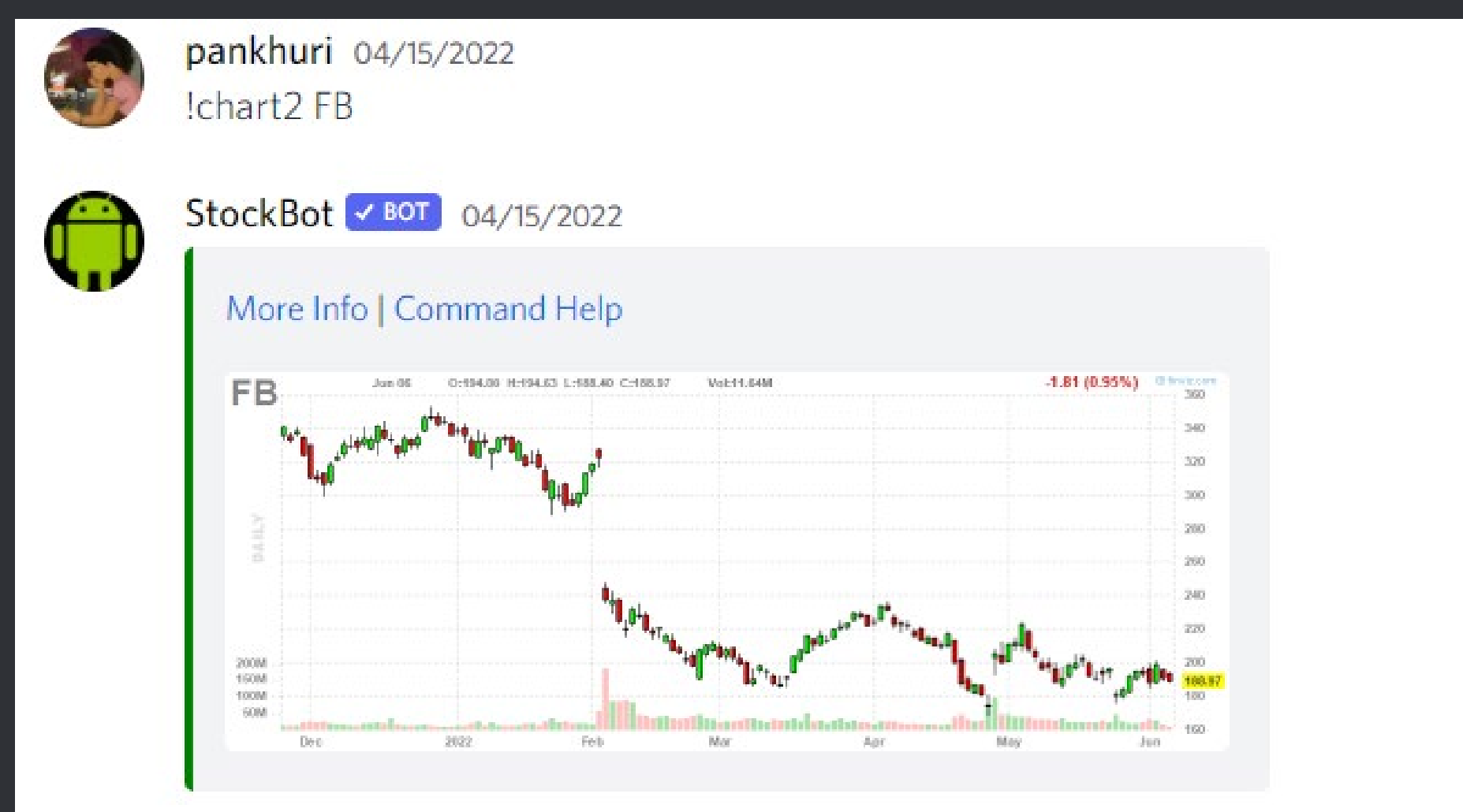


# Motivation

I wanted to give users an easy, interactive way to start to understand diversification; as an **alternative** to what they could learn from the internet

