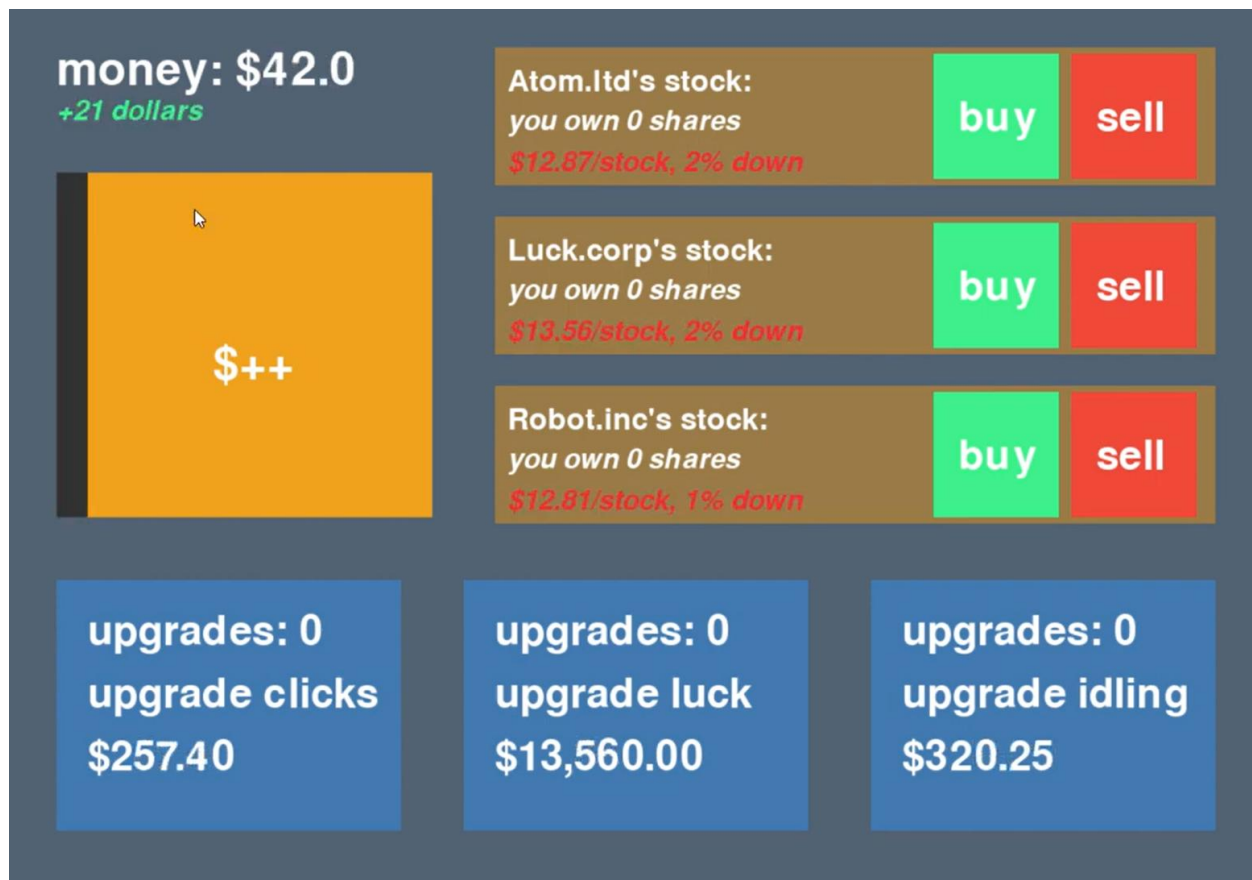
This game is a minimalistic clicker game. The game is won, when you acquire 10,000 dollars. To play, you click a button generating money and use that money to buy upgrades. The game features a stock market consisting of 3 companies: Atom.ltd, Luck.corp, and Robot.inc. These stocks fluctuate randomly, but with an upwards trend. Sometimes, a stock can crash, causing it to go down by up to 50%. These stocks also serve as a means to generate income, as an alternative feature to the “generate button”. The money you earn is obtained all at one at the closing of the stock market. Since the upgrade costs also scale along with the stock price and the amount of times you bought them, the game gradually scales and cashflow increases exponentially over time.

This is illustrated by the below flow chart;



And by the following youtube video:

<https://www.youtube.com/watch?v=22YS2I4hjKc>



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## 2. Artistic Design

The game is minimalist - no moving sprites, and at most only text changing color and objects disappearing. I made it this way to emulate a real life stock market app. For this reason, I also used a muted color triad colour scheme.

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## 3. Development Process

I used python with pygame to make this game. I made sure to not include too many nested loops or if statements and to compress things into functions where it was necessary so that the code became easier to read. I also made sure to give my variables appropriate names, so you don't become lost in the code. And generally followed good coding principles.

By Adarsh Govindan

A problem I had at the time of development was actually getting a timer to run along with the rest of the code. It worked well in Pygame, but in regular python it was a horrible mess. This was actually why I ended up choosing Pygame to make the GUI. The rest of it, apart from some minor bugs, was smooth sailing.

Following extensive brainstorming and planning sessions, I decided to go with this concept. After making an initial skeleton and minimum viable product, I fleshed it out and tested individual code pieces in a separate file to see if they worked and to narrow down problems. Finally, I put it all in pygame and had others play-test it.

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## 4. Conclusion and Future Work

The foremost thing I learnt from this game was how to use Pygame. It also taught me how to use functions effectively, how to sift my way through lots of codes to find bugs, and also how to balance a game as the player gets more powerful.

In future, I'm definitely going to add a rent system, where a set amount of money is taken away each month. Also, there is a bit more balancing that needs to be done. I would also like to make a chart or graph for the stock values, and add an indicator to show how much you've spent in a company.

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