

So based off our zoom call here's what I've put together. I feel like things should be pretty straightforward. At the top here I have a couple lists. The first is a list of the arrays we will probably need for everything in the program. The second is a list of the prompts and messages that the program will print out. Below is a better sample of what the program would look like in action. I tried to match the (*labels*) of each of the prompts/ messages throughout, but could have missed a couple.

(I don't have all the numbers yet, I just put in Xs to denote values that I don't know or variables in prompts and messages)

Go ahead and make suggestions for anything here!! I'm sure I made some mistakes or left something out.

ARRAYS

- Holdings array [] //the holdings in the portfolio
- Names array[] //string with ticker symbol and name
- Price array [] //price of each holding
- Positive array [] // array of Booleans indicating T for positive growth in the last month and F for negative growth in the last month
- Change array [] //array of the percentage change of each holding
- Dividend array [] // array of each holdings dividend
- MortgageSim array [] // array of percentage losses for each holding in the 2008 simulator
- COVID array [] // array of percentage losses for each holding in the COVID simulator
- TenYear array [] // array of each holding's average annual growth over the last 10 years
- TwentyYear array [] // array of each holding's average annual growth over the last 20 years

PROMPTS AND MESSAGES

(*purchaseMenu*) (is the menu of things you can buy)

(*portfolioMenu*) (is the menu of your holdings)

(*simulationMenu*) (is the menu of simulations)

(*purchasePrompt*) "Please select what you would like to buy or enter 0 to finish and go to portfolio"

(*quantityPrompt*) "Enter amount you would like to purchase:"

(*cashRemainingMessage*) "You have \$X.X to invest."

(*confirmPrompt*) "You have selected X.X of X Total purchase = \$X.X. Enter C to confirm."

(*infoMessage*) "You have selected X. Here is the holding information."

"X. Current price is: \$X.X. Last month saw a change of +X% or \$X.X. Current dividend yield is X.X%."

(*purchaseMessage*) "You have purchased X.X of X"

(*dogePurchase*) "Wow such investing - many X - very Doge – plz buy more."

(*endPrompt*) "Enter 246 to end program"

(*continuePrompt*) "Enter 135 to continue" //could be used after a simulation is finished to return to portfolio menu

(*returnOrSimPrompt*) "Enter 1 to return to portfolio or 2 for simulations."

(*divSimYearsPrompt*) "Please enter how many years you would like to simulate (1-20)."

(*dividendSimMessage*) "Based on dividend yields of X.X% and a value of \$X.X as of April 30th, 2021 your holding Doge would earn \$X.X in compounded dividends after X years."

WHAT THE SIMULATOR WOULD LOOK LIKE:

(beginningPrompt) "Welcome to investment portfolio simulator, you have \$500000 to invest. Please select what you would like to buy."

(purchaseMenu)

EQUITIES:

"Enter 1 for GSPC, S&P 500 – Price: \$X,XXX"

"Enter 2 for DJI, Dow Jones Industrial Average – Price: \$X,XXX"

"Enter 3 for NASDAQ, IXIC – Price: \$X,XXX"

"Enter 4 for Amazon.com, AMZN – Price: \$X,XXX"

"Enter 5 for Boeing, BA – Price: \$X,XXX"

"Enter 6 for Exxon Mobil, XOM – Price: \$X,XXX"

BONDS AND PROPERTY:

"Enter 7 for Vanguard Intermediate Term Bond Index, VICSX – Price: \$3,000"

"Enter 8 for Delaware Extended Duration Bond Fund Class C, DEECX – Price: \$1,000"

"Enter 9 for Medium suburban house, – Price: \$100,000"

"Enter 10 for Large suburban house, – Price: \$250,000"

"Enter 11 for Plot of land outside the city, – Price: \$25,000"

"Enter 12 for Plot of land in the city, – Price: \$50,000"

"Enter 13 for Doge, - Price: \$0.42069"

(enters 8)

(quantityPrompt) "Enter amount you would like to purchase:"

(enters 10)

(confirmPrompt) "You have selected 10 of Vanguard Intermediate Term Bond Index, VICSX. Total purchase = \$30,000. Enter C to confirm."

(enters C)

(purchaseMessage) "You have purchased 10 of Vanguard Intermediate Term Bond Index, VICSX."

(cashRemainingMessage) "You have \$470000 to invest."

(purchasePrompt) "Please select what you would like to buy or enter 0 to finish and go to portfolio"

(purchaseMenu)

(endPrompt) "Enter 246 to end program"

(enters 13)

(quantityPrompt) "Enter amount you would like to purchase:"

(enters 1000)

(confirmPrompt) "You have selected 1000 of Doge. Total purchase = \$420.69. Enter C to confirm."

(enters C)

(dogePurchase) "Wow such investing - many 1000 - very Doge – plz buy more."

(cashRemainingMessage) "You have \$469579.31 to invest."

"Please select what you would like to buy or enter 0 to finish and go to portfolio"

(keeps going then enters 0)

(portfolioMenu)

"Welcome to your portfolio. Please select one of the holdings for information."

"1 for Portfolio"

"2 for Vanguard Intermediate Term Bond Index, VICSX"

"3 for Doge"

"4 for X"

"5 for Y"

"6 for Z"

(endPrompt) "Enter 246 to end program"

(enters 3)

(infoMessage)

"You have selected Doge. Here is the holding information."

"Doge. Current price is: \$0.42069. Last month saw a change of +10% or \$0.042069. Current dividend yield is 6.9%."

(returnOrSimPrompt) "Enter 1 to return to portfolio or 2 for simulations."

(endPrompt) "Enter 246 to end program"

(enters 2)

(simulationMenu)

"Please select one of the following simulations to run."

"1 for Dividend simulator"

"2 for Ten year growth simulator"

"3 for Twenty year growth simulator"

"4 for COVID19 simulator"

"5 for Mortgage crisis simulator"

(enters 1)

(divSimYearsPrompt) "Please enter how many years you would like to simulate (1-20)."

(enters 10)

(dividendSimMessage) "Based on dividend yields of 6.9% and a value of \$420.69 as of April 30th, 2021 your holding Doge would earn \$399.17 in compounded dividends after 10 years."

(continuePrompt) "Enter 135 to continue"

(enters 135)

(portfolioMenu)

"Welcome to your portfolio. Please select one of the holdings for information."

"1 for Portfolio"

"2 for Vanguard Intermediate Term Bond Index, VICSX"

"3 for Doge"

"4 for X"

"5 for Y"

"6 for Z"

"Enter 246 to end program"