# Purpose

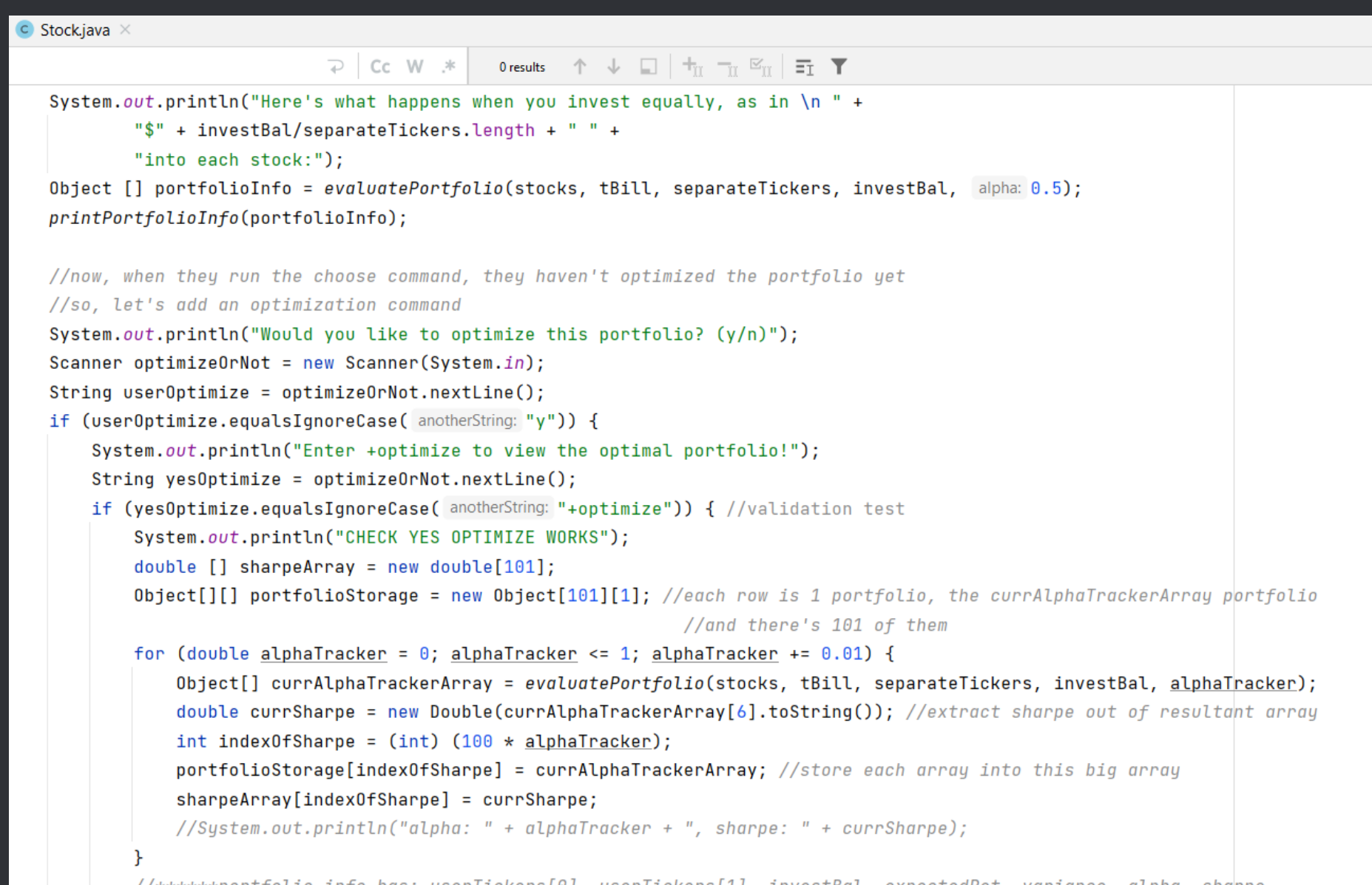
To provide a **fast, accessible, clear and interactive tool** that helps users understand portfolio optimization with diversification technique



Current State (not as interactive)

# Application

Used by **college students** interested in learning the basics of diversification



