Task 5:

Time to build BST: 0.004960060119628906

Task 7:

Time to linear search 100 random stocks: 0.004960060119628906

Task 8:

Time to BST search 100 random stocks: 0.0

Task 9:

Number of linear searches necessary before overall runtime would be more than combined total of building and searching through BST: 90.90948822166864

I got this number by taking avg time to search for one stock using BST method and adding that to the time it took to build the BST and the dividing everything by the avg time it takes to search for one stock using linear search method

Task 10:

Chart, line chart

Description automatically generated

Task 11:

Largest Percent Increase and Stock

1784.0579710144925%

name: Gamestop Corporation; symbol: GME; val: 1710.0; price:325.00

Largest Percent Decrease and Stock

-28.699186991869922%

name: Cogent Inc.; symbol: COGT; val: 2233.0; price:8.77