Prototype

# Technology Used



# WarrenBot

## Educating Future Investors about Diversification with a Discord Chatbot

Pankhuri Singhal   Applied Computing   Minor: Economics   Spring 2022

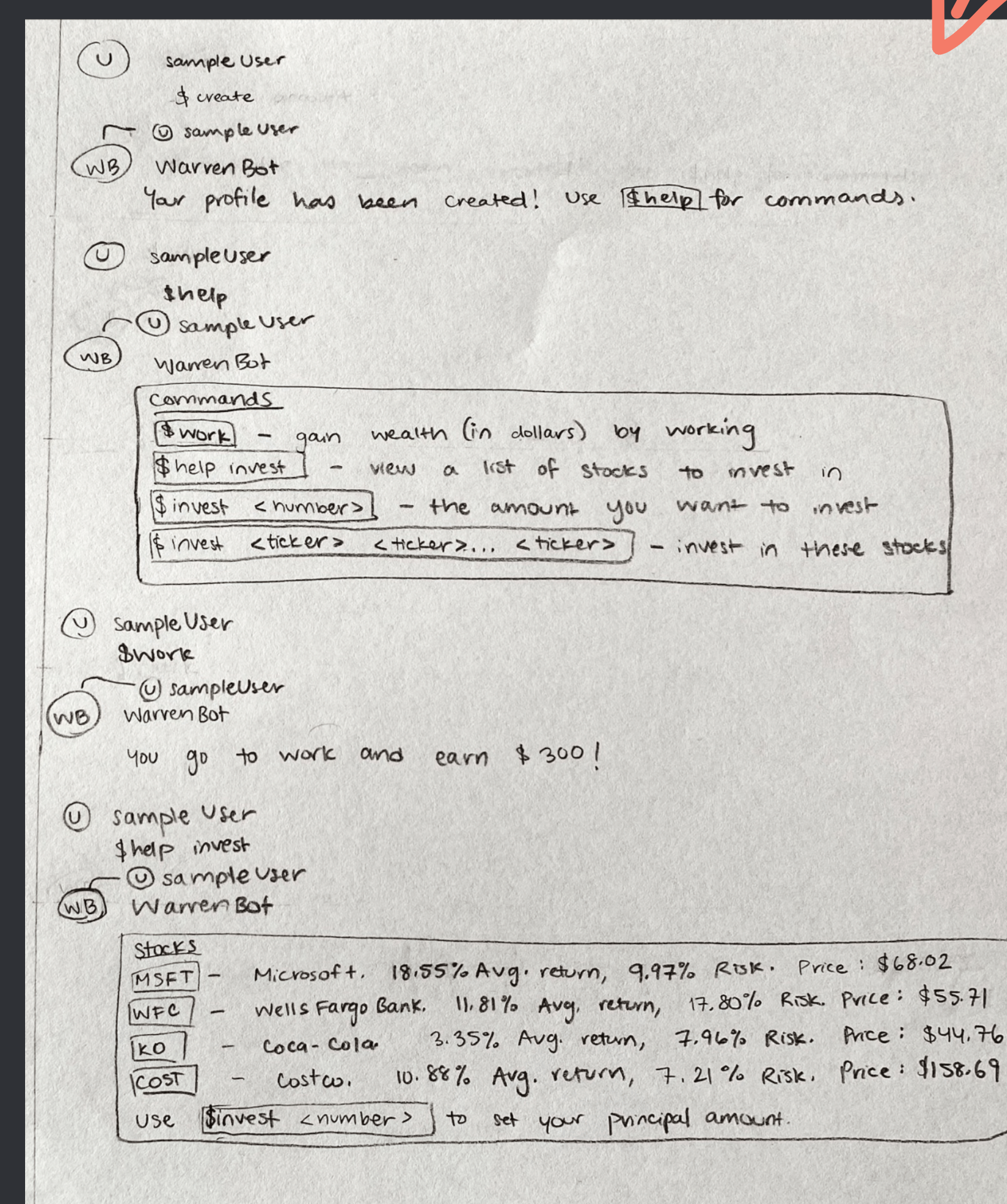
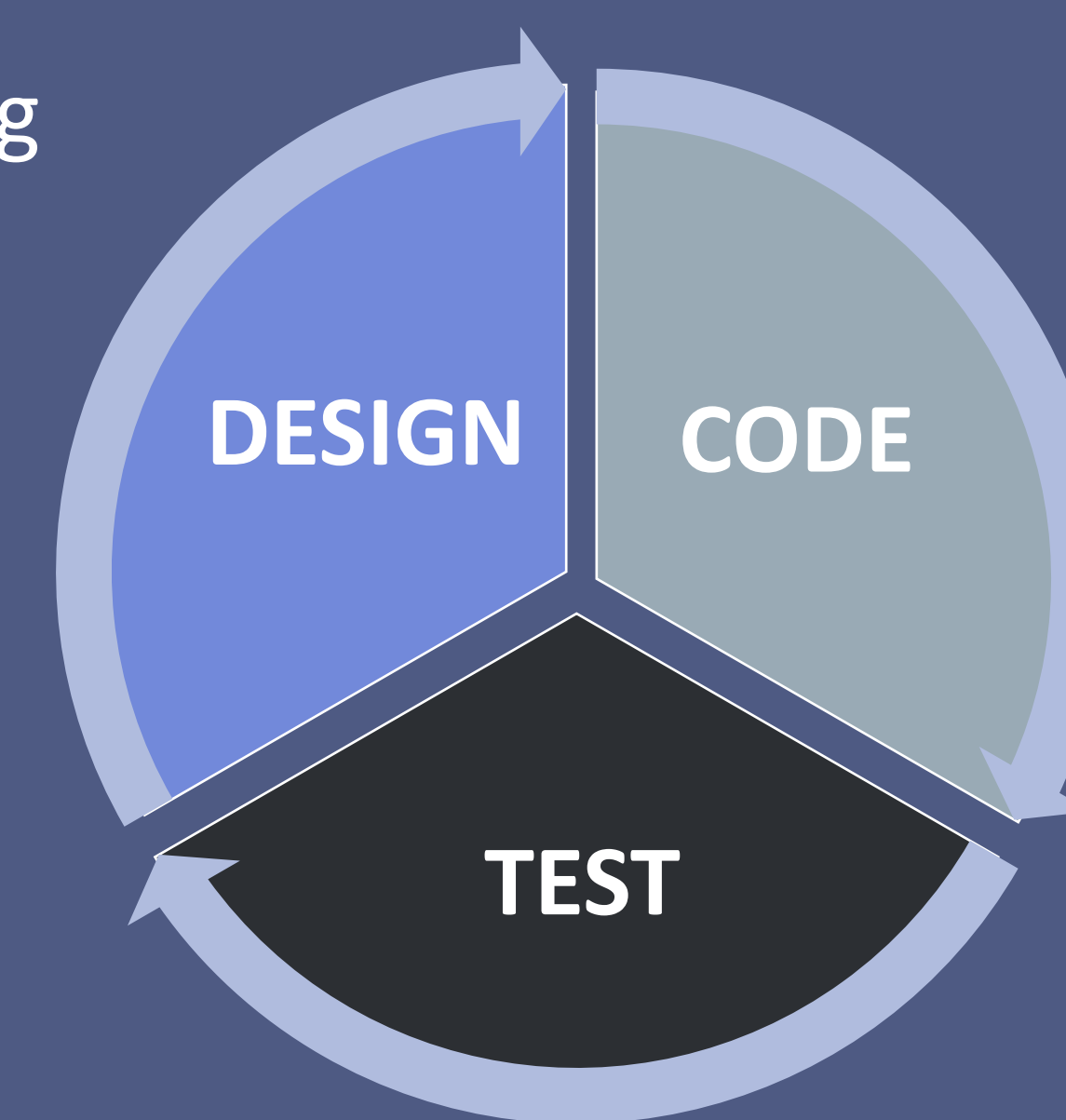
Faculty Advisors: Prof. Mark Kochanski, Dr. Jeffrey Kim

# Overview

- A fast, easy-to-use **chatbot** that helps users understand **portfolio optimization**
- User enters a specified command, and the bot will output the corresponding message
- **Interactive, gamified** way to help users understand diversification through an example portfolio optimization question

# Methodology + Deliverables

- Agile process allowed for **iterative** design, coding and testing
- Deliverables:
  1. Lean Canvas
  2. User Story
  3. Use Case Scenario
  4. Wireframe Sketch
  5. Functional Prototype



Wireframe

As a undergraduate student at UWB interested in investment concepts, I want to interact with this bot so that I can see how diversification is put into practice through example stocks.

Priority: "must"

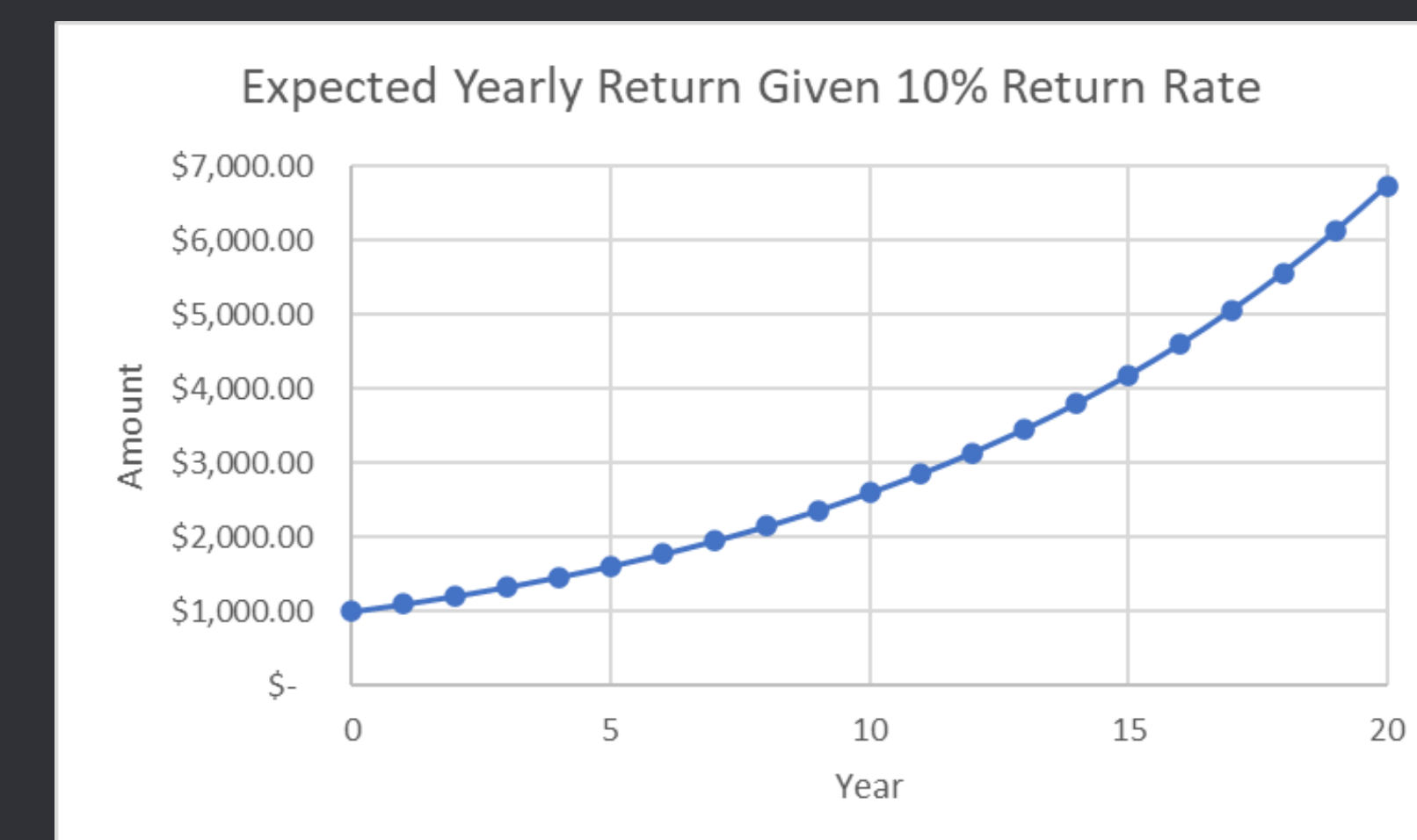
Acceptance Tests:

- the user must have a **Discord account**
- the user must enter the command to display the stocks

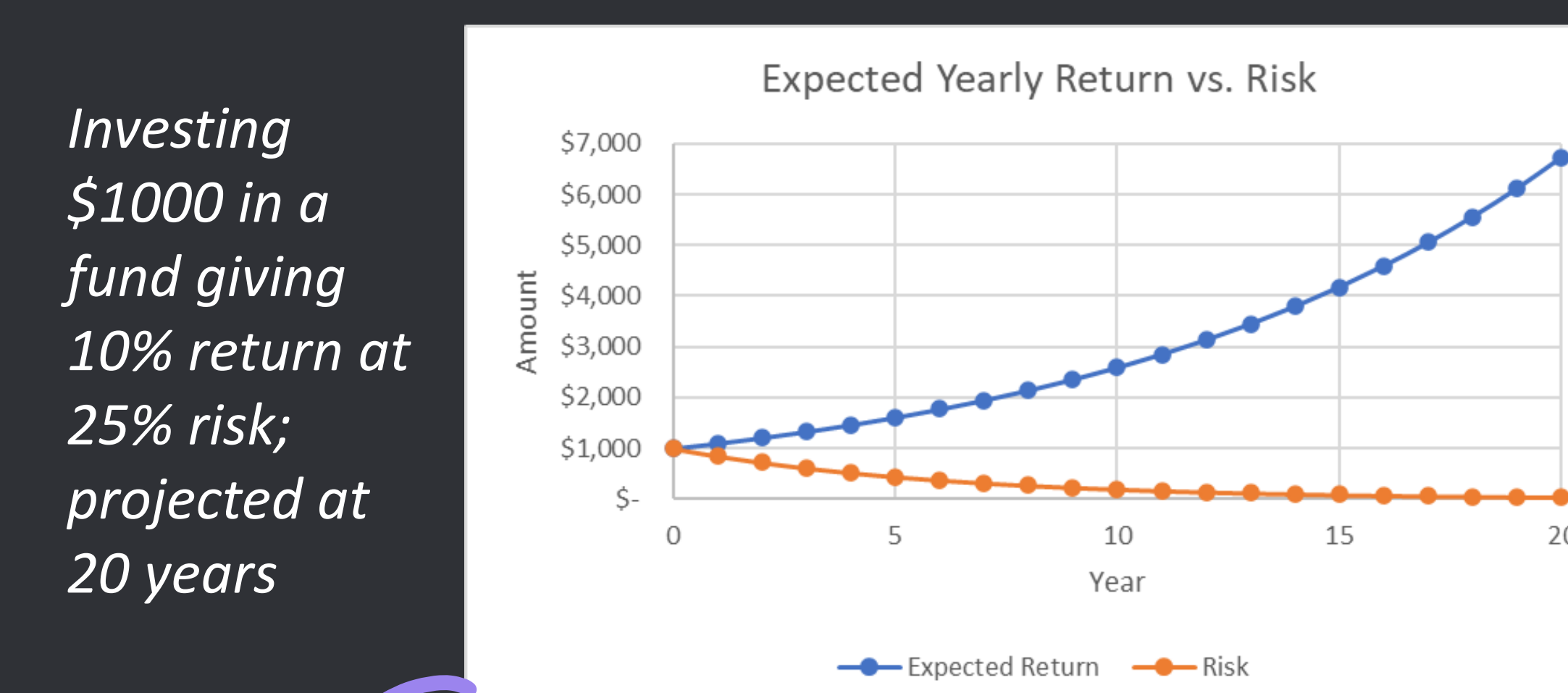
User Story

# Special Thanks To...

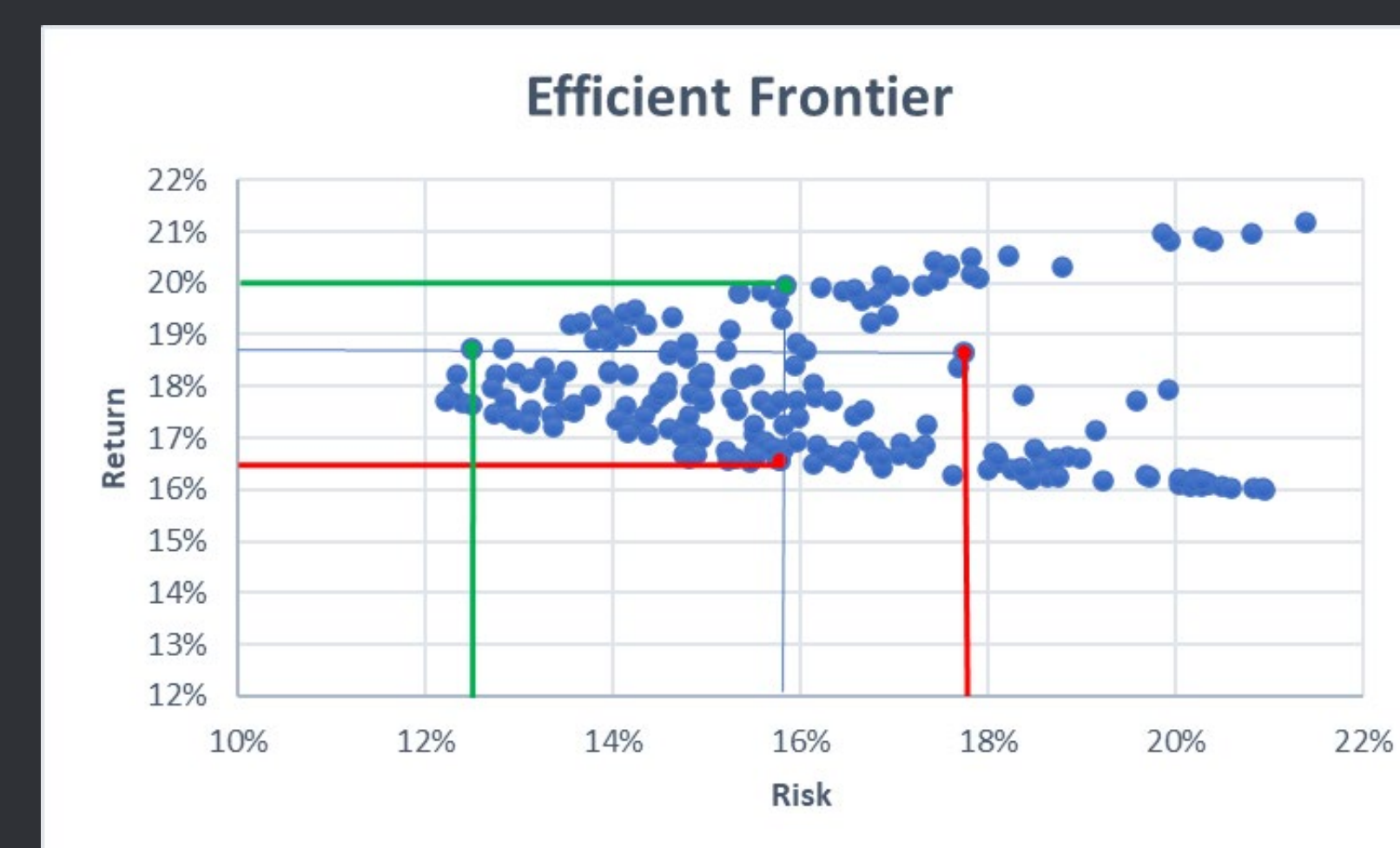
- Dr. Camelia Bejan (Expert)
- Dr. Alejandro Francetich (Expert)
- Je Salvador (Librarian)
- My Family and Friends!



Investing \$1000 in a fund giving 10% return at 0% risk; projected at 20 years



Investing \$1000 in a fund giving 10% return at 25% risk; projected at 20 years



Efficient portfolio of 4 stocks that details optimal return given certain risk; vice versa

# Challenges

- Figuring out how to **simulate Excel Solver** in IntelliJ IDE
- Mispriced Stocks

# Next Steps

- **Connection to Discord** to make it a real bot (with Discord API and unique bot token)
- Portfolios of over two stocks